Calscience Environmental Laboratories, Inc.

May 22, 2009

Tracy Stofferahn
Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Subject: **Calscience Work Order No.: 09-05-0616**
Client Reference: Newport Harbor

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/7/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Danielle Gonsman
Project Manager

CASE NARRATIVE

Calscience Work Order No.: 09-05-0616

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the sediment samples.

Sample Condition on Receipt

Four (4) sediment samples in glass jars were received for this project on May 7, 2009. The samples were transferred to the laboratory in an ice-chest with wet ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory ranged was 4.2°C. The samples were logged into the Laboratory Information Management System (LIMS), given laboratory identification numbers, and stored in refrigeration units pending analysis.

Tests Performed

Testing was performed in accordance with the chain-of-custody instructions and the project work plan. The following testing was performed as requested:

Trace Metals by EPA 6020
Mercury by EPA 7471A
PAHs by EPA 8270C SIM
Organochlorine Pesticides by EPA 8081A
PCB Aroclors by EPA 8082
Organotins by Krone, et al.
TOC by EPA 9060A
Total Solids by SM 2540 B
Total Sulfide by EPA 376.2M
Dissolved Sulfide by EPA 376.2M
Ammonia by SM 4500-NH3 B/C (M)

Testing for grain size was subcontracted to PTS Laboratories in Santa Fe Springs, California. This data is included and follows the chemistry data.

Data Summary

A laboratory duplicate result is included for sample CNB-CAD-3-S11.

Holding times

All holding time requirements were met.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed for each test. All parameters were within control limits.

Matrix Spikes

Matrix spike analyses were performed at required frequencies. One of the project samples, CNB-CAD-3-S11, was spiked for each applicable method. Each parameter was within control limits for each method with the following exceptions.

For the metals by EPA 6020, the matrix spike recovery for antimony fell just below the established control limit for this metal. However, the corresponding LCS/LCSD recoveries for antimony were in control, suggesting a possible matrix interference effect, and the data is released with no further qualifications.

For the organotins, the MSD recovery for TBT fell above the established control limit. However, TBT was not found in any of the samples at the indicated reporting limit, and thus the elevated MSD recovery is moot. Also, the corresponding LCS/LCSD recoveries for TBT were in control, and the data is thus released without further action.

Surrogates

The surrogate recoveries for each applicable test, and all samples, were within acceptable control limits, with the exception of the PCBs. For samples CNB-CAD-3-S3/4 and CNB-CAD-3-COMP (Lab Duplicate), the surrogate 2,4,5,6-Tetrachloro-m-xylene fell above the established control limit for this compound. However, the PCBs were undetected in the sample, so the elevated recovery has no effect on the data.

<u>Acronyms</u>

MS/MSD:	Matrix Spike/Matrix Spike Duplicate
LCS/LCSD:	Laboratory Control Sample/Laboratory Control Sample Duplicate
RPD:	Relative Percent Difference

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA	Date Received: 05/07/09
28202 Cabot Road, Suite 425	Work Order No: 09-05-0616
Laguna Niguel, CA 92677-1271	Preparation: EPA 3050B / EPA 7471A Total
	Method: EPA 6020 / EPA 7471A
	Units: mg/kg
Project: Newport Harbor	Page 1 of 2

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S3/4	**09-05-0616-1-A**	**05/07/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 21:37**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:13:17 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.624	1		Mercury	ND	0.104	1	
Arsenic	1.56	0.125	1		Nickel	1.41	0.125	1	
Beryllium	ND	0.125	1		Selenium	0.164	0.125	1	
Cadmium	ND	0.125	1		Silver	ND	0.125	1	
Chromium	1.91	0.125	1		Thallium	ND	0.125	1	
Copper	6.28	0.125	1		Zinc	8.14	1.25	1	
Lead	0.637	0.125	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S7	**09-05-0616-2-A**	**05/07/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 21:43**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:15:32 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.656	1		Mercury	ND	0.110	1	
Arsenic	2.61	0.131	1		Nickel	5.16	0.131	1	
Beryllium	ND	0.131	1		Selenium	0.221	0.131	1	
Cadmium	ND	0.131	1		Silver	ND	0.131	1	
Chromium	8.20	0.131	1		Thallium	ND	0.131	1	
Copper	7.75	0.131	1		Zinc	23.5	1.31	1	
Lead	1.08	0.131	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S11	**09-05-0616-3-A**	**05/07/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 21:32**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:17:47 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.678	1		Mercury	ND	0.113	1	
Arsenic	2.00	0.136	1		Nickel	2.09	0.136	1	
Beryllium	ND	0.136	1		Selenium	0.222	0.136	1	
Cadmium	ND	0.136	1		Silver	ND	0.136	1	
Chromium	4.08	0.136	1		Thallium	ND	0.136	1	
Copper	14.3	0.136	1		Zinc	12.5	1.36	1	
Lead	0.751	0.136	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received:	05/07/09
Work Order No:	09-05-0616
Preparation:	EPA 3050B / EPA 7471A Total
Method:	EPA 6020 / EPA 7471A
Units:	mg/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP	**09-05-0616-4-A**	**05/07/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 21:48**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:24:32 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.618	1		Mercury	ND	0.103	1	
Arsenic	2.20	0.124	1		Nickel	3.46	0.124	1	
Beryllium	ND	0.124	1		Selenium	0.125	0.124	1	
Cadmium	ND	0.124	1		Silver	ND	0.124	1	
Chromium	5.73	0.124	1		Thallium	ND	0.124	1	
Copper	11.7	0.124	1		Zinc	19.5	1.24	1	
Lead	0.865	0.124	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5-A**	**05/07/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 22:11**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:26:48 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.635	1		Mercury	ND	0.106	1	
Arsenic	2.60	0.127	1		Nickel	3.51	0.127	1	
Beryllium	ND	0.127	1		Selenium	0.238	0.127	1	
Cadmium	ND	0.127	1		Silver	ND	0.127	1	
Chromium	5.75	0.127	1		Thallium	ND	0.127	1	
Copper	12.7	0.127	1		Zinc	18.2	1.27	1	
Lead	0.914	0.127	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,503**	**N/A**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/14/09 10:18**	**090508L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.500	1		Lead	ND	0.100	1	
Arsenic	ND	0.100	1		Nickel	ND	0.100	1	
Beryllium	ND	0.100	1		Selenium	ND	0.100	1	
Cadmium	ND	0.100	1		Silver	ND	0.100	1	
Chromium	ND	0.100	1		Thallium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-007-6,279**	**N/A**	**Solid**	**Mercury**	**05/08/09**	**05/08/09 14:57**	**090508L02**

Parameter	Result	RL	DF	Qual
Mercury	ND	0.0835	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	Organotins by Krone et al.
		Units:	ug/kg

Project: Newport Harbor

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S3/4	**09-05-0616-1-A**	**05/07/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 12:22**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.7	1		Tetrabutyltin	ND	3.7	1	
Monobutyltin	ND	3.7	1		Tributyltin	ND	3.7	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	113	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S7	**09-05-0616-2-A**	**05/07/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 12:53**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.9	1		Tetrabutyltin	ND	3.9	1	
Monobutyltin	ND	3.9	1		Tributyltin	ND	3.9	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	111	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S11	**09-05-0616-3-A**	**05/07/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 13:26**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	4.1	1		Tetrabutyltin	ND	4.1	1	
Monobutyltin	ND	4.1	1		Tributyltin	ND	4.1	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	112	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP	**09-05-0616-4-A**	**05/07/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 13:58**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.7	1		Tetrabutyltin	ND	3.7	1	
Monobutyltin	ND	3.7	1		Tributyltin	ND	3.7	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	121	50-130							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	Organotins by Krone et al.
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5-A**	**05/07/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 14:30**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.8	1		Tetrabutyltin	ND	3.8	1	
Monobutyltin	ND	3.8	1		Tributyltin	ND	3.8	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	123	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-016-653**	**N/A**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 11:17**	**090514L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.0	1		Tetrabutyltin	ND	3.0	1	
Monobutyltin	ND	3.0	1		Tributyltin	ND	3.0	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	79	50-130							

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA	Date Received: 05/07/09
28202 Cabot Road, Suite 425	Work Order No: 09-05-0616
Laguna Niguel, CA 92677-1271	Preparation: EPA 3545
	Method: EPA 8270C SIM PAHs
	Units: ug/kg

Project: Newport Harbor

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S3/4	**09-05-0616-1-A**	**05/07/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 15:50**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	25	1		Benzo (b) Fluoranthene	ND	25	1	
2-Methylnaphthalene	ND	25	1		Benzo (a) Pyrene	ND	25	1	
Acenaphthylene	ND	25	1		Benzo (g,h,i) Perylene	ND	25	1	
Acenaphthene	ND	25	1		Indeno (1,2,3-c,d) Pyrene	ND	25	1	
Fluorene	ND	25	1		Dibenz (a,h) Anthracene	ND	25	1	
Phenanthrene	ND	25	1		1-Methylnaphthalene	ND	25	1	
Anthracene	ND	25	1		Benzo (e) Pyrene	ND	25	1	
Fluoranthene	ND	25	1		Perylene	ND	25	1	
Pyrene	ND	25	1		Biphenyl	ND	25	1	
Benzo (a) Anthracene	ND	25	1		1-Methylphenanthrene	ND	25	1	
Chrysene	ND	25	1		2,6-Dimethylnaphthalene	ND	25	1	
Benzo (k) Fluoranthene	ND	25	1		1,6,7-Trimethylnaphthalene	ND	25	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	111	18-162		2-Fluorobiphenyl	87	14-146	
p-Terphenyl-d14	69	34-148					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S7	**09-05-0616-2-A**	**05/07/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 16:35**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	26	1		Benzo (b) Fluoranthene	ND	26	1	
2-Methylnaphthalene	ND	26	1		Benzo (a) Pyrene	ND	26	1	
Acenaphthylene	ND	26	1		Benzo (g,h,i) Perylene	ND	26	1	
Acenaphthene	ND	26	1		Indeno (1,2,3-c,d) Pyrene	ND	26	1	
Fluorene	ND	26	1		Dibenz (a,h) Anthracene	ND	26	1	
Phenanthrene	ND	26	1		1-Methylnaphthalene	ND	26	1	
Anthracene	ND	26	1		Benzo (e) Pyrene	ND	26	1	
Fluoranthene	ND	26	1		Perylene	ND	26	1	
Pyrene	ND	26	1		Biphenyl	ND	26	1	
Benzo (a) Anthracene	ND	26	1		1-Methylphenanthrene	ND	26	1	
Chrysene	ND	26	1		2,6-Dimethylnaphthalene	ND	26	1	
Benzo (k) Fluoranthene	ND	26	1		1,6,7-Trimethylnaphthalene	ND	26	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	124	18-162		2-Fluorobiphenyl	91	14-146	
p-Terphenyl-d14	73	34-148					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S11	**09-05-0616-3-A**	**05/07/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 17:20**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	27	1		Benzo (b) Fluoranthene	ND	27	1	
2-Methylnaphthalene	ND	27	1		Benzo (a) Pyrene	ND	27	1	
Acenaphthylene	ND	27	1		Benzo (g,h,i) Perylene	ND	27	1	
Acenaphthene	ND	27	1		Indeno (1,2,3-c,d) Pyrene	ND	27	1	
Fluorene	ND	27	1		Dibenz (a,h) Anthracene	ND	27	1	
Phenanthrene	ND	27	1		1-Methylnaphthalene	ND	27	1	
Anthracene	ND	27	1		Benzo (e) Pyrene	ND	27	1	
Fluoranthene	ND	27	1		Perylene	ND	27	1	
Pyrene	ND	27	1		Biphenyl	ND	27	1	
Benzo (a) Anthracene	ND	27	1		1-Methylphenanthrene	ND	27	1	
Chrysene	ND	27	1		2,6-Dimethylnaphthalene	ND	27	1	
Benzo (k) Fluoranthene	ND	27	1		1,6,7-Trimethylnaphthalene	ND	27	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	129	18-162			2-Fluorobiphenyl	101	14-146		
p-Terphenyl-d14	83	34-148							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP	**09-05-0616-4-A**	**05/07/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 18:06**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	25	1		Benzo (b) Fluoranthene	ND	25	1	
2-Methylnaphthalene	ND	25	1		Benzo (a) Pyrene	ND	25	1	
Acenaphthylene	ND	25	1		Benzo (g,h,i) Perylene	ND	25	1	
Acenaphthene	ND	25	1		Indeno (1,2,3-c,d) Pyrene	ND	25	1	
Fluorene	ND	25	1		Dibenz (a,h) Anthracene	ND	25	1	
Phenanthrene	ND	25	1		1-Methylnaphthalene	ND	25	1	
Anthracene	ND	25	1		Benzo (e) Pyrene	ND	25	1	
Fluoranthene	ND	25	1		Perylene	ND	25	1	
Pyrene	ND	25	1		Biphenyl	ND	25	1	
Benzo (a) Anthracene	ND	25	1		1-Methylphenanthrene	ND	25	1	
Chrysene	ND	25	1		2,6-Dimethylnaphthalene	ND	25	1	
Benzo (k) Fluoranthene	ND	25	1		1,6,7-Trimethylnaphthalene	ND	25	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	122	18-162			2-Fluorobiphenyl	95	14-146		
p-Terphenyl-d14	77	34-148							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5-A**	**05/07/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 18:51**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	25	1		Benzo (b) Fluoranthene	ND	25	1	
2-Methylnaphthalene	ND	25	1		Benzo (a) Pyrene	ND	25	1	
Acenaphthylene	ND	25	1		Benzo (g,h,i) Perylene	ND	25	1	
Acenaphthene	ND	25	1		Indeno (1,2,3-c,d) Pyrene	ND	25	1	
Fluorene	ND	25	1		Dibenz (a,h) Anthracene	ND	25	1	
Phenanthrene	ND	25	1		1-Methylnaphthalene	ND	25	1	
Anthracene	ND	25	1		Benzo (e) Pyrene	ND	25	1	
Fluoranthene	ND	25	1		Perylene	ND	25	1	
Pyrene	ND	25	1		Biphenyl	ND	25	1	
Benzo (a) Anthracene	ND	25	1		1-Methylphenanthrene	ND	25	1	
Chrysene	ND	25	1		2,6-Dimethylnaphthalene	ND	25	1	
Benzo (k) Fluoranthene	ND	25	1		1,6,7-Trimethylnaphthalene	ND	25	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	69	18-162			2-Fluorobiphenyl	55	14-146		
p-Terphenyl-d14	43	34-148							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-471-23**	**N/A**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 12:00**	**090511L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	20	1		Benzo (b) Fluoranthene	ND	20	1	
2-Methylnaphthalene	ND	20	1		Benzo (a) Pyrene	ND	20	1	
Acenaphthylene	ND	20	1		Benzo (g,h,i) Perylene	ND	20	1	
Acenaphthene	ND	20	1		Indeno (1,2,3-c,d) Pyrene	ND	20	1	
Fluorene	ND	20	1		Dibenz (a,h) Anthracene	ND	20	1	
Phenanthrene	ND	20	1		1-Methylnaphthalene	ND	20	1	
Anthracene	ND	20	1		Benzo (e) Pyrene	ND	20	1	
Fluoranthene	ND	20	1		Perylene	ND	20	1	
Pyrene	ND	20	1		Biphenyl	ND	20	1	
Benzo (a) Anthracene	ND	20	1		1-Methylphenanthrene	ND	20	1	
Chrysene	ND	20	1		2,6-Dimethylnaphthalene	ND	20	1	
Benzo (k) Fluoranthene	ND	20	1		1,6,7-Trimethylnaphthalene	ND	20	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	76	18-162			2-Fluorobiphenyl	56	14-146		
p-Terphenyl-d14	49	34-148							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Newport Harbor

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S3/4	**09-05-0616-1-A**	**05/07/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 15:45**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	142	50-130		2	Decachlorobiphenyl	123	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S7	**09-05-0616-2-A**	**05/07/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 16:04**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	13	1		Aroclor-1248	ND	13	1	
Aroclor-1221	ND	13	1		Aroclor-1254	ND	13	1	
Aroclor-1232	ND	13	1		Aroclor-1260	ND	13	1	
Aroclor-1242	ND	13	1		Aroclor-1262	ND	13	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	128	50-130			Decachlorobiphenyl	115	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S11	**09-05-0616-3-A**	**05/07/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 13:36**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	14	1		Aroclor-1248	ND	14	1	
Aroclor-1221	ND	14	1		Aroclor-1254	ND	14	1	
Aroclor-1232	ND	14	1		Aroclor-1260	ND	14	1	
Aroclor-1242	ND	14	1		Aroclor-1262	ND	14	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	127	50-130			Decachlorobiphenyl	110	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Anchor QEA	Date Received: 05/07/09
28202 Cabot Road, Suite 425	Work Order No: 09-05-0616
Laguna Niguel, CA 92677-1271	Preparation: EPA 3545
	Method: EPA 8082
	Units: ug/kg

Project: Newport Harbor

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP	**09-05-0616-4-A**	**05/07/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 17:38**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	111	50-130			Decachlorobiphenyl	99	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5-A**	**05/07/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 17:19**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	13	1		Aroclor-1248	ND	13	1	
Aroclor-1221	ND	13	1		Aroclor-1254	ND	13	1	
Aroclor-1232	ND	13	1		Aroclor-1260	ND	13	1	
Aroclor-1242	ND	13	1		Aroclor-1262	ND	13	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	136	50-130		2	Decachlorobiphenyl	116	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-565-106**	**N/A**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 11:41**	**090511L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	10	1		Aroclor-1248	ND	10	1	
Aroclor-1221	ND	10	1		Aroclor-1254	ND	10	1	
Aroclor-1232	ND	10	1		Aroclor-1260	ND	10	1	
Aroclor-1242	ND	10	1		Aroclor-1262	ND	10	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	107	50-130			Decachlorobiphenyl	88	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg

Project: Newport Harbor | Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S3/4	**09-05-0616-1-A**	**05/07/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 16:26**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	25	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	104	50-130		Decachlorobiphenyl	81	50-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S7	**09-05-0616-2-A**	**05/07/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 16:53**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.3	1		4,4'-DDT	ND	1.3	1	
Alpha-BHC	ND	1.3	1		Endosulfan I	ND	1.3	1	
Beta-BHC	ND	1.3	1		Endosulfan II	ND	1.3	1	
Delta-BHC	ND	1.3	1		Endosulfan Sulfate	ND	1.3	1	
Gamma-BHC	ND	1.3	1		Endrin	ND	1.3	1	
Chlordane	ND	13	1		Endrin Aldehyde	ND	1.3	1	
Dieldrin	ND	1.3	1		Endrin Ketone	ND	1.3	1	
Trans-nonachlor	ND	1.3	1		Heptachlor	ND	1.3	1	
Cis-nonachlor	ND	1.3	1		Heptachlor Epoxide	ND	1.3	1	
2,4'-DDD	ND	1.3	1		Methoxychlor	ND	1.3	1	
2,4'-DDE	ND	1.3	1		Toxaphene	ND	26	1	
2,4'-DDT	ND	1.3	1		Alpha Chlordane	ND	1.3	1	
4,4'-DDD	ND	1.3	1		Gamma Chlordane	ND	1.3	1	
4,4'-DDE	ND	1.3	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	102	50-130		Decachlorobiphenyl	79	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-S11	**09-05-0616-3-A**	**05/07/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 15:59**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.4	1		4,4'-DDT	ND	1.4	1	
Alpha-BHC	ND	1.4	1		Endosulfan I	ND	1.4	1	
Beta-BHC	ND	1.4	1		Endosulfan II	ND	1.4	1	
Delta-BHC	ND	1.4	1		Endosulfan Sulfate	ND	1.4	1	
Gamma-BHC	ND	1.4	1		Endrin	ND	1.4	1	
Chlordane	ND	14	1		Endrin Aldehyde	ND	1.4	1	
Dieldrin	ND	1.4	1		Endrin Ketone	ND	1.4	1	
2,4'-DDD	ND	1.4	1		Heptachlor	ND	1.4	1	
Trans-nonachlor	ND	1.4	1		Heptachlor Epoxide	ND	1.4	1	
Cis-nonachlor	ND	1.4	1		Methoxychlor	ND	1.4	1	
2,4'-DDE	ND	1.4	1		Toxaphene	ND	27	1	
2,4'-DDT	ND	1.4	1		Alpha Chlordane	ND	1.4	1	
4,4'-DDD	ND	1.4	1		Gamma Chlordane	ND	1.4	1	
4,4'-DDE	ND	1.4	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	106	50-130		Decachlorobiphenyl	80	50-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP	**09-05-0616-4-A**	**05/07/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 17:20**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	25	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	95	50-130		Decachlorobiphenyl	76	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5-A**	**05/07/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 17:48**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.3	1		4,4'-DDT	ND	1.3	1	
Alpha-BHC	ND	1.3	1		Endosulfan I	ND	1.3	1	
Beta-BHC	ND	1.3	1		Endosulfan II	ND	1.3	1	
Delta-BHC	ND	1.3	1		Endosulfan Sulfate	ND	1.3	1	
Gamma-BHC	ND	1.3	1		Endrin	ND	1.3	1	
Chlordane	ND	13	1		Endrin Aldehyde	ND	1.3	1	
Dieldrin	ND	1.3	1		Endrin Ketone	ND	1.3	1	
Trans-nonachlor	ND	1.3	1		Heptachlor	ND	1.3	1	
2,4'-DDD	ND	1.3	1		Heptachlor Epoxide	ND	1.3	1	
Cis-nonachlor	ND	1.3	1		Methoxychlor	ND	1.3	1	
2,4'-DDE	ND	1.3	1		Toxaphene	ND	25	1	
2,4'-DDT	ND	1.3	1		Alpha Chlordane	ND	1.3	1	
4,4'-DDD	ND	1.3	1		Gamma Chlordane	ND	1.3	1	
4,4'-DDE	ND	1.3	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	112	50-130			Decachlorobiphenyl	86	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-858-29**	**N/A**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 12:21**	**090511L05**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.0	1		4,4'-DDT	ND	1.0	1	
Alpha-BHC	ND	1.0	1		Endosulfan I	ND	1.0	1	
Beta-BHC	ND	1.0	1		Endosulfan II	ND	1.0	1	
Delta-BHC	ND	1.0	1		Endosulfan Sulfate	ND	1.0	1	
Gamma-BHC	ND	1.0	1		Endrin	ND	1.0	1	
Chlordane	ND	10	1		Endrin Aldehyde	ND	1.0	1	
Dieldrin	ND	1.0	1		Endrin Ketone	ND	1.0	1	
Trans-nonachlor	ND	1.0	1		Heptachlor	ND	1.0	1	
2,4'-DDD	ND	1.0	1		Heptachlor Epoxide	ND	1.0	1	
Cis-nonachlor	ND	1.0	1		Methoxychlor	ND	1.0	1	
2,4'-DDE	ND	1.0	1		Toxaphene	ND	20	1	
2,4'-DDT	ND	1.0	1		Alpha Chlordane	ND	1.0	1	
4,4'-DDD	ND	1.0	1		Gamma Chlordane	ND	1.0	1	
4,4'-DDE	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	104	50-130			Decachlorobiphenyl	101	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-3-S3/4	**09-05-0616-1**	**05/07/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	0.37	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	1200	620	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	80.1	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.35	0.25	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-3-S7	**09-05-0616-2**	**05/07/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	0.66	0.13	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.13	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	1000	660	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	76.2	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.37	0.26	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-3-S11	**09-05-0616-3**	**05/07/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	0.27	0.14	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.14	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	810	680	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	73.8	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.76	0.27	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271			

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-3-COMP	**09-05-0616-4**	**05/07/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	1.2	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	740	620	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	80.9	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.69	0.25	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-3-COMP (LAB DUPLICATE)	**09-05-0616-5**	**05/07/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	1.3	0.13	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.13	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	1000	640	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	78.7	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.71	0.25	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
Method Blank		**N/A**	**Solid**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total	ND	0.10	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved	ND	0.10	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic	ND	500	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	ND	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N)	ND	0.20	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3050B
Method: EPA 6020

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	79	83	80-120	5	0-20	3
Arsenic	101	108	80-120	6	0-20	
Beryllium	109	113	80-120	3	0-20	
Cadmium	102	105	80-120	3	0-20	
Chromium	100	101	80-120	1	0-20	
Copper	111	105	80-120	4	0-20	
Lead	99	101	80-120	2	0-20	
Nickel	103	105	80-120	2	0-20	
Selenium	101	103	80-120	2	0-20	
Silver	99	102	80-120	3	0-20	
Thallium	97	101	80-120	4	0-20	
Zinc	106	106	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3050B
Method: EPA 6020

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
CNB-CAD-3-S11	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508S07**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	104	103	75-125	1	0-20	
Arsenic	106	110	75-125	4	0-20	
Beryllium	113	109	75-125	4	0-20	
Cadmium	105	103	75-125	1	0-20	
Chromium	96	94	75-125	2	0-20	
Copper	106	102	75-125	3	0-20	
Lead	100	101	75-125	1	0-20	
Nickel	103	101	75-125	2	0-20	
Selenium	104	101	75-125	3	0-20	
Silver	104	100	75-125	4	0-20	
Thallium	101	102	75-125	1	0-20	
Zinc	104	101	75-125	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received:	05/07/09
Work Order No:	09-05-0616
Preparation:	EPA 7471A Total
Method:	EPA 7471A

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	112	112	71-137	0	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
CNB-CAD-3-S11	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508S02**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	107	110	75-125	3	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: Organotins by Krone et al.

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**GC/MS Y**	**05/14/09**	**05/15/09**	**090514S12**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	112	126	50-130	11	0-20	
Tributyltin	120	145	50-130	19	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/07/09
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09**	**090511S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	138	138	40-160	0	0-20	
2-Methylnaphthalene	141	142	40-160	0	0-20	
Acenaphthylene	132	131	40-160	0	0-20	
Acenaphthene	137	138	40-160	0	0-20	
Fluorene	139	139	40-160	0	0-20	
Phenanthrene	141	138	40-160	2	0-20	
Anthracene	117	122	40-160	4	0-20	
Fluoranthene	116	126	40-160	8	0-20	
Pyrene	122	120	40-160	2	0-46	
Benzo (a) Anthracene	131	132	40-160	1	0-20	
Chrysene	129	125	40-160	3	0-20	
Benzo (k) Fluoranthene	147	146	40-160	1	0-20	
Benzo (b) Fluoranthene	150	154	40-160	3	0-20	
Benzo (a) Pyrene	143	143	40-160	0	0-20	
Benzo (g,h,i) Perylene	135	133	40-160	2	0-20	
Indeno (1,2,3-c,d) Pyrene	158	149	40-160	6	0-20	
Dibenz (a,h) Anthracene	138	136	40-160	2	0-20	
1-Methylnaphthalene	141	141	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA		Date Received:	05/07/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8082

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**GC 31**	**05/11/09**	**05/18/09**	**090511S06**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1016	120	126	50-135	5	0-25	
Aroclor-1260	90	96	50-135	6	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received:	05/07/09
Work Order No:	09-05-0616
Preparation:	EPA 3545
Method:	EPA 8081A

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CNB-CAD-3-S11	**Solid**	**GC 51**	**05/11/09**	**05/19/09**	**090511S05**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aldrin	96	94	50-135	2	0-25	
Alpha-BHC	89	88	50-135	1	0-25	
Beta-BHC	99	97	50-135	2	0-25	
Delta-BHC	106	103	50-135	2	0-25	
Gamma-BHC	93	92	50-135	2	0-25	
Dieldrin	87	85	50-135	2	0-25	
4,4'-DDD	94	89	50-135	5	0-25	
4,4'-DDE	99	97	50-135	2	0-25	
4,4'-DDT	91	88	50-135	3	0-25	
Endosulfan I	88	86	50-135	2	0-25	
Endosulfan II	87	84	50-135	4	0-25	
Endosulfan Sulfate	84	80	50-135	4	0-25	
Endrin	99	96	50-135	3	0-25	
Endrin Aldehyde	66	73	50-135	10	0-25	
Endrin Ketone	83	75	50-135	9	0-25	
Heptachlor	100	98	50-135	2	0-25	
Heptachlor Epoxide	88	87	50-135	1	0-25	
Methoxychlor	91	88	50-135	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616

Project: Newport Harbor

Matrix: Solid

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	MS% REC	MSD % REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	EPA 9060A	CNB-CAD-3-S11	05/07/09	N/A	94	93	75-125	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616

Project: Newport Harbor

Matrix: Solid

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Sulfide, Total	EPA 376.2M	CNB-CAD-3-S11	05/12/09	0.27	0.27	0	0-25	
Sulfide, Dissolved	EPA 376.2M	CNB-CAD-3-S11	05/11/09	ND	ND	NA	0-25	
Ammonia (as N)	SM 4500-NH3 B/C (M)	CNB-CAD-3-S11	05/15/09	0.76	0.76	0	0-25	
Solids, Total	SM 2540 B	CNB-CAD-3-S11	05/12/09	73.8	72.7	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616
Preparation: EPA 3050B
Method: EPA 6020

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,503	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Antimony	92	92	80-120	73-127	1	0-20	
Arsenic	90	83	80-120	73-127	8	0-20	
Beryllium	108	111	80-120	73-127	2	0-20	
Cadmium	100	98	80-120	73-127	1	0-20	
Chromium	91	92	80-120	73-127	0	0-20	
Copper	103	102	80-120	73-127	1	0-20	
Lead	96	96	80-120	73-127	0	0-20	
Nickel	98	99	80-120	73-127	1	0-20	
Selenium	96	94	80-120	73-127	2	0-20	
Silver	99	99	80-120	73-127	0	0-20	
Thallium	99	96	80-120	73-127	2	0-20	
Zinc	100	99	80-120	73-127	1	0-20	

Total number of LCS compounds : 12
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA		Date Received:	N/A
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 7471A Total
		Method:	EPA 7471A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-007-6,279	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	102	101	85-121	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA		Date Received:	N/A
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	Organotins by Krone et al.

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-653	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09**	**090514L12**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	94	90	50-130	4	0-20	
Tributyltin	91	104	50-130	13	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-471-23	**Solid**	**GC/MS MM**	**05/11/09**	**05/16/09**	**090511L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Naphthalene	77	77	40-160	20-180	0	0-20	
2-Methylnaphthalene	78	78	40-160	20-180	1	0-20	
Acenaphthylene	73	74	40-160	20-180	1	0-20	
Acenaphthene	79	79	48-108	38-118	0	0-11	
Fluorene	77	77	40-160	20-180	1	0-20	
Phenanthrene	80	80	40-160	20-180	0	0-20	
Anthracene	59	59	40-160	20-180	1	0-20	
Fluoranthene	74	75	40-160	20-180	1	0-20	
Pyrene	79	77	40-160	20-180	2	0-16	
Benzo (a) Anthracene	76	77	40-160	20-180	0	0-20	
Chrysene	73	73	40-160	20-180	1	0-20	
Benzo (k) Fluoranthene	77	80	40-160	20-180	3	0-20	
Benzo (b) Fluoranthene	84	85	40-160	20-180	2	0-20	
Benzo (a) Pyrene	78	79	40-160	20-180	1	0-20	
Benzo (g,h,i) Perylene	77	74	40-160	20-180	3	0-20	
Indeno (1,2,3-c,d) Pyrene	82	82	40-160	20-180	0	0-20	
Dibenz (a,h) Anthracene	66	65	40-160	20-180	1	0-20	
1-Methylnaphthalene	77	78	40-160	20-180	2	0-20	

Total number of LCS compounds : 18
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA		Date Received:	N/A
28202 Cabot Road, Suite 425		Work Order No:	09-05-0616
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8082

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-565-106	**Solid**	**GC 31**	**05/11/09**	**05/18/09**	**090511L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1016	118	99	50-135	17	0-25	
Aroclor-1260	107	94	50-135	12	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616
Preparation: EPA 3545
Method: EPA 8081A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-858-29	**Solid**	**GC 51**	**05/11/09**	**05/19/09**	**090511L05**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Aldrin	99	91	50-135	36-149	8	0-25	
Alpha-BHC	100	92	50-135	36-149	8	0-25	
Beta-BHC	100	93	50-135	36-149	7	0-25	
Delta-BHC	106	97	50-135	36-149	9	0-25	
Gamma-BHC	101	93	50-135	36-149	8	0-25	
Dieldrin	98	91	50-135	36-149	7	0-25	
4,4'-DDD	100	93	50-135	36-149	6	0-25	
4,4'-DDE	95	92	50-135	36-149	3	0-25	
4,4'-DDT	99	92	50-135	36-149	7	0-25	
Endosulfan I	94	90	50-135	36-149	4	0-25	
Endosulfan II	95	89	50-135	36-149	6	0-25	
Endosulfan Sulfate	96	90	50-135	36-149	7	0-25	
Endrin	103	95	50-135	36-149	8	0-25	
Endrin Aldehyde	98	90	50-135	36-149	8	0-25	
Endrin Ketone	91	86	50-135	36-149	6	0-25	
Heptachlor	102	94	50-135	36-149	8	0-25	
Heptachlor Epoxide	93	91	50-135	36-149	3	0-25	
Methoxychlor	96	90	50-135	36-149	7	0-25	

Total number of LCS compounds : 18
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0616

Project: Newport Harbor

Matrix : Solid

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Carbon, Total Organic	EPA 9060A	099-06-013-380	05/07/09	N/A	6000	5440	91	80-120	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-05-0616

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Chain of Custody Record & Laboratory Analysis Request

Page 1 of 1 Turnaround Requested: standard
Anchor Contact: Tracy Stofferahn

0616

ANCHOR ENVIRONMENTAL CA, L.P.
28202 Cabot Road, Suite ~~620~~ 425
Laguna Niguel, CA 92677
Ph: (949) 347-2780 Fax: (949) 347-2781

Lab Contact: Danielle Gonsman	Proj. Name: Newport Harbor
Lab: Calscience	Proj. Number: 090243-01
Address: 7440 Lincoln Way, Garden Grove, CA 92841	Sampler: MPW / TLS
Phone: 714-895-5494	Shipping Method: CEL Pick-up
Fax: 714-894-7501	AirBill:

Analyses Requested:

Sample ID	Sample Date	Sample Time	Sample Martix	# Containers	EPA 6020 / 7471 Priority Pollutant Metals / Mercury	EPA 8082 PCBs	EPA 8081A OC Pesticides	ASTM D4464 Grain Size	EPA 8270 OC SIMS PAHs	EPA 9060A TOC	SM 2540 B Total Solids	Krone et al. Organotins	SM 4500-NH3 Ammonia	EPA 376.2 M Sulfide (Total + Dissolved)	Notes/ Comments
CNB-CAD-3-S3/4	5-7-09		SED	2	X	X	X		X	X	X	X	X	X	
CNB-CAD-3-S7	↓		↓	3	X	X	X	X	X	X	X	X	X	X	
CNB-CAD-3-S11	↓		↓	4	X	X	X	X	X	X	X	X	X	X	extra-matrix spike
CNB-CAD-3-COMP	↓		↓	5	X	X	X	X	X	X	X	X	X	X	extra-dup

Relinquished: (Signature) [signature]	Relinquished: (Signature) [signature]	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Mark Reemts	Printed Name: Phuong Le	Printed Name:	
Company: Anchor QEA	Company: CEL	Company:	
Date/Time: 5/7/09 2:30pm	Date/Time: 5/7/09 1605	Date/Time:	
Received By: [signature]	Received By: [signature]	Received By:	
Printed Name: Phuong Le	Printed Name: J. Patel	Printed Name:	
Company: CEL	Company: CEL	Company:	# of Coolers: / Cooler Temp(s):
Date/Time: 5/7/09 1430	Date/Time: 5/7/09 1605	Date/Time:	COC Seals Intact? / Bottles Intact?

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05- 0 6 1 6

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ANCHOR DATE: 5/7/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 4.4 °C - 0.2 °C (CF) = 4.2 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** pl

CUSTODY SEALS INTACT:

☐ Cooler ☐________ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** pl

☐ Sample ☐________ ☐ No (Not Intact) ☑ Not Present **Initial:** [illegible]

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☑16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐________

Water: ☐VOA ☐VOAh ☐VOAna₂ ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna₂ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PB ☐100PBna₂ ☐______ ☐______ ☐______

Air: ☐Tedlar® ☐Summa® ☐______ **Other:** ☐____________ **Checked/Labeled by:** [illegible]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** YL

Preservative: h: HCL n: HNO3 na₂: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** YL

SOP T100_090 (03/13/09)

PTS Laboratories, Inc.

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

May 22, 2009

Danielle Gonsman
Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427

Re: PTS File No: 39401
09-05-0616

Dear Ms. Gonsman:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your 09-05-0616 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. An electronic version of the report has previously been sent to your attention via the internet. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2504.

Sincerely,
PTS Laboratories

Rachel Spitz
Project Manager

Encl.

PTS Laboratories

Project Name: N/A
Project Number: 09-05-0616

PTS File No: 39401
Client: Calscience

TEST PROGRAM

CORE ID	Depth ft.	Core Recovery ft.	Grain Size Analysis ASTM D4464M						Notes
		Plugs:	Grab						
Rcvd. 5/11/09									
CNB-CAD-3-COMP	N/A	N/A	X						
CNB-CAD-3-S7	N/A	N/A	X						
CNB-CAD-3-S11	N/A	N/A	X						
TOTALS:	3 Jars		3						

Laboratory Test Program Notes

PTS Laboratories, Inc.

Calscience
PTS File No: 39401

PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: N/A
PROJECT NO: 09-05-0616

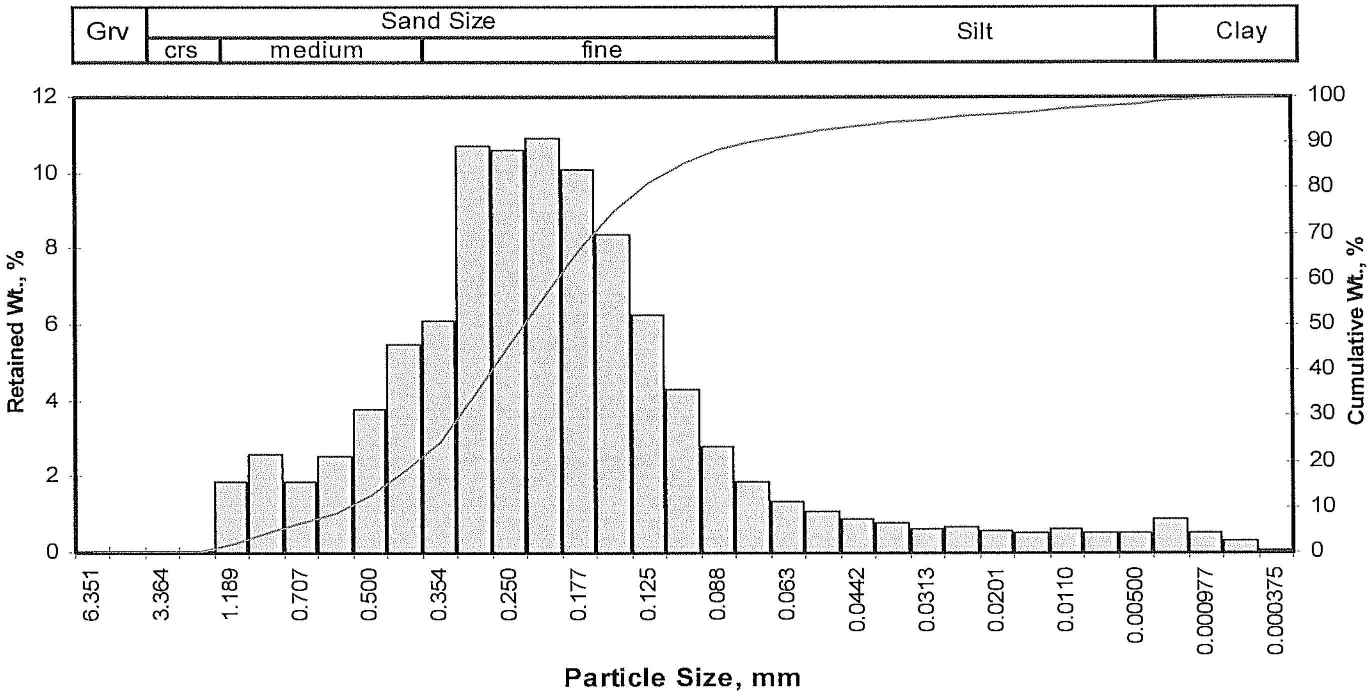
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
					Sand Size					
				Gravel	Coarse	Medium	Fine	Silt	Clay	
CNB-CAD-3-COMP	N/A	Fine sand	0.233	0.00	0.00	18.10	72.05	8.14	1.71	9.85
CNB-CAD-3-S7	N/A	Fine sand	0.157	0.00	0.00	12.27	72.17	13.43	2.14	15.56
CNB-CAD-3-S11	N/A	Fine sand	0.260	0.00	0.00	18.91	73.46	6.29	1.33	7.63

(1) Based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39401
Project:	N/A	**Sample ID:**	CNB-CAD-3-COMP
Project No:	09-05-0616	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	1.87	1.87	1.87
0.0331	0.841	0.25	20	2.56	2.56	4.43
0.0278	0.707	0.50	25	1.85	1.85	6.29
0.0234	0.595	0.75	30	2.54	2.54	8.83
0.0197	0.500	1.00	35	3.78	3.78	12.61
0.0166	0.420	1.25	40	5.48	5.49	18.10
0.0139	0.354	1.50	45	6.09	6.10	24.19
0.0117	0.297	1.75	50	10.70	10.71	34.90
0.0098	0.250	2.00	60	10.60	10.61	45.52
0.0083	0.210	2.25	70	10.90	10.91	56.43
0.0070	0.177	2.50	80	10.10	10.11	66.54
0.0059	0.149	2.75	100	8.36	8.37	74.90
0.0049	0.125	3.00	120	6.25	6.26	81.16
0.0041	0.105	3.25	140	4.29	4.29	85.46
0.0035	0.088	3.50	170	2.81	2.81	88.27
0.0029	0.074	3.75	200	1.88	1.88	90.15
0.0025	0.063	4.00	230	1.36	1.36	91.51
0.0021	0.053	4.25	270	1.07	1.07	92.58
0.00174	0.0442	4.50	325	0.89	0.89	93.47
0.00146	0.0372	4.75	400	0.75	0.75	94.22
0.00123	0.0313	5.00	450	0.64	0.64	94.86
0.000986	0.0250	5.32	500	0.68	0.68	95.55
0.000790	0.0201	5.64	635	0.57	0.57	96.12
0.000615	0.0156	6.00		0.53	0.53	96.65
0.000435	0.0110	6.50		0.61	0.61	97.26
0.000308	0.00781	7.00		0.50	0.50	97.76
0.000197	0.00500	7.65		0.53	0.53	98.29
0.000077	0.00195	9.00		0.87	0.87	99.16
0.000038	0.000977	10.00		0.51	0.51	99.67
0.000019	0.000488	11.00		0.30	0.30	99.97
0.000015	0.000375	11.38		0.03	0.03	100.00
TOTALS				**99.90**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.33	0.0314	0.798
10	0.83	0.0222	0.564
16	1.15	0.0177	0.449
25	1.52	0.0137	0.349
40	1.87	0.0108	0.274
50	2.10	0.0092	0.233
60	2.34	0.0078	0.198
75	2.75	0.0058	0.148
84	3.17	0.0044	0.111
90	3.73	0.0030	0.075
95	5.06	0.0012	0.030

Measure	Trask	Inman	Folk-Ward
Median, phi	2.10	2.10	2.10
Median, in.	0.0092	0.0092	0.0092
Median, mm	0.233	0.233	0.233
Mean, phi	2.01	2.16	2.14
Mean, in.	0.0098	0.0088	0.0089
Mean, mm	0.249	0.224	0.227
Sorting	1.534	1.005	1.220
Skewness	0.977	0.057	0.153
Kurtosis	0.206	1.356	1.572

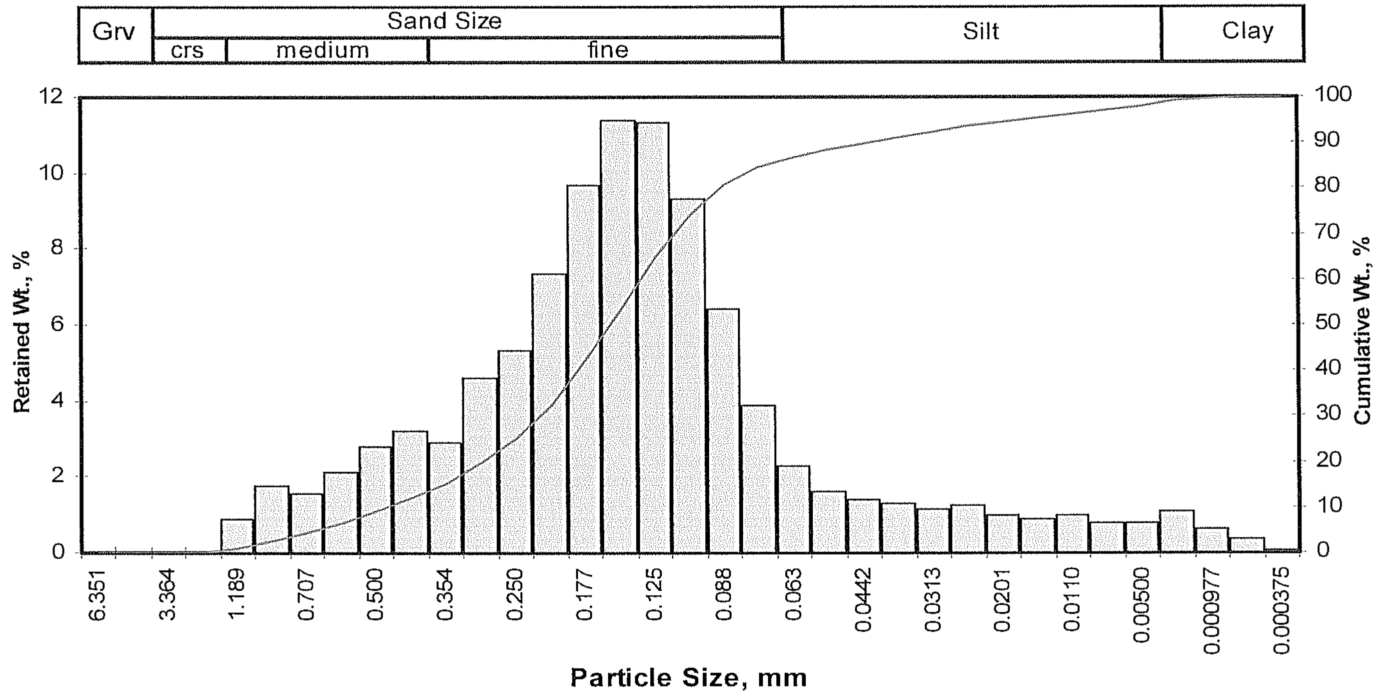
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	18.10
Fine Sand	200	72.05
Silt	>0.005 mm	8.14
Clay	<0.005 mm	1.71
	Total	**100**

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39401
Project:	N/A	**Sample ID:**	CNB-CAD-3-S7
Project No:	09-05-0616	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.88	0.88	0.88
0.0331	0.841	0.25	20	1.76	1.76	2.64
0.0278	0.707	0.50	25	1.53	1.53	4.17
0.0234	0.595	0.75	30	2.13	2.13	6.30
0.0197	0.500	1.00	35	2.78	2.78	9.08
0.0166	0.420	1.25	40	3.18	3.18	12.27
0.0139	0.354	1.50	45	2.87	2.87	15.14
0.0117	0.297	1.75	50	4.61	4.61	19.75
0.0098	0.250	2.00	60	5.30	5.30	25.05
0.0083	0.210	2.25	70	7.36	7.36	32.41
0.0070	0.177	2.50	80	9.68	9.68	42.10
0.0059	0.149	2.75	100	11.40	11.40	53.50
0.0049	0.125	3.00	120	11.30	11.30	64.81
0.0041	0.105	3.25	140	9.32	9.32	74.13
0.0035	0.088	3.50	170	6.43	6.43	80.56
0.0029	0.074	3.75	200	3.87	3.87	84.44
0.0025	0.063	4.00	230	2.30	2.30	86.74
0.0021	0.053	4.25	270	1.62	1.62	88.36
0.00174	0.0442	4.50	325	1.41	1.41	89.77
0.00146	0.0372	4.75	400	1.29	1.29	91.06
0.00123	0.0313	5.00	450	1.14	1.14	92.20
0.000986	0.0250	5.32	500	1.22	1.22	93.42
0.000790	0.0201	5.64	635	0.99	0.99	94.41
0.000615	0.0156	6.00		0.90	0.90	95.31
0.000435	0.0110	6.50		1.00	1.00	96.31
0.000308	0.00781	7.00		0.78	0.78	97.09
0.000197	0.00500	7.65		0.77	0.77	97.86
0.000077	0.00195	9.00		1.11	1.11	98.97
0.000038	0.000977	10.00		0.62	0.62	99.59
0.000019	0.000488	11.00		0.37	0.37	99.96
0.000015	0.000375	11.38		0.04	0.04	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.60	0.0260	0.661
10	1.07	0.0187	0.476
16	1.55	0.0135	0.342
25	2.00	0.0099	0.250
40	2.45	0.0072	0.184
50	2.67	0.0062	0.157
60	2.89	0.0053	0.135
75	3.28	0.0040	0.103
84	3.72	0.0030	0.076
90	4.55	0.0017	0.043
95	5.88	0.0007	0.017

Measure	Trask	Inman	Folk-Ward
Median, phi	2.67	2.67	2.67
Median, in.	0.0062	0.0062	0.0062
Median, mm	0.157	0.157	0.157
Mean, phi	2.50	2.63	2.65
Mean, in.	0.0070	0.0063	0.0063
Mean, mm	0.177	0.161	0.160
Sorting	1.562	1.088	1.344
Skewness	1.023	-0.036	0.089
Kurtosis	0.171	1.427	1.682

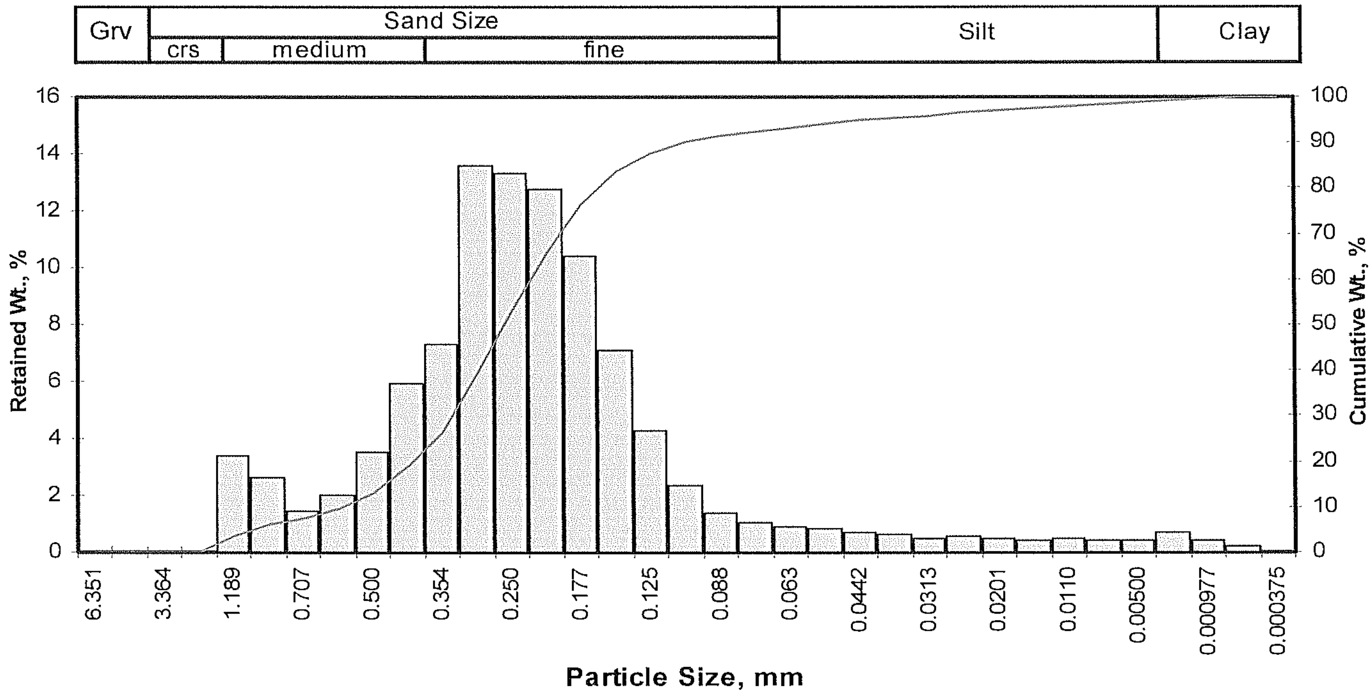
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	12.27
Fine Sand	200	72.17
Silt	>0.005 mm	13.43
Clay	<0.005 mm	2.14
	Total	**100**

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39401
Project:	N/A	**Sample ID:**	CNB-CAD-3-S11
Project No:	09-05-0616	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	3.40	3.40	3.40
0.0331	0.841	0.25	20	2.62	2.62	6.01
0.0278	0.707	0.50	25	1.43	1.43	7.44
0.0234	0.595	0.75	30	2.01	2.01	9.45
0.0197	0.500	1.00	35	3.50	3.50	12.95
0.0166	0.420	1.25	40	5.97	5.96	18.91
0.0139	0.354	1.50	45	7.35	7.34	26.26
0.0117	0.297	1.75	50	13.60	13.59	39.84
0.0098	0.250	2.00	60	13.30	13.29	53.13
0.0083	0.210	2.25	70	12.80	12.79	65.92
0.0070	0.177	2.50	80	10.40	10.39	76.31
0.0059	0.149	2.75	100	7.14	7.13	83.44
0.0049	0.125	3.00	120	4.25	4.25	87.69
0.0041	0.105	3.25	140	2.32	2.32	90.01
0.0035	0.088	3.50	170	1.36	1.36	91.36
0.0029	0.074	3.75	200	1.01	1.01	92.37
0.0025	0.063	4.00	230	0.90	0.90	93.27
0.0021	0.053	4.25	270	0.82	0.82	94.09
0.00174	0.0442	4.50	325	0.71	0.71	94.80
0.00146	0.0372	4.75	400	0.59	0.59	95.39
0.00123	0.0313	5.00	450	0.50	0.50	95.89
0.000986	0.0250	5.32	500	0.55	0.55	96.44
0.000790	0.0201	5.64	635	0.47	0.47	96.91
0.000615	0.0156	6.00		0.44	0.44	97.35
0.000435	0.0110	6.50		0.50	0.50	97.85
0.000308	0.00781	7.00		0.40	0.40	98.25
0.000197	0.00500	7.65		0.42	0.42	98.67
0.000077	0.00195	9.00		0.68	0.68	99.35
0.000038	0.000977	10.00		0.40	0.40	99.75
0.000019	0.000488	11.00		0.23	0.23	99.98
0.000015	0.000375	11.38		0.02	0.02	100.00
TOTALS				**100.10**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.06	0.0379	0.962
10	0.79	0.0228	0.579
16	1.13	0.0180	0.458
25	1.46	0.0143	0.364
40	1.75	0.0117	0.297
50	1.94	0.0103	0.260
60	2.13	0.0090	0.228
75	2.47	0.0071	0.181
84	2.78	0.0057	0.145
90	3.25	0.0041	0.105
95	4.58	0.0016	0.042

Measure	Trask	Inman	Folk-Ward
Median, phi	1.94	1.94	1.94
Median, in.	0.0103	0.0103	0.0103
Median, mm	0.260	0.260	0.260
Mean, phi	1.88	1.96	1.95
Mean, in.	0.0107	0.0102	0.0102
Mean, mm	0.272	0.258	0.259
Sorting	1.420	0.827	1.100
Skewness	0.985	0.017	0.092
Kurtosis	0.194	1.736	1.835
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	18.91
Fine Sand	200	73.46
Silt	>0.005 mm	6.29
Clay	<0.005 mm	1.33
	Total	**100**

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

TO: PTS LABORATORIES

CHAIN OF CUSTODY RECORD

DATE: 05/07/09
PAGE: 1 OF 1

LABORATORY CLIENT: Calscience Environmental Laboratories, Inc.
ADDRESS: 7440 Lincoln Way
CITY: Garden Grove, CA 92841-1427
TEL: (714) 895-5494
E-MAIL: dgonsman@calscience.com

CLIENT PROJECT NAME / NUMBER: 09-05-0616
P.O. NO.: 09-05-0616
PROJECT CONTACT: Danielle Gonsman
QUOTE NO.:
SAMPLER(S): (PRINT)
LAB USE ONLY: 39401

TURNAROUND TIME
___ SAME DAY ___ 24 HR ___ 48HR ___ 72 HR ___ 5 DAYS _X_ NORMAL

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
~~** Porosity: Total, Effective, Water filled, Air filled~~ DG

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	GRAIN SIZE- ASTM D4464
✓	CNB-CAD-3-COMP	05/07/09		SED	1	X
✓	CNB-CAD-3-S7	05/07/09		SED	1	X
✓	CNB-CAD-3-S11	05/07/09		SED	1	X

Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
[signature] (CALSCIENCE)	[signature] PTS Labs INC	5/11/09 ~~05/07/09~~	10:25
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:

29°F

Attachment F-3

Excerpts from 2018 and 2019 Sediment Sampling in Lower Newport Bay

Sediment Core Collection Form

ANCHOR QEA

Project	Lower Newport	Date	1/16/18 Time 1304
Station ID	BIN-03	Latitude	33°36.522' Longitude 117°54.352'
Type of Core	vibracore	Water Depth (ft)	12.8 Tide (ft) 0.9
Mudline Elevation (ft MLLW)	-11.9	Target Core Length (ft)	10.1
Project Depth+Overdepth (ft MLLW)	-17+5=-22	Penetration Length (ft)	7.8 Core Recovery (ft) 6.8

Depth In (ft.) Core Sections	Actual	Sample Interval	Classification and Remarks (Color, Consistency, Moisture, Grain Size, Sheen, Odor)
0–1			Gray soft wet SILT; 0.4 medium ~~stiff~~ moist
1–2		BIN-03-T	
2–3			stiff; slightly clayey SILT
3–4			
4–5			sandy SILT w/ trace shells
5–6	5.1–5.6	BIN-03-Z	very dense damp f-SAND
6–7	6.8	BIN-03-B	
7–8			
8–9			Refusal @ 7.8'
9–10			

4 No. Photos Taken Recorded By: C. Osuch Attempt No. 1 of 2

Sediment Core Collection Form

ANCHOR QEA

Project: Lower Newport
Station ID: BIN-03
Type of Core: vibracore
Mudline Elevation (ft MLLW): -11.9
Project Depth+Overdepth (ft MLLW): -17+5=-22

Date: 1/16/18 Time: 1350
Latitude: 33°36.522' Longitude: 117°54.352'
Water Depth (ft): 11.9 Tide (ft): 0.0
Target Core Length (ft): 5.1
Penetration Length (ft): 6.5 Core Recovery (ft): 5.1

Depth In (ft.) Core Sections / Actual	Sample Interval	Classification and Remarks (Color, Consistency, Moisture, Grain Size, Sheen, Odor)
0–1		Gray soft wet SILT
1–2	BIN-03-T	medium stiff moist
2–4.2		stiff; sandy SILT (~4)
4.2		very dense damp f-SAND w/ trace shells
5.1		
5–8		
8–9		Refusal @ 6.5
9		

___ No. Photos Taken

Recorded By: C. Osuch

Attempt No. 2 of 2

Sediment Core Collection Form

ANCHOR QEA

Project: Lower Newport		Date: 1/16/18	Time: 1600
Station ID: BIN-05		Latitude: 33°36.520'	Longitude: 117°54.442'
Type of Core: Vibracore		Water Depth (ft): 11.2	Tide (ft): -0.6
Mudline Elevation (ft MLLW): -11.8		Target Core Length (ft): 10.2	
Project Depth+Overdepth (ft MLLW): -17+5=-22		Penetration Length (ft): 9.2	Core Recovery (ft): 7.3

Depth In (ft.) Core Sections / Actual	Sample Interval	Classification and Remarks (Color, Consistency, Moisture, Grain Size, Sheen, Odor)
0		Gray, soft, wet, SILT
0.4		medium stiff, moist
1–2	BIN-05-T	
3		stiff
4		slightly clayey SILT
5.2–5.7	BIN-05-Z	
6–7	BIN-05-B	
7.1		dense, damp, f-SAND
7.3		
9.2		refusal @ 9.2'.

4 No. Photos Taken

Recorded By: C. Osuch

Attempt No. 1 of 2

Sediment Core Collection Form

ANCHOR QEA

Project	Lower Newport	Date	1/16/18 Time 1620
Station ID	BIN-05	Latitude	33°36.520' Longitude 117°54.442'
Type of Core	Vibracore	Water Depth (ft)	11.4 Tide (ft) -0.4
Mudline Elevation (ft MLLW)	-11.8	Target Core Length (ft)	5.2
Project Depth+Overdepth (ft MLLW)	-17	Penetration Length (ft)	7.6 Core Recovery (ft) 6.7

Depth In (ft.) Core Sections / Actual	Sample Interval	Classification and Remarks (Color, Consistency, Moisture, Grain Size, Sheen, Odor)
0–5.2	BIN-05-T	Gray (0–6.7); medium stiff (0–2); stiff (2–6.7); wet – moist (0–6.7); SILT (0–3.5); slightly clayey SILT (3.5–6.7) w/ f-sand @ 6.4
5.2–6.7	Discard	
6.7		

No. Photos Taken	Recorded By: C. Osuch	Attempt No. 2 of 2

eurofins | Calscience

Analytical Report

ANCHOR QEA, LLC
27201 Puerta Real, Suite 350
Mission Viejo, CA 92691-8306

Date Received:	01/17/18
Work Order:	18-01-1208
Preparation:	N/A
Method:	ASTM D4464 (M)
Units:	%

Project: City of Newport Beach - Federal Channels

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIN-COMP-T-011718	**18-01-1208-1-C**	**01/17/18 17:40**	**Sediment**	**LPSA 1**	**N/A**	**01/18/18 09:47**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	19.98	
Silt (0.00391 to 0.0625mm)	53.67	
Total Silt and Clay (0 to 0.0625mm)	73.62	
Very Fine Sand (0.0625 to 0.125mm)	8.91	
Fine Sand (0.125 to 0.25mm)	13.35	
Medium Sand (0.25 to 0.5mm)	4.14	
Coarse Sand (0.5 to 1mm)	ND	
Very Coarse Sand (1 to 2mm)	ND	
Gravel (greater than 2mm)	ND	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins Calscience

Analytical Report

ANCHOR QEA, LLC		Date Received:	01/17/18
27201 Puerta Real, Suite 350		Work Order:	18-01-1209
Mission Viejo, CA 92691-8306		Preparation:	N/A
		Method:	ASTM D4464 (M)
		Units:	%
Project: City of Newport Beach Exploratory			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
BIN-COMP-B-011718	**18-01-1209-1-B**	**01/17/18 17:45**	**Sediment**	**LPSA 1**	**N/A**	**01/18/18 09:57**	

Parameter	Result	Qualifiers
Clay (less than 0.00391mm)	6.67	
Silt (0.00391 to 0.0625mm)	17.42	
Total Silt and Clay (0 to 0.0625mm)	24.10	
Very Fine Sand (0.0625 to 0.125mm)	8.25	
Fine Sand (0.125 to 0.25mm)	32.71	
Medium Sand (0.25 to 0.5mm)	27.02	
Coarse Sand (0.5 to 1mm)	7.48	
Very Coarse Sand (1 to 2mm)	0.45	
Gravel (greater than 2mm)	ND	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Appendix G
Analysis of Short-Term Water Quality Impacts During Construction

9700 Research Drive
Irvine, California 92618
949.347.2780

November 24, 2020

Appendix G: Analysis of Short-Term Water Quality Impacts During Construction

Introduction

Short-Term Fate (STFATE) model scenarios were developed, executed, and evaluated to estimate the potential for sediment drift and loss of material during fill operations at the proposed confined aquatic disposal (CAD) facility within the Lower Newport Bay Federal Channels (Federal Channels). Hydrodynamic data generated from the Newport Bay Model[1] (developed by Everest International Consultants, Inc. [2005]) and physical characteristics of sediments within Lower Newport Bay that have recently been evaluated as part of the Federal Channels maintenance dredging program were used to inform the STFATE model. Results from the model scenarios were used to estimate sediment dispersion patterns associated with disposal operations within the proposed CAD facility boundaries as well as to predict compliance with applicable water quality criteria.

STFATE Model

The STFATE model is a module of the Automated Dredging and Disposal Alternatives Management System developed by the U.S. Army Corps of Engineers (USACE). STFATE predicts the transport of a single barge-load of dredged material through the water column and subsequently the area and thickness of deposits on the seabed through three phases of movement: convective descent (material settling through water column under the influence of gravity), dynamic collapse (neutral buoyancy and horizontal spreading), and passive transport-dispersion (dominated by ambient currents and turbulence). The model assumes material is not resuspended because of erosion or bedload transport once deposited on the seabed. The model may also be used to predict contaminant concentrations relative to applicable water quality criteria at multiple locations and time steps during the scenario simulation. Additional information regarding the model's capabilities and assumptions may be found in the Inland Testing Manual (USEPA/USACE 1998).

Input parameters to the model fall under four primary categories consisting of site description, velocity data, material description, and disposal operation. Model and site-specific input parameters for each of these categories are discussed in the following sections.

It should be noted that, wherever possible, similar input parameters to the STFATE model—as used for recent work at the North Energy Island Borrow Pit CAD pilot project, the Port Hueneme CAD Site,

[1] The Newport Bay Model was developed for hydrodynamic and water quality studies in Newport Bay. Applications have included circulation improvement, storm diversion, and pollutant transport studies.

and the Long Beach Outer Harbor Sediment Placement Ecological Restoration project sites—were used to maintain consistency in the approach to this project.

STFATE Model Setup

The following scenarios were developed and evaluated to address a range of environmental conditions anticipated to be encountered:

- **Tidal Stage**. Distinct scenarios were developed to simulate ebb and flood tide conditions.[2]
- **Material Type**. Three different material types were evaluated, representing the average grain size, maximum fine-grained, and maximum coarse-grained conditions. Furthermore, for each of these material types, scenarios were evaluated assuming the material did and did not experience clumping during disposal.
- **Placement Location**. Due to dynamic hydrodynamic conditions observed across the project area, two placement locations per tide stage were evaluated except during neap ebb tide, which only considered one placement location.

For each scenario, placement of dredged material was assumed to be from a split-hull barge.

Site Description

The model grid for the proposed CAD facility initially consisted of 23 cells in the east-west (left to right) and 16 cells in the north-south (top to bottom) directions (Table G-1; Figure G-1).[3] The dimensions of each cell were 75 feet by 75 feet. The constant water depth was determined by first defining a water depth that correlated to the center point of each grid cell outside the boundaries of the proposed CAD facility and then calculating an average of those values.[4] Water depths were taken from a recent USACE bathymetric survey conducted in June 2018. Water density profiles were developed from recent water quality measurements in support of the Federal Channels maintenance dredging program (Anchor QEA 2013a).

---

[2] Initially, the maximum predicted spring ebb tide and spring flood tide velocities were used in the model with the assumption that these conditions represented the worst case scenario for material transport away from, and material deposits outside, the proposed CAD facility. The initial model scenarios did not run to completion because fine-grained material (i.e., silts and clays) was remaining in suspension at the limits of the STFATE model grid due to a combination of model grid size and tidal velocities. Based on the STFATE model execution process, the total amount of material remaining in suspension could not be evaluated; therefore, various other tidal stage current velocities were evaluated. See Velocity Data for detailed information on current velocities used in the assessment.

[3] The STFATE model grid was expanded to 49 cells in the east-west (left to right) and 73 cells in the north-south (top to bottom) directions to enable the model to run to completion. The key metric in evaluating the model results with the larger grid size was amount of material deposited within the proposed CAD facility versus amount of material lost outside the proposed CAD facility. STFATE deposition results for material lost outside the proposed CAD facility should be interpreted with considerations of the hydrodynamics and geography of the Lower Newport Bay.

[4] This depth is representative of existing conditions for areas that will not be deepened during construction of the proposed CAD facility. The water depth used within the proposed CAD facility, presented in a subsequent section, "Disposal Operations" (Table G-3), conforms to the STFATE setup for disposal over a depression, where the depression is the depth of the proposed CAD facility.

Table G-1
STFATE Model Setup and Input Parameters for Placement of Material at the Lower Newport Bay CAD Facility – Site Description

Parameter (units)	Value	Source/Notes
Number of Grid Points (Left to Right)	73	Site-specific; best professional judgment
Number of Grid Points (Top to Bottom)	49	Site-specific; best professional judgment
Grid Spacing (Left to Right; feet)	75	Site-specific; best professional judgment
Grid Spacing (Top to Bottom; feet)	75	Site-specific; best professional judgment
Constant Water Depth (feet)	-13.5	Average depth outside boundary proposed CAD facility; based on USACE Bathymetric Survey, June 2018
Water Density Profile	At 3 feet: 1.024 g/cm^3 At 6 feet: 1.024 g/cm^3 At 12 feet: 1.024 g/cm^3	Anchor QEA 2013a

Note:
g/cm^3: grams per cubic centimeter

Velocity Data

Current velocity data were generated for typical spring tide conditions from the Newport Bay Model. The model consists of a model grid of varying cell dimensions that overlays Newport Bay (Figure G-1). It uses National Oceanic and Atmospheric Administration tide data and water quality data collected throughout Newport Bay to predict the hydrodynamics of the system (Everest International Consultants, Inc., 2005). Current vectors (u [+east/-west]; and v [+north/-south]) were provided for each of the model grid cells in the vicinity of the proposed CAD facility. The alignment of the model grid cells relative to the proposed CAD facility and STFATE model grid are shown in Figures G-1 and G-2. Current vector data were evaluated to determine the average non-peak spring ebb and flood current velocities (Figure G-2). Non-peak currents were defined as the plus or minus 2 hours from high or low tide (Figure G-3). Because the Newport Bay Model uses depth-averaged current data, a two-point vertical velocity field using the same velocities at each depth was used in STFATE, and the current vectors were transformed 48 degrees to align with the STFATE model grid. The transformed current vectors for each placement point are listed in Table G-2. The average non-peak spring ebb current velocities were applied to two disposal points on the western portion of the proposed CAD facility, and the average non-peak spring flood current velocities were applied to two disposal points on the eastern portion of the proposed CAD facility.

Table G-2
STFATE Model Setup and Input Parameters for Placement of Material at the Lower Newport Bay CAD Facility – Velocity Data

Parameter (units)	Surface Value	Source/Notes
Profile Type	Single Point Velocity Field for Constant Depth Grid	Site specific; best professional judgment
Ebb Tide Current Velocity (x-vector[1]; ft/s)	Disposal Point A: 0.298 Disposal Point B: 0.298	Newport Bay Model
Ebb Tide Current Velocity (z-vector[1]; ft/s)	Disposal Point A: 0.021 Disposal Point B: 0.021	Newport Bay Model
Flood Tide Current Velocity (x-vector[1]; ft/s)	Disposal Point X: -0.300 Disposal Point Y: -0.300	Newport Bay Model
Flood Tide Current Velocity (z-vector[1]; ft/s)	Disposal Point X: -0.079 Disposal Point Y: -0.079	Newport Bay Model

Notes:
1. The local coordinate system within STFATE assumes x-direction vectors are positive down (moving top to bottom) and z-direction vectors are positive right (moving left to right).

ft/s: feet per second

Disposal Operation

Two placement points (generally representing the western areas) during ebb tide and two placement points (generally representing the eastern areas) during flood tide were selected across the proposed CAD facility (Table G-3). Vessel characteristics were similar to those used in previous work supporting dredging operations within Lower Newport Bay. Due to constraints within the STFATE model capabilities, the proposed CAD facility was assumed to be a rectangular-shaped depression bounded by an area of constant water depth. To best fit a rectangular depression within the proposed CAD facility, the STFATE grid was rotated 48 degrees to align the STFATE-specified coordinate system with the proposed CAD facility. The water depth within the proposed CAD facility was determined using suitable area and volume of dredged material to be managed within the facility.

Table G-3
STFATE Model Setup and Input Parameters for Placement of Material at the Lower Newport Bay CAD Facility – Disposal Operation

Parameter (units)	Value	Source/Notes
Disposal Point (from top of grid; feet)	Disposal Point A: 525 Disposal Point B: 525 Disposal Point X: 5025 Disposal Point Y: 5025	Site-specific; best professional judgment. Points A and B represent placement locations during ebb tide conditions; Points X and Y represent placement locations during flood tide conditions
Disposal Point (from left of grid; feet)	Disposal Point A: 1725 Disposal Point B: 1575 Disposal Point X: 1800 Disposal Point Y: 1650	Site-specific; best professional judgment. Points A and B represent placement locations during ebb tide conditions; Points X and Y represent placement locations during flood tide conditions
Length of Vessel (feet)	200	Consistent with Lower Newport Bay dredging projects
Width of Vessel (feet)	50	Consistent with Lower Newport Bay dredging projects
Pre-Disposal Draft (feet)	12	Consistent with Lower Newport Bay dredging projects
Post-Disposal Draft (feet)	3	Consistent with Lower Newport Bay dredging projects
Time to Empty Vessel (seconds)	30	Professional knowledge from previous projects
Length of Depression (feet)	450	Based from proposed design drawings
Width of Depression (feet)	450	Based from proposed design drawings
Average Depth (feet)	-45	Based from proposed design drawings

Material Description

It was assumed that split-hull barges with the capacity to carry 2,000 cubic yards (cy) of material would be used during fill operations (Table G-4). STFATE default values were used for the settling characteristics of the various material types (sand, silt, clay, and clumps). In order to best represent a range of sediment characteristics anticipated to be placed at the proposed CAD facility, recent maintenance dredged material evaluation projects conducted for the Federal Channels and Regional General Permit programs were evaluated, and an average grain size and total solids condition was determined for five distinct scenarios.

The first scenario represents the layer of material consisting of sediment from dredge units determined unsuitable for open ocean disposal within the Federal Channels. The second scenario represents the layer of material consisting of sediment from dredge units identified for use as either an interim cover containment layer or final cap layer from the Federal Channels program. The third scenario represents the layer of material consisting of sediment from dredge units found unsuitable for open ocean disposal within the boundaries of the Regional General Permit for Newport Bay (RGP 54). The fourth scenario represents sediment from the dredge unit identified as an alternative source for an interim cover containment layer or final cap layer (sediments associated with the Entrance Channel dredge unit). The fifth scenario represents material consisting of sediment from the dredge unit found unsuitable for open ocean disposal and containing the greatest amount of fine-grained materials (project sample MCN1-COMP-T-011518 from the Lower Newport Bay Main Channel [Anchor QEA 2019]). Volumetric fractions for each of these project samples are presented in Table G-5.

STFATE has the capability of modeling clumping (typical of cohesive sediments) and non-clumping (typical of non-cohesive sediments) scenarios. Scenarios 1, 3, and 5 consist predominantly of fine-grained, cohesive materials, and therefore were modeled with an assumption that 50% of the material clumps prior to disposal. Scenarios 2 and 4 consist predominantly of coarse-grained, non-cohesive materials, and therefore were modeled without clumps during disposal.

Table G-4
STFATE Model Setup and Input Parameters for Placement of Material at the Lower Newport Bay CAD Facility – Material Description

Parameter (units)	Value	Source/Notes
Number of Layers	1	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Total Volume (cy)	2,000	Professional knowledge from previous projects
Barge Velocity Ebb Tide (x-vector; ft/s)	-0.82	Best professional judgment based on historical dredging operations with Lower Newport Bay
Barge Velocity Ebb Tide (z-vector; ft/s)	0.0	Best professional judgment based on historical dredging operations with Lower Newport Bay
Barge Velocity Flood Tide (x-vector; ft/s)	0.82	Best professional judgment based on historical dredging operations with Lower Newport Bay
Barge Velocity Flood Tide (z-vector; ft/s)	0.0	Best professional judgment based on historical dredging operations with Lower Newport Bay
Specific Gravity	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Fall Velocity (ft/s)	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Void Ratio	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Critical Shear Stress (lb/ft^2)	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Cohesive (Y/N)	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Stripped During Descent (Y/N)	Use STFATE default value	Best professional judgment based on predictive models and post-placement monitoring at similar CAD facilities in southern California
Volumetric Fraction	See Table G-5[1]	Federal Channels maintenance dredging program and Regional General Permit programs (2013 and 2017)

Notes:

1. Project samples from the Federal Channels maintenance dredging program (Anchor QEA 2019) and Regional General Permit programs (Anchor QEA 2013b; Anchor QEA 2018) were evaluated to determine the material type volumetric fraction for five distinct material types. Scenario 1 used the average grain size and total solids concentrations from all project areas within the boundaries of the Federal Channels program found not suitable for open ocean disposal. Scenario 2 used the average grain size and total solids concentrations from all project areas identified as suitable for use as an interim cover containment layer or final cap layer. Scenario 3 used the average grain size and total solids concentrations from all project areas within the boundaries of the City's RGP 54 program found not suitable for open ocean disposal. Scenario 4 used the average grain size and total solids concentrations from the Lower Newport Bay Entrance Channel, which was identified as an alternate source suitable for use as an interim cover containment layer or final cap layer. Scenario 5 used the grain size representing a maximum fine-grained material and total solids concentrations from all project areas found not suitable for open ocean disposal.

lb/ft^2: pounds per square foot

Table G-5
STFATE Scenarios Sediment Characteristics

Scenario No.	Scenario Description	Material Property	Measured Value1 (%)	STFATE Volumetric Fraction2 (unitless)
1	Average Grain Size Condition; Federal Channels; Unsuitable; with Clumping	Sand	14.1	0.0764
		Silt	24.7	0.1340
		Clay	11.2	0.0607
		Clumps	50	0.2711
		Total Solids	54.2	--
2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer or Final Cap Layer	Sand	77.5	0.5557
		Silt	15.7	0.1124
		Clay	6.8	0.0486
		Clumps	--	--
		Total Solids	71.7	--
3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	Sand	29.9	0.1965
		Silt	14.2	0.0932
		Clay	6.0	0.0393
		Clumps	50	0.3290
		Total Solids	65.8	--
4	Average Grain Size Condition; Entrance Channel; Alternative Material Source for Interim Cover Containment Layer or Final Cap Layer	Sand	98.1	0.8085
		Silt	1.3	0.0109
		Clay	0.6	0.0045
		Clumps	--	--
		Total Solids	82.4	--
5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	Sand	4.1	0.0185
		Silt	33.0	0.1499
		Clay	13.0	0.0590
		Clumps	50	0.2275
		Total Solids	45.5	--

Notes:

1. For scenarios that include clumping (Scenarios 1, 3, and 5), clumping was not measured. Rather, it was assumed 50% of material clumped, which is consistent with similar modeling conducted during construction of other regional CAD facilities (e.g., Port Hueneme, North Energy Island Borrow Pit, and Long Beach's Outer Harbor Sediment Placement and Ecosystem Restoration site).
2. STFATE Volumetric Fraction (unitless) was calculated by multiplying the measured grain size value (or assumed clumping rate) by the measured total solids value.

--: not applicable

Water Quality Analysis

STFATE was used to evaluate the copper, dissolved mercury, total polychlorinated biphenyls (PCBs), and total DDx contaminant concentrations within the boundary of the model grid for each of the scenarios listed above. The California Toxics Rule (CTR) Saltwater Criterion Continuous Concentration (CCC; i.e., chronic water quality standard) for dissolved copper (3.1 micrograms per liter [µg/L]), dissolved mercury (0.94 ug/L), total PCBs (0.03 ug/L), and total DDx (0.001 µg/L) were used in the model as the water quality standard; however, the predicted results were compared to both the CTR CCC and the CTR Criterion Maximum Concentration (CMC; i.e., acute water quality standard).

The background water concentration for dissolved copper was calculated as the average concentration measured in Lower Newport Bay as part of the Lower Newport Bay Federal Dredging Project (Anchor QEA 2013a) and Newport Bay Copper Study (Anchor QEA 2016). The background water concentrations for dissolved mercury, total PCBs, and total DDx were calculated as the average concentrations measured in Lower Newport Bay as part of the Lower Newport Bay Federal Dredging Project (Anchor QEA 2013a). Average concentrations are shown in Table G-6.

Similar to determining the appropriate physical properties described in the Material Description section above, the average sediment contaminant concentration was calculated from samples associated with each scenario (Table G-6; except Scenario 5 which used the sample-specific concentrations). The predicted initial concentration in the fluid fraction was then calculated by dividing the bulk sediment copper concentration by a representative solid-water partitioning coefficient (K_d). Assuming equilibrium is met, the initial concentration for metals in the fluid fraction was calculated using Equation 1.

Equation 1

$$K_d = \frac{C_s}{C_w}$$

where:

K_d	=	Solid-water distribution coefficient (liters per kilogram)
C_s	=	Metal concentration in sediment at equilibrium (milligrams per kilogram)
C_w	=	Metal concentration in water at equilibrium (milligrams per liter)

The initial concentration for organics (e.g., total PCBs or total DDx) in the fluid fraction was calculated using Equation 2.

Equation 2

$$K_{oc} * F_{oc} = \frac{C_s}{C_w}$$

where:

K_{oc}	=	where K_{oc} is the organic carbon-water partition coefficient
F_{oc}	=	F_{oc} is fractional organic carbon
C_s	=	Metal concentration in sediment at equilibrium (milligrams per kilogram)
C_w	=	Metal concentration in water at equilibrium (milligrams per liter)

An organic carbon partition coefficient (log K_{OC}) for total DDx and for total PCBs was estimated based on analytical data collected from each sediment layer. For each layer, sediment concentrations from several representative samples were averaged for each of the six DDx isomers and each of the 40 PCB congeners analyzed, with non-detects set to one-half of the detection limit. A weighted harmonic mean was then calculated based on the fractional distribution of these average concentrations, a compilation of octanol-water partition coefficients (K_{OW}) associated with each individual DDx isomer and PCB congener,[5] and a commonly used correlation between log K_{OW} and log K_{OC}[6]. Results from each layer were relatively consistent, yielding a total DDx log K_{OC} between 6.4 and 6.6 L/kg, and a total PCB log K_{OC} between 6.5 and 6.7 L/kg.

[5] For DDx compounds, log K_{ow} values for para,para isomers (e.g., 4,4'-DDT) are provided in de Bruijn et al. (1989) with log K_{ow} values for the ortho, par isomers (e.g., 2, 4'-DDT) assumed the same. For PCB congeners, log K_{OW} values as cited by Hawker and Connell (1988) are widely used, though they were measured by a generator column. Log K_{OW} values measured by the "slow-stirring" method are considered more accurate. Therefore, the Hawker and Connell (1988) PCB log K_{OW} values were adjusted based on a correlation with log K_{OW} values measured by de Bruijn et al. (1989) using the "slow-stirring" method (de Bruijn et al.'s (1989) log K_{OW} values were not used directly because that study only measured 20 PCB congeners).

[6] Log K_{OC} values were estimated from log K_{OW} using Di Toro's (1985) well known empirical relationship (log K_{OC} = [log K_{OW} x 0.983] + 0.00028).

Table G-6
Water Quality Analysis Input Parameters

Scenario No.	Contaminant of Concern	Background Concentration (mg/L)	Bulk Sediment Concentration[1] (mg/kg)	Solid-Water Partitioning Coefficient[1,2] (K_d)	Organic Carbon Partitioning Coefficient (K_{oc})[1]	Fraction Organic Carbon[1] (F_{oc})	Predicted Initial Concentration in Fluid Fraction (mg/L)
1	Copper	0.00258	84.0	104.1	NA	NA	0.00667
	Mercury	0.0000161[3]	1.70	104.9	NA	NA	0.0000214
	Total PCBs	0.00000650[3]	0.0532	NA	106.5	0.00770	0.00000218
	Total DDx[4]	0.0000013[5]	0.000945	NA	106.5	0.00770	0.00000168
2	Copper	0.00258	14.5	104.1	NA	NA	0.00115
	Mercury	0.0000161[3]	0.167	104.9	NA	NA	0.00000210
	Total PCBs	0.00000650[3]	0.00107	NA	106.7	0.0034	0.0000000628
	Total DDx[4]	0.0000013[5]	0.00076	NA	106.5	0.0034	0.0000000312
3	Copper	0.00258	42.8	104.1	NA	NA	0.00340
	Mercury	0.0000161[3]	20.7	104.9	NA	NA	0.000261
	Total PCBs	0.00000650[3]	0.044	NA	106.6	0.00423	0.00000261
	Total DDx[4]	0.0000013[5]	0.0313	NA	106.5	0.00423	0.00000234
4	Copper	0.00258	3.22	104.1	NA	NA	0.000256
	Mercury	0.0000161[3]	0.0125	104.9	NA	NA	0.000000157
	Total PCBs	0.00000650[3]	0.00042	NA	106.6	0.00089	0.000000119
	Total DDx[4]	0.0000013[5]	0.00088	NA	106.6	0.00089	0.000000124
5	Copper	0.00258	83.7	104.1	NA	NA	0.00665
	Mercury	0.0000161[3]	1.18	104.9	NA	NA	0.0000149
	Total PCBs	0.00000650[3]	0.042	NA	106.6	0.00019	0.0000555
	Total DDx[4]	0.0000013[5]	0.1026	NA	106.4	0.00019	0.000215

Notes:

1. The bulk sediment concentration and partitioning coefficients are not directly used by STFATE. These parameters were used to calculate the predicted initial concentration in the fluid fraction, which is used by STFATE.
2. K_d values are from Allison and Allison (2005).
3. All sample concentrations were reported as not detected; therefore, the highest method detection limit was used.
4. Due to limitations in STFATE, input parameters were multiplied by 10^6 when entered into STFATE, and the result was divided by 10^6. For example, for Scenario 1, the water quality standard was entered as 1.0 mg/L, the background concentration was entered as 1.3 mg/L, and the predicted initial fluid concentration was entered as 1.68 mg/L. The STFATE result was 0.139E+01 mg/L, which was converted back to 0.139E-05 mg/L (then converted again to 0.139E-02 µg/L in the results Table G-9 below).
5. The average was calculated using one-half the method detection limit for samples with non-detects and actual values for samples with detected concentrations.

mg/kg: milligram per kilogram
mg/L: milligram per liter

Model Execution and Evaluation

The STFATE model was executed in 1,200-second (20-minute) time steps for a duration of 14,400 seconds (4 hours). Results for the total volume (cy) and total thickness (feet) of material placed within each grid cell were evaluated at the conclusion of the 4 hours model simulation.

STFATE estimates the total volume and total thickness of material in each model grid cell. For model cells that receive a very small fraction of material, the STFATE defines the total volume into categories such as "less than 0.1 cubic foot (ft^3)" or "less than 0.001 ft^3." Each category was reduced in value by two orders of magnitude from the previous category. As a conservative approach, (i.e., worst case scenario), this modeling effort assumed a cell receiving "less than 0.1 ft^3" actually received exactly 0.001 ft^3 (the value of the next lowest category) and so on. Therefore, this approach overestimates the amount of material lost outside the model grid. As a point of comparison, STFATE generally predicted that 0.1 ft^3 of accumulated material on the bottom would have a total thickness of less than 1/10,000th of a foot (0.03 millimeters).

For each scenario, the placement of fill material was evaluated, and various metrics were calculated as follows:

- **Volume of material within proposed CAD facility**
  - The total volume of material accumulated within and deposited outside the proposed CAD facility was determined, and the proportion of material deposited outside the CAD facility was calculated. This metric evaluates the appropriateness of the CAD facility location and target placement locations.
- **Deposit thicknesses**
  - The maximum predicted deposit thickness after a single placement event was determined.
- **Water quality analysis**
  - Water quality analysis was conducted for each scenario during a disposal event occurring on an ebb tide at one of the two disposal locations. The maximum predicted

contaminant concentrations at any point (surface or mid-depth) and at any time was compared to the water quality criteria to determine if a potential for water quality exceedances existed.

Results and Discussion

A summary of the relative spatial distribution of fill material is provided in Table G-7. A summary of the single placement event deposit thicknesses is provided in Table G-8. A summary of the water quality analysis is provided in Table G-9. Additional detailed results (STFATE model output) per scenario are provided in Attachment G-1. Figures illustrating the volume, thickness of deposited material for each scenario, and thickness of deposited material greater than 0.17 foot (2 inches) are provided in Attachment G-2. Key findings from an evaluation of the modeling results are as follows:

- **Volume of material within proposed CAD facility**
  - Two disposal locations were evaluated for each tidal stage. Results shown in Table G-7 are representative of the disposal location that had the greatest amount of material deposited outside the proposed CAD facility boundaries. It should be noted, though, for placement events occurring during ebbing tides, the difference between the two disposal locations ranged from 1% to 3%; whereas, for placement events occurring during flooding tides, the difference between the two disposal locations ranged from 0% to 1%.
  - For placement events occurring during ebbing tides of material determined to be unsuitable for ocean disposal (Scenarios 1, 3, and 5), 88% to 90% of material is predicted to be deposited within the proposed CAD facility boundaries (i.e., 10% to 12% of material released from the scow would be deposited outside the boundary of the proposed CAD facility). Most of the material lost outside the proposed CAD facility would deposit within 75 feet (one model grid cell; see discussion below regarding deposit thicknesses).
  - For placement events occurring during ebbing tides of material suitable for use as an interim cover containment layer or final cap layer (Scenarios 2 and 4), 79% to 81% of material is predicted to be deposited within the proposed CAD facility boundaries (i.e., 19% to 21% of material released from the scow would be deposited outside the boundary of the propose CAD facility. Because this material would be sequenced after placement of unsuitable material, then any material from Scenarios 2 and 4 deposited beyond the boundaries of the proposed CAD facility would act as thin layer cover over any unsuitable material that may have been “lost” from the proposed CAD facility.
  - For placement events occurring during flooding tides, 91% to 94% of material is predicted to be deposited within the proposed CAD facility boundaries (i.e., 6% to 9%

of material released from the scow would be deposited outside the boundary of the proposed CAD facility).

- The chosen dump locations were appropriate for containing the placed material within the proposed Lower Newport Bay CAD facility; however, best management practices (BMPs) should be implemented to increase the proportion of material that is deposited within the proposed CAD facility, including the following:
  - Placement events during neap and non-peak tides (i.e., plus or minus 2 hours from slack tide; Figure G-3) would limit the horizontal distribution of fill material due to reduced current speeds.
  - The greater the fine content, the more dispersive the placement event; therefore, any sediment management strategy that reduces percent fines in any single barge-load dredged would reduce loss outside proposed CAD facility boundaries.
  - Implementation of BMPs to restrict placement locations within 150 feet from a site boundary would minimize loss outside the proposed Lower Newport Beach CAD facility site boundaries.

- **Deposit thicknesses**
  - For a single placement event from a split-hull barge, the maximum observed deposit thickness within the proposed CAD facility ranged from 1.3 to 2.3 feet for placement events occurring during ebbing tides and 1.4 to 2.3 feet for placement events occurring during flooding tides. It should be noted the deposit thicknesses typically decreased by an order of magnitude within 75 feet (one model grid cell). The average deposit thickness within approximately 190 feet (inclusive of all model grid cells within 150 feet (two model grid cells) and including the maximum deposit grid cell) was 0.4 foot. Deposit thicknesses decreased by an order of magnitude beyond this boundary and were less than 0.1 foot within 225 feet (three model grid cells).
  - For placement events during ebbing tides for each modeled scenario, some deposits greater than 0.17 foot (about 2 inches) were predicted in two to four model grid cells outside the proposed CAD facility boundary. These deposits were within 75 feet of the proposed CAD facility (i.e., one model grid cell).
    - BMPs are recommended to minimize or eliminate any deposition of material outside the proposed CAD facility.
    - Post-construction surveys and/or surface sediment sampling may be conducted to confirm presence of recently deposited material and characterize chemical concentrations in those deposits if present.

- **Water quality analysis**
  - Because of the short-term, intermittent impacts to water quality, predicted water quality concentrations after an initial mixing period of 4 hours were compared to the CMC (i.e.,

acute water quality standard).[7] If acute water quality standards were not established for a contaminant of concern, then predicted water quality concentrations were compared to the CCC (i.e., chronic water quality standard).[8] Predicted water quality concentrations were also compared to existing background water quality concentrations to determine if placement activities result in an increase in contaminant concentrations relative to background after the initial mixing period.

- For each modeled scenario, copper concentrations predicted in the water column were below the CMC of 4.8 µg/L. The maximum predicted copper concentration after 4 hours was 2.59 µg/L for material from the DUs determined to be unsuitable for ocean disposal from the Federal Channels Program (Scenario 1) and the maximum fine-grained material from the Lower Newport Bay Federal Channels program (Scenario 5). Predicted water quality concentrations after 4 hours of material placement from Scenarios 2, 3, and 4 were equal to the existing background water quality concentration (2.58 µg/L). Predicted water quality concentrations after 4 hours of material placement from Scenarios 1 and 5 were only 0.01 µg/L greater than background.
- For each modeled scenario, mercury concentrations predicted in the water column were below the CCC of 0.94 µg/L (a CMC has not been established for mercury). The maximum predicted mercury concentration after 4 hours was 0.0162 µg/L for the average grain size from the RGP 54 program (Scenario 3). Predicted water quality concentrations after 4 hours of material placement from Scenarios 1, 2, 4, and 5 were equal to the existing background water quality concentration (0.0161 µg/L). Predicted water quality concentrations after 4 hours of material placement from Scenarios 1 and 5 were only 0.0001 µg/L greater than background.
- For each modeled scenario, total PCB concentrations predicted in the water column were below the CCC of 0.03 µg/L (a CMC has not been established for total PCBs). The maximum predicted total PCB concentration was 0.00658 µg/L for the maximum fine-grained material from the Federal Channels program (Scenario 5). Predicted water quality concentrations after 4 hours of material placement from Scenarios 1, 2, 3, and 4 were equal to the existing background water quality concentration (0.00650 µg/L). The predicted water quality concentration after 4 hours of material placement from Scenario 5 was only 0.00008 µg/L greater than background.
  - Predicted water column concentrations for total PCBs do not exceed the Lower Newport Bay organochlorine compounds Total Maximum Daily Load (TMDL)

---

[7] The CMC (i.e., acute water quality standard) is defined in the CTR as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects.

[8] The CCC (i.e., chronic water quality standard) is defined in the CTR as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects.

chronic water quality targets (acute water quality targets were not established in the TMDL).

- For each modeled scenario, total DDx concentrations predicted in the water column after 4 hours were below the CMC of 0.13 µg/L. The maximum predicted total DDx concentration was 0.00160 µg/L for the maximum fine-grained material from the Lower Newport Bay Federal Channels program (Scenario 5). Predicted water quality concentrations after 4 hours of material placement from Scenarios 1, 2, 3, and 4 were equal to the existing background water quality concentration (0.00130 µg/L). Predicted water quality concentrations after 4 hours of material placement from Scenario 5 were only 0.0003 µg/L greater than background.
  - Predicted water column concentrations for total DDx do not exceed the Lower Newport Bay organochlorine compounds TMDL acute water quality targets; however, they do exceed the TMDL's chronic water quality targets. Water column targets for the TMDL for organochlorine compounds for Lower Newport Bay are equivalent to the CMC and CCC. As previously mentioned, comparing predicted water column concentrations to acute criterion is appropriate considering the short-term and intermittent nature of material placement activities. Furthermore, the removal, placement, and containment of DDx-contaminated Lower Newport Bay sediments at the proposed CAD facility provides a greater benefit than any short-term water quality impacts. Background water quality concentrations of total DDx are slightly higher than the TMDL chronic water quality targets. Scenario 5 results in a slight increase in total DDx concentrations relative to background after 4 hours. Water quality monitoring may be conducted to confirm model predictions and determine persistence of increased total DDx concentrations relative to background.
  - Although water quality monitoring may be conducted to confirm model predictions, consideration of analytical laboratory capabilities to detect concentrations near the water quality standard is required. Analytical laboratory method detection limits for DDx isomers are typically greater than the water quality standard; therefore, monitoring and associated analytical results may only provide non-detect results at method detection limits similar to the predicted DDx concentrations.
  - Material from MCN-1 is finer grained in content and therefore more susceptible for off-site transport during disposal. To minimize or eliminate potential increases of total DDx relative to existing background water quality concentrations, additional BMPs may be required to minimize the potential for impacts.

Table G-7
Summary of STFATE Model Results – Relative Spatial Distribution of Fill Material

Tide	Scenario No.	Scenario Description	Percent of Material Deposited within Proposed CAD Facility	Percent of Material Lost Outside Proposed CAD Facility
Ebb	1	Average Grain Size; Federal Channels; Unsuitable; with Clumping	88	12
	2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer or Final Cap Layer	79	21
	3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	90	10
	4	Average Grain Size Condition; Entrance Channel; Alternative Material Source for Interim Cover Containment Layer or Final Cap Layer	81	19
	5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	88	12
Flood	1	Average Grain Size; Federal Channels; Unsuitable; with Clumping	92	8
	2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer	93	7
	3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	94	6
	4	Average Grain Size Condition; Entrance Channel; Alternative Material Source for Interim Cover Containment Layer or Final Cap Layer	94	6
	5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	91	9

Table G-8
Summary of STFATE Model Results – Relative Vertical Distribution of Fill Material

Tide	Scenario No.	Scenario Description	Maximum Deposit Thickness within proposed CAD Facility (ft)
Ebb	1	Average Grain Size; Federal Channels; Unsuitable; with Clumping	2.3
	2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer or Final Cap Layer	1.9
	3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	2.3
	4	Average Grain Size Condition; Entrance Channel; Alternative Material Source for Interim Cover Containment Layer or Final Cap Layer	1.3
	5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	2.3
Flood	1	Average Grain Size; Federal Channels; Unsuitable; with Clumping	2.3
	2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer or Final Cap Layer	1.9
	3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	2.3
	4	Average Grain Size Condition; Entrance Channel; Alternative Material Source for Interim Cover Containment Layer or Final Cap Layer	1.4
	5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	2.3

Table G-9
Summary of STFATE Model Results – Water Quality Analysis

Scenario No.	Scenario Description	Copper Concentration Predicted on Model Grid after 4 hours (µg/L)	Mercury Concentration Predicted on Model Grid after 4 hours (µg/L)	Total PCBs Concentration Predicted on Model Grid after 4 hours (µg/L)	Total DDx Concentration Predicted on Model Grid after 4 hours (µg/L)
1	Average Grain Size; Federal Channels; Unsuitable; with Clumping	2.59	0.0161	0.00650	0.00130
2	Average Grain Size Condition; Federal Channels; Interim Cover Containment Layer	2.58	0.0161	0.00650	0.00130
3	Average Grain Size Condition; RGP 54; Unsuitable; with Clumping	2.58	0.0162	0.00650	0.00130
4	Average Grain Size Condition; Entrance Channel; Final Cap Layer	2.58	0.0161	0.00650	0.00130
5	Maximum Fine-Grained Material; Federal Channels; Unsuitable; with Clumping	2.59	0.0161	0.00658	0.00160
	Acute (CMC) Water Quality Standard (µg/L)	4.8	--	--	0.13
	Chronic (CCC) Water Quality Standard (µg/L)	3.1	0.94	0.03	0.001
	Background Water Quality Concentration (µg/L)	2.58	0.0161	0.00650	0.00130
	Water Quality Standard Exceeded?	No	No	No	**No**
	Background Water Quality Concentration Exceeds Water Quality Standard?	No	No	No	**Yes**

Note:
Bold: Predicted exceedance of water quality standard
--: Criteria not established

Conclusions

STFATE model scenarios were developed, executed, and evaluated in order to estimate the potential for sediment drift and loss of material during fill operations at the proposed CAD facility in Lower Newport Bay. Results from the model scenarios were used to estimate depositional patterns within the CAD facility during various tidal currents. Key findings from these model simulations are as follows:

- There are no restrictions of placement events during neap tides (i.e., first and third quarters of the moon).
- During spring tides, BMPs should be implemented to limit placement events during non-peak tidal current velocities (i.e., plus or minus 2 hours from slack tide; Figure G-3) to limit the horizontal distribution of fill material.
    - Disposal events of unsuitable material (Scenarios 1, 3, and 5) occurring during non-peak ebbing tides result in 10% to 12% of material deposited outside the proposed CAD facility.
        - Most of these deposits occur within 75 feet of the proposed CAD facility.
    - Disposal events of interim cover containment layer or final cap layer material (Scenarios 2 and 4) occurring during non-peak ebbing tides result in 19% to 21% of material deposited outside the proposed CAD facility.
        - Most of these deposits occur within 75 feet of the proposed CAD facility and will act as a thin layer cover over any unsuitable material lost outside the CAD facility.
    - Disposal events occurring during non-peak flooding tides result in 6% to 9% of material to be deposited outside the proposed CAD facility.
- The maximum observed thicknesses of deposited material ranged from 1.3 to 2.3 feet within the model grid cell directly associated with the placement location. Deposit thicknesses rapidly decreased in adjacent model grid cells (within 75 feet).
    - Deposit thicknesses greater than 0.17 foot (2 inches) outside the proposed CAD facility are limited in area and do not extend more than 75 feet from the boundary of the facility.
- Acute condition water quality standards and TMDL water quality targets (where established) for dissolved copper, dissolved mercury, total PCBs, and total DDX were not violated. Although the dredging operation is anticipated to be short term and intermittent, it is noted that the chronic condition water quality standard for total DDx was exceeded during disposal events of all material types. However, the existing background water quality is also greater than this standard, and predicted total DDx concentrations are expected to be at or near background concentrations within 4 hours of dredging. Water quality monitoring may have limited practicality because predicted total DDx concentrations (during disposal events with materials in Scenarios 1 through 4, listed previously) are similar to typical method detection

limits currently achieved by regional analytical laboratories. Strategies to minimize the volume of material from Scenario 5, such as mixing with material from other dredge units, sequencing material from Scenario 5 first, use of silt curtains, or other BMPs, should be used to minimize water quality impairments.

References

Allison, J.D., and T.L. Allison, 2005. *Partition Coefficients for Metals in Surface Water, Soil, and Waste*. U.S. Environmental Protection Agency. EPA/600/R-05/074. July 2005.

Anchor QEA (Anchor QEA, L.P.), 2013a. *Water Quality and Sediment Monitoring Report, Lower Newport Bay Federal Dredging*. Prepared for the City of Newport Beach. July 2013.

Anchor QEA, 2013b. *Sampling and Analysis Report, Regional General Permit 54 Sediment Characterization*. Prepared for the City of Newport Beach. October 2013.

Anchor QEA (Anchor QEA, LLC), 2016. Memorandum to the City of Newport Beach. Regarding: Newport Bay Copper Study: Winter 2016. March 2016.

Anchor QEA, 2018. *Sampling and Analysis Report, RGP 54 Sediment Characterization*. Prepared for the City of Newport Beach. June 2018.

Anchor QEA, 2019. *Sampling and Analysis Program Report, Lower Newport Bay Federal Channels Dredging*. Prepared for the City of Newport Beach. June 2019.

De Bruijn, J., F. Busser, W. Seinen, and J. Hermens, 1989. "Determination of Octanol/Water Partition Coefficients for Hydrophobic Organic Chemicals with the "Slow-Stirring" Method." *Environmental Toxicology and Chemistry* 8:499–512.

Di Toro, D.M., 1985. "A particle interaction model of reversible organic chemical sorption." *Chemosphere* 14(10):1503–1538.

Everest International Consultants, Inc., 2005. Newport Bay Model. Prepared for the City of Newport Beach. June 2005.

Hawker, D.W., and D.W. Connell, 1988. "Octanol-water partition coefficients of polychlorinated biphenyls congeners." *Environmental Science & Technology* 22:382–385.

USEPA/USACE (U.S. Environmental Protection Agency and U.S. Army Corps of Engineers), 1998. *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual. Inland Testing Manual.* EPA-823-B-98-004. February 1998.

Figures

SOURCE: Image from Bing Maps.
HORIZONTAL DATUM: California State Plane, Zone VI, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: Mean Lower Low Water (MLLW)

LEGEND:

Proposed CAD Facility

STFATE Model Grid

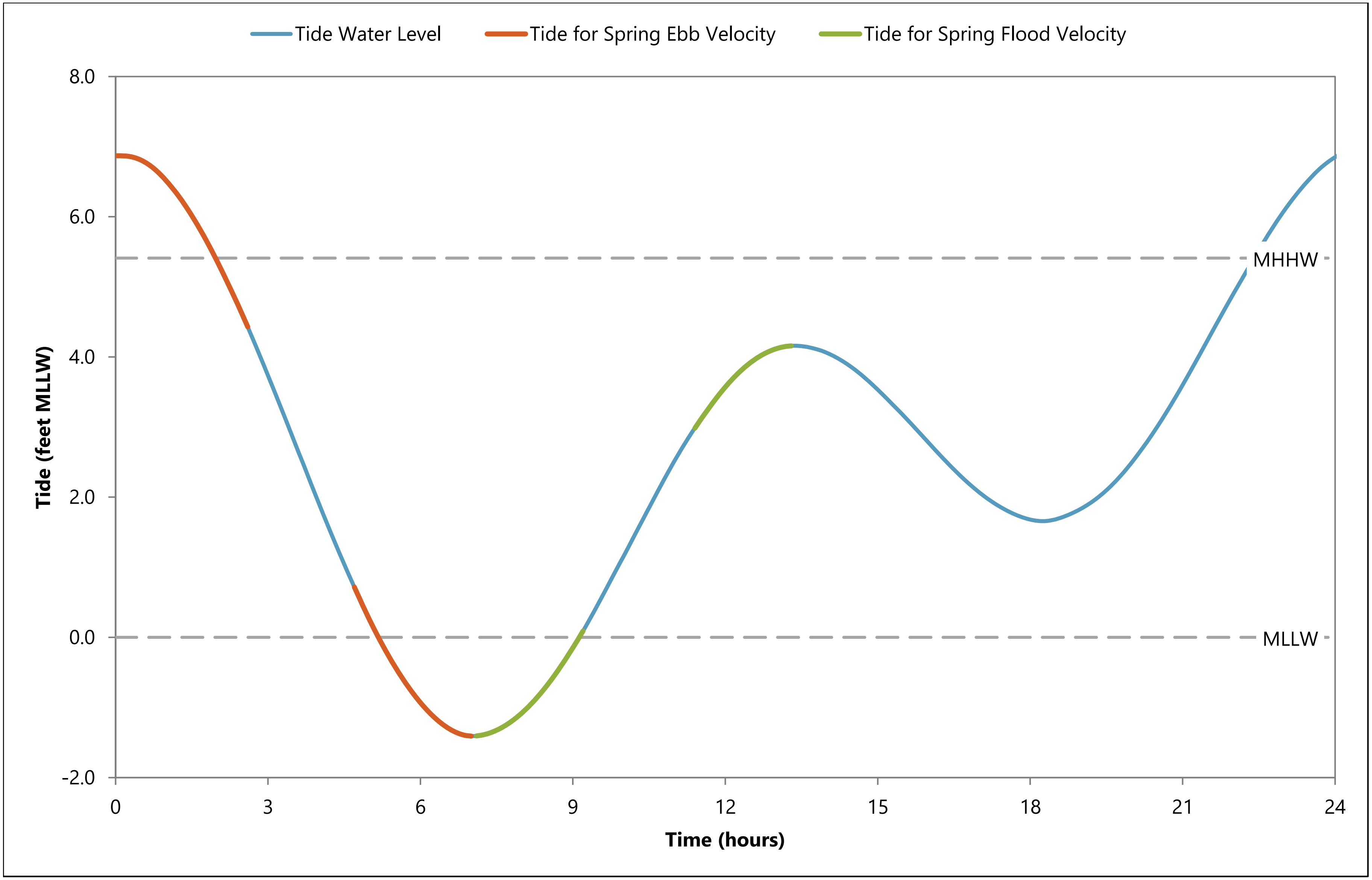
Newport Bay Model

0 500
Feet

Publish Date: 2020/04/07 9:29 AM | User: bueoka
Filepath: S:\PROJECTS\City_of_Newport_Beach\C-6111_On-call_2015-2017(150243-01)\NH Sediment Management\LNB Design Documents\CAD Design\STFATE Modeling\STFATE_Grid.dwg Figure 1

ANCHOR QEA

Figure G-1
Project Location of Proposed CAD Facility with Overlays of Newport Bay Model and STFATE Model Grids



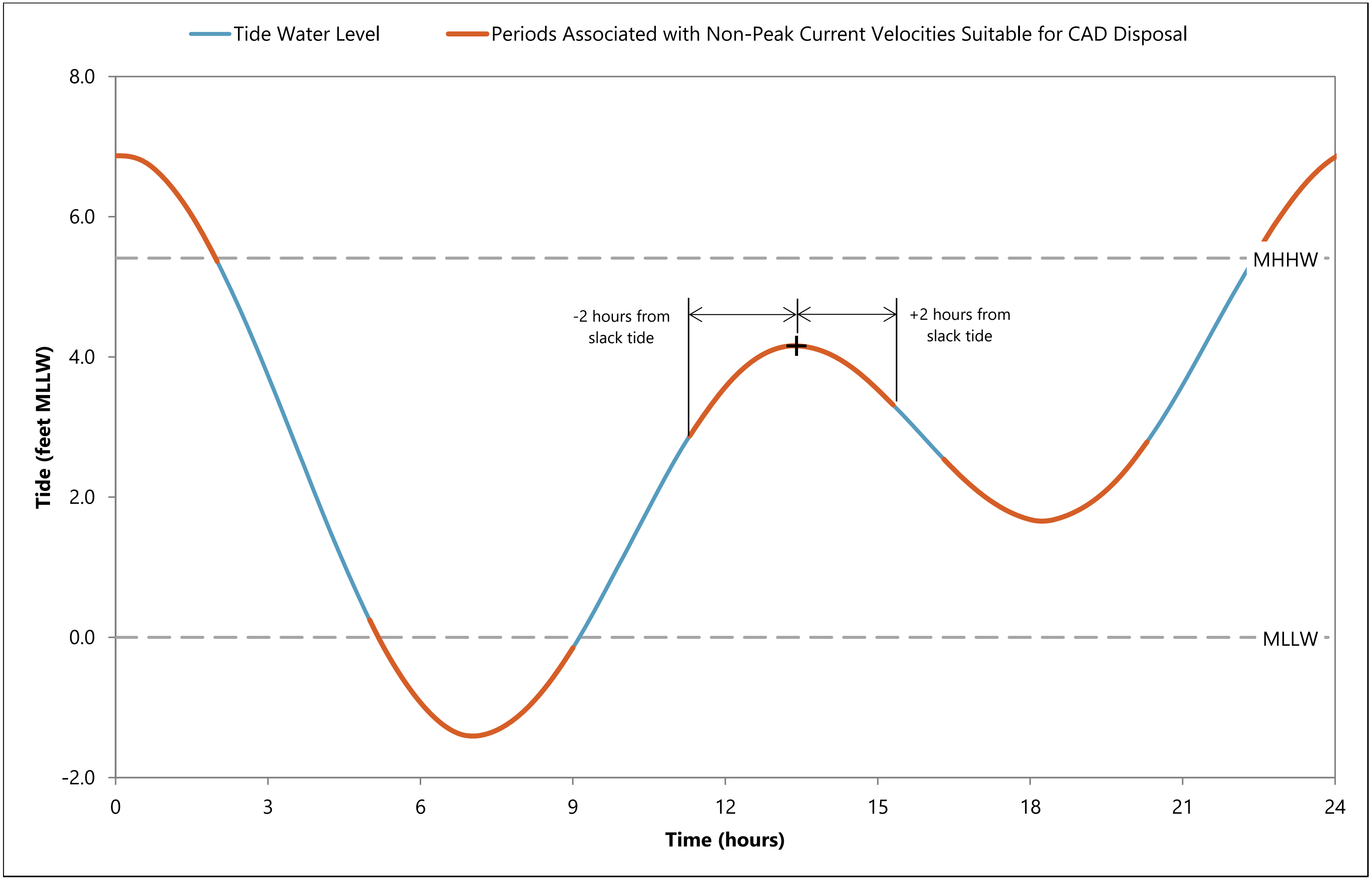
Notes: MHHW: mean higher high water, MLLW: mean lower low water

Figure G-2

Tide Conditions Used for Estimating Non-Peak Spring Tide Velocities

Appendix G: STFATE Model Scenarios for CAD Site Development at the Proposed Lower Newport Bay Federal Channels Site

Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay



Notes: MHHW: mean higher high water, MLLW: mean lower low water

ANCHOR QEA

Figure G-3
Periods Associated with Non-Peak Current Velocities Suitable for CAD Disposal
Appendix G: STFATE Model Scenarios for CAD Site Development at the Proposed Lower Newport Bay Federal Channels Site
Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay

Attachment G-1
Detailed Results Per Scenario

```
MODEL:  SHORT-TERM FATE OF DREDGED MATERIAL FROM SPLIT HULL BARGE OR HOPPER DREDGE
               (PC Version 5.01  MAY, 1993)
               (Extended Memory Modification: December, 1997)
               This Version Supports Grid Sizes up to 96 x 96 Points


 TITLE:


 FILE:    TmpFile .DUE


 AREA:    THE PROJECT AREA IS DESCRIBED BY A 49 X 73 GRID.

          THERE ARE 49 GRID POINTS (NMAX) IN THE Z-DIRECTION (FROM LEFT TO RIGHT)
            AND 73 GRID POINTS (MMAX) IN THE X-DIRECTION (FROM TOP TO BOTTOM).


 EXECUTION PARAMETERS:

          MODEL COEFFICIENTS SPECIFIED IN INPUT DATA (KEY1 = 1).

          PERFORM COMPLETE ANALYSIS INCLUDING DESCENT, COLLAPSE, AND TRANSPORT-DIFFUSION (KEY2 = 0).

          PERFORM TIER II INLAND DUMPING INITIAL MIXING EVALUATION
            TO COMPARE WATER QUALITY WITH STANDARD (KEY3 = 5).

          MIXING ZONE WILL BE COMPUTED SINCE A MIXING ZONE HAS NOT BEEN DESIGNATED.

          NO ANALYSIS OF A ZONE OF INITIAL DILUTION REQUESTED.

          PRINTING OF CONVECTIVE DESCENT RESULTS NOT REQUESTED (IPCN = 0).

          PRINTING OF CONVECTIVE DESCENT RESULTS NOT REQUESTED (IPCN = 0).

          PRINTING OF DYNAMIC COLLAPSE RESULTS NOT REQUESTED (IPCL = 0).

          QUARTERLY PRINTING OF LONG-TERM TRANSPORT DIFFUSION RESULTS REQUESTED (IPLT = 0).

          LONG-TERM TRANSPORT DIFFUSION RESULTS REQUESTED AT THE FOLLOWING 1 DEPTH(S):
                0.00 FT
```

```
GRID:    NUMBER OF LONG TERM GRID POINTS IN Z-DIRECTION (NMAX) = 49

         NUMBER OF LONG TERM GRID POINTS IN X-DIRECTION (MMAX) = 73

         GRID SPACING IN Z-DIRECTION (DZ) =    75.00000 FT

         GRID SPACING IN X-DIRECTION (DX) =    75.00000 FT

         CONSTANT DEPTH GRID SPECIFIED HAVING A DEPTH (DEPC) OF    13.50000 FT.
```

DEPTH GRID, FEET:

M N =	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

M	N =18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

M	N =35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

CODED GRID:

RANGE OF N IS 1 TO 49

```
X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
X O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W D W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
```

```
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O X
X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
```

```
LEGEND FOR CODED GRID:  W = WATER POINT
                        L = LAND POINT
                        O = OPEN BOUNDARY
                        B = MIXING ZONE BOUNDARY
                        Z = ZID BOUNDARY
                        D = DUMP LOCATION
                        X = DUMMY POINT
```

NUMBER OF GRID POINTS WITHIN ESTUARY = 3105

DISPOSAL LOCATION:

THE DUMP LOCATION IS 525.0 FT (XBARGE) OR ABOUT GRID POINT # 8 FROM THE TOP OF THE GRID
AND 1725. FT (ZBARGE) OR ABOUT GRID POINT #24 FROM THE LEFT EDGE OF THE GRID.

THE BOTTOM SLOPE IN THE X-DIRECTION AT THE DUMP SITE (SLOPEX, POSITIVE IF DEPTH INCREASES
FROM TOP OF GRID TO BOTTOM OF GRID) IS 0.00 DEGREES.

THE BOTTOM SLOPE IN THE Z-DIRECTION AT THE DUMP SITE (SLOPEZ, POSITIVE IF DEPTH INCREASES
FROM LEFT SIDE OF GRID TO RIGHT SIDE OF GRID) IS 0.00 DEGREES.

THE DISPOSAL LOCATION IS AT A HOLE OR DEPRESSION.
THE LENGTH OF THE HOLE IN THE X-DIRECTION (XHOLE) IS 450.00 FT,
THE LENGTH OF THE HOLE IN THE Z-DIRECTION (ZHOLE) IS 450.00 FT AND
THE AVERAGE DEPTH OF THE HOLE (DHOLE) IS 45.00 FT.

AMBIENT DENSITY PROFILE:

DEPTH (FT)	DENSITY (G/CC)
0.0000E+00	1.0240
3.000	1.0240
6.000	1.0240
12.00	1.0240
13.50	1.0240

COMPUTED DEPTH:

THE DEPTH AT THE DUMP LOCATION WAS INTERPOLATED TO BE 13.50 FT.

VELOCITY DISTRIBUTION:

TWO-VELOCITY PROFILES ARE SPECIFIED IN BOTH X AND Z DIRECTIONS FOR USE AT ALL GRID POINTS PROVIDING "QUICK LOOKS".

DEPTH IN FT IS ASSUMED CONSTANT AND VELOCITIES IN FPS ARE CONSIDERED STEADY IN TIME.

VELOCITY PROFILE PARAMETERS FOLLOW...

		FROM TOP TO BOTTOM ON GRID		FROM LEFT TO RIGHT ON GRID
UPPER:	DEPTH, DU1 = 6.00	X-VELOCITY, UU1 = 0.298	DEPTH, DW1 = 6.00	Z-VELOCITY, WW1 = 0.210E-01
LOWER:	DEPTH, DU2 = 12.0	X-VELOCITY, UU2 = 0.298	DEPTH, DW2 = 12.0	Z-VELOCITY, WW2 = 0.210E-01

BOTTOM SHEAR STRESS, LBS/SQ FT:

M N=	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

M N=	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

M N=	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

TIME PARAMETERS:

DURATION OF THE DISPOSAL, TREL = 30.00 SECONDS

DURATION OF THE SIMULATION, TSTOP = 14400.00 SECONDS

LONG-TERM TIME STEP USED IN THE SIMULATION, DTL = 1200.00 SECONDS

BARGE DESCRIPTION:

LENGTH OF BARGE, BARGL = 0.20E+03 FT

WIDTH OF BARGE, BARGW = 50. FT

DRAFT OF LOADED BARGE, DREL1 = 12.0 FT

DRAFT OF UNLOADED BARGE, DREL2 = 3.00 FT

MODEL COEFFICIENTS READ FROM INPUT:

TURBULENT THERMAL ENTRAINMENT	ALPHA0	=	0.2350
SETTLING COEFFICIENT	BETA	=	0.0000
APPARENT MASS COEFFICIENT	CM	=	1.0000
DRAG COEFFICIENT FOR A SPHERE	CD	=	0.5000
RATIO--CLOUD/AMBIENT DENSITY GRADIENTS	GAMA	=	0.2500
FORM DRAG FOR COLLAPSING CLOUD	CDRAG	=	1.0000
SKIN FRICTION FOR COLLAPSING CLOUD	CFRIC	=	0.0100
DRAG FOR AN ELLIPSOIDAL WEDGE	CD3	=	0.1000
DRAG FOR A PLATE	CD4	=	1.0000
ENTRAINMENT IN COLLAPSE	ALPHAC	=	0.1000
FRICTION BETWEEN CLOUD AND BOTTOM	FRICTN	=	0.0100
4/3 LAW HORIZ. DIFF. DISSIPATION FACTOR	ALAMDA	=	0.0010
UNSTRATIFIED WATER VERT. DIFF. COEF.	AKY0	=	0.0250
STRIPPING COEF. OF FINES DURING CONVERTIVE DESCENT		=	0.0030

MATERIAL DESCRIPTION: 4 SOLIDS FRACTIONS

L A Y E R 1

DESCRIPTION	SPEC. GRAV. OR DENSITY (GM/CC)	VOLUMETRIC CONCENTRATION (VOL/VOL)	FALL VELOCITY (FPS)	DEPOSITIONAL VOID RATIO	CHARACTER
SAND	2.700	0.7640E-01	0.10000	0.6000	NONCOHESIVE

CRITICAL SHEAR STRESS FOR DEPOSITION = 0.2500E-01 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

Silt	2.650	0.1340	0.01000	4.500	NONCOHESIVE

CRITICAL SHEAR STRESS FOR DEPOSITION = 0.8500E-02 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

Clay	2.650	0.6070E-01	0.00200	7.500	NONCOHESIVE

CRITICAL SHEAR STRESS FOR DEPOSITION = 0.3800E-02 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

Clumps	1.600	0.2711	3.00000	0.4000	NONCOHESIVE

CRITICAL SHEAR STRESS FOR DEPOSITION = 99.00 LBS/SQ. FT.
SEDIMENT FRACTION WILL NOT BE STRIPPED DURING CONVECTIVE DESCENT.

WATER QUALITY ANALYSIS DATA:

CONCENTRATIONS OF FOLLOWING INITIAL MIXING OF THE FLUID
ARE COMPUTED FOR WATER QUALITY EVALUATIONS.

THE INITIAL CONCENTRATION OF IS 0.000000E+00 MG/L
AND ITS BACKGROUND CONCENTRATION IS 0.0000000E+00 MG/L.

THE WATER QUALITY STANDARD FOR IS 0.0000000E+00 MG/L.

DESCRIPTION	SPEC. GRAV. OR DENSITY (GM/CC)	VOLUMETRIC CONCENTRATION (VOL/VOL)
FLUID	1.024	0.4578

DISCHARGE PARAMETERS:

VOLUME OF LAYER 1 =   2000.   CU YD

DEPTH IS TOO SHALLOW FOR CONVECTIVE DESCENT SO DESCENT IS BYPASSED.

CLOUD COLLAPSE PHASE:

```
IN TRIAL #1 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.10000000     SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS    6.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.

IN TRIAL #2 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.16666667E-02 SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS 1137.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.

IN TRIAL #3 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.31555556E-02 SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS  836.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.

IN TRIAL #4 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.43914816E-02 SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS  701.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.
```

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 1									
30.31	500.3	1725.	143.3	9.063	1.013	560.3	0.0000E+00	71	1
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 2									
30.61	500.2	1725.	159.3	10.08	0.4471	8.761	0.0000E+00	141	71
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 3									
30.92	500.2	1725.	171.4	10.52	0.2734	5.777	0.0000E+00	211	141
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 4									
31.23	500.2	1725.	181.1	10.80	0.1911	4.255	0.0000E+00	281	211
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 5									
31.54	500.2	1725.	189.1	10.99	0.1448	3.355	0.0000E+00	351	281
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 6									
31.84	500.2	1725.	195.8	11.13	0.1152	2.758	0.0000E+00	421	351
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 7									
32.15	500.2	1725.	201.6	11.25	0.9467E-01	2.327	0.0000E+00	491	421
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 8									
32.46	500.2	1725.	206.7	11.34	0.7957E-01	2.003	0.0000E+00	561	491
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 9									
32.77	500.2	1725.	211.1	11.42	0.6810E-01	1.749	0.0000E+00	631	561
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 10									
33.07	500.2	1725.	215.1	10.07	3.431	3534.	0.0000E+00	701	631

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 1									
30.31	500.3	1725.	143.3	9.063	1.013	982.8	0.0000E+00	71	1
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 2									
30.61	500.2	1725.	159.3	10.08	0.4471	15.37	0.0000E+00	141	71
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 3									
30.92	500.2	1725.	171.4	10.52	0.2734	10.13	0.0000E+00	211	141
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 4									
31.23	500.2	1725.	181.1	10.80	0.1911	7.461	0.0000E+00	281	211
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 5									
31.54	500.2	1725.	189.1	10.99	0.1448	5.884	0.0000E+00	351	281
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 6									
31.84	500.2	1725.	195.8	11.13	0.1152	4.838	0.0000E+00	421	351
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 7									
32.15	500.2	1725.	201.6	11.25	0.9467E-01	4.083	0.0000E+00	491	421
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 8									
32.46	500.2	1725.	206.7	11.34	0.7957E-01	3.512	0.0000E+00	561	491
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 9									
32.77	500.2	1725.	211.1	11.42	0.6810E-01	3.066	0.0000E+00	631	561
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 10									
33.07	500.2	1725.	215.1	10.07	3.431	6199.	0.0000E+00	701	631

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 1									
30.31	500.3	1725.	143.3	9.063	1.013	445.2	0.0000E+00	71	1
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 2									
30.61	500.2	1725.	159.3	10.08	0.4471	6.960	0.0000E+00	141	71
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 3									
30.92	500.2	1725.	171.4	10.52	0.2734	4.589	0.0000E+00	211	141
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 4									
31.23	500.2	1725.	181.1	10.80	0.1911	3.380	0.0000E+00	281	211
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 5									
31.54	500.2	1725.	189.1	10.99	0.1448	2.665	0.0000E+00	351	281
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 6									
31.84	500.2	1725.	195.8	11.13	0.1152	2.190	0.0000E+00	421	351
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 7									
32.15	500.2	1725.	201.6	11.25	0.9467E-01	1.849	0.0000E+00	491	421
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 8									
32.46	500.2	1725.	206.7	11.34	0.7957E-01	1.591	0.0000E+00	561	491
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 9									
32.77	500.2	1725.	211.1	11.42	0.6810E-01	1.389	0.0000E+00	631	561
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 10									
33.07	500.2	1725.	215.1	10.07	3.431	2808.	0.0000E+00	701	631

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 1									
30.31	500.3	1725.	143.3	13.50	0.1000E-02	944.6	0.0000E+00	71	1
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 2									
30.61	500.2	1725.	159.3	13.50	0.1000E-02	3525.	0.0000E+00	141	71
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 3									
30.92	500.2	1725.	171.4	13.50	0.1000E-02	2797.	0.0000E+00	211	141
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 4									
31.23	500.2	1725.	181.1	13.50	0.1000E-02	2123.	0.0000E+00	281	211
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 5									
31.54	500.2	1725.	189.1	13.50	0.1000E-02	1565.	0.0000E+00	351	281
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 6									
31.84	500.2	1725.	195.8	13.50	0.1000E-02	1130.	0.0000E+00	421	351
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 7									
32.15	500.2	1725.	201.6	13.50	0.1000E-02	801.7	0.0000E+00	491	421
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 8									
32.46	500.2	1725.	206.7	13.50	0.1000E-02	561.0	0.0000E+00	561	491
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 9									
32.77	500.2	1725.	211.1	13.50	0.1000E-02	388.0	0.0000E+00	631	561
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 10									
33.07	500.2	1725.	215.1	10.07	3.431	804.3	0.0000E+00	701	631

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (MG)	ENTRAINED MASS (MG)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 5) = 1									
33.07	500.2	1725.	215.1	10.07	3.431	0.0000E+00	0.0000E+00	701	1

NOTE -- When all solid material has settled from a cloud, the cloud is erased and
the remaining clouds for this solids type are renumbered.

```
LONG TERM DIFFUSION RESULTS:

    BEGIN LONG TERM SIMULATION OF FATE OF SAND



SUMMARY OF SAND     DISTRIBUTIONS AFTER    1200.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =    0.00000E+00
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     4125.6


     COMPUTATIONS FOR SAND     TERMINATED AT    1200.00  SEC. ELAPSED TIME...MATERIAL SETTLED TO BOTTOM
```

BOTTOM ACCUMULATION OF SAND (CU FT/GRID SQUARE) , 1200.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.02	.01	+	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.09	.33	.58	.52	.22	.05	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.18	1.3	4.7	8.4	7.4	3.2	.71	.07	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.08	1.2	9.4	35	63	55	24	5.1	.55	.03	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.31	4.5	34	130	246	214	88	18	1.9	.10	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.55	8.1	61	242	471	409	162	33	3.4	.18	+	.
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.48	7.0	53	208	403	350	140	28	3.0	.16	+	.
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.21	3.0	22	84	157	138	58	12	1.3	.07	+	.
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.04	.65	4.7	17	31	28	12	2.5	.28	.01	+	.
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.07	.50	1.8	3.2	2.8	1.2	.27	.03	+	.	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.02	.09	.17	.15	.06	.01	+	.	.	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	00000000000000000000000000000000000000000000000000000000000000000000																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	

```
61    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
62    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
63    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
64    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
65    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
66    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
67    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
68    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
69    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
70    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
71    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

THICKNESS (FT) OF SAND ACCUMULATED ON BOTTOM, 1200.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	+	.	.	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.01	.01	+	+	+	.	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.03	.06	.06	.02	+	+	.	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.01	.06	.13	.11	.04	+	+	.	.	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.01	.05	.11	.09	.03	+	+	.	.	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.02	.04	.03	.01	+	+	.	0	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	.	.	0	0	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	0	0	0	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M	N= 32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	00000000000000000000000000000000000000000000000000000000000000000000															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

```
    BEGIN LONG TERM SIMULATION OF FATE OF Silt



SUMMARY OF Silt     DISTRIBUTIONS AFTER    1200.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     144.63
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     7091.4



SUMMARY OF Silt     DISTRIBUTIONS AFTER    2400.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     57.868
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     7178.1



SUMMARY OF Silt     DISTRIBUTIONS AFTER    3600.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     23.601
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     7212.4
```

CONCENTRATIONS ABOVE BACKGROUND OF Silt (MG/L) IN THE CLOUD 3600.00 SECONDS AFTER DUMP

0.00 FT BELOW THE WATER SURFACE

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	.01	.01	.01	+	+	+	+	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.01	.02	.04	.05	.06	.05	.04	.02	.01	+	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	+	.01	.04	.09	.16	.22	.25	.22	.16	.09	.04	.01	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.01	.05	.14	.30	.54	.76	.85	.76	.54	.30	.14	.05	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.04	.13	.37	.82	1.4	2.0	2.3	2.0	1.4	.82	.37	.13	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.02	.08	.28	.79	1.7	3.1	4.5	5.0	4.5	3.1	1.7	.79	.28	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.03	.14	.48	1.3	3.0	5.5	7.8	8.8	7.8	5.5	3.0	1.3	.48	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.04	.19	.66	1.8	4.1	7.6	11	12	11	7.5	4.1	1.8	.66	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.04	.20	.71	2.0	4.5	8.2	12	13	12	8.2	4.5	2.0	.71	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.04	.18	.61	1.7	3.8	7.0	10	11	10	7.0	3.8	1.7	.61	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.02	.12	.42	1.1	2.6	4.7	6.8	7.6	6.8	4.7	2.6	1.1	.42	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.01	.06	.23	.64	1.4	2.5	3.6	4.0	3.6	2.5	1.4	.64	.23	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.03	.10	.28	.62	1.0	1.5	1.7	1.5	1.0	.62	.28	.10	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.01	.03	.10	.21	.38	.53	.59	.53	.38	.21	.10	.03	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
58 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
59 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 2 00000000000000000000000000000000000000000000000000000000000000000000
 3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
12    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
13    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
14    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
15    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
16    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
17    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
18    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
19    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
20    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
21    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
22    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
23    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
24    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
25    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
26    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
27    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
28    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
29    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
30    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
31    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
32    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
33    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
34    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
35    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
36    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
37    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
38    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
39    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
40    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
41    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
42    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
43    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
44    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
45    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
46    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
47    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
48    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
49    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
50    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
51    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
52    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
53    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
54    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
55    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
56    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
57    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
58    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
59    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
60    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
```

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

BOTTOM ACCUMULATION OF Silt (CU FT/GRID SQUARE) , 3600.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.03	.03	.01	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.15	.56	1.0	.89	.39	.08	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.31	2.2	8.1	15	13	5.6	1.2	.13	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.15	2.2	16	59	108	95	41	8.8	.95	.05	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.54	7.9	59	224	422	369	152	32	3.3	.18	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.95	14	105	416	809	702	278	56	5.9	.32	+	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.83	12	91	358	692	601	241	49	5.2	.28	+	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.37	5.3	39	146	271	238	100	21	2.3	.14	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.11	1.2	8.7	31	56	50	22	5.2	.73	.08	.01	+
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.07	.42	1.9	5.6	10	9.3	5.2	1.9	.52	.11	.01	+
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.08	.38	1.3	3.3	5.5	5.9	4.0	1.8	.61	.14	.02	+
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.07	.34	1.1	2.8	4.5	4.8	3.4	1.6	.56	.14	.03	+
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.06	.25	.78	1.7	2.8	3.0	2.2	1.1	.45	.14	.03	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.20	.53	1.0	1.6	1.8	1.4	.85	.40	.15	.05	.01
21	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.19	.46	.88	1.2	1.4	1.2	.82	.43	.18	.06	.01
22	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.06	.19	.45	.82	1.1	1.3	1.1	.81	.44	.19	.06	.02
23	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.05	.16	.37	.68	.98	1.1	.98	.68	.37	.16	.05	.01
24	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.04	.11	.25	.45	.65	.73	.65	.45	.25	.11	.04	.01
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.06	.13	.24	.34	.39	.34	.24	.13	.06	.02	+
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.02	.05	.10	.14	.16	.14	.10	.05	.02	.01	+
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.03	.05	.05	.05	.03	.02	+	+	+
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.01	.01	.01	.01	.01	+	+	+	+
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	.	.	.	.	.	.
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

60 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
61 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
62 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
63 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
64 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
65 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
66 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
67 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
68 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
69 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
70 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
71 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 2 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
12    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
13    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
14    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
15    +   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
16    +   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
17    +   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
18    +   +   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
19    +   +   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
20    +   +   +   .   .   0   0   0   0   0   0   0   0   0   0   00000
21    +   +   +   .   .   0   0   0   0   0   0   0   0   0   0   00000
22    +   +   +   .   .   0   0   0   0   0   0   0   0   0   0   00000
23    +   +   +   .   .   0   0   0   0   0   0   0   0   0   0   00000
24    +   +   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
25    +   +   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
26    +   +   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
27    +   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
28    .   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
29    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
30    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
31    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
32    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
33    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
34    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
35    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
36    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
37    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
38    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
39    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
40    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
41    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
42    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
43    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
44    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
45    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
46    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
47    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
48    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
49    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
50    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
51    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
52    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
53    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
54    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
55    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
56    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
57    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
58    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
59    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
60    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
```

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
72	00000000000000000000000000000000000000000000000000000000000000000000															

SMALL CLOUDS AT 3600.00 SECONDS ELAPSED TIME FOR Silt

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	1564.	1800.	3.674	0.0000E+00	466.9	0.0000E+00	13.50	0.100000E-01
2	1564.	1800.	0.9189	0.0000E+00	491.6	0.0000E+00	13.50	0.100000E-01
3	1564.	1800.	0.6027	0.0000E+00	509.9	0.0000E+00	13.50	0.100000E-01
4	1564.	1800.	0.4163	0.0000E+00	524.4	0.0000E+00	13.50	0.100000E-01
5	1564.	1800.	0.3492	0.0000E+00	536.2	0.0000E+00	13.50	0.100000E-01
6	1563.	1800.	0.2863	0.0000E+00	546.1	0.0000E+00	13.50	0.100000E-01
7	1563.	1800.	0.2448	0.0000E+00	554.5	0.0000E+00	13.50	0.100000E-01
8	1563.	1800.	0.2099	0.0000E+00	561.8	0.0000E+00	13.50	0.100000E-01
9	1563.	1800.	0.1815	0.0000E+00	568.2	0.0000E+00	13.50	0.100000E-01
10	1563.	1800.	16.72	0.0000E+00	573.9	0.0000E+00	13.50	0.100000E-01

SUMMARY OF Silt DISTRIBUTIONS AFTER 4800.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 9.6253
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7226.4

SUMMARY OF Silt DISTRIBUTIONS AFTER 6000.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 3.9256
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7232.1

SUMMARY OF Silt DISTRIBUTIONS AFTER 7200.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 1.6010
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7234.4

MAX CONC IS 0.00000010 OUTPUT SUPPRESSED AT 0.00 FT

BOTTOM ACCUMULATION OF Silt (CU FT/GRID SQUARE) , 7200.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.03	.03	.01	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.15	.56	1.0	.89	.39	.08	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.31	2.2	8.1	15	13	5.6	1.2	.13	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.15	2.2	16	59	108	95	41	8.8	.95	.05	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.54	7.9	59	224	422	369	152	32	3.3	.18	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.95	14	105	416	809	702	278	56	5.9	.32	+	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.83	12	91	358	692	601	241	49	5.2	.28	+	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.37	5.3	39	146	271	238	100	21	2.3	.14	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.11	1.2	8.7	31	56	50	22	5.2	.73	.08	.01	+
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.07	.42	1.9	5.6	10	9.3	5.2	1.9	.52	.11	.01	+
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.08	.38	1.3	3.3	5.5	5.9	4.0	1.8	.61	.14	.02	+
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.07	.34	1.1	2.8	4.5	4.8	3.4	1.6	.56	.14	.03	+
19	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.06	.25	.79	1.7	2.8	3.0	2.2	1.1	.45	.14	.03	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.20	.54	1.0	1.6	1.8	1.4	.87	.41	.16	.05	.01
21	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.20	.48	.90	1.3	1.4	1.2	.84	.45	.19	.07	.02
22	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.21	.48	.87	1.2	1.4	1.2	.86	.48	.22	.08	.02
23	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.07	.19	.43	.76	1.0	1.2	1.1	.78	.45	.21	.08	.03
24	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.06	.16	.34	.59	.83	.94	.85	.62	.37	.19	.08	.03
25	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.05	.13	.26	.43	.59	.67	.62	.47	.30	.16	.08	.03
26	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.11	.21	.33	.44	.50	.48	.38	.26	.15	.08	.03
27	0000	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	.02	.05	.10	.18	.27	.36	.41	.40	.33	.23	.15	.08	.04
28	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.09	.15	.23	.31	.35	.34	.29	.21	.13	.07	.04
29	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.07	.13	.19	.25	.28	.28	.24	.18	.12	.07	.03
30	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.03	.06	.10	.15	.19	.22	.22	.19	.15	.10	.06	.03
31	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.03	.05	.08	.12	.15	.17	.17	.15	.12	.08	.05	.03
32	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.02	.04	.07	.09	.12	.13	.13	.12	.10	.07	.05	.03
33	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.05	.07	.09	.11	.11	.10	.08	.06	.04	.02
34	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.04	.06	.07	.08	.09	.08	.07	.05	.03	.02
35	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.05	.06	.07	.07	.06	.05	.04	.03	.02
36	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.04	.04	.05	.05	.05	.04	.03	.02	.01
37	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.01	.02	.03	.03	.04	.04	.04	.03	.02	.02	.01
38	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.02	.02	.01	.01
39	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.02	.02	.02	.01	.01	+
40	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	+	+
41	0000	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	+	+	+
42	0000	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
43	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
44	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
45	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 2 00000000000000000000000000000000000000000000000000000000000000000000
 3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
12    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
13    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
14    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
15    +   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
16    +   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
17    +   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
18    +   +   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
19    +   +   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
20    +   +   +   .   .   .   0   0   0   0   0   0   0   0   0   00000
21    +   +   +   .   .   .   .   0   0   0   0   0   0   0   0   00000
22    +   +   +   +   .   .   .   0   0   0   0   0   0   0   0   00000
23    +   +   +   +   .   .   .   .   0   0   0   0   0   0   0   00000
24  .01   +   +   +   +   .   .   .   0   0   0   0   0   0   0   00000
25  .01   +   +   +   +   .   .   .   .   0   0   0   0   0   0   00000
26  .01   +   +   +   +   .   .   .   .   0   0   0   0   0   0   00000
27  .01   +   +   +   +   +   .   .   .   .   0   0   0   0   0   00000
28  .01   +   +   +   +   +   .   .   .   .   0   0   0   0   0   00000
29  .01   +   +   +   +   +   .   .   .   .   .   0   0   0   0   00000
30  .01   +   +   +   +   +   +   .   .   .   .   0   0   0   0   00000
31  .01   +   +   +   +   +   +   .   .   .   .   0   0   0   0   00000
32  .01   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
33  .01   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
34  .01   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
35  .01   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
36  .01   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
37    +   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
38    +   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
39    +   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
40    +   +   +   +   +   +   +   .   .   .   .   .   0   0   0   00000
41    +   +   +   +   +   +   .   .   .   .   .   0   0   0   0   00000
42    +   +   +   +   +   +   .   .   .   .   .   0   0   0   0   00000
43    +   +   +   +   +   .   .   .   .   .   .   0   0   0   0   00000
44    +   +   +   +   +   .   .   .   .   .   0   0   0   0   0   00000
45    +   +   +   +   .   .   .   .   .   .   0   0   0   0   0   00000
46    +   +   +   .   .   .   .   .   .   0   0   0   0   0   0   00000
47    +   .   .   .   .   .   .   .   0   0   0   0   0   0   0   00000
48    .   .   .   .   .   .   .   0   0   0   0   0   0   0   0   00000
49    .   .   .   .   .   .   0   0   0   0   0   0   0   0   0   00000
50    .   .   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
51    .   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
52    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
53    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
54    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
55    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
56    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
57    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
58    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
59    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
60    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
```

```
61    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
62    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
63    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
64    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
65    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
66    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
67    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
68    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
69    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
70    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
71    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

SMALL CLOUDS AT 7200.00 SECONDS ELAPSED TIME FOR Silt

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	2637.	1876.	0.2492	0.0000E+00	915.3	0.0000E+00	13.50	0.100000E-01
2	2637.	1876.	0.6233E-01	0.0000E+00	946.7	0.0000E+00	13.50	0.100000E-01
3	2637.	1876.	0.4089E-01	0.0000E+00	969.8	0.0000E+00	13.50	0.100000E-01
4	2636.	1876.	0.2824E-01	0.0000E+00	987.9	0.0000E+00	13.50	0.100000E-01
5	2636.	1876.	0.2369E-01	0.0000E+00	1003.	0.0000E+00	13.50	0.100000E-01
6	2636.	1876.	0.1942E-01	0.0000E+00	1015.	0.0000E+00	13.50	0.100000E-01
7	2636.	1876.	0.1660E-01	0.0000E+00	1026.	0.0000E+00	13.50	0.100000E-01
8	2636.	1876.	0.1424E-01	0.0000E+00	1035.	0.0000E+00	13.50	0.100000E-01
9	2636.	1876.	0.1231E-01	0.0000E+00	1043.	0.0000E+00	13.50	0.100000E-01
10	2636.	1876.	1.134	0.0000E+00	1050.	0.0000E+00	13.50	0.100000E-01

SUMMARY OF Silt DISTRIBUTIONS AFTER 8400.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.65294
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7235.3

SUMMARY OF Silt DISTRIBUTIONS AFTER 9600.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.26630
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7235.7

SUMMARY OF Silt DISTRIBUTIONS AFTER 10800.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.10861
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7235.9

MAX CONC IS 0.00000000 OUTPUT SUPPRESSED AT 0.00 FT

BOTTOM ACCUMULATION OF Silt   (CU FT/GRID SQUARE) , 10800.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.03	.03	.01	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.15	.56	1.0	.89	.39	.08	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.31	2.2	8.1	15	13	5.6	1.2	.13	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.15	2.2	16	59	108	95	41	8.8	.95	.05	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.54	7.9	59	224	422	369	152	32	3.3	.18	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.95	14	105	416	809	702	278	56	5.9	.32	+	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.83	12	91	358	692	601	241	49	5.2	.28	+	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.37	5.3	39	146	271	238	100	21	2.3	.14	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.11	1.2	8.7	31	56	50	22	5.2	.73	.08	.01	+
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.07	.42	1.9	5.6	10	9.3	5.2	1.9	.52	.11	.01	+
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.08	.38	1.3	3.3	5.5	5.9	4.0	1.8	.61	.14	.02	+
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.07	.34	1.1	2.8	4.5	4.8	3.4	1.6	.56	.14	.03	+
19	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.06	.25	.79	1.7	2.8	3.0	2.2	1.1	.45	.14	.03	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.20	.54	1.0	1.6	1.8	1.4	.87	.41	.16	.05	.01
21	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.20	.48	.90	1.3	1.4	1.2	.84	.45	.19	.07	.02
22	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.21	.48	.87	1.2	1.4	1.2	.86	.48	.22	.08	.02
23	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.07	.19	.43	.76	1.0	1.2	1.1	.78	.45	.21	.08	.03
24	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.06	.16	.34	.59	.83	.94	.85	.62	.37	.19	.08	.03
25	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.13	.26	.43	.59	.67	.62	.47	.30	.16	.08	.03
26	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.11	.21	.33	.44	.50	.48	.38	.26	.15	.08	.03
27	0000	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	.02	.05	.10	.18	.27	.36	.41	.40	.33	.23	.15	.08	.04
28	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.09	.15	.23	.31	.35	.34	.29	.21	.13	.07	.04
29	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.07	.13	.19	.25	.28	.28	.24	.18	.12	.07	.03
30	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.06	.10	.15	.19	.22	.22	.19	.15	.10	.06	.03
31	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.05	.08	.12	.15	.17	.17	.15	.12	.08	.05	.03
32	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.04	.07	.09	.12	.13	.13	.12	.10	.07	.05	.03
33	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.05	.08	.09	.11	.11	.10	.08	.06	.04	.02
34	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.04	.06	.08	.09	.09	.08	.07	.05	.04	.02
35	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.01	.02	.04	.05	.06	.07	.07	.07	.06	.04	.03	.02
36	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.04	.05	.05	.06	.05	.05	.04	.03	.02
37	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.04	.04	.04	.04	.03	.02	.01
38	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.03	.03	.02	.02	.01
39	0000	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.02	.02	.01	.01
40	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.02	.02	.01	.01	.01
41	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.01	.01	.01	.01
42	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	+
43	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	+	+
44	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	+	+	+
45	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
51	0000	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
52	0000	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
53	0000	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
54	0000	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
55	0000	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
56	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
57	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
58	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
59	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+

```
60 OOOO   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +
61 OOOO   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +
62 OOOO   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   .
63 OOOO   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
64 OOOO   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
65 OOOO   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
66 OOOO   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
67 OOOO   0   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	000000000000000000000000000000000000000000000000000000000000000000000															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
17	+	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
18	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
19	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
20	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
21	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
22	+	+	+	+	.	.	.	0	0	0	0	0	0	0	0	00000
23	+	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
24	.01	+	+	+	+	.	.	.	0	0	0	0	0	0	0	00000
25	.01	+	+	+	+	.	.	.	.	0	0	0	0	0	0	00000
26	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
27	.01	+	+	+	+	+	.	.	.	.	0	0	0	0	0	00000
28	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
29	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
30	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0	00000
31	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0	00000
32	.01	+	+	+	+	+	+	.	.	.	.	.	.	0	0	00000
33	.01	+	+	+	+	+	+	+	.	.	.	.	.	0	0	00000
34	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0	00000
35	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0	00000
36	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	00000
37	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	00000
38	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	00000
39	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
40	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
41	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
42	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
43	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
44	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
45	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
46	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
47	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
48	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
49	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
50	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
51	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
52	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
53	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000
54	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000
55	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.0000
56	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.0000
57	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.0000
58	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.0000
59	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.0000
60	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	00000

```
61    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   OOOOO
62    .   .   .   .   .   .   .   .   .   .   .   .   .   .   0   OOOOO
63    .   .   .   .   .   .   .   .   .   .   .   .   .   0   0   OOOOO
64    .   .   .   .   .   .   .   .   .   .   .   .   0   0   0   OOOOO
65    .   .   .   .   .   .   .   .   .   .   .   .   0   0   0   OOOOO
66    .   .   .   .   .   .   .   .   .   .   .   0   0   0   0   OOOOO
67    .   .   .   .   .   .   .   .   .   .   0   0   0   0   0   OOOOO
68    .   .   .   .   .   .   .   .   0   0   0   0   0   0   0   OOOOO
69    .   .   .   .   .   .   .   0   0   0   0   0   0   0   0   OOOOO
70    .   .   .   .   .   0   0   0   0   0   0   0   0   0   0   OOOOO
71    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

SMALL CLOUDS AT 10800.00 SECONDS ELAPSED TIME FOR Silt

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	3710.	1951.	0.1691E-01	0.0000E+00	1461.	0.0000E+00	13.50	0.100000E-01
2	3710.	1951.	0.4229E-02	0.0000E+00	1498.	0.0000E+00	13.50	0.100000E-01
3	3709.	1951.	0.2774E-02	0.0000E+00	1525.	0.0000E+00	13.50	0.100000E-01
4	3709.	1951.	0.1916E-02	0.0000E+00	1547.	0.0000E+00	13.50	0.100000E-01
5	3709.	1951.	0.1607E-02	0.0000E+00	1564.	0.0000E+00	13.50	0.100000E-01
6	3709.	1951.	0.1317E-02	0.0000E+00	1578.	0.0000E+00	13.50	0.100000E-01
7	3709.	1951.	0.1126E-02	0.0000E+00	1591.	0.0000E+00	13.50	0.100000E-01
8	3709.	1951.	0.9658E-03	0.0000E+00	1601.	0.0000E+00	13.50	0.100000E-01
9	3709.	1951.	0.8352E-03	0.0000E+00	1610.	0.0000E+00	13.50	0.100000E-01
10	3709.	1951.	0.7693E-01	0.0000E+00	1619.	0.0000E+00	13.50	0.100000E-01

SUMMARY OF Silt DISTRIBUTIONS AFTER 12000.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.44293E-01
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7235.9

SUMMARY OF Silt DISTRIBUTIONS AFTER 13200.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.18065E-01
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7236.0

SUMMARY OF Silt DISTRIBUTIONS AFTER 14400.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 0.73674E-02
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 7236.0

MAX CONC IS 0.00000000 OUTPUT SUPPRESSED AT 0.00 FT

BOTTOM ACCUMULATION OF Silt (CU FT/GRID SQUARE) , 14400.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.03	.03	.01	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.15	.56	1.0	.89	.39	.08	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.31	2.2	8.1	15	13	5.6	1.2	.13	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.15	2.2	16	59	108	95	41	8.8	.95	.05	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.54	7.9	59	224	422	369	152	32	3.3	.18	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.95	14	105	416	809	702	278	56	5.9	.32	+	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.83	12	91	358	692	601	241	49	5.2	.28	+	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.37	5.3	39	146	271	238	100	21	2.3	.14	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.11	1.2	8.7	31	56	50	22	5.2	.73	.08	.01	+
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.07	.42	1.9	5.6	10	9.3	5.2	1.9	.52	.11	.01	+
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.08	.38	1.3	3.3	5.5	5.9	4.0	1.8	.61	.14	.02	+
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.07	.34	1.1	2.8	4.5	4.8	3.4	1.6	.56	.14	.03	+
19	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.06	.25	.79	1.7	2.8	3.0	2.2	1.1	.45	.14	.03	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.20	.54	1.0	1.6	1.8	1.4	.87	.41	.16	.05	.01
21	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.20	.48	.90	1.3	1.4	1.2	.84	.45	.19	.07	.02
22	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.21	.48	.87	1.2	1.4	1.2	.86	.48	.22	.08	.02
23	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.07	.19	.43	.76	1.0	1.2	1.1	.78	.45	.21	.08	.03
24	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.06	.16	.34	.59	.83	.94	.85	.62	.37	.19	.08	.03
25	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.13	.26	.43	.59	.67	.62	.47	.30	.16	.08	.03
26	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.11	.21	.33	.44	.50	.48	.38	.26	.15	.08	.03
27	0000	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	.02	.05	.10	.18	.27	.36	.41	.40	.33	.23	.15	.08	.04
28	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.09	.15	.23	.31	.35	.34	.29	.21	.13	.07	.04
29	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.07	.13	.19	.25	.28	.28	.24	.18	.12	.07	.03
30	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.06	.10	.15	.19	.22	.22	.19	.15	.10	.06	.03
31	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.05	.08	.12	.15	.17	.17	.15	.12	.08	.05	.03
32	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.04	.07	.09	.12	.13	.13	.12	.10	.07	.05	.03
33	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.05	.08	.09	.11	.11	.10	.08	.06	.04	.02
34	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.04	.06	.08	.09	.09	.08	.07	.05	.04	.02
35	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.01	.02	.04	.05	.06	.07	.07	.07	.06	.04	.03	.02
36	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.04	.05	.05	.06	.05	.05	.04	.03	.02
37	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.04	.04	.04	.04	.03	.02	.01
38	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.03	.03	.02	.02	.01
39	0000	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.02	.02	.01	.01
40	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.02	.02	.02	.01	.01
41	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.01	.01	.01	.01
42	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	+
43	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	+	+
44	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	+	+	+
45	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
51	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
52	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
53	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
54	0000	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
55	0000	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
56	0000	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
57	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
58	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
59	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

```
60 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
61 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
62 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
63 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
64 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +
65 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +
66 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +
67 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +
68 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +
69 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
70 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
71 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	00000000000000000000000000000000000000000000000000000000000000000000																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
12	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
13	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
14	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
15	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0		00000
16	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0		00000
17	+	.	.	.	0	0	0	0	0	0	0	0	0	0	0		00000
18	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0		00000
19	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0		00000
20	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0		00000
21	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0		00000
22	+	+	+	+	.	.	.	0	0	0	0	0	0	0	0		00000
23	+	+	+	+	.	.	.	.	0	0	0	0	0	0	0		00000
24	.01	+	+	+	+	.	.	.	0	0	0	0	0	0	0		00000
25	.01	+	+	+	+	.	.	.	.	0	0	0	0	0	0		00000
26	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	0		00000
27	.01	+	+	+	+	+	.	.	.	.	0	0	0	0	0		00000
28	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0		00000
29	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0		00000
30	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0		00000
31	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0		00000
32	.01	+	+	+	+	+	+	.	.	.	.	.	.	0	0		00000
33	.01	+	+	+	+	+	+	+	.	.	.	.	.	0	0		00000
34	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0		00000
35	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0		00000
36	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.		00000
37	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.		00000
38	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
39	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
40	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
41	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
42	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
43	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
44	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
45	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
46	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
47	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
48	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
49	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
50	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
51	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
52	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
53	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.		.0000
54	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
55	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
56	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
57	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.		.0000
58	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.		.0000
59	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.		.0000
60	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.		.0000

```
61    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .   .0000
62    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .   .0000
63    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .   .0000
64    +   +   +   +   +   .   .   .   .   .   .   .   .   .   .   .0000
65    +   +   +   +   .   .   .   .   .   .   .   .   .   .   .   .0000
66    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
67    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
68    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
69    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
70    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
71    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
72 00000000000000000000000000000000000000000000000000000000000000000000
```

SMALL CLOUDS AT 14400.00 SECONDS ELAPSED TIME FOR Silt

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	4782.	2027.	0.1147E-02	0.0000E+00	2090.	0.0000E+00	13.50	0.100000E-01
2	4782.	2027.	0.2869E-03	0.0000E+00	2132.	0.0000E+00	13.50	0.100000E-01
3	4782.	2027.	0.1882E-03	0.0000E+00	2163.	0.0000E+00	13.50	0.100000E-01
4	4782.	2027.	0.1300E-03	0.0000E+00	2187.	0.0000E+00	13.50	0.100000E-01
5	4782.	2027.	0.1090E-03	0.0000E+00	2206.	0.0000E+00	13.50	0.100000E-01
6	4782.	2027.	0.8937E-04	0.0000E+00	2223.	0.0000E+00	13.50	0.100000E-01
7	4782.	2027.	0.7641E-04	0.0000E+00	2236.	0.0000E+00	13.50	0.100000E-01
8	4782.	2027.	0.6552E-04	0.0000E+00	2248.	0.0000E+00	13.50	0.100000E-01
9	4782.	2027.	0.5666E-04	0.0000E+00	2259.	0.0000E+00	13.50	0.100000E-01
10	4782.	2027.	0.5219E-02	0.0000E+00	2268.	0.0000E+00	13.50	0.100000E-01

BOTTOM ACCUMULATION OF Silt (CU FT/GRID SQUARE) , 14400.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.03	.03	.01	+	+	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.15	.56	1.0	.89	.39	.08	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.31	2.2	8.1	15	13	5.6	1.2	.13	+	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.15	2.2	16	59	108	95	41	8.8	.95	.05	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.54	7.9	59	224	422	369	152	32	3.3	.18	+	.
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.95	14	105	416	809	702	278	56	5.9	.32	+	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.83	12	91	358	692	601	241	49	5.2	.28	+	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.37	5.3	39	146	271	238	100	21	2.3	.14	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.11	1.2	8.7	31	56	50	22	5.2	.73	.08	.01	+
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.07	.42	1.9	5.6	10	9.3	5.2	1.9	.52	.11	.01	+
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.08	.38	1.3	3.3	5.5	5.9	4.0	1.8	.61	.14	.02	+
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.07	.34	1.1	2.8	4.5	4.8	3.4	1.6	.56	.14	.03	+
19	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.06	.25	.79	1.7	2.8	3.0	2.2	1.1	.45	.14	.03	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.20	.54	1.0	1.6	1.8	1.4	.87	.41	.16	.05	.01
21	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.20	.48	.90	1.3	1.4	1.2	.84	.45	.19	.07	.02
22	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.07	.21	.48	.87	1.2	1.4	1.2	.86	.48	.22	.08	.02
23	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.07	.19	.43	.76	1.0	1.2	1.1	.78	.45	.21	.08	.03
24	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.02	.06	.16	.34	.59	.83	.94	.85	.62	.37	.19	.08	.03
25	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.13	.26	.43	.59	.67	.62	.47	.30	.16	.08	.03
26	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.02	.05	.11	.21	.33	.44	.50	.48	.38	.26	.15	.08	.03
27	0000	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	.02	.05	.10	.18	.27	.36	.41	.40	.33	.23	.15	.08	.04
28	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.09	.15	.23	.31	.35	.34	.29	.21	.13	.07	.04
29	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.07	.13	.19	.25	.28	.28	.24	.18	.12	.07	.03
30	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.06	.10	.15	.19	.22	.22	.19	.15	.10	.06	.03
31	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.05	.08	.12	.15	.17	.17	.15	.12	.08	.05	.03
32	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.04	.07	.09	.12	.13	.13	.12	.10	.07	.05	.03
33	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.05	.08	.09	.11	.11	.10	.08	.06	.04	.02
34	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.04	.06	.08	.09	.09	.08	.07	.05	.04	.02
35	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.01	.02	.04	.05	.06	.07	.07	.07	.06	.04	.03	.02
36	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.04	.05	.05	.06	.05	.05	.04	.03	.02
37	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.04	.04	.04	.04	.03	.02	.01
38	0000	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.03	.03	.02	.02	.01
39	0000	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.02	.02	.01	.01
40	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.02	.02	.02	.01	.01
41	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.01	.01	.01	.01
42	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	+
43	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	+	+
44	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	+	+	+
45	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
51	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
52	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
53	0000	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
54	0000	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
55	0000	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
56	0000	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
57	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
58	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
59	0000	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

```
60 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
61 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
62 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
63 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
64 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +
65 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +
66 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +
67 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +
68 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +
69 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
70 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
71 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M	N= 32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
17	+	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
18	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
19	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
20	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
21	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
22	+	+	+	+	.	.	.	0	0	0	0	0	0	0	0	00000
23	+	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
24	.01	+	+	+	+	.	.	.	0	0	0	0	0	0	0	00000
25	.01	+	+	+	+	.	.	.	.	0	0	0	0	0	0	00000
26	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
27	.01	+	+	+	+	+	.	.	.	.	0	0	0	0	0	00000
28	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
29	.01	+	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
30	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0	00000
31	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	0	00000
32	.01	+	+	+	+	+	+	.	.	.	.	.	.	0	0	00000
33	.01	+	+	+	+	+	+	+	.	.	.	.	.	0	0	00000
34	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0	00000
35	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	0	00000
36	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	00000
37	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	00000
38	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
39	.01	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
40	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
41	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
42	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
43	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
44	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
45	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
46	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
47	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
48	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
49	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
50	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
51	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
52	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
53	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.0000
54	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
55	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
56	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
57	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
58	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000
59	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000
60	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000

```
61    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .   .0000
62    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .   .0000
63    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .   .0000
64    +   +   +   +   +   .   .   .   .   .   .   .   .   .   .   .0000
65    +   +   +   +   .   .   .   .   .   .   .   .   .   .   .   .0000
66    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
67    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
68    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
69    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
70    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
71    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
72 00000000000000000000000000000000000000000000000000000000000000000000
```

THICKNESS (FT) OF Silt   ACCUMULATED ON BOTTOM,   14400.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	.	.	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.01	.01	+	+	+	.	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.01	.05	.10	.09	.04	+	+	.	.	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.05	.21	.41	.36	.14	.03	+	+	.	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.10	.40	.79	.68	.27	.05	+	+	.	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.08	.35	.67	.58	.23	.04	+	+	.	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.03	.14	.26	.23	.09	.02	+	+	.	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.03	.05	.04	.02	+	+	.	.	.
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	+	+	+	+	.	.
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.	.
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.	.
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.	.
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	.	.
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	.	.	.
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	.	.	.
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	00000000000000000000000000000000000000000000000000000000000000000000															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
18	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
19	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
20	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
21	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
22	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
23	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
24	.	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
25	.	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
26	.	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
27	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
28	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
29	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
30	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
31	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
32	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
33	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
34	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
35	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
36	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
37	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
38	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
39	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
40	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
41	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
42	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
43	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
44	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
45	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
46	.	.	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
47	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
48	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
49	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
50	.	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
51	.	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
52	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
53	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
54	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000

```
61    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
62    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
63    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
64    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
65    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
66    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
67    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
68    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
69    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
70    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
71    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
    BEGIN LONG TERM SIMULATION OF FATE OF Clay



SUMMARY OF Clay     DISTRIBUTIONS AFTER    1200.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     1419.2
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     1858.6



SUMMARY OF Clay     DISTRIBUTIONS AFTER    2400.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     611.95
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     2665.9



SUMMARY OF Clay     DISTRIBUTIONS AFTER    3600.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =     484.33
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     2793.5
```

CONCENTRATIONS ABOVE BACKGROUND OF Clay   (MG/L) IN THE CLOUD   3600.00 SECONDS AFTER DUMP

0.00 FT BELOW THE WATER SURFACE

...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	+	.01	.02	.05	.09	.13	.14	.12	.08	.04	.02	+	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.01	.05	.14	.29	.49	.66	.72	.63	.44	.25	.11	.04	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.01	.07	.23	.59	1.2	2.0	2.7	3.0	2.6	1.8	1.0	.48	.17	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.01	.06	.24	.77	1.9	4.1	6.8	9.2	10	8.7	6.1	3.5	1.6	.59	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.03	.16	.66	2.1	5.3	11	19	25	27	24	17	10	4.3	1.6	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.07	.36	1.4	4.5	12	25	42	56	61	54	38	21	10	3.5	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.13	.64	2.5	8.1	21	45	77	105	115	100	70	39	17	6.3	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.18	.91	3.6	12	31	68	118	163	179	156	107	59	26	9.2	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.21	1.0	4.2	14	38	85	151	213	236	204	139	74	32	11	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.19	.98	4.0	14	38	87	159	228	255	220	148	77	32	11	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.14	.74	3.1	11	31	72	135	197	222	191	127	65	26	8.6	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.08	.45	1.9	6.8	20	48	91	134	151	130	85	43	17	5.5	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.04	.22	.95	3.4	10	25	47	70	79	68	45	22	8.8	2.8	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.01	.08	.38	1.3	4.0	10	19	28	32	27	18	8.9	3.5	1.1	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.02	.12	.42	1.2	3.0	5.7	8.5	10	8.3	5.4	2.7	1.1	.35	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	.03	.10	.31	.73	1.3	2.0	2.2	1.9	1.2	.66	.27	.08	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
58 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
59 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
  2 00000000000000000000000000000000000000000000000000000000000000000000
  3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
  9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 12    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 13    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 14    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 15    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 16    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 17    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 18    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 19    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 20    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 21    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 22    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 23    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 24    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 25    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 26    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 27    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 28    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 29    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 30    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 31    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 32    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 33    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 34    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 35    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 36    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 37    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 38    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 39    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 40    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 41    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 42    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 43    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 44    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 45    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 46    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 47    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 48    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 49    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 50    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 51    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 52    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 53    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 54    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 55    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 56    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 57    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 58    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 59    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 60    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
```

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
72	000000000000000000000000000000000000000000000000000000000000000000000															

BOTTOM ACCUMULATION OF Clay   (CU FT/GRID SQUARE) ,   3600.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.15	.27	.24	.10	.02	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.61	2.2	3.9	3.4	1.5	.33	.03	+	.	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.04	.61	4.4	16	29	26	11	2.4	.26	.01	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.16	2.1	16	60	111	97	41	8.7	.98	.06	+	+
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.32	4.0	29	111	211	184	75	16	1.9	.17	.01	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.44	4.2	27	100	188	166	71	17	2.5	.35	.04	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.08	.61	3.7	17	54	94	86	43	14	3.3	.69	.11	.01
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.13	.85	4.0	14	33	52	52	33	15	4.6	1.0	.18	.02
16	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.15	.96	4.3	14	31	47	48	34	16	5.3	1.2	.22	.03
17	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.13	.81	3.5	11	25	39	40	28	13	4.4	1.1	.22	.03
18	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.11	.55	2.2	6.7	15	23	24	17	8.3	2.9	.84	.20	.04
19	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.02	.09	.38	1.2	3.4	7.2	11	12	8.5	4.6	1.9	.69	.21	.05
20	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.02	.09	.31	.91	2.1	4.0	5.8	6.3	5.1	3.2	1.6	.66	.22	.06
21	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.02	.08	.27	.75	1.6	3.0	4.3	4.7	4.0	2.7	1.4	.61	.21	.05
22	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.06	.20	.57	1.3	2.3	3.3	3.7	3.2	2.1	1.1	.48	.16	.04
23	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.03	.12	.36	.83	1.5	2.2	2.4	2.1	1.4	.74	.30	.10	.02
24	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.06	.18	.42	.78	1.1	1.2	1.0	.72	.37	.15	.05	.01
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.07	.16	.30	.45	.50	.43	.28	.14	.06	.02	+
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.02	.05	.09	.13	.15	.13	.08	.04	.01	+	+
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.01	.02	.03	.03	.03	.02	.01	+	+	+
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	+	+	+	+	+	+	+	.
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	.	.
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	.	.	.	.	.
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	+	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
16	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
17	+	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
18	+	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
19	.01	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
20	.01	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
21	.01	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
22	.01	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
23	+	+	+	.	.	0	0	0	0	0	0	0	0	0	0	00000
24	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
25	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
26	+	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
27	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
28	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
29	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

SMALL CLOUDS AT 3600.00 SECONDS ELAPSED TIME FOR Clay

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	1548.	1799.	134.9	0.0000E+00	466.9	0.0000E+00	13.50	0.200000E-02
2	1564.	1800.	4.086	0.0000E+00	491.6	0.0000E+00	13.50	0.200000E-02
3	1564.	1800.	2.691	0.0000E+00	509.9	0.0000E+00	13.50	0.200000E-02
4	1564.	1800.	1.960	0.0000E+00	524.4	0.0000E+00	13.50	0.200000E-02
5	1564.	1800.	1.544	0.0000E+00	536.2	0.0000E+00	13.50	0.200000E-02
6	1563.	1800.	1.266	0.0000E+00	546.1	0.0000E+00	13.50	0.200000E-02
7	1563.	1800.	1.070	0.0000E+00	554.5	0.0000E+00	13.50	0.200000E-02
8	1563.	1800.	0.9198	0.0000E+00	561.8	0.0000E+00	13.50	0.200000E-02
9	1563.	1800.	0.8021	0.0000E+00	568.2	0.0000E+00	13.50	0.200000E-02
10	1433.	1791.	335.1	0.0000E+00	573.9	0.1115	13.39	0.200000E-02

SUMMARY OF Clay DISTRIBUTIONS AFTER 4800.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 405.31
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 2872.5

SUMMARY OF Clay DISTRIBUTIONS AFTER 6000.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 339.19
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 2938.6

SUMMARY OF Clay DISTRIBUTIONS AFTER 7200.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 283.85
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 2993.9

CONCENTRATIONS ABOVE BACKGROUND OF Clay (MG/L) IN THE CLOUD 7200.00 SECONDS AFTER DUMP

0.00 FT BELOW THE WATER SURFACE

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	+	.01	.02	.03	.06	.10	.15	.22	.29	.36	.42	.47	.48	.46	.41	.35	.27	.20
24	0000	0	0	0	0	0	0	0	0	0	0	0	.01	.02	.04	.07	.13	.21	.31	.45	.60	.74	.87	.95	.98	.94	.85	.71	.56	.42
25	0000	0	0	0	0	0	0	0	0	0	0	0	.01	.04	.07	.14	.24	.40	.61	.86	1.1	1.4	1.6	1.8	1.8	1.8	1.6	1.3	1.0	.80
26	0000	0	0	0	0	0	0	0	0	0	0	0	.03	.07	.14	.25	.44	.72	1.0	1.5	2.0	2.5	3.0	3.3	3.4	3.2	2.9	2.4	1.9	1.4
27	0000	0	0	0	0	0	0	0	0	0	0	0	.05	.12	.23	.43	.75	1.2	1.8	2.6	3.5	4.4	5.1	5.6	5.8	5.5	5.0	4.2	3.3	2.4
28	0000	0	0	0	0	0	0	0	0	0	0	0	.09	.18	.37	.68	1.1	1.9	2.9	4.2	5.6	7.0	8.2	9.1	9.3	8.9	8.0	6.7	5.3	3.9
29	0000	0	0	0	0	0	0	0	0	0	0	0	.13	.28	.55	1.0	1.7	2.8	4.4	6.3	8.4	11	13	14	14	14	12	10	8.0	5.9
30	0000	0	0	0	0	0	0	0	0	0	0	0	.18	.38	.76	1.4	2.4	4.0	6.2	8.9	12	15	18	20	20	19	17	15	11	8.4
31	0000	0	0	0	0	0	0	0	0	0	0	0	.24	.50	1.0	1.8	3.2	5.3	8.2	12	16	20	24	26	27	26	23	20	15	11
32	0000	0	0	0	0	0	0	0	0	0	0	0	.29	.62	1.2	2.3	4.0	6.6	10	15	20	25	30	33	34	33	29	25	19	14
33	0000	0	0	0	0	0	0	0	0	0	0	0	.33	.71	1.4	2.6	4.7	7.7	12	17	24	30	36	39	40	39	35	29	23	17
34	0000	0	0	0	0	0	0	0	0	0	0	0	.36	.77	1.5	2.9	5.1	8.5	13	19	26	33	39	44	45	43	39	32	25	18
35	0000	0	0	0	0	0	0	0	0	0	0	0	.36	.78	1.5	2.9	5.2	8.7	14	20	27	34	41	45	47	45	40	33	26	19
36	0000	0	0	0	0	0	0	0	0	0	0	0	.34	.73	1.4	2.8	5.0	8.3	13	19	26	33	40	44	45	44	39	32	25	18
37	0000	0	0	0	0	0	0	0	0	0	0	0	.30	.65	1.3	2.5	4.4	7.5	12	17	24	30	36	40	41	39	35	29	23	16
38	0000	0	0	0	0	0	0	0	0	0	0	0	.25	.54	1.1	2.0	3.7	6.2	10	14	20	25	30	34	35	33	30	25	19	14
39	0000	0	0	0	0	0	0	0	0	0	0	0	.19	.42	.85	1.6	2.9	4.9	7.7	11	16	20	24	26	27	26	23	19	15	11
40	0000	0	0	0	0	0	0	0	0	0	0	0	.14	.30	.62	1.1	2.1	3.5	5.6	8.2	11	15	17	19	20	19	17	14	11	7.9
41	0000	0	0	0	0	0	0	0	0	0	0	0	.09	.20	.42	.80	1.4	2.4	3.8	5.6	7.7	10	12	13	14	13	12	10	7.4	5.3
42	0000	0	0	0	0	0	0	0	0	0	0	0	.06	.13	.26	.51	.91	1.5	2.4	3.5	4.9	6.2	7.4	8.3	8.5	8.2	7.3	6.1	4.7	3.4
43	0000	0	0	0	0	0	0	0	0	0	0	0	.03	.07	.15	.30	.54	.91	1.4	2.1	2.8	3.7	4.4	4.8	5.0	4.8	4.3	3.6	2.7	2.0
44	0000	0	0	0	0	0	0	0	0	0	0	0	.02	.04	.08	.16	.30	.50	.78	1.1	1.5	2.0	2.4	2.6	2.7	2.6	2.3	1.9	1.5	1.1
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

58 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
59 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
60 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
61 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
62 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
63 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
64 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
65 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
66 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
67 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
68 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
69 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
70 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
71 OOOO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	00000000000000000000000000000000000000000000000000000000000000000000															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
23	.14	.09	.05	0	0	0	0	0	0	0	0	0	0	0	0	00000
24	.29	.19	.11	0	0	0	0	0	0	0	0	0	0	0	0	00000
25	.56	.36	.22	0	0	0	0	0	0	0	0	0	0	0	0	00000
26	1.0	.65	.39	0	0	0	0	0	0	0	0	0	0	0	0	00000
27	1.7	1.1	.67	0	0	0	0	0	0	0	0	0	0	0	0	00000
28	2.7	1.7	1.0	0	0	0	0	0	0	0	0	0	0	0	0	00000
29	4.0	2.6	1.5	0	0	0	0	0	0	0	0	0	0	0	0	00000
30	5.7	3.7	2.2	0	0	0	0	0	0	0	0	0	0	0	0	00000
31	7.6	4.9	2.9	0	0	0	0	0	0	0	0	0	0	0	0	00000
32	10	6.1	3.6	0	0	0	0	0	0	0	0	0	0	0	0	00000
33	11	7.1	4.2	0	0	0	0	0	0	0	0	0	0	0	0	00000
34	12	7.8	4.6	0	0	0	0	0	0	0	0	0	0	0	0	00000
35	13	8.0	4.7	0	0	0	0	0	0	0	0	0	0	0	0	00000
36	12	7.7	4.5	0	0	0	0	0	0	0	0	0	0	0	0	00000
37	11	6.9	4.1	0	0	0	0	0	0	0	0	0	0	0	0	00000
38	9.2	5.8	3.4	0	0	0	0	0	0	0	0	0	0	0	0	00000
39	7.2	4.5	2.6	0	0	0	0	0	0	0	0	0	0	0	0	00000
40	5.3	3.3	1.9	0	0	0	0	0	0	0	0	0	0	0	0	00000
41	3.6	2.2	1.3	0	0	0	0	0	0	0	0	0	0	0	0	00000
42	2.2	1.4	.84	0	0	0	0	0	0	0	0	0	0	0	0	00000
43	1.3	.84	.49	0	0	0	0	0	0	0	0	0	0	0	0	00000
44	.74	.46	.27	0	0	0	0	0	0	0	0	0	0	0	0	00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000

```
61    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
62    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
63    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
64    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
65    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
66    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
67    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
68    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
69    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
70    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
71    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0    OOOOO
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

BOTTOM ACCUMULATION OF Clay   (CU FT/GRID SQUARE) ,   7200.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.15	.27	.24	.10	.02	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.61	2.2	3.9	3.4	1.5	.33	.03	+	.	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.04	.61	4.4	16	29	26	11	2.4	.26	.01	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.16	2.1	16	60	111	97	41	8.7	.98	.06	+	+
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.32	4.0	29	111	211	184	75	16	1.9	.17	.01	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.44	4.2	27	100	188	166	71	17	2.5	.35	.04	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.08	.61	3.7	17	54	94	86	43	14	3.3	.69	.11	.01
15	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.13	.86	4.0	14	33	52	52	33	15	4.6	1.0	.18	.02
16	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.15	.96	4.3	14	31	47	48	34	16	5.3	1.2	.22	.03
17	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.14	.81	3.5	11	25	39	40	28	13	4.4	1.1	.22	.04
18	0000	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.11	.56	2.2	6.7	15	23	24	17	8.3	3.0	.86	.21	.05
19	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.10	.40	1.3	3.5	7.3	11	12	8.7	4.7	2.0	.74	.24	.07
20	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.11	.35	.99	2.2	4.2	6.0	6.5	5.3	3.4	1.7	.76	.28	.09
21	0000	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.03	.11	.35	.89	1.9	3.4	4.7	5.2	4.5	3.1	1.7	.79	.31	.11
22	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.01	.03	.12	.33	.81	1.7	2.9	4.1	4.6	4.0	2.8	1.6	.79	.34	.13
23	0000	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.01	.04	.12	.31	.72	1.4	2.4	3.3	3.7	3.3	2.4	1.4	.78	.37	.16
24	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.05	.13	.31	.65	1.2	1.9	2.6	2.9	2.7	2.1	1.3	.80	.41	.19
25	0000	0	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.06	.14	.32	.64	1.1	1.7	2.3	2.5	2.4	1.9	1.3	.85	.47	.23
26	0000	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.02	.07	.16	.34	.65	1.1	1.6	2.1	2.4	2.3	1.9	1.4	.90	.52	.27
27	0000	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.03	.07	.17	.34	.64	1.0	1.5	2.0	2.2	2.2	1.8	1.4	.93	.55	.30
28	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.03	.08	.17	.34	.62	1.0	1.4	1.8	2.0	2.0	1.7	1.3	.92	.57	.32
29	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.04	.09	.18	.34	.59	.92	1.3	1.6	1.8	1.8	1.6	1.2	.90	.58	.35
30	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	.02	.04	.09	.18	.34	.56	.86	1.1	1.4	1.6	1.6	1.5	1.2	.89	.59	.37
31	0000	0	0	0	0	.	.	.	.	+	+	+	+	.01	.02	.05	.10	.19	.33	.54	.80	1.0	1.3	1.5	1.5	1.3	1.1	.86	.60	.38
32	0000	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.05	.10	.18	.32	.51	.75	1.0	1.2	1.3	1.4	1.2	1.0	.83	.59	.38
33	0000	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.05	.09	.17	.30	.47	.68	.91	1.1	1.2	1.2	1.1	.99	.77	.56	.37
34	0000	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.05	.09	.16	.27	.42	.60	.80	.97	1.0	1.1	1.0	.89	.70	.51	.35
35	0000	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.04	.08	.14	.24	.37	.52	.68	.82	.92	.94	.89	.77	.61	.46	.31
36	0000	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.04	.07	.12	.20	.31	.44	.57	.68	.76	.78	.74	.65	.52	.39	.27
37	0000	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.03	.06	.10	.17	.25	.35	.46	.55	.61	.63	.60	.53	.43	.33	.23
38	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.05	.08	.13	.20	.28	.36	.43	.48	.49	.47	.42	.34	.26	.18
39	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	.01	.02	.03	.06	.10	.15	.21	.27	.32	.36	.37	.35	.31	.26	.20	.14
40	0000	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.04	.07	.11	.15	.19	.23	.25	.26	.25	.22	.18	.14	.10
41	0000	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.01	.03	.05	.07	.10	.13	.15	.17	.17	.17	.15	.12	.09	.07
42	0000	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.04	.06	.08	.09	.10	.11	.10	.09	.07	.06	.04
43	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.06	.06	.06	.05	.04	.03	.02
44	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.03	.03	.03	.02	.01	.01
45	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	+
46	0000	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	+	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
16	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
17	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
18	.01	+	+	+	.	.	.	0	0	0	0	0	0	0	0	00000
19	.01	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
20	.02	+	+	+	+	.	.	.	.	0	0	0	0	0	0	00000
21	.03	.01	+	+	+	+	.	.	.	.	0	0	0	0	0	00000
22	.04	.01	+	+	+	+	.	.	.	.	0	0	0	0	0	00000
23	.06	.02	+	+	+	+	+	.	.	.	.	0	0	0	0	00000
24	.08	.03	.01	+	+	+	+	.	.	.	.	.	0	0	0	00000
25	.10	.04	.01	+	+	+	+	+	.	.	.	.	0	0	0	00000
26	.13	.06	.02	.01	+	+	+	+	.	.	.	.	.	0	0	00000
27	.15	.07	.03	.01	+	+	+	+	+	.	.	.	.	0	0	00000
28	.17	.08	.04	.01	+	+	+	+	+	.	.	.	.	0	0	00000
29	.19	.10	.05	.02	.01	+	+	+	+	+	.	.	.	.	0	00000
30	.21	.11	.06	.02	.01	+	+	+	+	+	.	.	.	.	0	00000
31	.22	.12	.06	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
32	.23	.13	.07	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
33	.23	.13	.07	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
34	.22	.13	.07	.03	.01	+	+	+	+	+	+	.	.	.	0	00000
35	.20	.12	.07	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
36	.18	.11	.06	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
37	.15	.09	.05	.03	.01	+	+	+	+	+	.	.	.	.	0	00000
38	.12	.07	.04	.02	.01	+	+	+	+	+	.	.	.	.	0	00000
39	.09	.06	.03	.01	+	+	+	+	+	+	.	.	.	.	0	00000
40	.06	.04	.02	.01	+	+	+	+	+	+	.	.	.	.	0	00000
41	.04	.02	.01	+	+	+	+	+	+	.	.	.	.	0	0	00000
42	.02	.01	.01	+	+	+	+	+	+	.	.	.	.	0	0	00000
43	.01	.01	+	+	+	+	+	+	.	.	.	.	.	0	0	00000
44	+	+	+	+	+	+	+	.	.	.	.	.	0	0	0	00000
45	+	+	+	+	+	+	+	.	.	.	.	0	0	0	0	00000
46	+	+	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
47	+	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
48	+	+	+	.	.	.	.	.	.	0	0	0	0	0	0	00000
49	+	+	.	.	.	.	.	.	0	0	0	0	0	0	0	00000
50	.	.	.	.	.	.	.	0	0	0	0	0	0	0	0	00000
51	.	.	.	.	.	.	0	0	0	0	0	0	0	0	0	00000
52	.	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
53	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000

```
61    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
62    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
63    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
64    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
65    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
66    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
67    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
68    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
69    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
70    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
71    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   OOOOO
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

SMALL CLOUDS AT 7200.00 SECONDS ELAPSED TIME FOR Clay

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	2621.	1874.	79.04	0.0000E+00	915.3	0.0000E+00	13.50	0.200000E-02
2	2637.	1876.	2.395	0.0000E+00	946.7	0.0000E+00	13.50	0.200000E-02
3	2637.	1876.	1.577	0.0000E+00	969.8	0.0000E+00	13.50	0.200000E-02
4	2636.	1876.	1.149	0.0000E+00	987.9	0.0000E+00	13.50	0.200000E-02
5	2636.	1876.	0.9049	0.0000E+00	1003.	0.0000E+00	13.50	0.200000E-02
6	2636.	1876.	0.7418	0.0000E+00	1015.	0.0000E+00	13.50	0.200000E-02
7	2636.	1876.	0.6271	0.0000E+00	1026.	0.0000E+00	13.50	0.200000E-02
8	2636.	1876.	0.5391	0.0000E+00	1035.	0.0000E+00	13.50	0.200000E-02
9	2636.	1876.	0.4701	0.0000E+00	1043.	0.0000E+00	13.50	0.200000E-02
10	2505.	1866.	196.4	0.0000E+00	1050.	0.0000E+00	13.50	0.200000E-02

SUMMARY OF Clay DISTRIBUTIONS AFTER 8400.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 237.55
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3040.2

SUMMARY OF Clay DISTRIBUTIONS AFTER 9600.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 198.79
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3079.0

SUMMARY OF Clay DISTRIBUTIONS AFTER 10800.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 166.36
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3111.4

CONCENTRATIONS ABOVE BACKGROUND OF Clay (MG/L) IN THE CLOUD 10800.00 SECONDS AFTER DUMP

0.00 FT BELOW THE WATER SURFACE

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	+	.01	.02	.03	.04	.05	.07	.10	.12	.15	.18	.21	.24	.26	.28	.29	.29	.29	.28	.26	.23
34	0000	0	0	0	0	0	0	0	0	.01	.02	.03	.04	.06	.08	.11	.15	.19	.23	.28	.32	.36	.40	.43	.44	.45	.44	.42	.39	.36
35	0000	0	0	0	0	0	0	0	0	.02	.03	.04	.06	.09	.13	.17	.22	.28	.35	.41	.48	.54	.60	.64	.67	.67	.66	.63	.59	.53
36	0000	0	0	0	0	0	0	0	0	.03	.04	.06	.09	.13	.18	.25	.32	.41	.50	.60	.70	.79	.87	.93	.97	.98	.97	.92	.86	.78
37	0000	0	0	0	0	0	0	0	0	.04	.06	.09	.13	.19	.26	.35	.46	.58	.71	.85	.99	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.1
38	0000	0	0	0	0	0	0	0	0	.05	.08	.13	.19	.26	.36	.49	.63	.80	.98	1.1	1.3	1.5	1.7	1.8	1.9	1.9	1.8	1.8	1.6	1.5
39	0000	0	0	0	0	0	0	0	0	.07	.11	.17	.25	.35	.49	.65	.85	1.0	1.3	1.5	1.8	2.0	2.2	2.4	2.5	2.5	2.5	2.4	2.2	2.0
40	0000	0	0	0	0	0	0	0	0	.09	.15	.22	.32	.46	.63	.85	1.1	1.4	1.7	2.0	2.4	2.7	3.0	3.2	3.3	3.3	3.3	3.1	2.9	2.6
41	0000	0	0	0	0	0	0	0	0	.12	.19	.28	.41	.58	.81	1.0	1.4	1.7	2.2	2.6	3.0	3.4	3.8	4.1	4.2	4.3	4.2	4.0	3.7	3.4
42	0000	0	0	0	0	0	0	0	0	.15	.23	.35	.51	.72	1.0	1.3	1.7	2.2	2.7	3.2	3.8	4.3	4.7	5.0	5.3	5.3	5.2	5.0	4.6	4.2
43	0000	0	0	0	0	0	0	0	0	.18	.28	.42	.61	.87	1.2	1.6	2.1	2.6	3.2	3.9	4.5	5.2	5.7	6.1	6.4	6.4	6.3	6.1	5.6	5.1
44	0000	0	0	0	0	0	0	0	0	.21	.33	.49	.71	1.0	1.4	1.8	2.4	3.1	3.8	4.6	5.4	6.1	6.7	7.2	7.5	7.6	7.5	7.1	6.6	6.0
45	0000	0	0	0	0	0	0	0	0	.24	.37	.56	.81	1.1	1.6	2.1	2.8	3.5	4.4	5.2	6.1	7.0	7.7	8.2	8.6	8.7	8.6	8.2	7.6	6.8
46	0000	0	0	0	0	0	0	0	0	.26	.41	.62	.90	1.2	1.7	2.3	3.1	3.9	4.8	5.8	6.8	7.7	8.6	9.2	10	10	10	9.1	8.5	7.6
47	0000	0	0	0	0	0	0	0	0	.28	.44	.66	.97	1.3	1.9	2.5	3.3	4.2	5.2	6.3	7.4	8.4	9.3	10	10	11	10	10	9.2	8.3
48	0000	0	0	0	0	0	0	0	0	.30	.46	.69	1.0	1.4	2.0	2.6	3.5	4.4	5.5	6.6	7.8	8.8	10	11	11	11	11	10	10	8.7
49	0000	0	0	0	0	0	0	0	0	.30	.47	.70	1.0	1.4	2.0	2.7	3.6	4.5	5.6	6.8	7.9	9.0	10	11	11	11	11	11	10	8.9
50	0000	0	0	0	0	0	0	0	0	.30	.46	.70	1.0	1.4	2.0	2.7	3.5	4.5	5.6	6.7	7.9	9.0	10	11	11	11	11	11	10	8.8
51	0000	0	0	0	0	0	0	0	0	.29	.44	.67	.98	1.4	1.9	2.6	3.4	4.3	5.4	6.5	7.6	8.7	10	10	11	11	11	10	10	8.6
52	0000	0	0	0	0	0	0	0	0	.27	.41	.63	.92	1.3	1.8	2.4	3.2	4.1	5.1	6.1	7.2	8.1	9.0	10	10	10	10	10	8.9	8.0
53	0000	0	0	0	0	0	0	0	0	.24	.38	.57	.84	1.1	1.6	2.2	2.9	3.7	4.6	5.6	6.5	7.4	8.2	8.8	9.2	9.3	9.2	8.8	8.1	7.3
54	0000	0	0	0	0	0	0	0	0	.21	.33	.50	.74	1.0	1.4	1.9	2.6	3.3	4.1	4.9	5.8	6.6	7.3	7.8	8.2	8.3	8.1	7.8	7.2	6.5
55	0000	0	0	0	0	0	0	0	0	.18	.28	.43	.63	.91	1.2	1.7	2.2	2.8	3.5	4.2	5.0	5.7	6.3	6.7	7.0	7.1	7.0	6.7	6.2	5.6
56	0000	0	0	0	0	0	0	0	0	.15	.24	.36	.53	.76	1.0	1.4	1.8	2.3	2.9	3.5	4.1	4.7	5.2	5.6	5.9	5.9	5.8	5.6	5.2	4.7
57	0000	0	0	0	0	0	0	0	0	.12	.19	.29	.43	.61	.85	1.1	1.5	1.9	2.4	2.9	3.4	3.8	4.2	4.6	4.8	4.8	4.7	4.5	4.2	3.8

```
58 OOOO   0   0   0   0   0   0   0   0 .10 .15 .23 .34 .48 .67 .91 1.2 1.5 1.9 2.2 2.6 3.0 3.3 3.6 3.7 3.8 3.7 3.6 3.3 3.0
59 OOOO   0   0   0   0   0   0   0   0 .07 .11 .17 .26 .37 .51 .70 .92 1.1 1.4 1.7 2.0 2.3 2.5 2.7 2.9 2.9 2.8 2.7 2.5 2.3
60 OOOO   0   0   0   0   0   0   0   0 .05 .08 .13 .19 .27 .38 .52 .68 .87 1.0 1.3 1.5 1.7 1.9 2.0 2.1 2.1 2.1 2.0 1.9 1.7
61 OOOO   0   0   0   0   0   0   0   0 .04 .06 .09 .14 .20 .28 .37 .49 .63 .78 .94 1.1 1.2 1.3 1.4 1.5 1.5 1.5 1.4 1.3 1.2
62 OOOO   0   0   0   0   0   0   0   0 .02 .04 .06 .09 .14 .19 .26 .34 .44 .55 .66 .77 .88 .97 1.0 1.0 1.1 1.0 1.0 .96 .87
63 OOOO   0   0   0   0   0   0   0   0 .02 .03 .04 .06 .09 .13 .18 .23 .30 .37 .45 .53 .60 .66 .71 .74 .75 .74 .71 .66 .59
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
33	.20	.17	.14	.12	.09	.07	.05	.03	.02	0	0	0	0	0	0	00000	
34	.31	.27	.22	.18	.14	.11	.08	.06	.04	0	0	0	0	0	0	00000	
35	.47	.40	.33	.27	.21	.16	.12	.09	.06	0	0	0	0	0	0	00000	
36	.68	.58	.49	.39	.31	.24	.17	.13	.09	0	0	0	0	0	0	00000	
37	.97	.83	.69	.56	.44	.33	.25	.18	.12	0	0	0	0	0	0	00000	
38	1.3	1.1	.95	.77	.60	.46	.34	.25	.17	0	0	0	0	0	0	00000	
39	1.8	1.5	1.2	1.0	.81	.62	.46	.33	.23	0	0	0	0	0	0	00000	
40	2.3	2.0	1.6	1.3	1.0	.81	.60	.43	.30	0	0	0	0	0	0	00000	
41	3.0	2.5	2.1	1.7	1.3	1.0	.76	.55	.39	0	0	0	0	0	0	00000	
42	3.7	3.1	2.6	2.1	1.6	1.2	.94	.68	.48	0	0	0	0	0	0	00000	
43	4.5	3.8	3.1	2.5	2.0	1.5	1.1	.82	.57	0	0	0	0	0	0	00000	
44	5.2	4.5	3.7	3.0	2.3	1.8	1.3	.96	.67	0	0	0	0	0	0	00000	
45	6.0	5.1	4.2	3.4	2.6	2.0	1.5	1.0	.77	0	0	0	0	0	0	00000	
46	6.7	5.7	4.7	3.8	2.9	2.2	1.6	1.2	.85	0	0	0	0	0	0	00000	
47	7.2	6.2	5.1	4.1	3.2	2.4	1.8	1.3	.91	0	0	0	0	0	0	00000	
48	7.6	6.5	5.4	4.3	3.3	2.5	1.9	1.3	.96	0	0	0	0	0	0	00000	
49	7.8	6.6	5.5	4.4	3.4	2.6	1.9	1.4	.97	0	0	0	0	0	0	00000	
50	7.7	6.6	5.4	4.4	3.4	2.6	1.9	1.3	.97	0	0	0	0	0	0	00000	
51	7.5	6.4	5.3	4.2	3.3	2.5	1.8	1.3	.93	0	0	0	0	0	0	00000	
52	7.0	6.0	4.9	3.9	3.1	2.3	1.7	1.2	.87	0	0	0	0	0	0	00000	
53	6.4	5.4	4.5	3.6	2.8	2.1	1.5	1.1	.79	0	0	0	0	0	0	00000	
54	5.7	4.8	4.0	3.2	2.5	1.9	1.4	1.0	.70	0	0	0	0	0	0	00000	
55	4.9	4.1	3.4	2.7	2.1	1.6	1.2	.86	.60	0	0	0	0	0	0	00000	
56	4.1	3.5	2.8	2.3	1.8	1.3	1.0	.72	.50	0	0	0	0	0	0	00000	
57	3.3	2.8	2.3	1.8	1.4	1.1	.82	.58	.41	0	0	0	0	0	0	00000	
58	2.6	2.2	1.8	1.4	1.1	.88	.64	.46	.32	0	0	0	0	0	0	00000	
59	2.0	1.7	1.4	1.1	.89	.67	.49	.35	.24	0	0	0	0	0	0	00000	
60	1.5	1.2	1.0	.84	.66	.50	.37	.26	.18	0	0	0	0	0	0	00000	

61	1.0	.92	.76	.61	.47	.36	.26	.19	.13	0	0	0	0	0	0	00000
62	.76	.65	.53	.43	.33	.25	.18	.13	.09	0	0	0	0	0	0	00000
63	.52	.44	.36	.29	.23	.17	.12	.09	.06	0	0	0	0	0	0	00000
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

BOTTOM ACCUMULATION OF Clay (CU FT/GRID SQUARE) , 10800.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.15	.27	.24	.10	.02	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.61	2.2	3.9	3.4	1.5	.33	.03	+	.	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.04	.61	4.4	16	29	26	11	2.4	.26	.01	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.16	2.1	16	60	111	97	41	8.7	.98	.06	+	+
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.32	4.0	29	111	211	184	75	16	1.9	.17	.01	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.44	4.2	27	100	188	166	71	17	2.5	.35	.04	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.08	.61	3.7	17	54	94	86	43	14	3.3	.69	.11	.01
15	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.13	.86	4.0	14	33	52	52	33	15	4.6	1.0	.18	.02
16	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.15	.96	4.3	14	31	47	48	34	16	5.3	1.2	.22	.03
17	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.14	.81	3.5	11	25	39	40	28	13	4.4	1.1	.22	.04
18	0000	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.11	.56	2.2	6.7	15	23	24	17	8.3	3.0	.86	.21	.05
19	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.10	.40	1.3	3.5	7.3	11	12	8.7	4.7	2.0	.74	.24	.07
20	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.11	.35	.99	2.2	4.2	6.0	6.5	5.3	3.4	1.7	.76	.28	.09
21	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.03	.11	.35	.89	1.9	3.4	4.7	5.2	4.5	3.1	1.7	.79	.31	.11
22	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.01	.03	.12	.33	.81	1.7	2.9	4.1	4.6	4.0	2.8	1.6	.79	.34	.13
23	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.04	.12	.31	.72	1.4	2.4	3.3	3.7	3.3	2.4	1.4	.78	.37	.16
24	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	.01	.05	.13	.31	.66	1.2	1.9	2.6	2.9	2.7	2.1	1.3	.80	.41	.19
25	0000	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.02	.06	.15	.32	.64	1.1	1.7	2.3	2.5	2.4	1.9	1.3	.85	.47	.23
26	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	.01	.03	.07	.16	.34	.65	1.1	1.6	2.1	2.4	2.3	1.9	1.4	.91	.52	.27
27	0000	0	0	0	.	.	.	.	.	+	+	+	+	+	.01	.03	.08	.17	.35	.64	1.0	1.5	2.0	2.3	2.2	1.9	1.4	.94	.56	.30
28	0000	0	0	.	.	.	.	.	.	+	+	+	+	+	.01	.04	.08	.18	.35	.62	1.0	1.4	1.8	2.1	2.0	1.7	1.3	.94	.58	.33
29	0000	0	.	.	.	.	.	.	+	+	+	+	+	+	.02	.04	.09	.19	.35	.60	.94	1.3	1.6	1.8	1.8	1.6	1.3	.93	.60	.36
30	0000	0	.	.	.	.	.	.	+	+	+	+	+	.01	.02	.05	.10	.20	.35	.58	.89	1.2	1.5	1.7	1.7	1.5	1.2	.92	.63	.39
31	0000	.	.	.	.	.	.	+	+	+	+	+	+	.01	.03	.06	.11	.21	.36	.57	.85	1.1	1.4	1.5	1.6	1.4	1.2	.92	.65	.42
32	0000	.	.	.	.	.	.	+	+	+	+	+	+	.01	.03	.06	.12	.21	.36	.56	.81	1.0	1.3	1.4	1.5	1.3	1.1	.92	.66	.44
33	0000	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.07	.12	.22	.36	.54	.77	1.0	1.2	1.3	1.4	1.3	1.1	.90	.66	.46
34	0000	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.04	.07	.13	.22	.35	.52	.73	.95	1.1	1.2	1.3	1.2	1.0	.87	.66	.47
35	0000	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.04	.08	.13	.22	.34	.50	.69	.88	1.0	1.1	1.2	1.1	1.0	.84	.65	.47
36	0000	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.05	.08	.14	.22	.34	.48	.65	.82	.98	1.0	1.1	1.0	.96	.80	.63	.47
37	0000	.	.	.	+	+	+	+	+	+	+	+	.01	.03	.05	.09	.14	.22	.33	.46	.61	.77	.91	1.0	1.0	1.0	.91	.77	.62	.47
38	0000	.	.	.	+	+	+	+	+	+	+	.01	.01	.03	.05	.09	.14	.22	.32	.44	.58	.72	.84	.93	.96	.93	.86	.74	.60	.47
39	0000	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.06	.09	.14	.22	.31	.42	.55	.67	.78	.86	.89	.87	.81	.70	.58	.46
40	0000	.	.	.	+	+	+	+	+	+	+	.01	.02	.03	.06	.09	.14	.21	.30	.40	.51	.63	.73	.80	.83	.81	.76	.67	.56	.45
41	0000	.	.	+	+	+	+	+	+	+	+	.01	.02	.04	.06	.09	.14	.20	.28	.38	.48	.58	.67	.73	.76	.75	.71	.63	.54	.44
42	0000	.	.	+	+	+	+	+	+	+	+	.01	.02	.04	.06	.09	.14	.20	.27	.36	.45	.54	.62	.68	.70	.70	.66	.59	.51	.42
43	0000	.	.	+	+	+	+	+	+	+	+	.01	.02	.04	.06	.09	.13	.19	.26	.33	.42	.50	.57	.62	.65	.64	.61	.55	.48	.40
44	0000	.	.	+	+	+	+	+	+	+	.01	.01	.02	.04	.06	.09	.13	.18	.24	.31	.39	.46	.52	.57	.59	.59	.56	.51	.45	.38
45	0000	.	.	+	+	+	+	+	+	+	.01	.01	.02	.04	.06	.09	.12	.17	.23	.29	.35	.42	.47	.52	.54	.54	.51	.47	.42	.35
46	0000	.	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.08	.11	.16	.21	.26	.32	.38	.43	.47	.49	.49	.47	.43	.38	.33
47	0000	.	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.08	.11	.15	.19	.24	.29	.34	.39	.42	.44	.44	.42	.39	.35	.30
48	0000	.	+	+	+	+	+	+	+	+	+	.01	.02	.03	.05	.07	.10	.13	.17	.22	.26	.31	.34	.37	.39	.39	.38	.35	.32	.27
49	0000	.	+	+	+	+	+	+	+	+	+	.01	.02	.03	.04	.06	.09	.12	.15	.19	.23	.27	.30	.33	.34	.34	.33	.31	.28	.24
50	0000	.	+	+	+	+	+	+	+	+	+	.01	.02	.03	.04	.06	.08	.10	.13	.17	.20	.23	.26	.28	.30	.30	.29	.27	.25	.22
51	0000	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.09	.12	.14	.17	.20	.23	.24	.25	.26	.25	.23	.21	.19
52	0000	.	.	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.06	.08	.10	.12	.15	.17	.19	.21	.21	.22	.21	.20	.18	.16
53	0000	.	.	+	+	+	+	+	+	+	+	+	.01	.02	.02	.03	.05	.06	.08	.10	.12	.14	.16	.17	.18	.18	.18	.17	.15	.13
54	0000	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.08	.10	.12	.13	.14	.15	.15	.14	.14	.12	.11
55	0000	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.08	.09	.10	.11	.12	.12	.12	.11	.10	.09
56	0000	.	.	.	+	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.05	.06	.07	.08	.09	.09	.09	.09	.09	.08	.07
57	0000	.	.	.	+	+	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.05	.05	.06	.07	.07	.07	.07	.07	.06	.05
58	0000	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.04	.05	.05	.05	.05	.05	.05	.04	.04
59	0000	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.02	.03	.03	.04	.04	.04	.04	.03	.03	.03

```
60 OOOO   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .02 .02 .03 .03 .03 .02 .02 .02
61 OOOO   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .01 .02 .02 .02 .02 .02 .01 .01
62 OOOO   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
63 OOOO   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01   +   +   +   +
64 OOOO   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
65 OOOO   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
66 OOOO   0   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
67 OOOO   0   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
68 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
69 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
70 OOOO   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
71 OOOO   0   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	+	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
16	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
17	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
18	.01	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
19	.01	+	+	+	.	.	.	.	.	0	0	0	0	0	0	00000
20	.02	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
21	.03	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
22	.04	.01	+	+	+	+	.	.	.	.	.	.	0	0	0	00000
23	.06	.02	+	+	+	+	+	.	.	.	.	.	.	0	0	00000
24	.08	.03	.01	+	+	+	+	+	.	.	.	.	.	.	0	00000
25	.11	.04	.02	+	+	+	+	+	+	.	.	.	.	.	.	00000
26	.13	.06	.02	.01	+	+	+	+	+	.	.	.	.	.	.	00000
27	.15	.07	.03	.01	+	+	+	+	+	+	.	.	.	.	.	.0000
28	.18	.09	.04	.02	.01	+	+	+	+	+	+	.	.	.	.	.0000
29	.21	.11	.05	.02	.01	+	+	+	+	+	+	.	.	.	.	.0000
30	.23	.13	.07	.03	.01	+	+	+	+	+	+	+	.	.	.	.0000
31	.26	.15	.08	.04	.02	.01	+	+	+	+	+	+	+	.	.	.0000
32	.28	.17	.09	.05	.03	.01	+	+	+	+	+	+	+	.	.	.0000
33	.30	.18	.11	.06	.03	.02	.01	+	+	+	+	+	+	+	.	.0000
34	.31	.20	.12	.07	.04	.02	.01	+	+	+	+	+	+	+	.	.0000
35	.33	.21	.13	.08	.05	.02	.01	+	+	+	+	+	+	+	+	.0000
36	.34	.23	.15	.09	.05	.03	.02	.01	+	+	+	+	+	+	+	.0000
37	.34	.24	.16	.10	.06	.04	.02	.01	+	+	+	+	+	+	+	+0000
38	.35	.25	.17	.11	.07	.04	.02	.01	+	+	+	+	+	+	+	+0000
39	.35	.25	.17	.12	.07	.05	.03	.01	.01	+	+	+	+	+	+	+0000
40	.34	.25	.18	.12	.08	.05	.03	.02	.01	+	+	+	+	+	+	+0000
41	.34	.25	.18	.13	.08	.05	.03	.02	.01	+	+	+	+	+	+	+0000
42	.33	.25	.18	.13	.09	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
43	.32	.25	.18	.13	.09	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
44	.31	.24	.18	.13	.09	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
45	.29	.23	.17	.13	.09	.06	.04	.03	.01	.01	+	+	+	+	+	+0000
46	.27	.22	.17	.12	.09	.06	.04	.03	.01	.01	+	+	+	+	+	+0000
47	.25	.20	.16	.12	.08	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
48	.23	.18	.14	.11	.08	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
49	.21	.17	.13	.10	.07	.05	.04	.02	.01	.01	+	+	+	+	+	+0000
50	.18	.15	.12	.09	.07	.05	.03	.02	.01	.01	+	+	+	+	+	+0000
51	.16	.13	.10	.08	.06	.04	.03	.02	.01	.01	+	+	+	+	+	+0000
52	.14	.11	.09	.07	.05	.04	.02	.02	.01	+	+	+	+	+	+	+0000
53	.11	.09	.08	.06	.04	.03	.02	.01	.01	+	+	+	+	+	+	+0000
54	.09	.08	.06	.05	.04	.03	.02	.01	.01	+	+	+	+	+	+	+0000
55	.08	.06	.05	.04	.03	.02	.01	.01	+	+	+	+	+	+	+	+0000
56	.06	.05	.04	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+0000
57	.05	.04	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+0000
58	.03	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+0000
59	.02	.02	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
60	.02	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+	.0000

61	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+	+	.0000
62	.01	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.0000
63	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.0000
64	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.0000
65	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	.0000
66	+	+	+	+	+	+	+	+	+	+	+	.	.	.	.	.0000
67	+	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
68	+	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.0000
69	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.0000
70	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.0000
71	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	00000
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

SMALL CLOUDS AT 10800.00 SECONDS ELAPSED TIME FOR Clay

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	3694.	1950.	46.32	0.0000E+00	1461.	0.0000E+00	13.50	0.200000E-02
2	3710.	1951.	1.404	0.0000E+00	1498.	0.0000E+00	13.50	0.200000E-02
3	3709.	1951.	0.9242	0.0000E+00	1525.	0.0000E+00	13.50	0.200000E-02
4	3709.	1951.	0.6733	0.0000E+00	1547.	0.0000E+00	13.50	0.200000E-02
5	3709.	1951.	0.5304	0.0000E+00	1564.	0.0000E+00	13.50	0.200000E-02
6	3709.	1951.	0.4348	0.0000E+00	1578.	0.0000E+00	13.50	0.200000E-02
7	3709.	1951.	0.3675	0.0000E+00	1591.	0.0000E+00	13.50	0.200000E-02
8	3709.	1951.	0.3160	0.0000E+00	1601.	0.0000E+00	13.50	0.200000E-02
9	3709.	1951.	0.2755	0.0000E+00	1610.	0.0000E+00	13.50	0.200000E-02
10	3578.	1942.	115.1	0.0000E+00	1619.	0.0000E+00	13.50	0.200000E-02

SUMMARY OF Clay DISTRIBUTIONS AFTER 12000.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 139.22
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3138.5

SUMMARY OF Clay DISTRIBUTIONS AFTER 13200.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 116.51
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3160.9

SUMMARY OF Clay DISTRIBUTIONS AFTER 14400.00 SEC.

TOTAL SUSPENDED MATERIAL (CU FT) = 97.504
TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) = 3179.2

```
CONCENTRATIONS ABOVE BACKGROUND OF Clay     (MG/L) IN THE CLOUD  14400.00 SECONDS AFTER DUMP

               0.00 FT BELOW THE WATER SURFACE
...MULTIPLY DISPLAYED VALUES BY   1.000         (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)
M N=  2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31
 2 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 3 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 4 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 5 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 6 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 7 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 8 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 9 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
10 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
11 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
12 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
13 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
14 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
15 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
16 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
17 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
18 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
19 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
20 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
21 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
22 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
23 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
24 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
25 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
26 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
27 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
28 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
29 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
30 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
31 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
32 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
33 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
34 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
35 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
36 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
37 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
38 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
39 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
40 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
41 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
42 OOOO   0   0   0   0   +   + .01 .01 .01 .02 .02 .03 .03 .04 .05 .06 .07 .08 .09 .09 .10 .11 .11 .12 .12 .12 .12 .12 .11
43 OOOO   0   0   0   0   + .01 .01 .01 .02 .02 .03 .04 .05 .06 .07 .08 .09 .10 .12 .13 .14 .15 .15 .16 .16 .16 .16 .16 .15
44 OOOO   0   0   0   0 .01 .01 .01 .02 .02 .03 .04 .05 .06 .08 .09 .11 .12 .14 .15 .17 .18 .20 .21 .21 .22 .22 .22 .21 .20
45 OOOO   0   0   0   0 .01 .01 .02 .03 .03 .04 .06 .07 .09 .10 .12 .14 .16 .18 .20 .22 .24 .26 .27 .28 .29 .29 .29 .28 .27
46 OOOO   0   0   0   0 .01 .02 .03 .03 .04 .06 .07 .09 .11 .13 .16 .18 .21 .24 .26 .29 .31 .33 .35 .36 .37 .37 .37 .36 .35
47 OOOO   0   0   0   0 .02 .02 .03 .04 .06 .07 .09 .12 .14 .17 .20 .23 .27 .30 .34 .37 .40 .42 .45 .46 .47 .47 .47 .46 .44
48 OOOO   0   0   0   0 .02 .03 .04 .06 .07 .09 .12 .15 .18 .21 .25 .29 .34 .38 .42 .46 .50 .53 .56 .58 .59 .60 .59 .58 .56
49 OOOO   0   0   0   0 .03 .04 .05 .07 .09 .12 .15 .18 .22 .27 .31 .36 .42 .47 .52 .57 .62 .66 .69 .72 .73 .74 .73 .71 .69
50 OOOO   0   0   0   0 .04 .05 .07 .09 .11 .14 .18 .22 .27 .32 .38 .44 .51 .57 .64 .70 .76 .81 .85 .88 .89 .90 .89 .87 .84
51 OOOO   0   0   0   0 .04 .06 .08 .11 .14 .17 .22 .27 .33 .39 .46 .53 .61 .69 .77 .84 .91 .97 1.0 1.0 1.0 1.0 1.0 1.0 1.0
52 OOOO   0   0   0   0 .05 .07 .10 .13 .16 .21 .26 .32 .39 .46 .55 .63 .73 .82 .91 1.0 1.0 1.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2
53 OOOO   0   0   0   0 .06 .08 .11 .15 .19 .24 .30 .37 .45 .54 .64 .74 .85 .96 1.0 1.1 1.2 1.3 1.4 1.4 1.5 1.5 1.4 1.4 1.4
54 OOOO   0   0   0   0 .07 .10 .13 .17 .22 .28 .35 .43 .52 .62 .74 .85 .98 1.1 1.2 1.3 1.4 1.5 1.6 1.6 1.7 1.7 1.7 1.6 1.6
55 OOOO   0   0   0   0 .08 .11 .15 .19 .25 .32 .40 .49 .59 .71 .84 .97 1.1 1.2 1.4 1.5 1.6 1.7 1.8 1.9 1.9 1.9 1.9 1.9 1.8
56 OOOO   0   0   0   0 .09 .13 .17 .22 .28 .36 .45 .55 .67 .80 .94 1.0 1.2 1.4 1.5 1.7 1.8 1.9 2.0 2.1 2.2 2.2 2.2 2.1 2.0
57 OOOO   0   0   0   0 .10 .14 .18 .24 .31 .39 .49 .61 .74 .88 1.0 1.2 1.3 1.5 1.7 1.9 2.0 2.2 2.3 2.3 2.4 2.4 2.4 2.3 2.3
```

58	OOOO	0	0	0	0	.11	.15	.20	.26	.34	.43	.54	.66	.80	.96	1.1	1.3	1.5	1.7	1.9	2.0	2.2	2.4	2.5	2.6	2.6	2.6	2.6	2.6	2.5
59	OOOO	0	0	0	0	.12	.16	.22	.28	.36	.46	.58	.71	.86	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.5	2.7	2.8	2.8	2.8	2.8	2.8	2.7
60	OOOO	0	0	0	0	.13	.17	.23	.30	.38	.49	.61	.75	.91	1.0	1.2	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.8	2.9	3.0	3.0	3.0	2.9	2.8
61	OOOO	0	0	0	0	.13	.18	.24	.31	.40	.51	.64	.78	.95	1.1	1.3	1.5	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.1	3.1	3.2	3.1	3.1	2.9
62	OOOO	0	0	0	0	.14	.18	.25	.32	.41	.52	.66	.81	.98	1.1	1.3	1.6	1.8	2.0	2.3	2.5	2.7	2.9	3.1	3.2	3.2	3.3	3.2	3.2	3.0
63	OOOO	0	0	0	0	.14	.19	.25	.33	.42	.53	.66	.82	1.0	1.1	1.4	1.6	1.8	2.1	2.3	2.5	2.8	2.9	3.1	3.2	3.3	3.3	3.3	3.2	3.1
64	OOOO	0	0	0	0	.14	.19	.25	.32	.42	.53	.66	.82	1.0	1.1	1.4	1.6	1.8	2.1	2.3	2.6	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.2	3.1
65	OOOO	0	0	0	0	.14	.18	.24	.32	.41	.52	.66	.81	.98	1.1	1.3	1.6	1.8	2.0	2.3	2.5	2.7	2.9	3.1	3.2	3.2	3.3	3.2	3.2	3.1
66	OOOO	0	0	0	0	.13	.18	.24	.31	.40	.51	.64	.79	.95	1.1	1.3	1.5	1.8	2.0	2.2	2.4	2.7	2.8	3.0	3.1	3.2	3.2	3.2	3.1	3.0
67	OOOO	0	0	0	0	.13	.17	.23	.30	.38	.49	.61	.75	.91	1.1	1.2	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.0	3.0	3.0	3.0	3.0	2.8
68	OOOO	0	0	0	0	.12	.16	.21	.28	.36	.46	.58	.71	.86	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.7	2.8	2.9	2.9	2.9	2.8	2.7
69	OOOO	0	0	0	0	.11	.15	.20	.26	.34	.43	.54	.66	.80	.96	1.1	1.3	1.5	1.7	1.9	2.1	2.2	2.4	2.5	2.6	2.7	2.7	2.7	2.6	2.5
70	OOOO	0	0	0	0	.10	.14	.18	.24	.31	.39	.49	.61	.74	.88	1.0	1.2	1.3	1.5	1.7	1.9	2.0	2.2	2.3	2.4	2.4	2.5	2.4	2.4	2.3
71	OOOO	0	0	0	0	.09	.12	.16	.22	.28	.35	.44	.55	.67	.80	.94	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.1
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																													

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000	
42	.11	.10	.09	.08	.07	.07	.06	.05	.04	.03	.03	.02	.02	.01	.01	00000	
43	.15	.14	.13	.11	.10	.09	.08	.07	.06	.05	.04	.03	.02	.02	.01	00000	
44	.19	.18	.17	.15	.14	.12	.10	.09	.08	.06	.05	.04	.03	.02	.02	00000	
45	.26	.24	.22	.20	.18	.16	.14	.12	.10	.08	.07	.05	.04	.03	.02	00000	
46	.33	.31	.29	.26	.23	.21	.18	.15	.13	.11	.09	.07	.06	.04	.03	00000	
47	.42	.39	.36	.33	.30	.26	.23	.20	.17	.14	.11	.09	.07	.06	.04	00000	
48	.53	.49	.46	.42	.37	.33	.29	.25	.21	.17	.14	.11	.09	.07	.05	00000	
49	.65	.61	.57	.51	.46	.41	.36	.31	.26	.22	.18	.14	.11	.09	.07	00000	
50	.80	.75	.69	.63	.56	.50	.43	.37	.32	.26	.22	.17	.14	.11	.08	00000	
51	.96	.90	.83	.76	.68	.60	.52	.45	.38	.32	.26	.21	.17	.13	.10	00000	
52	1.1	1.0	.99	.90	.81	.71	.62	.53	.45	.38	.31	.25	.20	.16	.12	00000	
53	1.3	1.2	1.1	1.0	.94	.83	.73	.62	.53	.44	.36	.29	.23	.18	.14	00000	
54	1.5	1.4	1.3	1.2	1.0	.96	.84	.72	.61	.51	.42	.34	.27	.21	.16	00000	
55	1.7	1.6	1.5	1.3	1.2	1.0	.95	.82	.69	.58	.48	.39	.31	.24	.19	00000	
56	1.9	1.8	1.7	1.5	1.3	1.2	1.0	.92	.78	.65	.53	.43	.34	.27	.21	00000	
57	2.1	2.0	1.8	1.7	1.5	1.3	1.1	1.0	.86	.72	.59	.48	.38	.30	.23	00000	
58	2.3	2.2	2.0	1.8	1.6	1.4	1.2	1.1	.94	.78	.64	.52	.42	.33	.25	00000	
59	2.5	2.4	2.2	2.0	1.8	1.5	1.3	1.1	1.0	.84	.69	.56	.45	.35	.27	00000	
60	2.7	2.5	2.3	2.1	1.9	1.6	1.4	1.2	1.0	.89	.73	.59	.47	.37	.29	00000	

61	2.8	2.6	2.4	2.2	2.0	1.7	1.5	1.3	1.1	.93	.76	.62	.49	.39	.30	OOOOO
62	2.9	2.7	2.5	2.3	2.0	1.8	1.5	1.3	1.1	.96	.79	.64	.51	.40	.31	OOOOO
63	2.9	2.7	2.5	2.3	2.0	1.8	1.6	1.3	1.1	.97	.80	.65	.52	.41	.31	OOOOO
64	2.9	2.7	2.5	2.3	2.0	1.8	1.6	1.3	1.1	.97	.80	.65	.52	.41	.31	OOOOO
65	2.9	2.7	2.5	2.3	2.0	1.8	1.5	1.3	1.1	.96	.79	.64	.51	.40	.31	OOOOO
66	2.8	2.6	2.4	2.2	2.0	1.7	1.5	1.3	1.1	.93	.77	.62	.49	.39	.30	OOOOO
67	2.7	2.5	2.3	2.1	1.9	1.7	1.4	1.2	1.0	.89	.73	.59	.47	.37	.29	OOOOO
68	2.5	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	.84	.69	.56	.45	.35	.27	OOOOO
69	2.4	2.2	2.0	1.8	1.6	1.5	1.3	1.1	.94	.78	.64	.52	.41	.33	.25	OOOOO
70	2.2	2.0	1.9	1.7	1.5	1.3	1.1	1.0	.86	.72	.59	.48	.38	.30	.23	OOOOO
71	2.0	1.8	1.7	1.5	1.4	1.2	1.0	.93	.78	.65	.53	.43	.34	.27	.21	OOOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

BOTTOM ACCUMULATION OF Clay (CU FT/GRID SQUARE) , 14400.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.15	.27	.24	.10	.02	+	+	.	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.61	2.2	3.9	3.4	1.5	.33	.03	+	.	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.04	.61	4.4	16	29	26	11	2.4	.26	.01	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.16	2.1	16	60	111	97	41	8.7	.98	.06	+	+
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.32	4.0	29	111	211	184	75	16	1.9	.17	.01	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.44	4.2	27	100	188	166	71	17	2.5	.35	.04	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.08	.61	3.7	17	54	94	86	43	14	3.3	.69	.11	.01
15	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.13	.86	4.0	14	33	52	52	33	15	4.6	1.0	.18	.02
16	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.15	.96	4.3	14	31	47	48	34	16	5.3	1.2	.22	.03
17	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.14	.81	3.5	11	25	39	40	28	13	4.4	1.1	.22	.04
18	0000	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.11	.56	2.2	6.7	15	23	24	17	8.3	3.0	.86	.21	.05
19	0000	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.10	.40	1.3	3.5	7.3	11	12	8.7	4.7	2.0	.74	.24	.07
20	0000	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.11	.35	.99	2.2	4.2	6.0	6.5	5.3	3.4	1.7	.76	.28	.09
21	0000	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.03	.11	.35	.89	1.9	3.4	4.7	5.2	4.5	3.1	1.7	.79	.31	.11
22	0000	0	0	0	0	0	0	.	.	.	.	.	+	+	+	.01	.03	.12	.33	.81	1.7	2.9	4.1	4.6	4.0	2.8	1.6	.79	.34	.13
23	0000	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.04	.12	.31	.72	1.4	2.4	3.3	3.7	3.3	2.4	1.4	.78	.37	.16
24	0000	0	0	0	0	0	.	.	.	.	.	+	+	+	+	.01	.05	.13	.31	.66	1.2	1.9	2.6	2.9	2.7	2.1	1.3	.80	.41	.19
25	0000	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.02	.06	.15	.32	.64	1.1	1.7	2.3	2.5	2.4	1.9	1.3	.85	.47	.23
26	0000	0	0	0	.	.	.	.	.	.	+	+	+	+	.01	.03	.07	.16	.34	.65	1.1	1.6	2.1	2.4	2.3	1.9	1.4	.91	.52	.27
27	0000	0	0	.	.	.	.	.	.	+	+	+	+	+	.01	.03	.08	.17	.35	.64	1.0	1.5	2.0	2.3	2.2	1.9	1.4	.94	.56	.30
28	0000	0	.	.	.	.	.	.	.	+	+	+	+	+	.01	.04	.08	.18	.35	.62	1.0	1.4	1.8	2.1	2.0	1.7	1.3	.94	.58	.33
29	0000	.	.	.	.	.	.	.	+	+	+	+	+	+	.02	.04	.09	.19	.35	.60	.94	1.3	1.6	1.8	1.8	1.6	1.3	.93	.60	.36
30	0000	.	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.05	.10	.20	.35	.58	.89	1.2	1.5	1.7	1.7	1.5	1.2	.92	.63	.39
31	0000	.	.	.	.	.	.	+	+	+	+	+	+	.01	.03	.06	.11	.21	.36	.57	.85	1.1	1.4	1.5	1.6	1.4	1.2	.92	.65	.42
32	0000	.	.	.	.	.	+	+	+	+	+	+	+	.01	.03	.06	.12	.21	.36	.56	.81	1.0	1.3	1.4	1.5	1.3	1.1	.92	.66	.44
33	0000	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.07	.13	.22	.36	.54	.77	1.0	1.2	1.3	1.4	1.3	1.1	.90	.66	.46
34	0000	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.04	.07	.13	.22	.35	.52	.73	.95	1.1	1.2	1.3	1.2	1.0	.87	.66	.47
35	0000	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.04	.08	.14	.22	.34	.50	.69	.89	1.0	1.1	1.2	1.1	1.0	.84	.65	.47
36	0000	.	.	.	+	+	+	+	+	+	+	+	.01	.02	.05	.08	.14	.22	.34	.48	.65	.83	.98	1.0	1.1	1.0	.96	.81	.64	.48
37	0000	.	.	.	+	+	+	+	+	+	+	.01	.01	.03	.05	.09	.14	.22	.33	.47	.62	.77	.91	1.0	1.0	1.0	.91	.78	.63	.48
38	0000	.	.	+	+	+	+	+	+	+	+	.01	.02	.03	.05	.09	.15	.22	.32	.45	.59	.73	.85	.94	.97	.94	.86	.75	.61	.48
39	0000	.	.	+	+	+	+	+	+	+	+	.01	.02	.03	.06	.09	.15	.22	.32	.43	.56	.68	.79	.87	.90	.88	.82	.72	.59	.47
40	0000	.	+	+	+	+	+	+	+	+	+	.01	.02	.04	.06	.10	.15	.22	.31	.41	.53	.64	.74	.81	.84	.83	.77	.68	.58	.46
41	0000	.	+	+	+	+	+	+	+	+	.01	.01	.02	.04	.06	.10	.15	.21	.30	.39	.50	.60	.69	.75	.78	.77	.73	.65	.55	.45
42	0000	+	+	+	+	+	+	+	+	+	.01	.01	.03	.04	.07	.10	.15	.21	.29	.37	.47	.56	.64	.70	.73	.72	.68	.62	.53	.44
43	0000	+	+	+	+	+	+	+	+	+	.01	.02	.03	.04	.07	.10	.15	.21	.28	.36	.44	.53	.60	.65	.68	.68	.64	.59	.51	.43
44	0000	+	+	+	+	+	+	+	+	+	.01	.02	.03	.05	.07	.10	.15	.20	.27	.34	.42	.50	.56	.61	.63	.63	.61	.56	.49	.42
45	0000	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.15	.20	.26	.33	.40	.47	.52	.57	.59	.59	.57	.53	.47	.40
46	0000	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.14	.19	.25	.31	.37	.44	.49	.53	.55	.56	.54	.50	.45	.39
47	0000	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.14	.19	.24	.29	.35	.41	.46	.50	.52	.52	.50	.47	.43	.37
48	0000	+	+	+	+	+	+	+	+	.01	.01	.02	.04	.05	.07	.10	.14	.18	.23	.28	.33	.39	.43	.46	.48	.49	.47	.45	.41	.36
49	0000	+	+	+	+	+	+	+	+	.01	.02	.02	.04	.05	.07	.10	.13	.17	.22	.27	.31	.36	.40	.43	.45	.46	.44	.42	.39	.34
50	0000	+	+	+	+	+	+	+	+	.01	.02	.02	.04	.05	.07	.10	.13	.17	.21	.25	.30	.34	.38	.40	.42	.43	.42	.40	.37	.33
51	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.10	.13	.16	.20	.24	.28	.32	.35	.38	.39	.40	.39	.37	.35	.31
52	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.19	.23	.26	.30	.33	.35	.37	.37	.37	.35	.33	.30
53	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.18	.21	.25	.28	.31	.33	.34	.35	.34	.33	.31	.28
54	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.11	.14	.17	.20	.23	.26	.29	.31	.32	.32	.32	.31	.29	.27
55	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.11	.13	.16	.19	.22	.24	.27	.29	.30	.30	.30	.29	.27	.25
56	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.06	.08	.10	.13	.15	.18	.20	.23	.25	.26	.28	.28	.28	.27	.26	.24
57	0000	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.06	.08	.10	.12	.14	.17	.19	.21	.23	.25	.26	.26	.26	.25	.24	.22
58	0000	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.05	.06	.07	.09	.11	.13	.15	.18	.20	.21	.23	.24	.24	.24	.23	.22	.21
59	0000	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.06	.07	.09	.10	.12	.14	.16	.18	.20	.21	.22	.22	.22	.22	.21	.19

```
60 OOOO   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .05 .07 .08 .10 .11 .13 .15 .17 .18 .19 .20 .20 .20 .20 .19 .18
61 OOOO   +   +   +   +   +   +   + .01 .01 .01 .02 .03 .04 .05 .06 .07 .09 .11 .12 .14 .15 .16 .17 .18 .19 .19 .18 .17 .16
62 OOOO   +   +   +   +   +   +   + .01 .01 .01 .02 .03 .04 .05 .06 .07 .08 .10 .11 .13 .14 .15 .16 .17 .17 .17 .16 .16 .15
63 OOOO   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .04 .05 .06 .08 .09 .10 .11 .13 .14 .14 .15 .15 .15 .15 .14 .14
64 OOOO   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .13 .14 .14 .13 .13 .12
65 OOOO   +   +   +   +   +   +   +   + .01 .01 .01 .02 .03 .03 .04 .05 .06 .07 .08 .09 .10 .11 .11 .12 .12 .12 .12 .12 .11
66 OOOO   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .04 .05 .05 .06 .07 .08 .09 .10 .10 .11 .11 .11 .11 .10 .10
67 OOOO   +   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .03 .04 .05 .06 .06 .07 .08 .08 .09 .09 .09 .09 .09 .09 .09
68 OOOO   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .04 .05 .05 .06 .07 .07 .08 .08 .08 .08 .08 .08 .07
69 OOOO   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .02 .03 .04 .04 .05 .05 .06 .06 .07 .07 .07 .07 .07 .07 .06
70 OOOO   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .04 .04 .05 .05 .05 .06 .06 .06 .06 .06 .06 .06
71 OOOO   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .03 .04 .04 .04 .05 .05 .05 .05 .05 .05 .05
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	+	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
16	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
17	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
18	.01	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
19	.01	+	+	+	.	.	.	.	.	0	0	0	0	0	0	00000
20	.02	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
21	.03	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
22	.04	.01	+	+	+	+	.	.	.	.	.	.	0	0	0	00000
23	.06	.02	+	+	+	+	+	.	.	.	.	.	.	0	0	00000
24	.08	.03	.01	+	+	+	+	+	.	.	.	.	.	.	0	00000
25	.11	.04	.02	+	+	+	+	+	+	.	.	.	.	.	.	00000
26	.13	.06	.02	.01	+	+	+	+	+	.	.	.	.	.	.	.0000
27	.15	.07	.03	.01	+	+	+	+	+	+	.	.	.	.	.	.0000
28	.18	.09	.04	.02	.01	+	+	+	+	+	+	.	.	.	.	.0000
29	.21	.11	.05	.02	.01	+	+	+	+	+	+	+	.	.	.	.0000
30	.23	.13	.07	.03	.01	+	+	+	+	+	+	+	.	.	.	.0000
31	.26	.15	.08	.04	.02	.01	+	+	+	+	+	+	+	.	.	.0000
32	.28	.17	.09	.05	.03	.01	+	+	+	+	+	+	+	+	.	.0000
33	.30	.18	.11	.06	.03	.02	.01	+	+	+	+	+	+	+	+	.0000
34	.31	.20	.12	.07	.04	.02	.01	+	+	+	+	+	+	+	+	.0000
35	.33	.22	.14	.08	.05	.03	.01	.01	+	+	+	+	+	+	+	+0000
36	.34	.23	.15	.09	.06	.03	.02	.01	+	+	+	+	+	+	+	+0000
37	.35	.24	.16	.10	.06	.04	.02	.01	+	+	+	+	+	+	+	+0000
38	.35	.25	.17	.11	.07	.04	.03	.01	.01	+	+	+	+	+	+	+0000
39	.36	.26	.18	.12	.08	.05	.03	.02	.01	+	+	+	+	+	+	+0000
40	.36	.26	.19	.13	.09	.06	.03	.02	.01	.01	+	+	+	+	+	+0000
41	.36	.27	.20	.14	.09	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
42	.35	.27	.20	.14	.10	.07	.04	.03	.02	.01	+	+	+	+	+	+0000
43	.35	.27	.20	.15	.11	.07	.05	.03	.02	.01	.01	+	+	+	+	+0000
44	.34	.27	.21	.15	.11	.08	.05	.04	.02	.01	.01	+	+	+	+	+0000
45	.33	.27	.21	.16	.12	.08	.06	.04	.03	.02	.01	+	+	+	+	+0000
46	.33	.27	.21	.16	.12	.09	.06	.04	.03	.02	.01	.01	+	+	+	+0000
47	.32	.26	.21	.16	.12	.09	.07	.05	.03	.02	.01	.01	+	+	+	+0000
48	.31	.26	.21	.16	.13	.09	.07	.05	.03	.02	.01	.01	+	+	+	+0000
49	.30	.25	.20	.16	.13	.10	.07	.05	.04	.03	.02	.01	.01	+	+	+0000
50	.29	.24	.20	.16	.13	.10	.07	.05	.04	.03	.02	.01	.01	+	+	+0000
51	.27	.23	.20	.16	.13	.10	.08	.06	.04	.03	.02	.01	.01	+	+	+0000
52	.26	.23	.19	.16	.13	.10	.08	.06	.04	.03	.02	.01	.01	+	+	+0000
53	.25	.22	.18	.15	.12	.10	.08	.06	.04	.03	.02	.01	.01	.01	+	+0000
54	.24	.21	.18	.15	.12	.10	.08	.06	.04	.03	.02	.02	.01	.01	+	+0000
55	.23	.20	.17	.14	.12	.10	.08	.06	.04	.03	.02	.02	.01	.01	+	+0000
56	.21	.19	.16	.14	.12	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
57	.20	.18	.16	.13	.11	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
58	.19	.17	.15	.13	.11	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
59	.18	.16	.14	.12	.10	.08	.07	.05	.04	.03	.02	.02	.01	.01	+	+0000
60	.16	.15	.13	.11	.10	.08	.07	.05	.04	.03	.02	.02	.01	.01	+	+0000

61	.15	.14	.12	.10	.09	.07	.06	.05	.04	.03	.02	.02	.01	.01	+	+0000
62	.14	.13	.11	.10	.08	.07	.06	.05	.04	.03	.02	.02	.01	.01	+	+0000
63	.13	.11	.10	.09	.08	.06	.05	.04	.03	.03	.02	.01	.01	.01	+	+0000
64	.11	.10	.09	.08	.07	.06	.05	.04	.03	.02	.02	.01	.01	.01	+	+0000
65	.10	.09	.08	.07	.06	.05	.04	.04	.03	.02	.02	.01	.01	.01	+	+0000
66	.09	.08	.07	.07	.06	.05	.04	.03	.03	.02	.02	.01	.01	+	+	+0000
67	.08	.07	.07	.06	.05	.04	.04	.03	.02	.02	.01	.01	.01	+	+	+0000
68	.07	.06	.06	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	+	+	+0000
69	.06	.06	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	+	+	+	+0000
70	.05	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	.01	+	+	+	+0000
71	.04	.04	.04	.03	.03	.02	.02	.02	.01	.01	.01	+	+	+	+	+0000
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

SMALL CLOUDS AT 14400.00 SECONDS ELAPSED TIME FOR Clay

CLOUD #	LOCATION OF CLOUD CENTROID DISTANCE FROM TOP OF GRID	LEFT OF GRID	MASS FROM DISPOSAL (CU FT)	ENTRAINED MASS (CU FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	SOLIDS FALL VELOCITY (FPS)
1	4767.	2026.	27.15	0.0000E+00	2090.	0.0000E+00	13.50	0.200000E-02
2	4782.	2027.	0.8226	0.0000E+00	2132.	0.0000E+00	13.50	0.200000E-02
3	4782.	2027.	0.5417	0.0000E+00	2163.	0.0000E+00	13.50	0.200000E-02
4	4782.	2027.	0.3946	0.0000E+00	2187.	0.0000E+00	13.50	0.200000E-02
5	4782.	2027.	0.3108	0.0000E+00	2206.	0.0000E+00	13.50	0.200000E-02
6	4782.	2027.	0.2548	0.0000E+00	2223.	0.0000E+00	13.50	0.200000E-02
7	4782.	2027.	0.2154	0.0000E+00	2236.	0.0000E+00	13.50	0.200000E-02
8	4782.	2027.	0.1852	0.0000E+00	2248.	0.0000E+00	13.50	0.200000E-02
9	4782.	2027.	0.1615	0.0000E+00	2259.	0.0000E+00	13.50	0.200000E-02
10	4651.	2018.	67.47	0.0000E+00	2268.	0.0000E+00	13.50	0.200000E-02

BOTTOM ACCUMULATION OF Clay (CU FT/GRID SQUARE) , 14400.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																													
3	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
6	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
7	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
8	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.04	.15	.27	.24	.10	.02	+	+	.	0
9	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.61	2.2	3.9	3.4	1.5	.33	.03	+	.	.
10	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.04	.61	4.4	16	29	26	11	2.4	.26	.01	+	.
11	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.16	2.1	16	60	111	97	41	8.7	.98	.06	+	+
12	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.32	4.0	29	111	211	184	75	16	1.9	.17	.01	+
13	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.44	4.2	27	100	188	166	71	17	2.5	.35	.04	+
14	OOOO	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.08	.61	3.7	17	54	94	86	43	14	3.3	.69	.11	.01
15	OOOO	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.13	.86	4.0	14	33	52	52	33	15	4.6	1.0	.18	.02
16	OOOO	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.15	.96	4.3	14	31	47	48	34	16	5.3	1.2	.22	.03
17	OOOO	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.01	.14	.81	3.5	11	25	39	40	28	13	4.4	1.1	.22	.04
18	OOOO	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.11	.56	2.2	6.7	15	23	24	17	8.3	3.0	.86	.21	.05
19	OOOO	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.10	.40	1.3	3.5	7.3	11	12	8.7	4.7	2.0	.74	.24	.07
20	OOOO	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	.02	.11	.35	.99	2.2	4.2	6.0	6.5	5.3	3.4	1.7	.76	.28	.09
21	OOOO	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.03	.11	.35	.89	1.9	3.4	4.7	5.2	4.5	3.1	1.7	.79	.31	.11
22	OOOO	0	0	0	0	0	0	.	.	.	.	.	+	+	+	.01	.03	.12	.33	.81	1.7	2.9	4.1	4.6	4.0	2.8	1.6	.79	.34	.13
23	OOOO	0	0	0	0	0	0	.	.	.	.	+	+	+	+	.01	.04	.12	.31	.72	1.4	2.4	3.3	3.7	3.3	2.4	1.4	.78	.37	.16
24	OOOO	0	0	0	0	0	.	.	.	.	.	+	+	+	+	.01	.05	.13	.31	.66	1.2	1.9	2.6	2.9	2.7	2.1	1.3	.80	.41	.19
25	OOOO	0	0	0	0	.	.	.	.	.	+	+	+	+	+	.02	.06	.15	.32	.64	1.1	1.7	2.3	2.5	2.4	1.9	1.3	.85	.47	.23
26	OOOO	0	0	0	.	.	.	.	.	.	+	+	+	+	.01	.03	.07	.16	.34	.65	1.1	1.6	2.1	2.4	2.3	1.9	1.4	.91	.52	.27
27	OOOO	0	0	.	.	.	.	.	.	+	+	+	+	+	.01	.03	.08	.17	.35	.64	1.0	1.5	2.0	2.3	2.2	1.9	1.4	.94	.56	.30
28	OOOO	0	.	.	.	.	.	.	.	+	+	+	+	+	.01	.04	.08	.18	.35	.62	1.0	1.4	1.8	2.1	2.0	1.7	1.3	.94	.58	.33
29	OOOO	.	.	.	.	.	.	.	+	+	+	+	+	+	.02	.04	.09	.19	.35	.60	.94	1.3	1.6	1.8	1.8	1.6	1.3	.93	.60	.36
30	OOOO	.	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.05	.10	.20	.35	.58	.89	1.2	1.5	1.7	1.7	1.5	1.2	.92	.63	.39
31	OOOO	.	.	.	.	.	.	+	+	+	+	+	+	.01	.03	.06	.11	.21	.36	.57	.85	1.1	1.4	1.5	1.6	1.4	1.2	.92	.65	.42
32	OOOO	.	.	.	.	.	+	+	+	+	+	+	+	.01	.03	.06	.12	.21	.36	.56	.81	1.0	1.3	1.4	1.5	1.3	1.1	.92	.66	.44
33	OOOO	.	.	.	.	.	+	+	+	+	+	+	.01	.02	.03	.07	.13	.22	.36	.54	.77	1.0	1.2	1.3	1.4	1.3	1.1	.90	.66	.46
34	OOOO	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.04	.07	.13	.22	.35	.52	.73	.95	1.1	1.2	1.3	1.2	1.0	.87	.66	.47
35	OOOO	.	.	.	.	+	+	+	+	+	+	+	.01	.02	.04	.08	.14	.22	.34	.50	.69	.89	1.0	1.1	1.2	1.1	1.0	.84	.65	.47
36	OOOO	.	.	.	+	+	+	+	+	+	+	+	.01	.02	.05	.08	.14	.22	.34	.48	.65	.83	.98	1.0	1.1	1.0	.96	.81	.64	.48
37	OOOO	.	.	.	+	+	+	+	+	+	+	.01	.01	.03	.05	.09	.14	.22	.33	.47	.62	.77	.91	1.0	1.0	1.0	.91	.78	.63	.48
38	OOOO	.	.	+	+	+	+	+	+	+	+	.01	.02	.03	.05	.09	.15	.22	.32	.45	.59	.73	.85	.94	.97	.94	.86	.75	.61	.48
39	OOOO	.	.	+	+	+	+	+	+	+	+	.01	.02	.03	.06	.09	.15	.22	.32	.43	.56	.68	.79	.87	.90	.88	.82	.72	.59	.47
40	OOOO	.	+	+	+	+	+	+	+	+	+	.01	.02	.04	.06	.10	.15	.22	.31	.41	.53	.64	.74	.81	.84	.83	.77	.68	.58	.46
41	OOOO	.	+	+	+	+	+	+	+	+	.01	.01	.02	.04	.06	.10	.15	.21	.30	.39	.50	.60	.69	.75	.78	.77	.73	.65	.55	.45
42	OOOO	+	+	+	+	+	+	+	+	+	.01	.01	.03	.04	.07	.10	.15	.21	.29	.37	.47	.56	.64	.70	.73	.72	.68	.62	.53	.44
43	OOOO	+	+	+	+	+	+	+	+	+	.01	.02	.03	.04	.07	.10	.15	.21	.28	.36	.44	.53	.60	.65	.68	.68	.64	.59	.51	.43
44	OOOO	+	+	+	+	+	+	+	+	+	.01	.02	.03	.05	.07	.10	.15	.20	.27	.34	.42	.50	.56	.61	.63	.63	.61	.56	.49	.42
45	OOOO	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.15	.20	.26	.33	.40	.47	.52	.57	.59	.59	.57	.53	.47	.40
46	OOOO	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.14	.19	.25	.31	.37	.44	.49	.53	.55	.56	.54	.50	.45	.39
47	OOOO	+	+	+	+	+	+	+	+	.01	.01	.02	.03	.05	.07	.10	.14	.19	.24	.29	.35	.41	.46	.50	.52	.52	.50	.47	.43	.37
48	OOOO	+	+	+	+	+	+	+	+	.01	.01	.02	.04	.05	.07	.10	.14	.18	.23	.28	.33	.39	.43	.46	.48	.49	.47	.45	.41	.36
49	OOOO	+	+	+	+	+	+	+	+	.01	.02	.02	.04	.05	.07	.10	.13	.17	.22	.27	.31	.36	.40	.43	.45	.46	.44	.42	.39	.34
50	OOOO	+	+	+	+	+	+	+	+	.01	.02	.02	.04	.05	.07	.10	.13	.17	.21	.25	.30	.34	.38	.40	.42	.43	.42	.40	.37	.33
51	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.10	.13	.16	.20	.24	.28	.32	.35	.38	.39	.40	.39	.37	.35	.31
52	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.19	.23	.26	.30	.33	.35	.37	.37	.37	.35	.33	.30
53	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.12	.15	.18	.21	.25	.28	.31	.33	.34	.35	.34	.33	.31	.28
54	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.11	.14	.17	.20	.23	.26	.29	.31	.32	.32	.32	.31	.29	.27
55	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.07	.09	.11	.13	.16	.19	.22	.24	.27	.29	.30	.30	.30	.29	.27	.25
56	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.06	.08	.10	.13	.15	.18	.20	.23	.25	.26	.28	.28	.28	.27	.26	.24
57	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.03	.04	.05	.06	.08	.10	.12	.14	.17	.19	.21	.23	.25	.26	.26	.26	.25	.24	.22
58	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.05	.06	.07	.09	.11	.13	.15	.18	.20	.21	.23	.24	.24	.24	.23	.22	.21
59	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.06	.07	.09	.10	.12	.14	.16	.18	.20	.21	.22	.22	.22	.22	.21	.19

60	OOOO	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.05	.07	.08	.10	.11	.13	.15	.17	.18	.19	.20	.20	.20	.20	.19	.18
61	OOOO	+	+	+	+	+	+	+	.01	.01	.01	.02	.03	.04	.05	.06	.07	.09	.11	.12	.14	.15	.16	.17	.18	.19	.19	.18	.17	.16
62	OOOO	+	+	+	+	+	+	+	.01	.01	.01	.02	.03	.04	.05	.06	.07	.08	.10	.11	.13	.14	.15	.16	.17	.17	.17	.16	.16	.15
63	OOOO	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.03	.04	.05	.06	.08	.09	.10	.11	.13	.14	.14	.15	.15	.15	.15	.14	.14
64	OOOO	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.13	.14	.14	.13	.13	.12
65	OOOO	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.03	.03	.04	.05	.06	.07	.08	.09	.10	.11	.11	.12	.12	.12	.12	.12	.11
66	OOOO	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.03	.04	.05	.05	.06	.07	.08	.09	.10	.10	.11	.11	.11	.11	.10	.10
67	OOOO	+	+	+	+	+	+	+	+	+	.01	.01	.02	.02	.03	.03	.04	.05	.06	.06	.07	.08	.08	.09	.09	.09	.09	.09	.09	.09
68	OOOO	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.03	.03	.04	.05	.05	.06	.07	.07	.08	.08	.08	.08	.08	.08	.07
69	OOOO	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.02	.03	.04	.04	.05	.05	.06	.06	.07	.07	.07	.07	.07	.07	.06
70	OOOO	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.03	.03	.04	.04	.05	.05	.05	.06	.06	.06	.06	.06	.06	.06
71	OOOO	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.02	.02	.03	.03	.03	.04	.04	.04	.05	.05	.05	.05	.05	.05	.05
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																													

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	+	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	+	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
16	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
17	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
18	.01	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
19	.01	+	+	+	.	.	.	.	.	0	0	0	0	0	0	00000
20	.02	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
21	.03	.01	+	+	+	+	.	.	.	.	.	0	0	0	0	00000
22	.04	.01	+	+	+	+	.	.	.	.	.	.	0	0	0	00000
23	.06	.02	+	+	+	+	+	.	.	.	.	.	.	0	0	00000
24	.08	.03	.01	+	+	+	+	+	.	.	.	.	.	.	0	00000
25	.11	.04	.02	+	+	+	+	+	+	.	.	.	.	.	.	00000
26	.13	.06	.02	.01	+	+	+	+	+	.	.	.	.	.	.	.0000
27	.15	.07	.03	.01	+	+	+	+	+	+	.	.	.	.	.	.0000
28	.18	.09	.04	.02	.01	+	+	+	+	+	+	.	.	.	.	.0000
29	.21	.11	.05	.02	.01	+	+	+	+	+	+	+	.	.	.	.0000
30	.23	.13	.07	.03	.01	+	+	+	+	+	+	+	.	.	.	.0000
31	.26	.15	.08	.04	.02	.01	+	+	+	+	+	+	+	.	.	.0000
32	.28	.17	.09	.05	.03	.01	+	+	+	+	+	+	+	+	.	.0000
33	.30	.18	.11	.06	.03	.02	.01	+	+	+	+	+	+	+	+	.0000
34	.31	.20	.12	.07	.04	.02	.01	+	+	+	+	+	+	+	+	.0000
35	.33	.22	.14	.08	.05	.03	.01	.01	+	+	+	+	+	+	+	+0000
36	.34	.23	.15	.09	.06	.03	.02	.01	+	+	+	+	+	+	+	+0000
37	.35	.24	.16	.10	.06	.04	.02	.01	+	+	+	+	+	+	+	+0000
38	.35	.25	.17	.11	.07	.04	.03	.01	.01	+	+	+	+	+	+	+0000
39	.36	.26	.18	.12	.08	.05	.03	.02	.01	+	+	+	+	+	+	+0000
40	.36	.26	.19	.13	.09	.06	.03	.02	.01	.01	+	+	+	+	+	+0000
41	.36	.27	.20	.14	.09	.06	.04	.02	.01	.01	+	+	+	+	+	+0000
42	.35	.27	.20	.14	.10	.07	.04	.03	.02	.01	+	+	+	+	+	+0000
43	.35	.27	.20	.15	.11	.07	.05	.03	.02	.01	.01	+	+	+	+	+0000
44	.34	.27	.21	.15	.11	.08	.05	.04	.02	.01	.01	+	+	+	+	+0000
45	.33	.27	.21	.16	.12	.08	.06	.04	.03	.02	.01	+	+	+	+	+0000
46	.33	.27	.21	.16	.12	.09	.06	.04	.03	.02	.01	.01	+	+	+	+0000
47	.32	.26	.21	.16	.12	.09	.07	.05	.03	.02	.01	.01	+	+	+	+0000
48	.31	.26	.21	.16	.13	.09	.07	.05	.03	.02	.01	.01	+	+	+	+0000
49	.30	.25	.20	.16	.13	.10	.07	.05	.04	.03	.02	.01	.01	+	+	+0000
50	.29	.24	.20	.16	.13	.10	.07	.05	.04	.03	.02	.01	.01	+	+	+0000
51	.27	.23	.20	.16	.13	.10	.08	.06	.04	.03	.02	.01	.01	+	+	+0000
52	.26	.23	.19	.16	.13	.10	.08	.06	.04	.03	.02	.01	.01	+	+	+0000
53	.25	.22	.18	.15	.12	.10	.08	.06	.04	.03	.02	.01	.01	.01	+	+0000
54	.24	.21	.18	.15	.12	.10	.08	.06	.04	.03	.02	.02	.01	.01	+	+0000
55	.23	.20	.17	.14	.12	.10	.08	.06	.04	.03	.02	.02	.01	.01	+	+0000
56	.21	.19	.16	.14	.12	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
57	.20	.18	.16	.13	.11	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
58	.19	.17	.15	.13	.11	.09	.07	.06	.04	.03	.02	.02	.01	.01	+	+0000
59	.18	.16	.14	.12	.10	.08	.07	.05	.04	.03	.02	.02	.01	.01	+	+0000
60	.16	.15	.13	.11	.10	.08	.07	.05	.04	.03	.02	.02	.01	.01	+	+0000

61	.15	.14	.12	.10	.09	.07	.06	.05	.04	.03	.02	.02	.01	.01	+	+OOOO
62	.14	.13	.11	.10	.08	.07	.06	.05	.04	.03	.02	.02	.01	.01	+	+OOOO
63	.13	.11	.10	.09	.08	.06	.05	.04	.03	.03	.02	.01	.01	.01	+	+OOOO
64	.11	.10	.09	.08	.07	.06	.05	.04	.03	.02	.02	.01	.01	.01	+	+OOOO
65	.10	.09	.08	.07	.06	.05	.04	.04	.03	.02	.02	.01	.01	.01	+	+OOOO
66	.09	.08	.07	.07	.06	.05	.04	.03	.03	.02	.02	.01	.01	+	+	+OOOO
67	.08	.07	.07	.06	.05	.04	.04	.03	.02	.02	.01	.01	.01	+	+	+OOOO
68	.07	.06	.06	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	+	+	+OOOO
69	.06	.06	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	+	+	+	+OOOO
70	.05	.05	.04	.04	.03	.03	.02	.02	.01	.01	.01	.01	+	+	+	+OOOO
71	.04	.04	.04	.03	.03	.02	.02	.02	.01	.01	.01	+	+	+	+	+OOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

THICKNESS (FT) OF Clay   ACCUMULATED ON BOTTOM,   14400.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY   1.000   (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	+	+	+	+	.	.	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.02	.04	.03	.01	+	+	.	.	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.02	.09	.16	.14	.06	.01	+	+	.	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.16	.31	.27	.11	.02	+	+	.	.
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.15	.28	.25	.10	.02	+	+	.	.
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.08	.14	.12	.06	.02	+	+	+	.
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.05	.07	.07	.05	.02	+	+	+	.
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.02	.04	.07	.07	.05	.02	+	+	+	.
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.03	.05	.06	.04	.02	+	+	+	.
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	.02	.03	.03	.02	.01	+	+	+	.
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	.01	.01	.01	.01	+	+	+	+	+
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
24	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
25	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
26	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
27	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
28	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
29	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
30	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
31	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+
32	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
33	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
34	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
35	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
36	0000	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
37	0000	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
38	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
39	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
40	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
41	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
42	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
43	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
44	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
45	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
51	0000	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
52	0000	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
53	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
54	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
55	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
56	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
57	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
58	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
59	0000	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

```
60 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   +
61 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
62 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
63 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +
64 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +   +
65 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +
66 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +   +
67 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +   +
68 OOOO   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +   +   +
69 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +
70 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
71 OOOO   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 2 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
 9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
12    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
13    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
14    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
15    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
16    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
17    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
18    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0      00000
19    .   .   .   0   0   0   0   0   0   0   0   0   0   0   0      00000
20    .   .   .   0   0   0   0   0   0   0   0   0   0   0   0      00000
21    .   .   .   .   0   0   0   0   0   0   0   0   0   0   0      00000
22    .   .   .   .   .   0   0   0   0   0   0   0   0   0   0      00000
23    +   .   .   .   .   0   0   0   0   0   0   0   0   0   0      00000
24    +   .   .   .   .   .   0   0   0   0   0   0   0   0   0      00000
25    +   .   .   .   .   .   0   0   0   0   0   0   0   0   0      00000
26    +   .   .   .   .   .   .   0   0   0   0   0   0   0   0      00000
27    +   +   .   .   .   .   .   .   0   0   0   0   0   0   0      00000
28    +   +   .   .   .   .   .   .   0   0   0   0   0   0   0      00000
29    +   +   .   .   .   .   .   .   .   0   0   0   0   0   0      00000
30    +   +   +   .   .   .   .   .   .   0   0   0   0   0   0      00000
31    +   +   +   .   .   .   .   .   .   .   0   0   0   0   0      00000
32    +   +   +   .   .   .   .   .   .   .   .   0   0   0   0      00000
33    +   +   +   .   .   .   .   .   .   .   .   0   0   0   0      00000
34    +   +   +   +   .   .   .   .   .   .   .   .   0   0   0      00000
35    +   +   +   +   .   .   .   .   .   .   .   .   0   0   0      00000
36    +   +   +   +   .   .   .   .   .   .   .   .   .   0   0      00000
37    +   +   +   +   +   .   .   .   .   .   .   .   .   .   0      00000
38    +   +   +   +   +   .   .   .   .   .   .   .   .   .   0      00000
39    +   +   +   +   +   .   .   .   .   .   .   .   .   .   .      00000
40    +   +   +   +   +   .   .   .   .   .   .   .   .   .   .      00000
41    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .      .0000
42    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .      .0000
43    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .      .0000
44    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .      .0000
45    +   +   +   +   +   +   .   .   .   .   .   .   .   .   .      .0000
46    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
47    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
48    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
49    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
50    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
51    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
52    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
53    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
54    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
55    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
56    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
57    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
58    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
59    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
60    +   +   +   +   +   +   +   .   .   .   .   .   .   .   .      .0000
```

```
61     +   +   +   +   +   +   +   .   .   .   .   .   .   .   .   .0000
62     +   +   +   +   +   +   .   .   .   .   .   .   .   .   .   .0000
63     +   +   +   +   +   +   .   .   .   .   .   .   .   .   .   .0000
64     +   +   +   +   +   .   .   .   .   .   .   .   .   .   .   .0000
65     +   +   +   +   +   .   .   .   .   .   .   .   .   .   .   .0000
66     +   +   +   +   .   .   .   .   .   .   .   .   .   .   .   .0000
67     +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
68     +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
69     .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
70     .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
71     .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
72 0000000000000000000000000000000000000000000000000000000000000000000000
```

```
    BEGIN LONG TERM SIMULATION OF FATE OF Clumps




SUMMARY OF Clumps   DISTRIBUTIONS AFTER    1200.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =    0.00000E+00
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     14639.



     COMPUTATIONS FOR Clumps   TERMINATED AT    1200.00  SEC. ELAPSED TIME...MATERIAL SETTLED TO BOTTOM
```

BOTTOM ACCUMULATION OF Clumps (CU FT/GRID SQUARE) , 1200.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY 10.00 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.08	.24	.08	+	.	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.35	8.4	24	8.4	.35	+	.	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.02	4.1	101	290	101	4.1	.02	.	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.03	6.0	144	415	144	6.0	.03	.	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	1.0	25	72	25	1.0	+	.	0	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.02	.52	1.5	.57	.02	+	0	0	0	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.01	.69	3.9	2.7	.23	+	.	0	0	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.07	3.8	22	15	1.2	.01	.	0	0	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.05	2.5	15	10	.83	+	.	0	0	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.20	1.1	.80	.06	+	0	0	0	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	+	+	.	0	0	0	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	0	0	0	0	0	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	OOOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

```
THICKNESS (FT) OF Clumps   ACCUMULATED ON BOTTOM,     1200.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY   1.000         (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)
M N=  2    3    4    5    6    7    8    9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   26   27   28   29   30   31
 2 00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
 3 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 4 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 5 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +    +    +    .    0    0    0    0    0
 6 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +  .02  .06  .02    +    .    0    0    0    0
 7 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .  .01  .25  .72  .25  .01    .    0    0    0    0
 8 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .  .01  .35  1.0  .35  .01    .    0    0    0    0
 9 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +  .06  .17  .06    +    .    0    0    0    0
10 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +    +    +    .    0    0    0    0    0
11 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +    +    +    +    .    0    0    0    0
12 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    +    +  .05  .03    +    .    0    0    0    0
13 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    +    +  .03  .02    +    .    0    0    0    0
14 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    +    +    +    +    .    0    0    0    0
15 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    .    .    .    .    0    0    0    0    0
16 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
17 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
18 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
19 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
20 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
21 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
22 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
23 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
24 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
25 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
26 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
27 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
28 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
29 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
30 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
31 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
32 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
33 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
34 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
35 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
36 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
37 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
38 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
39 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
40 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
41 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
42 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
43 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
44 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
45 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
46 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
47 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
48 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
49 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
50 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
51 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
52 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
53 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
54 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
55 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
56 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
57 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
58 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
59 0000    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
```

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	00000000000000000000000000000000000000000000000000000000000000000000																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

```
    BEGIN LONG TERM SIMULATION OF FATE OF


SUMMARY OF          DISTRIBUTIONS AFTER    1200.00 SEC

    TOTAL TRACER OR CONTAMINANT IN SOLUTION (MG) =    0.00000E+00


     COMPUTATIONS FOR          TERMINATED AT    1200.00  SEC. ELAPSED TIME...MATERIAL SETTLED TO BOTTOM
```

FINAL DISTRIBUTIONS OF TOTAL SETTLED MATERIAL FOLLOW.....

```
TOTAL ACCUMULATED SOLID VOLUME ON BOTTOM (CU FT/GRID SQR),    1200.00 SECONDS AFTER DUMP
...MULTIPLY DISPLAYED VALUES BY   10.00         (LEGEND... + = .LT. .01   . = .LT. .0001   0 = .LT. .000001)
M N=  2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31
 2 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 3 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
 4 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   +   +   +   .   0   0   0   0   0
 5 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   + .08 .24 .08   +   .   0   0   0   0
 6 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   + .35 8.4  24 8.4 .35   +   .   0   0   0
 7 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   . .02 4.1 101 290 101 4.2 .02   .   .   0   0
 8 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   + .03 6.0 144 416 144 6.0 .04   +   .   .   0
 9 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   +   + .06 1.4  26  74  27 2.0 .23 .02   +   .   0
10 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   + .02 .41 3.0  12  22  18 7.6 1.6 .17   +   +   .
11 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   + .10 1.4  11  42  82  71  28 5.8 .63 .03   +   .
12 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   .   +   + .18 2.6  20  81 171 145  53  11 1.1 .06   +   +
13 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   +   + .17 2.3  17  69 143 122  46 9.4 1.0 .08   +   +
14 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   .   .   + .01 .11 1.2 7.8  29  53  47  20 4.7 .70 .09 .01   +
15 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   .   +   + .01 .10 .59 2.7 8.1  14  13 6.7 2.2 .57 .11 .01   +
16 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   .   .   +   + .01 .10 .48 1.6 3.8 5.9 6.0 4.0 1.8 .58 .13 .02   +
17 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   .   .   +   + .01 .08 .39 1.2 2.8 4.4 4.6 3.2 1.5 .50 .12 .02   +
18 OOOO   0   0   0   0   0   0   0   0   0   0   0   .   .   .   +   + .01 .06 .25 .79 1.7 2.7 2.9 2.0 1.0 .35 .10 .02   +
19 OOOO   0   0   0   0   0   0   0   0   0   0   0   .   .   +   +   + .01 .04 .15 .43 .91 1.3 1.4 1.0 .59 .24 .08 .02   +
20 OOOO   0   0   0   0   0   0   0   0   0   0   .   .   .   +   +   + .01 .04 .11 .28 .53 .77 .83 .68 .42 .21 .09 .03 .01
21 OOOO   0   0   0   0   0   0   0   0   0   .   .   .   .   +   +   + .01 .04 .11 .24 .43 .61 .67 .58 .39 .21 .09 .03 .01
22 OOOO   0   0   0   0   0   0   0   0   0   .   .   .   +   +   +   + .01 .04 .10 .21 .38 .53 .60 .53 .37 .21 .10 .04 .01
23 OOOO   0   0   0   0   0   0   0   0   .   .   .   .   +   +   +   + .01 .03 .09 .18 .31 .44 .49 .44 .32 .19 .09 .04 .01
24 OOOO   0   0   0   0   0   0   0   .   .   .   .   .   +   +   +   + .01 .03 .08 .15 .25 .35 .39 .36 .27 .17 .09 .05 .02
25 OOOO   0   0   0   0   0   0   0   .   .   .   .   +   +   +   +   + .01 .03 .07 .14 .21 .29 .32 .30 .24 .16 .10 .05 .02
26 OOOO   0   0   0   0   0   0   .   .   .   .   .   +   +   +   +   + .01 .03 .07 .13 .19 .26 .29 .28 .23 .16 .10 .06 .03
27 OOOO   0   0   0   0   0   .   .   .   .   .   .   +   +   +   +   + .01 .04 .07 .12 .18 .24 .27 .26 .22 .16 .10 .06 .03
28 OOOO   0   0   0   0   0   .   .   .   .   .   +   +   +   +   +   + .02 .04 .07 .11 .17 .21 .24 .24 .20 .15 .10 .06 .03
29 OOOO   0   0   0   0   .   .   .   .   .   .   +   +   +   +   + .01 .02 .03 .06 .10 .15 .19 .21 .21 .19 .14 .10 .06 .04
30 OOOO   0   0   0   .   .   .   .   .   .   +   +   +   +   +   + .01 .02 .03 .06 .09 .13 .17 .19 .19 .17 .14 .10 .06 .04
31 OOOO   0   0   0   .   .   .   .   .   .   +   +   +   +   +   + .01 .02 .03 .06 .09 .12 .15 .17 .17 .16 .13 .10 .07 .04
32 OOOO   0   0   .   .   .   .   .   .   .   +   +   +   +   +   + .01 .02 .03 .06 .08 .11 .14 .16 .16 .15 .12 .09 .07 .04
33 OOOO   0   .   .   .   .   .   .   .   +   +   +   +   +   +   + .01 .02 .03 .05 .08 .11 .13 .14 .15 .14 .12 .09 .07 .04
34 OOOO   .   .   .   .   .   .   .   .   +   +   +   +   +   +   + .01 .02 .03 .05 .07 .10 .12 .13 .14 .13 .11 .09 .07 .04
35 OOOO   .   .   .   .   .   .   .   +   +   +   +   +   +   +   + .01 .02 .03 .05 .07 .09 .11 .12 .12 .12 .10 .08 .06 .05
36 OOOO   .   .   .   .   .   .   .   +   +   +   +   +   +   +   + .01 .02 .03 .05 .06 .08 .10 .11 .11 .11 .10 .08 .06 .05
37 OOOO   .   .   .   .   .   .   .   +   +   +   +   +   +   +   + .01 .02 .03 .04 .06 .08 .09 .10 .10 .10 .09 .08 .06 .05
38 OOOO   .   .   .   .   .   .   +   +   +   +   +   +   +   +   + .01 .02 .03 .04 .06 .07 .08 .09 .10 .09 .09 .07 .06 .04
39 OOOO   .   .   .   .   .   .   +   +   +   +   +   +   +   + .01 .01 .02 .03 .04 .05 .07 .08 .09 .09 .09 .08 .07 .06 .04
40 OOOO   .   .   .   .   .   +   +   +   +   +   +   +   +   + .01 .01 .02 .03 .04 .05 .06 .07 .08 .08 .08 .07 .07 .05 .04
41 OOOO   .   .   .   .   .   +   +   +   +   +   +   +   +   + .01 .01 .02 .03 .04 .05 .06 .07 .07 .08 .07 .07 .06 .05 .04
42 OOOO   .   .   .   .   .   +   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .05 .06 .07 .07 .07 .07 .06 .05 .04
43 OOOO   .   .   .   .   +   +   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .05 .06 .06 .06 .06 .06 .06 .05 .04
44 OOOO   .   .   .   .   +   +   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .05 .05 .06 .06 .06 .06 .05 .05 .04
45 OOOO   .   .   .   +   +   +   +   +   +   +   +   +   +   + .01 .01 .02 .02 .03 .04 .04 .05 .05 .06 .06 .05 .05 .04 .04
46 OOOO   .   .   .   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .03 .03 .04 .05 .05 .05 .05 .05 .05 .04 .03
47 OOOO   .   .   .   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .03 .03 .04 .04 .05 .05 .05 .05 .04 .04 .03
48 OOOO   .   .   .   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .04 .04 .04 .04 .04 .04 .04 .03
49 OOOO   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .04 .04 .04 .04 .04 .04 .03 .03
50 OOOO   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .03 .03 .03 .04 .04 .04 .04 .04 .03 .03
51 OOOO   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .02 .03 .03 .03 .04 .04 .03 .03 .03 .03
52 OOOO   .   .   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .02 .02 .03 .03 .03 .03 .03 .03 .03 .03 .03
53 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .02 .03 .03 .03 .03 .03 .03 .03 .02
54 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .02 .02 .02 .02 .03 .03 .03 .03 .03 .02 .02
55 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .02 .02 .02 .02 .03 .03 .03 .02 .02 .02
56 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02
57 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .01 .02 .02 .02 .02 .02 .02 .02 .02 .02
58 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .02 .02 .02 .02 .02 .02 .02 .02 .02
59 OOOO   .   +   +   +   +   +   +   +   +   +   +   +   +   +   +   + .01 .01 .01 .01 .01 .02 .02 .02 .02 .02 .02 .02 .01
```

60 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.02	.01	.01
61 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
62 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
63 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
64 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
65 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01	.01
66 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	.01	.01	.01	.01	.01	.01	.01
67 OOOO	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.01	+	+	+
68 OOOO	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
69 OOOO	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
70 OOOO	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
71 OOOO	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																													

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47 48
2	00000000000000000000000000000000000000000000000000000000000000000000															
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
11	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
12	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
13	.	.	0	0	0	0	0	0	0	0	0	0	0	0	0	00000
14	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
15	+	.	.	0	0	0	0	0	0	0	0	0	0	0	0	00000
16	+	.	.	.	0	0	0	0	0	0	0	0	0	0	0	00000
17	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
18	+	+	.	.	.	0	0	0	0	0	0	0	0	0	0	00000
19	+	+	+	.	.	.	0	0	0	0	0	0	0	0	0	00000
20	+	+	+	.	.	.	.	0	0	0	0	0	0	0	0	00000
21	+	+	+	+	.	.	.	.	0	0	0	0	0	0	0	00000
22	+	+	+	+	.	.	.	.	.	0	0	0	0	0	0	00000
23	+	+	+	+	+	.	.	.	.	.	0	0	0	0	0	00000
24	+	+	+	+	+	.	.	.	.	.	.	0	0	0	0	00000
25	.01	+	+	+	+	+	.	.	.	.	.	.	0	0	0	00000
26	.01	+	+	+	+	+	.	.	.	.	.	.	.	0	0	00000
27	.01	+	+	+	+	+	+	.	.	.	.	.	.	.	0	00000
28	.02	.01	+	+	+	+	+	+	.	.	.	.	.	.	0	00000
29	.02	.01	+	+	+	+	+	+	.	.	.	.	.	.	.	00000
30	.02	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
31	.02	.01	+	+	+	+	+	+	+	.	.	.	.	.	.	.0000
32	.03	.01	.01	+	+	+	+	+	+	+	.	.	.	.	.	.0000
33	.03	.01	.01	+	+	+	+	+	+	+	+	.	.	.	.	.0000
34	.03	.02	.01	+	+	+	+	+	+	+	+	.	.	.	.	.0000
35	.03	.02	.01	+	+	+	+	+	+	+	+	+	.	.	.	.0000
36	.03	.02	.01	.01	+	+	+	+	+	+	+	+	.	.	.	.0000
37	.03	.02	.01	.01	+	+	+	+	+	+	+	+	+	.	.	.0000
38	.03	.02	.01	.01	+	+	+	+	+	+	+	+	+	.	.	.0000
39	.03	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	.	.0000
40	.03	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	.	.0000
41	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	.0000
42	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
43	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
44	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
45	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
46	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
47	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
48	.03	.02	.02	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
49	.03	.02	.02	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
50	.02	.02	.02	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
51	.02	.02	.02	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
52	.02	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
53	.02	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
54	.02	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
55	.02	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+0000
56	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
57	.02	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
58	.01	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
59	.01	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000
60	.01	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+0000

61	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+	+0000
62	.01	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+	+0000
63	.01	.01	.01	+	+	+	+	+	+	+	+	+	+	+	+	+0000
64	.01	.01	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
65	.01	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
66	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
67	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
68	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
69	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
70	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
71	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+0000
72	000000000000000000000000000000000000000000000000000000000000000000000															

TOTAL THICKNESS (FT) OF NEW MATERIAL ON BOTTOM, 1200.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M	N= 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.04	.14	.04	+	.	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	.02	.57	1.6	.57	.02	+	0	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.82	2.3	.82	.03	+	.	0	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.15	.42	.15	.01	+	+	.	0	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.01	.06	.12	.10	.04	+	+	.	.	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.06	.24	.47	.40	.16	.03	+	+	.	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.11	.46	.98	.83	.30	.06	+	+	.	.
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.09	.39	.82	.70	.26	.05	+	+	.	.
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.04	.16	.30	.27	.11	.02	+	+	.	.
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.04	.08	.07	.03	.01	+	+	+	.
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.02	.03	.03	.02	.01	+	+	+	.
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.01	.02	.02	.01	+	+	+	+	.
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	.01	.01	.01	.01	+	+	+	+	.
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	.
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
26	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
27	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
28	0000	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
29	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
30	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
31	0000	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
32	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
33	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
34	0000	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
35	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
36	0000	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
37	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
38	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
39	0000	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
40	0000	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
41	0000	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
42	0000	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
43	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
44	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
45	0000	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
46	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
47	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
48	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
49	0000	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+
50	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
51	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
52	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
53	0000	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
54	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+	+
55	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+
56	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+	+
57	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+
58	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+	+
59	0000	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	+	+	+

```
60 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   +   +
61 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   +   +   +   +   +   +   .
62 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
63 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
64 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
65 OOOO   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
66 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
67 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
68 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
69 OOOO   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
70 OOOO   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
71 OOOO   0   0   0   0   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

```
M N= 32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 2 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 3    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 4    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 5    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 6    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 7    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 8    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
 9    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
10    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
11    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
12    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
13    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
14    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
15    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
16    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
17    .   0   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
18    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
19    .   .   0   0   0   0   0   0   0   0   0   0   0   0   0   00000
20    .   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
21    .   .   .   0   0   0   0   0   0   0   0   0   0   0   0   00000
22    .   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
23    .   .   .   .   0   0   0   0   0   0   0   0   0   0   0   00000
24    .   .   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
25    .   .   .   .   .   0   0   0   0   0   0   0   0   0   0   00000
26    .   .   .   .   .   .   0   0   0   0   0   0   0   0   0   00000
27    +   .   .   .   .   .   0   0   0   0   0   0   0   0   0   00000
28    +   .   .   .   .   .   .   0   0   0   0   0   0   0   0   00000
29    +   .   .   .   .   .   .   0   0   0   0   0   0   0   0   00000
30    +   .   .   .   .   .   .   .   0   0   0   0   0   0   0   00000
31    +   .   .   .   .   .   .   .   .   0   0   0   0   0   0   00000
32    +   +   .   .   .   .   .   .   .   0   0   0   0   0   0   00000
33    +   +   .   .   .   .   .   .   .   .   0   0   0   0   0   00000
34    +   +   .   .   .   .   .   .   .   .   0   0   0   0   0   00000
35    +   +   .   .   .   .   .   .   .   .   .   0   0   0   0   00000
36    +   +   .   .   .   .   .   .   .   .   .   0   0   0   0   00000
37    +   +   .   .   .   .   .   .   .   .   .   .   0   0   0   00000
38    +   +   +   .   .   .   .   .   .   .   .   .   0   0   0   00000
39    +   +   +   .   .   .   .   .   .   .   .   .   .   0   0   00000
40    +   +   +   .   .   .   .   .   .   .   .   .   .   0   0   00000
41    +   +   +   .   .   .   .   .   .   .   .   .   .   .   0   00000
42    +   +   +   .   .   .   .   .   .   .   .   .   .   .   0   00000
43    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   00000
44    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   00000
45    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
46    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
47    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
48    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
49    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
50    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
51    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
52    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
53    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
54    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
55    +   +   +   .   .   .   .   .   .   .   .   .   .   .   .   .0000
56    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
57    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
58    +   +   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
59    +   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
60    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
```

```
61    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
62    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
63    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
64    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
65    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
66    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
67    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
68    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
69    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
70    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
71    .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .0000
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

SUMMARY OF CONCENTRATIONS FOR SAND

TIME (HR)	DEPTH (FT)	MAX CONC ABOVE BACKGROUND ON ENTIRE GRID (MG/L)	X-LOC (FT)	Z-LOC (FT)
1.00	0.0	0.000E+00	0.	0.
2.00	0.0	0.000E+00	0.	0.
3.00	0.0	0.000E+00	0.	0.
4.00	0.0	0.000E+00	0.	0.

SUMMARY OF CONCENTRATIONS FOR Silt

TIME (HR)	DEPTH (FT)	MAX CONC ABOVE BACKGROUND ON ENTIRE GRID (MG/L)	X-LOC (FT)	Z-LOC (FT)
1.00	0.0	0.134E+02	1575.	1800.
2.00	0.0	0.263E+00	2625.	1875.
3.00	0.0	0.735E-02	3675.	1950.
4.00	0.0	0.252E-03	4800.	2025.

SUMMARY OF CONCENTRATIONS FOR Clay

TIME (HR)	DEPTH (FT)	MAX CONC ABOVE BACKGROUND ON ENTIRE GRID (MG/L)	X-LOC (FT)	Z-LOC (FT)
1.00	0.0	0.255E+03	1500.	1800.
2.00	0.0	0.467E+02	2550.	1875.
3.00	0.0	0.114E+02	3600.	1950.
4.00	0.0	0.336E+01	4725.	2025.

SUMMARY OF CONCENTRATIONS FOR Clumps

TIME (HR)	DEPTH (FT)	MAX CONC ABOVE BACKGROUND ON ENTIRE GRID (MG/L)	X-LOC (FT)	Z-LOC (FT)
1.00	0.0	0.000E+00	0.	0.
2.00	0.0	0.000E+00	0.	0.
3.00	0.0	0.000E+00	0.	0.
4.00	0.0	0.000E+00	0.	0.

SUMMARY OF CONCENTRATIONS FOR

TIME (HR)	DEPTH (FT)	MAX CONC ABOVE BACKGROUND ON ENTIRE GRID (MG/L)	MAX CONC ON GRID (MG/L)	X-LOC (FT)	Z-LOC (FT)
0.33	0.0	0.000E+00	0.000E+00	0.	0.
0.67	0.0	0.000E+00	0.000E+00	0.	0.
1.00	0.0	0.000E+00	0.000E+00	0.	0.
1.33	0.0	0.000E+00	0.000E+00	0.	0.
1.67	0.0	0.000E+00	0.000E+00	0.	0.
2.00	0.0	0.000E+00	0.000E+00	0.	0.
2.33	0.0	0.000E+00	0.000E+00	0.	0.
2.67	0.0	0.000E+00	0.000E+00	0.	0.
3.00	0.0	0.000E+00	0.000E+00	0.	0.
3.33	0.0	0.000E+00	0.000E+00	0.	0.
3.67	0.0	0.000E+00	0.000E+00	0.	0.
4.00	0.0	0.000E+00	0.000E+00	0.	0.

ESTIMATES OF AREAS CURRENTLY IN VIOLATION (SNAPSHOT) AND MIXING ZONES (ACCUMULATED AREA OF VIOLATION)

```
ÚÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ¿
³       TIME                  SNAPSHOT                            ACCUMULATED              ³
³      ( SEC )      AREA(SQ FT)    L(FT)     W(FT)      AREA(SQ FT)    L(FT)     W(FT)      ³
³                                                                                           ³
³                                                                                           ³
ÀÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÙ
```

*** RUN COMPLETED ***

```
MODEL:  SHORT-TERM FATE OF DREDGED MATERIAL FROM SPLIT HULL BARGE OR HOPPER DREDGE
               (PC Version 5.01  MAY, 1993)
               (Extended Memory Modification: December, 1997)
               This Version Supports Grid Sizes up to 96 x 96 Points


 TITLE:


 FILE:    TmpFile .DUE


 AREA:    THE PROJECT AREA IS DESCRIBED BY A 49 X 73 GRID.

          THERE ARE 49 GRID POINTS (NMAX) IN THE Z-DIRECTION (FROM LEFT TO RIGHT)
            AND 73 GRID POINTS (MMAX) IN THE X-DIRECTION (FROM TOP TO BOTTOM).


 EXECUTION PARAMETERS:

          MODEL COEFFICIENTS SPECIFIED IN INPUT DATA (KEY1 = 1).

          PERFORM COMPLETE ANALYSIS INCLUDING DESCENT, COLLAPSE, AND TRANSPORT-DIFFUSION (KEY2 = 0).

          PERFORM TIER II INLAND DUMPING INITIAL MIXING EVALUATION
            TO COMPARE WATER QUALITY WITH STANDARD (KEY3 = 5).

          MIXING ZONE WILL BE COMPUTED SINCE A MIXING ZONE HAS NOT BEEN DESIGNATED.

          NO ANALYSIS OF A ZONE OF INITIAL DILUTION REQUESTED.

          PRINTING OF CONVECTIVE DESCENT RESULTS NOT REQUESTED (IPCN = 0).

          PRINTING OF CONVECTIVE DESCENT RESULTS NOT REQUESTED (IPCN = 0).

          PRINTING OF DYNAMIC COLLAPSE RESULTS NOT REQUESTED (IPCL = 0).

          QUARTERLY PRINTING OF LONG-TERM TRANSPORT DIFFUSION RESULTS REQUESTED (IPLT = 0).

          LONG-TERM TRANSPORT DIFFUSION RESULTS REQUESTED AT THE FOLLOWING 1 DEPTH(S):
                0.00 FT
```

```
GRID:    NUMBER OF LONG TERM GRID POINTS IN Z-DIRECTION (NMAX) = 49

         NUMBER OF LONG TERM GRID POINTS IN X-DIRECTION (MMAX) = 73

         GRID SPACING IN Z-DIRECTION (DZ) =    75.00000 FT

         GRID SPACING IN X-DIRECTION (DX) =    75.00000 FT

         CONSTANT DEPTH GRID SPECIFIED HAVING A DEPTH (DEPC) OF    13.50000 FT.
```

DEPTH GRID, FEET:

M N =	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

M	N =18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

M N =35	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
1	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
2	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
3	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
4	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
5	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
6	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
7	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
8	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
9	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
10	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
11	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
12	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
13	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
14	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
15	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
16	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
17	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
18	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
19	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
20	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
21	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
22	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
23	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
24	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
25	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
26	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
27	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
28	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
29	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
30	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
31	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
32	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
33	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
34	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
35	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
36	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
37	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
38	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
39	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
40	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
41	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
42	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
43	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
44	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
45	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
46	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
47	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
48	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
49	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
50	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
51	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
52	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
53	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
54	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
55	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
56	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
57	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
58	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

59	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
60	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
61	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
62	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
63	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
64	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
65	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
66	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
67	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
68	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
69	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
70	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
71	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
72	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.
73	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.	14.

CODED GRID:

RANGE OF N IS   1 TO 49

```
X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
X O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W D W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
```

```
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W W O X
 X O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O X
 X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
```

```
LEGEND FOR CODED GRID:  W = WATER POINT
                        L = LAND POINT
                        O = OPEN BOUNDARY
                        B = MIXING ZONE BOUNDARY
                        Z = ZID BOUNDARY
                        D = DUMP LOCATION
                        X = DUMMY POINT
```

NUMBER OF GRID POINTS WITHIN ESTUARY = 3105

DISPOSAL LOCATION:

THE DUMP LOCATION IS 525.0 FT (XBARGE) OR ABOUT GRID POINT # 8 FROM THE TOP OF THE GRID
AND 1725. FT (ZBARGE) OR ABOUT GRID POINT #24 FROM THE LEFT EDGE OF THE GRID.

THE BOTTOM SLOPE IN THE X-DIRECTION AT THE DUMP SITE (SLOPEX, POSITIVE IF DEPTH INCREASES
FROM TOP OF GRID TO BOTTOM OF GRID) IS 0.00 DEGREES.

THE BOTTOM SLOPE IN THE Z-DIRECTION AT THE DUMP SITE (SLOPEZ, POSITIVE IF DEPTH INCREASES
FROM LEFT SIDE OF GRID TO RIGHT SIDE OF GRID) IS 0.00 DEGREES.

THE DISPOSAL LOCATION IS AT A HOLE OR DEPRESSION.
THE LENGTH OF THE HOLE IN THE X-DIRECTION (XHOLE) IS 450.00 FT,
THE LENGTH OF THE HOLE IN THE Z-DIRECTION (ZHOLE) IS 450.00 FT AND
THE AVERAGE DEPTH OF THE HOLE (DHOLE) IS 45.00 FT.

AMBIENT DENSITY PROFILE:

DEPTH (FT)	DENSITY (G/CC)
0.0000E+00	1.0240
3.000	1.0240
6.000	1.0240
12.00	1.0240
13.50	1.0240

COMPUTED DEPTH:

THE DEPTH AT THE DUMP LOCATION WAS INTERPOLATED TO BE 13.50 FT.

VELOCITY DISTRIBUTION:

TWO-VELOCITY PROFILES ARE SPECIFIED IN BOTH X AND Z DIRECTIONS FOR USE AT ALL GRID POINTS PROVIDING "QUICK LOOKS".

DEPTH IN FT IS ASSUMED CONSTANT AND VELOCITIES IN FPS ARE CONSIDERED STEADY IN TIME.

VELOCITY PROFILE PARAMETERS FOLLOW...

		FROM TOP TO BOTTOM ON GRID		FROM LEFT TO RIGHT ON GRID
UPPER:	DEPTH, DU1 = 6.00	X-VELOCITY, UU1 = 0.298	DEPTH, DW1 = 6.00	Z-VELOCITY, WW1 = 0.210E-01
LOWER:	DEPTH, DU2 = 12.0	X-VELOCITY, UU2 = 0.298	DEPTH, DW2 = 12.0	Z-VELOCITY, WW2 = 0.210E-01

BOTTOM SHEAR STRESS, LBS/SQ FT:

M N=	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0000	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

M N=	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

M	N= 35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
3	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
4	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
5	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
6	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
7	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
8	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
9	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
10	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
11	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
12	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
13	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
14	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
15	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
16	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
17	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
18	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
19	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
20	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
21	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
22	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
23	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
24	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
25	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
26	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
27	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
28	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
29	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
30	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
31	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
32	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
33	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
34	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
35	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
36	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
37	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
38	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
39	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
40	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
41	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
42	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
43	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
44	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
45	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
46	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
47	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
48	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
49	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
50	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
51	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
52	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
53	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
54	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
55	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
56	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
57	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
58	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

59	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
60	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
61	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
62	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
63	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
64	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
65	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
66	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
67	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
68	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
69	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
70	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
71	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
72	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
73	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

TIME PARAMETERS:

DURATION OF THE DISPOSAL, TREL = 30.00 SECONDS

DURATION OF THE SIMULATION, TSTOP = 14400.00 SECONDS

LONG-TERM TIME STEP USED IN THE SIMULATION, DTL = 1200.00 SECONDS

BARGE DESCRIPTION:

LENGTH OF BARGE, BARGL = 0.20E+03 FT

WIDTH OF BARGE, BARGW = 50. FT

DRAFT OF LOADED BARGE, DREL1 = 12.0 FT

DRAFT OF UNLOADED BARGE, DREL2 = 3.00 FT

MODEL COEFFICIENTS READ FROM INPUT:

```
TURBULENT THERMAL ENTRAINMENT             ALPHA0 =    0.2350
SETTLING COEFFICIENT                      BETA   =    0.0000
APPARENT MASS COEFFICIENT                 CM     =    1.0000
DRAG COEFFICIENT FOR A SPHERE             CD     =    0.5000
RATIO--CLOUD/AMBIENT DENSITY GRADIENTS    GAMA   =    0.2500
FORM DRAG FOR COLLAPSING CLOUD            CDRAG  =    1.0000
SKIN FRICTION FOR COLLAPSING CLOUD        CFRIC  =    0.0100
DRAG FOR AN ELLIPSOIDAL WEDGE             CD3    =    0.1000
DRAG FOR A PLATE                          CD4    =    1.0000
ENTRAINMENT IN COLLAPSE                   ALPHAC =    0.1000
FRICTION BETWEEN CLOUD AND BOTTOM         FRICTN =    0.0100
4/3 LAW HORIZ. DIFF. DISSIPATION FACTOR   ALAMDA  =    0.0010
UNSTRATIFIED WATER VERT. DIFF. COEF.      AKY0    =    0.0250
STRIPPING COEF. OF FINES DURING CONVERTIVE DESCENT=    0.0030
```

MATERIAL DESCRIPTION: 3 SOLIDS FRACTIONS

L A Y E R 1

DESCRIPTION	SPEC. GRAV. OR DENSITY (GM/CC)	VOLUMETRIC CONCENTRATION (VOL/VOL)	FALL VELOCITY (FPS)	DEPOSITIONAL VOID RATIO	CHARACTER
SAND	2.700	0.5557	0.10000	0.6000	NONCOHESIVE
Silt	2.650	0.1124	0.01000	4.500	NONCOHESIVE
Clay	2.650	0.4860E-01	0.00200	7.500	NONCOHESIVE

SAND:
CRITICAL SHEAR STRESS FOR DEPOSITION = 0.2500E-01 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

Silt:
CRITICAL SHEAR STRESS FOR DEPOSITION = 0.8500E-02 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

Clay:
CRITICAL SHEAR STRESS FOR DEPOSITION = 0.3800E-02 LBS/SQ. FT.
SEDIMENT FRACTION WILL BE STRIPPED DURING CONVECTIVE DESCENT.

WATER QUALITY ANALYSIS DATA:

CONCENTRATIONS OF   FOLLOWING INITIAL MIXING OF THE FLUID
ARE COMPUTED FOR WATER QUALITY EVALUATIONS.

THE INITIAL CONCENTRATION OF   IS 0.000000E+00 MG/L
AND ITS BACKGROUND CONCENTRATION IS 0.0000000E+00 MG/L.

THE WATER QUALITY STANDARD FOR   IS 0.0000000E+00 MG/L.

DESCRIPTION	SPEC. GRAV. OR DENSITY (GM/CC)	VOLUMETRIC CONCENTRATION (VOL/VOL)
FLUID	1.024	0.2833

DISCHARGE PARAMETERS:

VOLUME OF LAYER 1 = 2000. CU YD

DEPTH IS TOO SHALLOW FOR CONVECTIVE DESCENT SO DESCENT IS BYPASSED.

CLOUD COLLAPSE PHASE:

```
IN TRIAL #1 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.10000000     SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS   66.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.

IN TRIAL #2 THE COLLAPSE PHASE TIME STEP (DT) WAS  0.21666666E-01 SECONDS.
            THE TOTAL NUMBER OF INTEGRATION TIME STEPS (ISTEP) FOR CONVECTIVE DESCENT AND COLAPSE WAS  265.
            THE INTEGRATION TIME STEP NUMBER WHEN THE BED WAS ENCOUNTERED (IBED) WAS    1.
            THE BOTTOM WAS ENCOUNTERED DURING CONVECTIVE DESCENT.
            DIFFUSION OF THE DISCHARGE IS GREATER THAN DYNAMIC SPREADING FROM THE COLLAPSE.
```

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 1									
30.56	500.1	1725.	113.6	7.855	0.6224	3025.	0.0000E+00	27	1
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 2									
31.13	499.8	1725.	134.8	8.477	1.036	113.3	0.0000E+00	53	27
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 3									
31.69	499.6	1725.	154.7	9.513	0.6631	83.37	0.0000E+00	79	53
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 4									
32.25	499.5	1725.	171.6	10.18	0.4327	60.13	0.0000E+00	105	79
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 5									
32.82	499.5	1725.	185.6	10.61	0.2974	44.41	0.0000E+00	131	105
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 6									
33.38	499.5	1725.	197.4	10.91	0.2177	34.30	0.0000E+00	157	131
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 7									
33.94	499.5	1725.	207.6	11.12	0.1689	27.76	0.0000E+00	183	157
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 8									
34.51	499.5	1725.	216.6	11.29	0.1373	23.37	0.0000E+00	209	183
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 9									
35.07	499.5	1725.	224.8	11.43	0.1157	20.28	0.0000E+00	235	209
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 10									
35.63	499.5	1725.	232.3	11.55	0.9997E-01	18.00	0.0000E+00	261	235
NEW CLOUD CREATED, NTCLD(K) (K = 1) = 11									
35.72	499.5	1725.	233.4	9.779	3.721	0.2656E+05	0.0000E+00	265	261

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 1									
30.56	500.1	1725.	113.6	7.855	0.6224	611.9	0.0000E+00	27	1
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 2									
31.13	499.8	1725.	134.8	8.477	1.036	22.93	0.0000E+00	53	27
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 3									
31.69	499.6	1725.	154.7	9.513	0.6631	16.86	0.0000E+00	79	53
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 4									
32.25	499.5	1725.	171.6	10.18	0.4327	12.16	0.0000E+00	105	79
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 5									
32.82	499.5	1725.	185.6	10.61	0.2974	8.984	0.0000E+00	131	105
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 6									
33.38	499.5	1725.	197.4	10.91	0.2177	6.938	0.0000E+00	157	131
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 7									
33.94	499.5	1725.	207.6	11.12	0.1689	5.614	0.0000E+00	183	157
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 8									
34.51	499.5	1725.	216.6	11.29	0.1373	4.728	0.0000E+00	209	183
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 9									
35.07	499.5	1725.	224.8	11.43	0.1157	4.102	0.0000E+00	235	209
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 10									
35.63	499.5	1725.	232.3	11.55	0.9997E-01	3.642	0.0000E+00	261	235
NEW CLOUD CREATED, NTCLD(K) (K = 2) = 11									
35.72	499.5	1725.	233.4	9.779	3.721	5372.	0.0000E+00	265	261

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	CLOUD CENTROID Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (CU FT)	ENTRAINED MASS (CU FT)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 1									
30.56	500.1	1725.	113.6	7.855	0.6224	264.6	0.0000E+00	27	1
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 2									
31.13	499.8	1725.	134.8	8.477	1.036	9.913	0.0000E+00	53	27
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 3									
31.69	499.6	1725.	154.7	9.513	0.6631	7.291	0.0000E+00	79	53
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 4									
32.25	499.5	1725.	171.6	10.18	0.4327	5.259	0.0000E+00	105	79
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 5									
32.82	499.5	1725.	185.6	10.61	0.2974	3.884	0.0000E+00	131	105
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 6									
33.38	499.5	1725.	197.4	10.91	0.2177	3.000	0.0000E+00	157	131
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 7									
33.94	499.5	1725.	207.6	11.12	0.1689	2.428	0.0000E+00	183	157
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 8									
34.51	499.5	1725.	216.6	11.29	0.1373	2.044	0.0000E+00	209	183
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 9									
35.07	499.5	1725.	224.8	11.43	0.1157	1.773	0.0000E+00	235	209
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 10									
35.63	499.5	1725.	232.3	11.55	0.9997E-01	1.574	0.0000E+00	261	235
NEW CLOUD CREATED, NTCLD(K) (K = 3) = 11									
35.72	499.5	1725.	233.4	9.779	3.721	2323.	0.0000E+00	265	261

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

TIME FROM DISPOSAL (SEC)	CLOUD CENTROID X-LOCATION (FT)	Z-LOCATION (FT)	CLOUD X-Z DIAMETER (FT)	DEPTH OF TOP OF CLOUD (FT)	CLOUD VERT. THICKNESS (FT)	T O T A L M A S S (MG)	ENTRAINED MASS (MG)	TIME STEP WHEN THIS CLOUD WAS CREATED	TIME STEP WHEN PREVIOUS CLOUD WAS CREATED
NEW CLOUD CREATED, NTCLD(K) (K = 4) = 1									
35.72	499.5	1725.	233.4	9.779	3.721	0.0000E+00	0.0000E+00	265	1

NOTE -- When all solid material has settled from a cloud, the cloud is erased and the remaining clouds for this solids type are renumbered.

```
LONG TERM DIFFUSION RESULTS:


    BEGIN LONG TERM SIMULATION OF FATE OF SAND




SUMMARY OF SAND     DISTRIBUTIONS AFTER    1200.00 SEC.

    TOTAL SUSPENDED MATERIAL (CU FT) =    0.00000E+00
    TOTAL MATERIAL SETTLED TO BOTTOM (CU FT) =     30008.


     COMPUTATIONS FOR SAND     TERMINATED AT    1200.00  SEC. ELAPSED TIME...MATERIAL SETTLED TO BOTTOM
```

BOTTOM ACCUMULATION OF SAND (CU FT/GRID SQUARE) , 1200.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 10.00 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	+	.	.	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	+	.02	.04	.04	.02	+	+	.	.	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.03	.17	.53	.89	.80	.39	.10	.01	+	.	.
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.31	1.7	5.5	9.1	8.2	3.9	1.0	.14	.01	+	.
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.16	1.7	10	31	52	46	22	5.8	.82	.06	+	.
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.02	.49	5.2	30	96	170	150	68	18	2.4	.19	+	+
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.04	.80	8.5	49	166	324	278	115	28	4.0	.30	.01	+
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.03	.70	7.4	43	143	272	235	100	25	3.5	.27	.01	+
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.33	3.5	20	63	109	97	45	12	1.6	.12	+	+
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.08	.90	5.1	16	26	24	12	3.0	.42	.03	+	.
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	.01	.12	.71	2.1	3.6	3.2	1.5	.41	.05	+	+	.
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.05	.16	.27	.24	.11	.03	+	+	.	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	+	+	+	+	.	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	.	.	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

M N=	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO																
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
11	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
12	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
13	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
14	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		00000

61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0OOOO
72	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO															

THICKNESS (FT) OF SAND ACCUMULATED ON BOTTOM, 1200.00 SECONDS AFTER DUMP

...MULTIPLY DISPLAYED VALUES BY 1.000 (LEGEND... + = .LT. .01 . = .LT. .0001 0 = .LT. .000001)

M N=	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000																													
3	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	0	0	0	0	0
7	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	+	+	.	.	.	0	0	0
8	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	+	.	.	0	0
9	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	.01	.02	.02	.01	+	+	.	.	0
10	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.02	.08	.14	.13	.06	.01	+	+	.	0
11	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.08	.27	.48	.42	.19	.04	+	+	.	0
12	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.02	.13	.47	.92	.79	.32	.08	.01	+	.	0
13	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.02	.12	.40	.77	.66	.28	.07	.01	+	.	0
14	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	.01	.05	.18	.31	.27	.12	.03	+	+	.	0
15	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	+	+	.01	.04	.07	.06	.03	+	+	.	.	0
16	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	.01	+	+	+	+	.	0	0
17	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	+	+	+	+	+	.	.	0	0	0
18	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	0	0	0	0
19	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

```
60 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
61 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
62 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
63 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
64 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
65 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
66 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
67 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
68 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
69 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
70 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
71 OOOO   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
72 OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

APPENDIX B

LABORATORY TESTING

APPENDIX B - LABORATORY TESTING

Diaz•Yourman & Associates (DYA) selected soil samples to be tested and the tests to be performed on the selected samples. Laboratory testing was performed by AP Engineering and Testing, Inc. Laboratory data are summarized on the boring logs in Appendix A and presented on Plates B1 through B7. We have reviewed and concur with the test results and accept full responsibility for their use in our analysis. A summary of the geotechnical laboratory testing is presented in Table B1.

Table B1 - LABORATORY TESTING SUMMARY

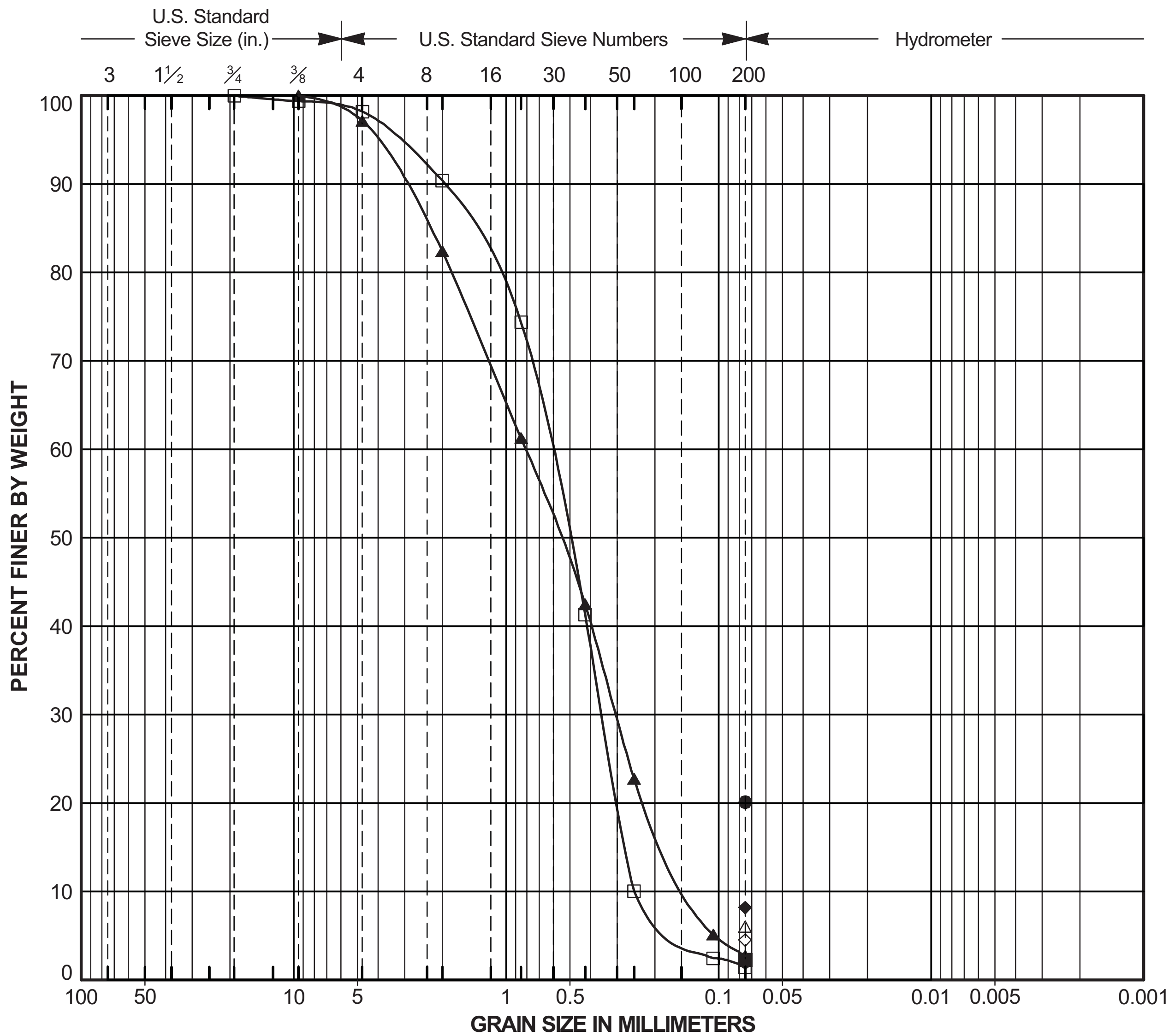
TEST NAME	PROCEDURE	PURPOSE	LOCATION
Percent Passing the No. 200 Sieve	ASTM D1140-92	Classification, index properties	Boring Logs
Moisture Content, Dry Density	ASTM D2216-92	Classification, index properties	Boring Logs
Grain-Size Distribution	ASTM D422-63	Classification, index properties	Plates B1 and B2
Direct Shear	ASTM D3080-90	Shear strength	Plates B3 to B7
pH	CTM 532	Corrosion potential	Table B2
Resistivity	CTM 532	Corrosion potential	Table B2
Soluble Sulfates	CTM 417-B	Corrosion potential	Table B2
Soluble Chlorides	CTM 422	Corrosion potential	Table B2

Notes:
- ASTM = American Society for Testing and Materials
- CTM = Caltrans Test Method

Table B2 - CORROSION POTENTIAL TEST RESULTS

Boring No.	B-1	B-2	B-3 & B-5
Depth (feet)	10 to 21[1]	0 to 10[1]	10 to 20[1]
pH	8.23	9.08	8.31
Water Soluble Sulfate Content (ppm)	42	21	38
Water Soluble Chloride Content (ppm)	1940	139	1238
Minimum Resistivity/Moisture Content (ohms-cm)	300	4200	500

Note:
1. Composite sample



COBBLES	GRAVEL		SAND			SILT or CLAY
	Coarse	Fine	Coarse	Medium	Fine	

Laboratory Testing by: AP Engineering and Testing, Inc.

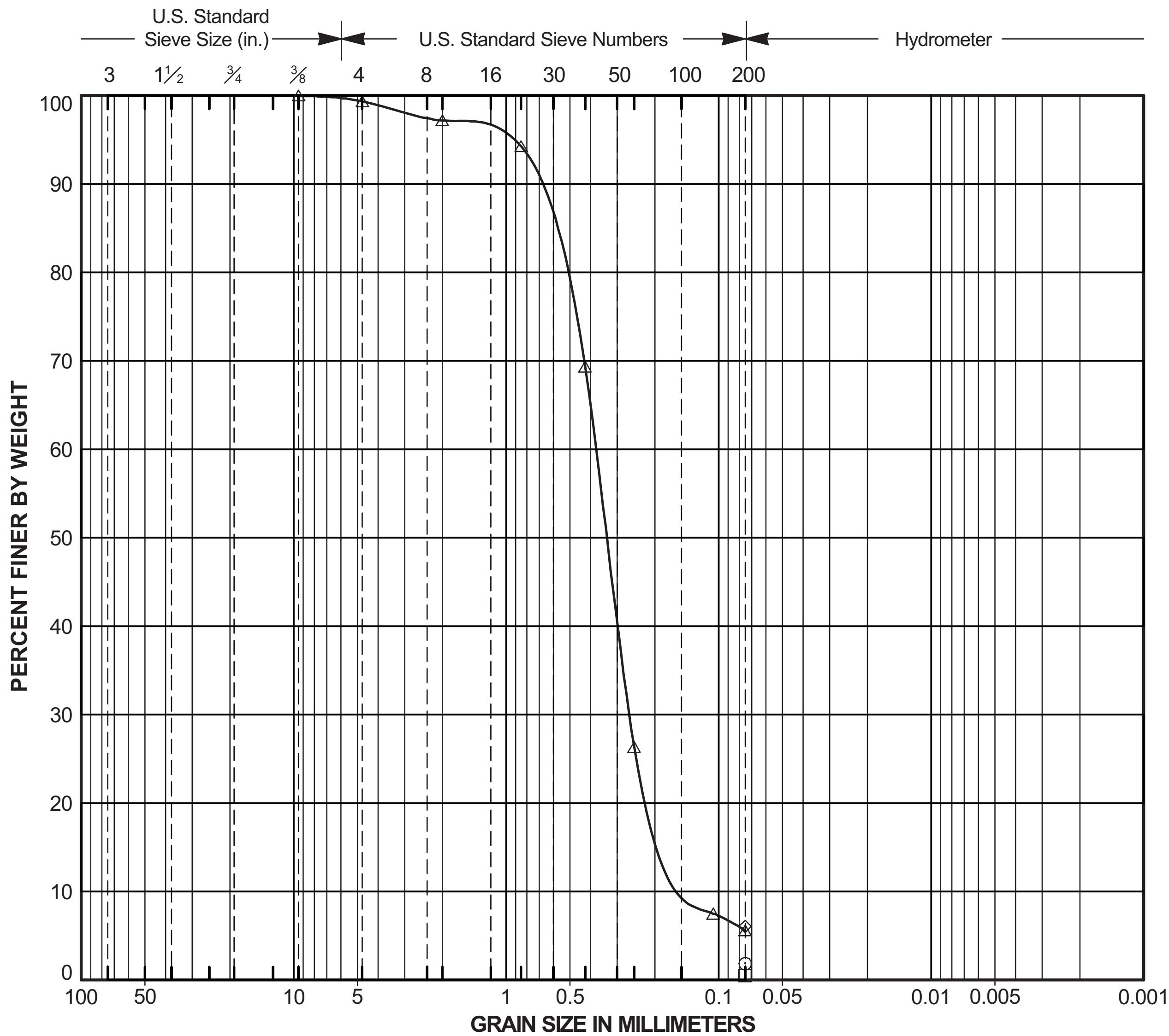
Symbol	Source	Depth (feet)	Classification	Natural M. C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
⊙	B-1	5.0	POORLY GRADED SAND (SP)	24			2
□	B-1	10.0	POORLY GRADED SAND (SP)	17			1
△	B-1	25.0	POORLY GRADED SAND with SILT (SP-SM)				6
◇	B-1	40.0	POORLY GRADED SAND with SILT (SP-SM)				5
●	B-1	75.0	SANDSTONE(BEDROCK)				20
■	B-2	2.0	POORLY GRADED SAND (SP)	5			2
▲	B-2	10.0	POORLY GRADED SAND (SP)				3
◆	B-3	5.0	POORLY GRADED SAND with SILT (SP-SM)				8

PARTICLE SIZE ANALYSIS

Bay Island Sea Wall
Project No. 2005-041

PLATE
B1

Template: DY_SIEVE_WIN



COBBLES	Coarse	Fine	Coarse	Medium	Fine	SILT or CLAY
	GRAVEL		SAND			

Laboratory Testing by: AP Engineering and Testing, Inc.

Symbol	Source	Depth (feet)	Classification	Natural M. C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
⊙	B-3	15.0	POORLY GRADED SAND (SP)	23			2
□	B-3	25.0	WELL-GRADED SAND (SW-SM)	15			1
△	B-5	25.0	POORLY GRADED SAND with SILT (SP-SM)				6
◇	B-5	35.0	WELL-GRADED SAND with SILT (SW-SM)				6

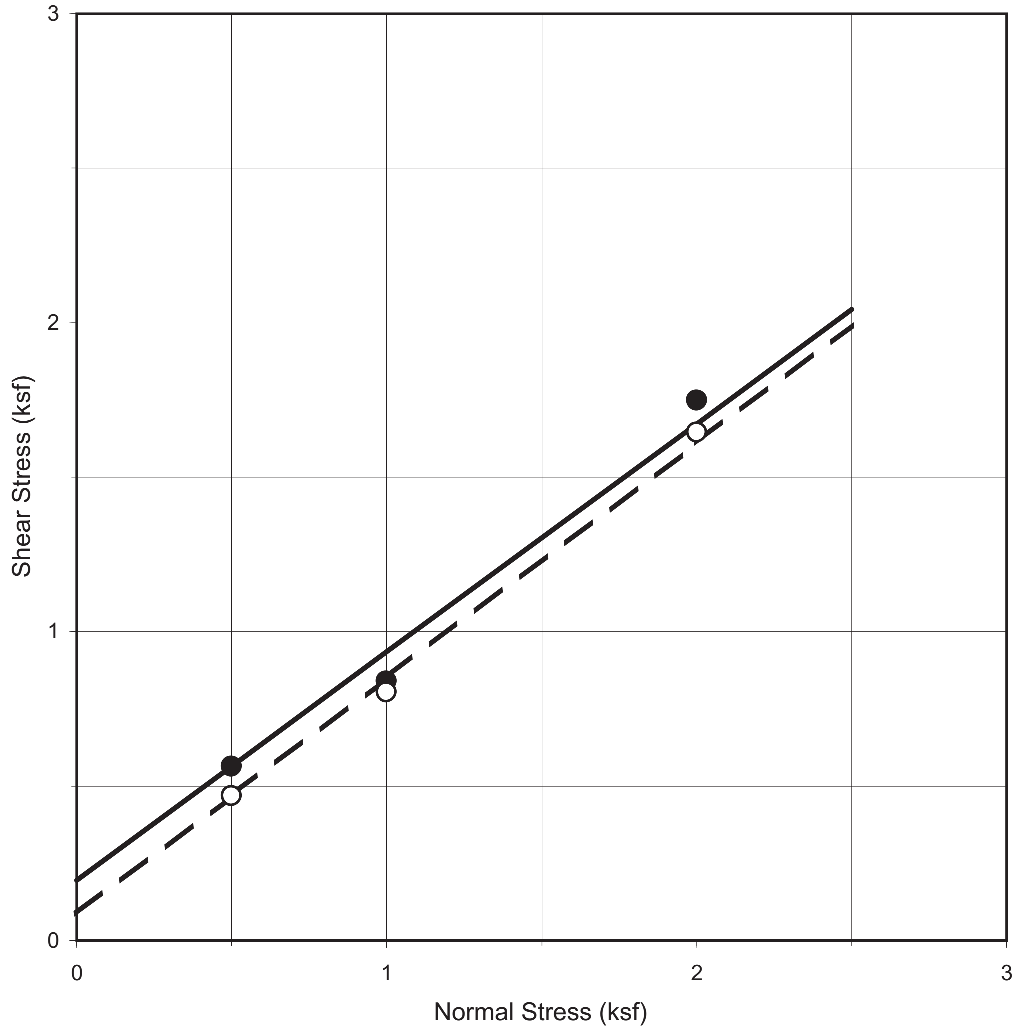
PARTICLE SIZE ANALYSIS

Bay Island Sea Wall

Project No. 2005-041

PLATE

B2



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-1
Sample No.	:	2
Depth (ft)	:	5
Sample Type	:	Undisturbed
Soil Type	:	Yellowish Brown Poorly-Graded Sand w/shell
Test Condition	:	Saturated
Initial Dry Density	:	99.46 pcf
Moisture Content (before)	:	23.99 %
Moisture Content (after)	:	24.58 %

INTERPRETED STRENGTH DATA

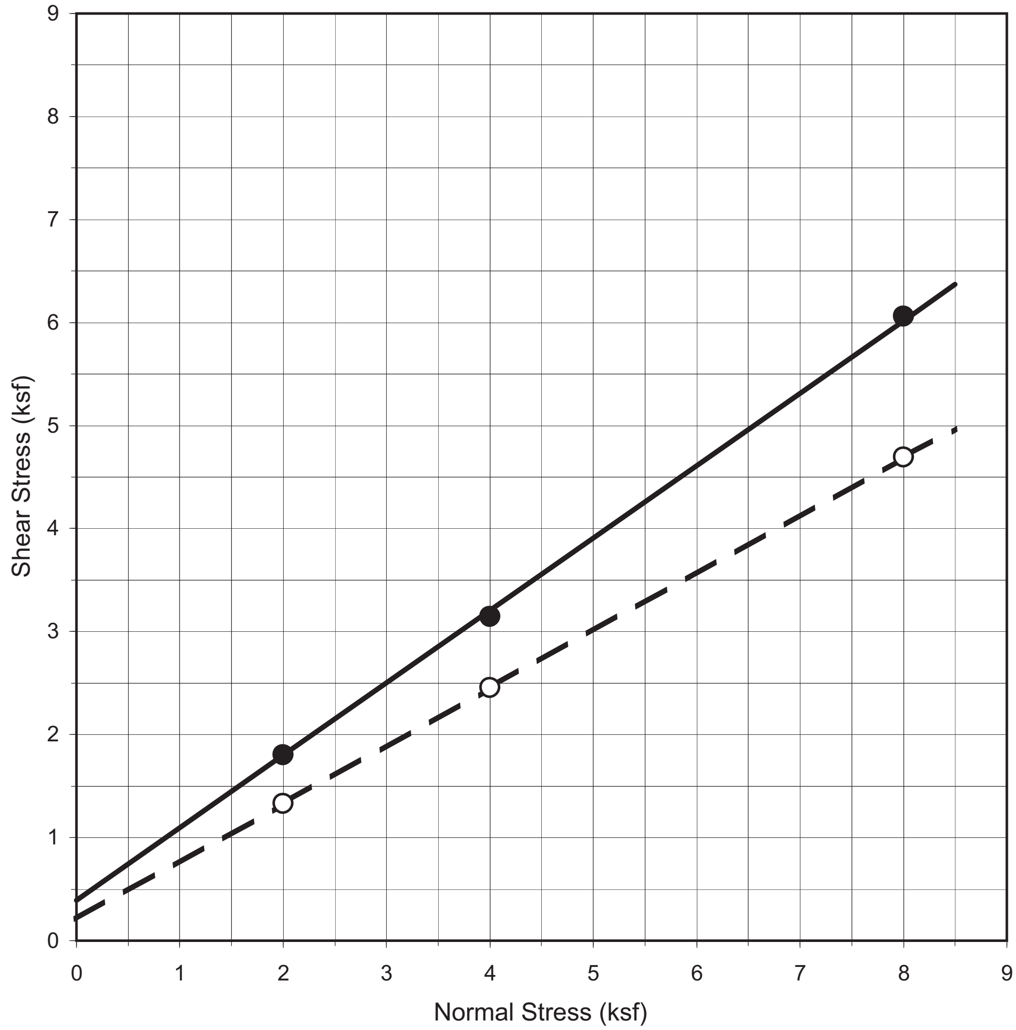
	Peak	Ultimate
COHESION (PSF) :	200	100
FRICTION ANGLE :	36 °	37 °

AP ENGINEERING AND TESTING, INC.

0

DIRECT SHEAR
TEST RESULTS
(ASTM D 3080)

Dec-05 Figure No.



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-1
Sample No.	:	5A
Depth (ft)	:	20
Sample Type	:	Undisturbed
Soil Type	:	Yellowish Brown Poorly-Graded Sand
Test Condition	:	Saturated
Initial Dry Density	:	103.74 pcf
Moisture Content (before)	:	21.11 %
Moisture Content (after)	:	24.26 %

INTERPRETED STRENGTH DATA

	Peak	Ultimate
COHESION (PSF) :	400	200
FRICTION ANGLE :	35 °	29 °

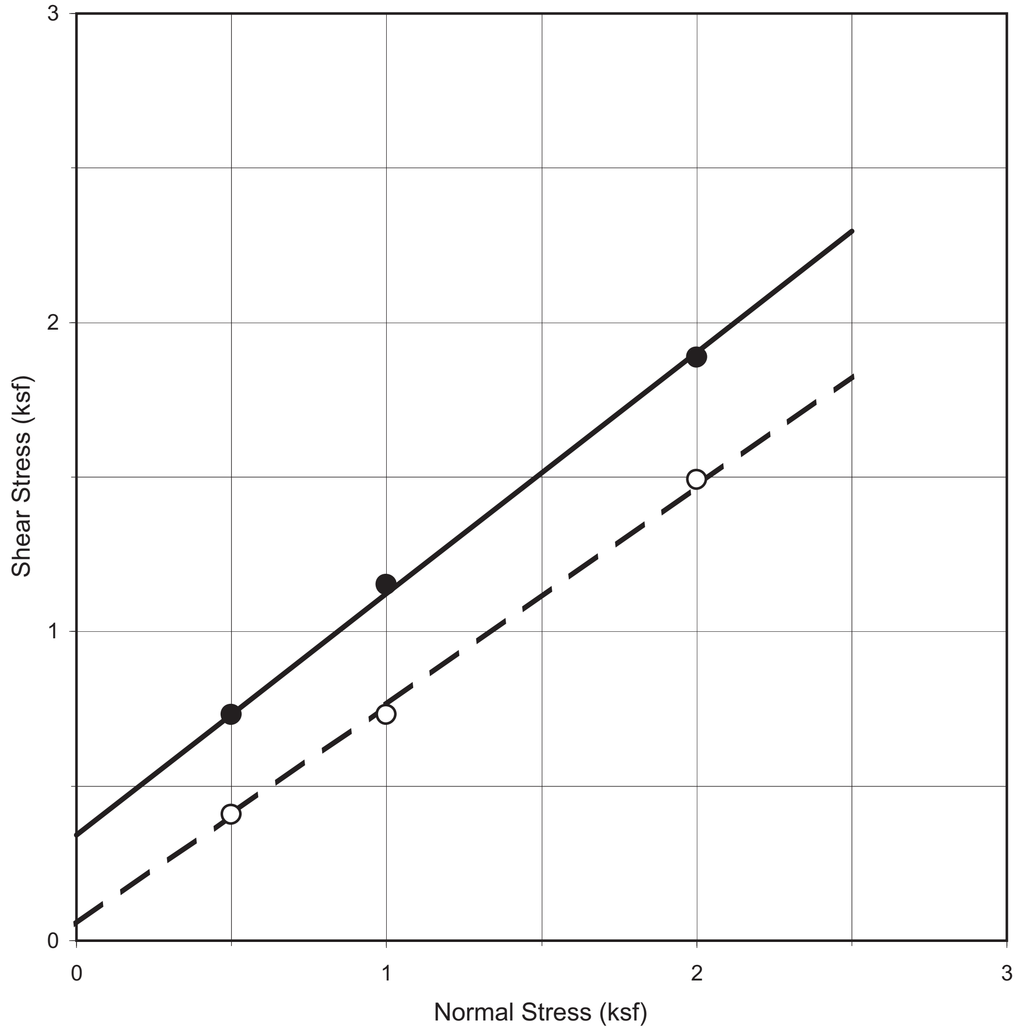
AP ENGINEERING AND TESTING, INC.

DIRECT SHEAR

TEST RESULTS

(ASTM D 3080)

Dec-05 Figure No.



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-2
Sample No.	:	1A
Depth (ft)	:	2
Sample Type	:	Undisturbed
Soil Type	:	Yellowish Brown Well-Graded Sand w/shell
Test Condition	:	Saturated
Initial Dry Density	:	120.88 pcf
Moisture Content (before)	:	4.85 %
Moisture Content (after)	:	15.24 %

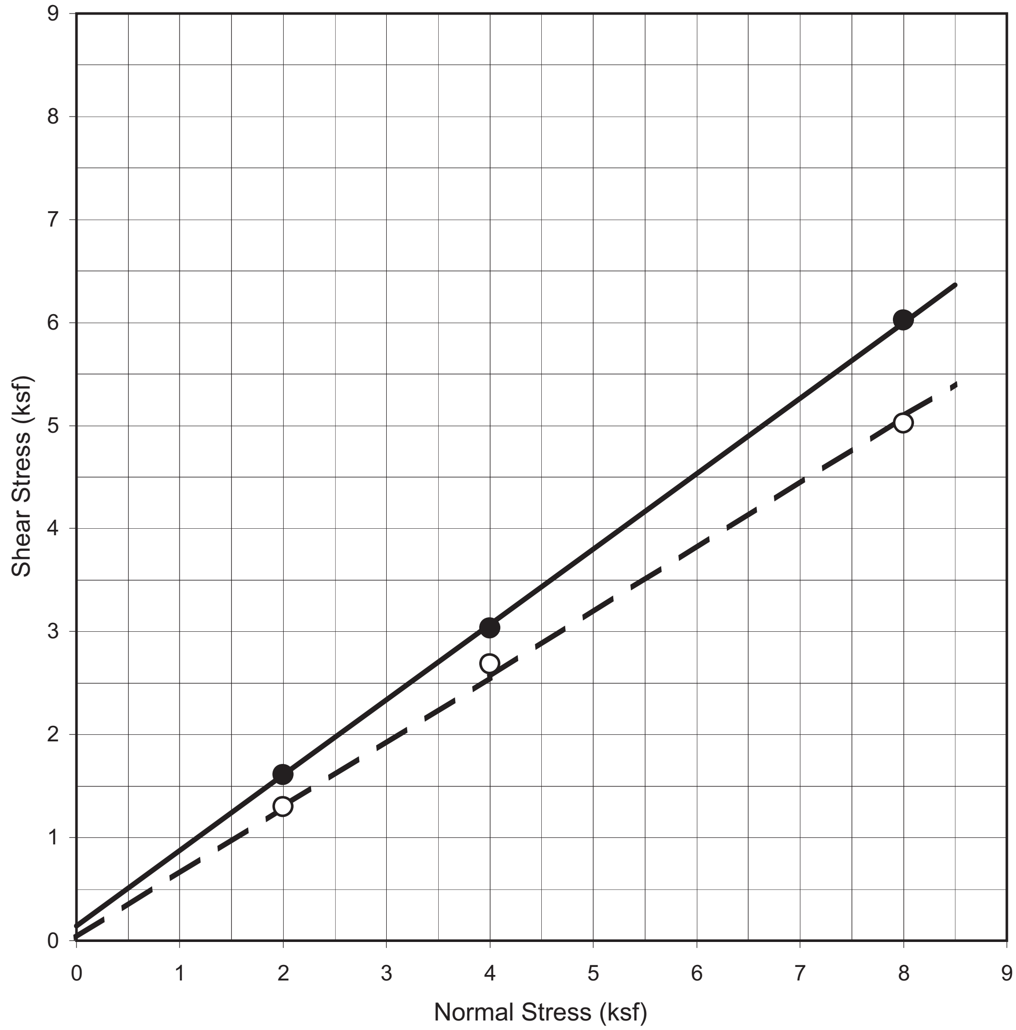
INTERPRETED STRENGTH DATA

	Peak	Ultimate
COHESION (PSF) :	350	50
FRICTION ANGLE :	38 °	35 °

AP ENGINEERING AND TESTING, INC.

DIRECT SHEAR
TEST RESULTS
(ASTM D 3080)

Nov-05 Figure No.



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-2
Sample No.	:	6A
Depth (ft)	:	25
Sample Type	:	Undisturbed
Soil Type	:	Olive Gray Silty Sand
Test Condition	:	Saturated
Initial Dry Density	:	90.9 pcf
Moisture Content (before)	:	30.2 %
Moisture Content (after)	:	32.1 %

INTERPRETED STRENGTH DATA

	Peak	Ultimate
COHESION (PSF) :	150	50
FRICTION ANGLE :	36 °	32 °

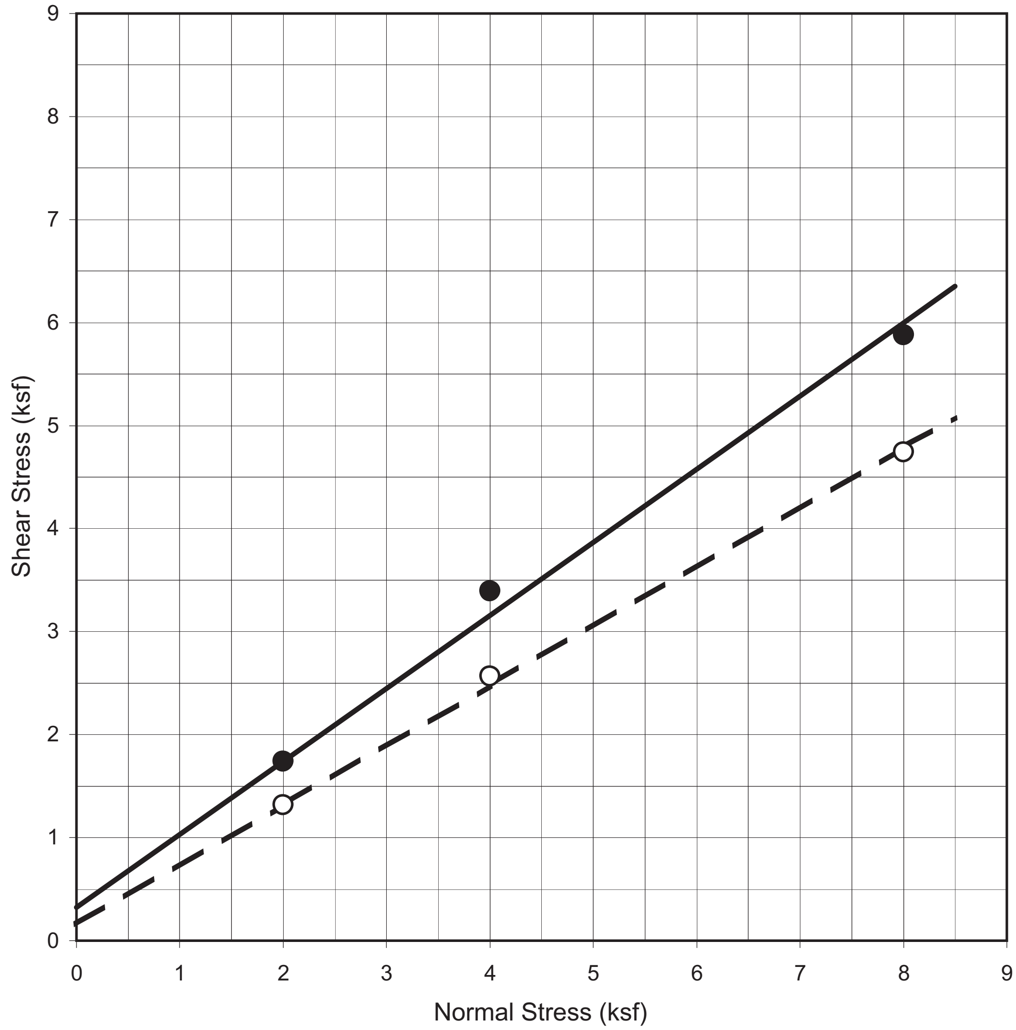
AP ENGINEERING AND TESTING, INC.

DIRECT SHEAR

TEST RESULTS

(ASTM D 3080)

Nov-05 Figure No.



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-3
Sample No.	:	4
Depth (ft)	:	15
Sample Type	:	Undisturbed
Soil Type	:	Dark Grayish Brown Sand /w shell
Test Condition	:	Saturated
Initial Dry Density	:	99.9 pcf
Moisture Content (before)	:	22.9 %
Moisture Content (after)	:	24.2 %

INTERPRETED STRENGTH DATA

	Peak	Ultimate
COHESION (PSF) :	300	150
FRICTION ANGLE :	35 °	30 °

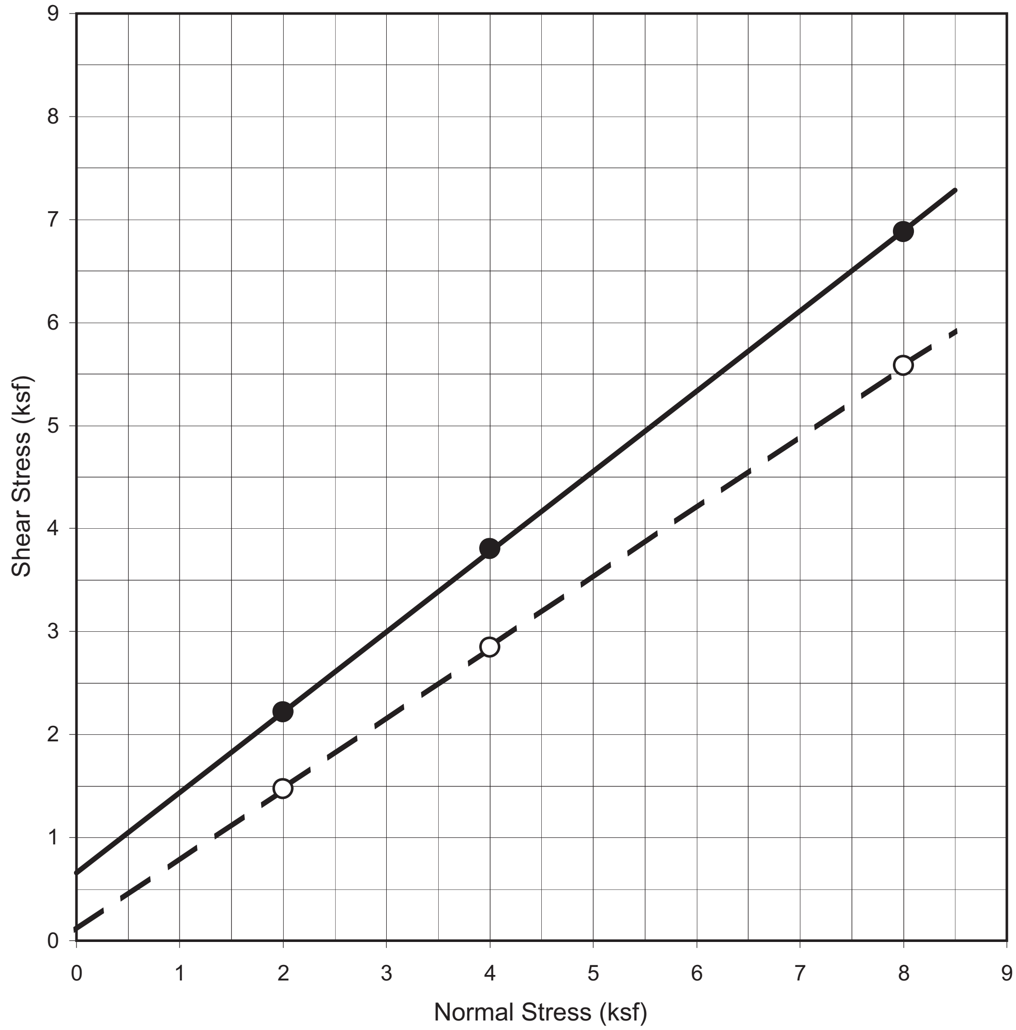
AP ENGINEERING AND TESTING, INC.

0

DIRECT SHEAR

TEST RESULTS
(ASTM D 3080)

Nov-05 Figure No.



Project Name:	:	Bay Island Sea Wall
Project No.	:	2005-041
Boring No.	:	B-5
Sample No.	:	3
Depth (ft)	:	20
Sample Type	:	Undisturbed
Soil Type	:	Yellowish Brown Well-Graded Sand w/shell
Test Condition	:	Saturated
Initial Dry Density	:	111.0 pcf
Moisture Content (before)	:	14.8 %
Moisture Content (after)	:	20.1 %

INTERPRETED STRENGTH DATA

	Peak	Ultimate
COHESION (PSF) :	650	100
FRICTION ANGLE :	38 °	34 °

AP ENGINEERING AND TESTING, INC.

DIRECT SHEAR

TEST RESULTS
(ASTM D 3080)

Nov-05 Figure No.

APPENDIX C

LIQUEFACTION AND SEISMIC SETTLEMENT ANALYSES

APPENDIX C - LIQUEFACTION AND SEISMIC SETTLEMENT ANALYSES

LIQUEFACTION POTENTIAL EVALUATION

The liquefaction potential evaluation was based on the approaches recommended by R. B. Seed, et al. (2003) under a unified and consistent framework for soil liquefaction engineering. The comprehensive efforts by R. B. Seed, et al. (2003) summarized recent advances in the liquefaction engineering topics based on a recent database. This approach meets the requirements in the California Division of Mines and Geology (now California Geological Survey) Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (1997) and provides a more rigorous evaluation than the procedures outlined in the Southern California Earthquake Center's (SCEC) *Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California* (1999). The simplified liquefaction evaluation procedure involves the following basic steps:

1. An estimate is made of the cyclic stress ratio (CSR) caused by given earthquake ground motions at different depths using a simplified approach. The intensity of ground shaking, the duration of shaking, and the variations of induced shear stresses with depth are incorporated into the evaluation.
2. An estimate is then made of cyclic resistance ratio (CRR), indicative of the liquefaction resistance of the site subsurface soils. Recommendations were provided to estimate CRR either from standard penetration test (SPT) blow counts or direct cone penetration test (CPT) results.

The procedure can provide a deterministic index, namely a factor of safety (FS), comparing of the CRR and CSR to evaluate the potential zone of liquefaction in the soil deposit. The FS against liquefaction is defined as FS = CRR/CSR. Potential zones of liquefaction correspond to soil layers where FS is less than 1. In addition to the FS, the procedure can provide the probabilistic evaluation for liquefaction potential.

SIMPLIFIED PROCEDURES BASED ON SPT BLOW COUNT

The use of standard penetration test (SPT) blow counts in a liquefaction potential evaluation is considered to be appropriate because many factors affecting the liquefaction potential of sandy soils affect the SPT blow count in a similar way. Among several SPT-based approaches, the procedure proposed by R. B. Seed, et al. (2003) was adopted in this analysis because it was developed more recently and based on a larger database which consisted of modern field records.

Initially, the subsurface soils consisting of fine-grained materials (silts and clays) were evaluated to screen out the nonliquefiable fine-grained soils. The silts and clays (including the soils containing more than 20 percent fines with plasticity index [PI] higher than 12 percent or soils consisting of fines more than 35 percent fines with PI less than 12 percent) were categorized into three groups based on the following criteria:

- Zone A: soils with PI less than 12 percent and liquid limit (LL) less than 37 percent were considered potentially susceptible to cyclically induced liquefaction if the insitu moisture content was more than 80 percent of the LL.
- Zone B: soils with PI less than 20 percent and LL less than 47 percent may be liquefiable if the insitu moisture content was more than 85 percent of the LL.
- Zone C: soils outside zones A and B were generally not considered susceptible to classic cyclic liquefaction, but should be checked for potential loss of strength with remolding or monotonic accumulation of shear deformation.

The liquefaction potential of the soils classified as Zones A or B was then estimated based on the following procedures recommended for the sandy soils. The soils classified as Zone C were not included in this liquefaction analysis. However, other evaluations were performed on those clays/silts, which may be vulnerable to strength loss during shaking.

The CSR, generally based on the earthquake magnitude, shaking intensity (maximum ground acceleration), and overall soil conditions (average shear wave velocity at depths within 40 feet below the ground surface), was then adjusted by a duration weighting factor (DWF_M), which was correlated to the design earthquake magnitude, and a effective overburden stress factor (K_σ) to a fully normalized value at a magnitude of 7.5 and effective overburden stress of 1 atmosphere (atm, approximately 1 ton per square foot [tsf]).

Either the CRR or probability of liquefaction potential can be evaluated using the SPT blow count data of potentially liquefiable sandy soils (including the fine-grained material classified as Zones A and B). Normalized clean sand SPT blow counts, $N_{1,60cs}$, were obtained by modifying the field SPT blow counts. The modifications included normalizing to an overburden pressure of 1 atm and corrections for hammer energy, borehole diameter, rod length, the lining (or lack of lining) of SPT samplers, and fines content (percent passing No. 200 sieve). An expression was presented in the procedure for CRR for a given earthquake magnitude and probability, as a function of $(N_1)_{60cs}$ and effective overburden stress. For the deterministic approach, the threshold was set at a probability of 15 percent in this analysis. The FS can be obtained using the pairs of CRR and CSR. In addition to CRR, probabilities at a given earthquake magnitude can be calculated directly as a function of $(N_1)_{60cs}$, CSR, and effective overburden stress.

ANALYSES

The liquefaction potential of the subsurface soils was evaluated using the above recommended procedures using the SPT results. Sample calculations of the spreadsheets used for liquefaction potential evaluations for design basis earthquake (DBE) with both SPT methods are attached. Graphical results for the borings are presented on Plates C1 through C4.

SEISMIC SETTLEMENT

Settlement of level ground because of the design event with a peak ground acceleration o f 0.39g and corresponding moment magnitude of 6.6. Liquefaction was estimated based on procedures presented by Tokimatsu and Seed (1987) for SPT methods. The results are summarized in Table C1.

Table C1 - SUMMARY OF LIQUEFACTION INDUCED SETTLEMENT

IDENTIFICATION	POTENTIAL LIQUEFIABLE LAYERS IN DEPTH (feet)	CALCULATED LIQUEFATION INDUCED SETTLEMENT (inches)
B-1	5 to 8	1
B-2	--	--
B-3	5 to 12	2.5
B-5	23 to 28	2
Note: • Peak ground acceleration = 0.39g		

APPENDIX D

PILE CAPACITY ANALYSES

APPENDIX D - PILE CAPACITY ANALYSES

AXIAL PILE CAPACITY

Axial pile capacities were evaluated using the computer program APILE^{Plus}4.0 for Windows. This computer program has the capability to estimate the vertical pile performance using four different approaches including American Petroleum Institute (API) recommended practice 2A (RP2A), the U.S. Federal Highway Administration (FHWA), the U.S. Army Corps of Engineers (USACE), and the Lambda method. Regardless of which method was used, the ultimate axial capacity can generally be obtained by summing the components from incremental side friction and end-bearing.

For the proposed foundation type, the RP2A method recommended by API was used in the analyses. For the RP2A method, the ultimate axial pile capacity can be expressed as:

$$Pu = \int\int (\alpha x cx + Kpx \tan \delta x)\, dA\, dL + Ap\,(9c + poNq)$$

where

Pu	=	ultimate axial pile capacity,
αx	=	coefficient depending on effective overburden pressure and undrained shear strength at depth x for cohesive soil (ignored for cohesionless soil),
cx	=	undrained soil shear strength at depth x,
K	=	coefficient of lateral earth pressure for cohesionless soil (0.8 for open-ended pipe piles, ignored for cohesive soil),
px	=	effective overburden pressure at depth x,
δx	=	angle of friction between pile wall and soil at depth x,
As	=	side surface area of pile,
L	=	penetration of pile below the ground surface,
Ap	=	cross-sectional area of the pile tip,
c	=	undrained soil shear strength at pile tip, taken as the average over a distance of 2 diameters below the tip of the pile (ignored for cohesionless soil),
po	=	effective overburden pressure at pile tip, and
Nq	=	bearing capacity factor for cohesionless soil (ignored for cohesive soil).

Settlement of axially loaded piles was evaluated using elastic settlement analyses and load-transfer function analyses. The load-transfer functions considered the shaft-load transfer function (t-z curves) and the base-load transfer function (q-u curves). The built-in load-transfer function curves within the APILE program were used in the analyses.

The lateral coefficients, bearing capacity factor, and external friction angles were obtained based on site specific data gathered for this investigation and on correlations/recommendations provided in the APILE^{Plus}4.0 manual. Limiting side friction and end-bearing pressures were also assigned according to the manual recommendations and local experience.

Pile downdrag may be caused by settlement of the soils under static and dynamic loading conditions. Downdrag may occur under static condition if adjacent additional fill is placed after the piles are in place. During dynamic loading, downdrag may be caused by settlement of a liquefied layer and nonliquefied layer overlying a liquefied layer. Downdrag by nonliquefied layer overlying the liquefied layer may be estimated using 50 percent to 100 percent of the corresponding side friction. Downdrag by the liquefied layer may be estimated using the residual/cyclic strength of the liquefied material. The effect of reduced capacity and additional downdrag due to the seismic loading is to increase settlement. However, oversized predrilling will be specified within the upper dense layers and within the potentially liquefiable sands, and accordingly, downdrag within the predrilled depth was ignored in the analyses.

Axial pile capacities of 14-inch square driven concrete pile including ultimate compression capacity were estimated in Figure 6.

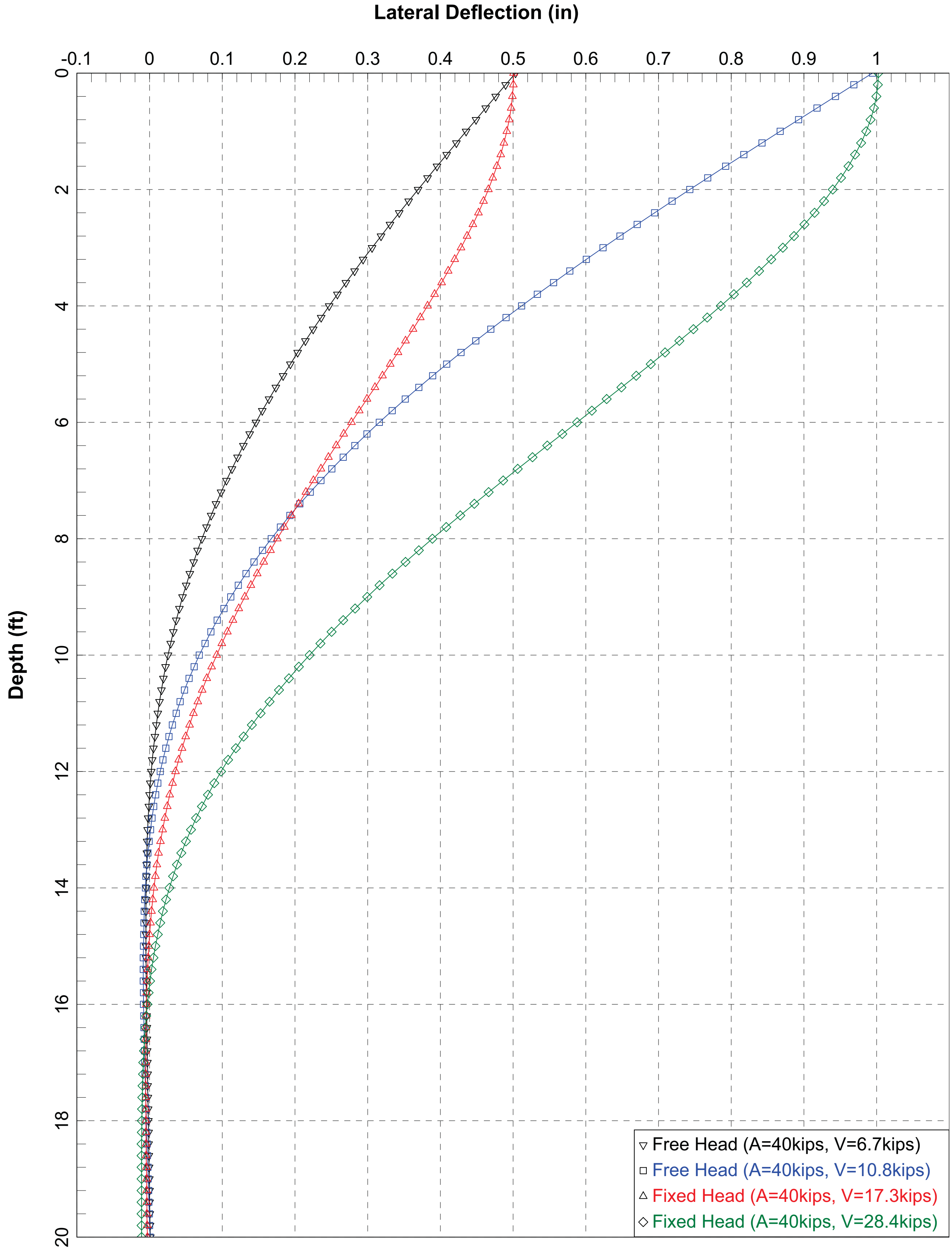
PILE LATERAL CAPACITY

Lateral pile analyses were performed using the computer program LPILE^{PLUS}5.0 for Windows (Ensoft, 2004). The program uses nonlinear p-y (lateral load deflection) data and a finite-difference solution. These p-y curves can be either input or generated by the program.

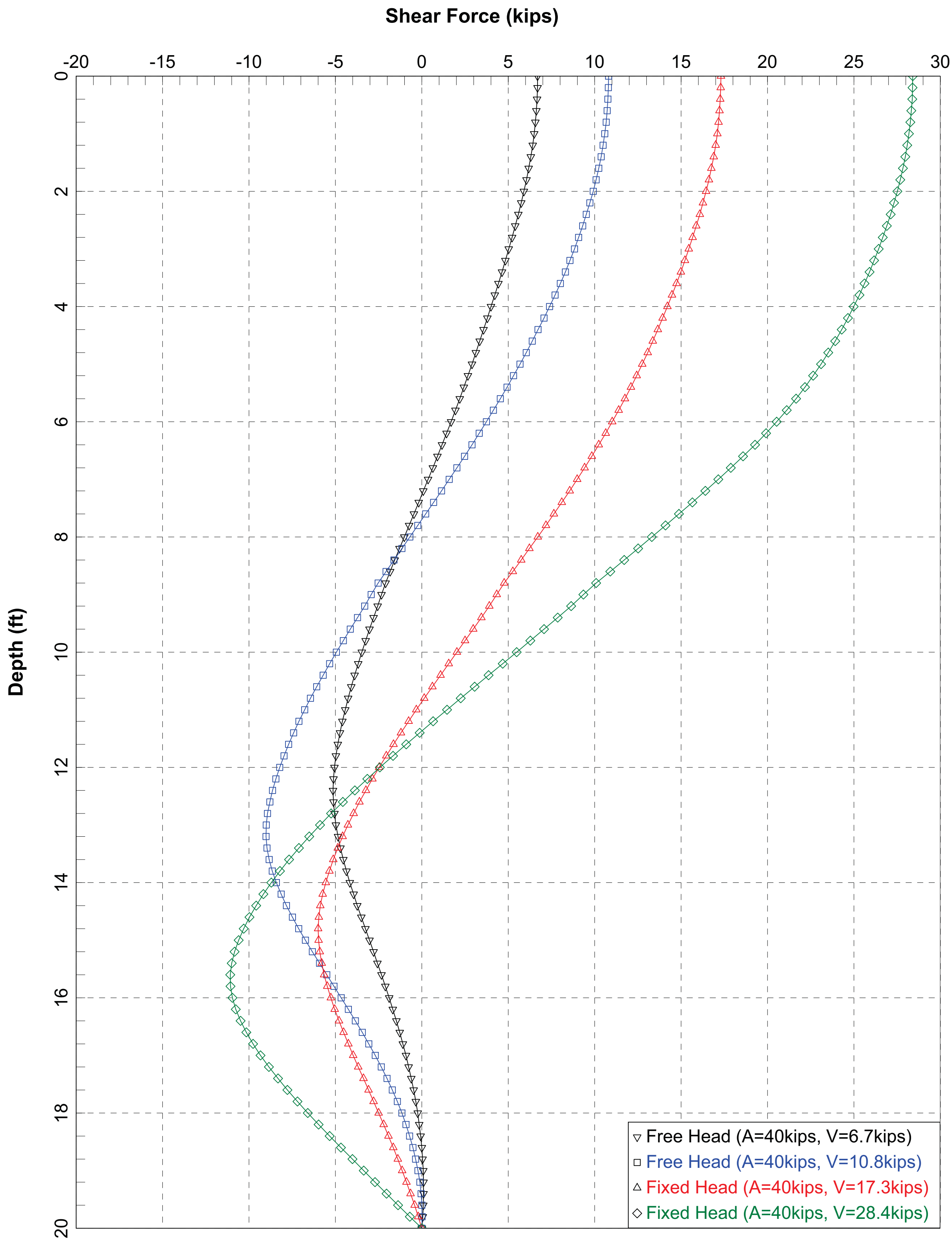
Input parameters for the program include applied moments, lateral forces, axial load, head condition (free or fixed), pile geometry and stiffness, initial soil movement along the pile, and soil geometry and strength parameters. The soil parameters include soil type for internal p-y curve generation, unit weight, friction angle, shear strength, initial stiffness, and soil strain at 50 percent of maximum strength.

For the lateral load capacity evaluation, 14-inch square driven concrete piles were considered. Pile loads were assumed to be at the pile top. Since design loads were not provided at the time of our analyses, for preliminary design, nonlinear static analyses were performed.

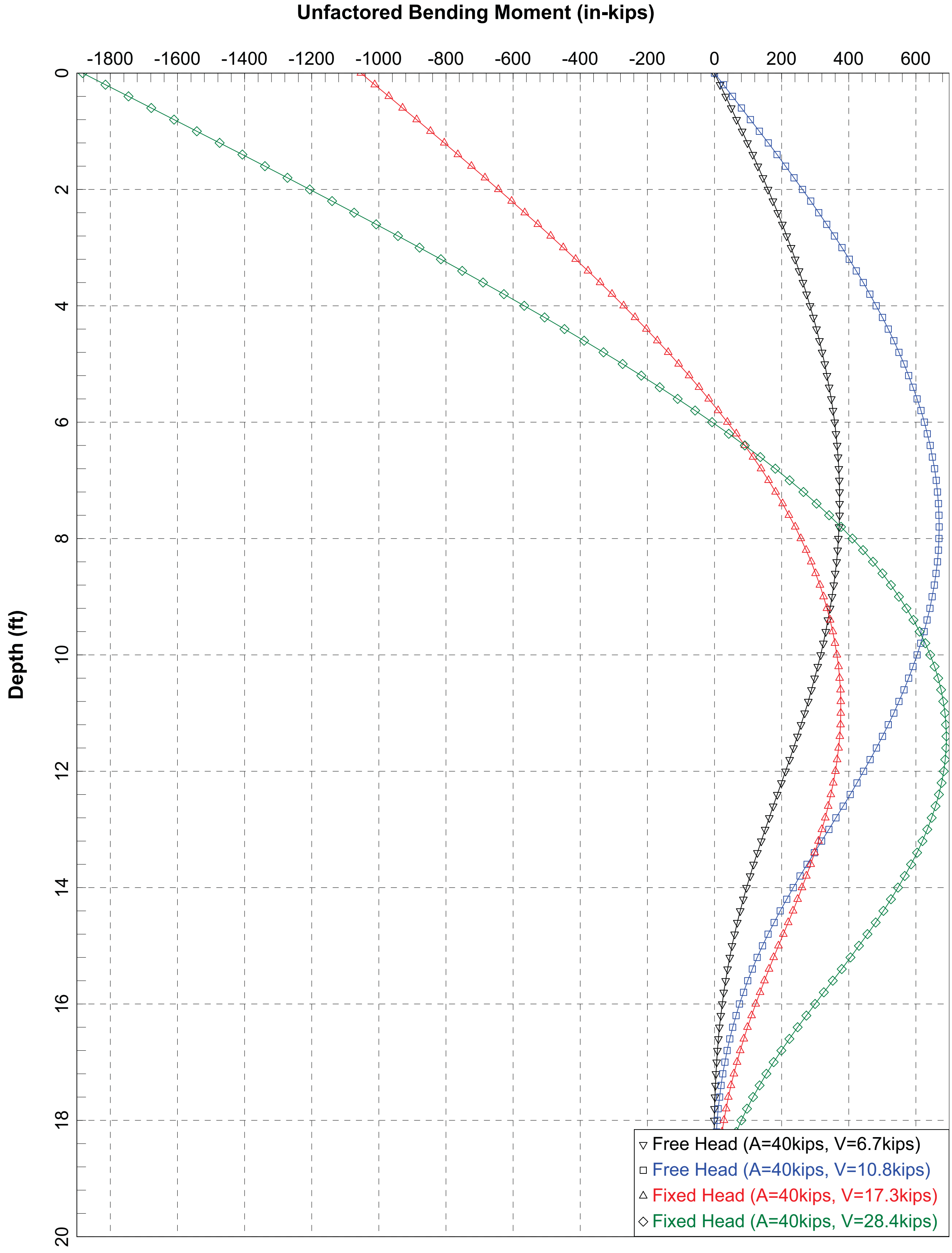
Lateral pile capacities of 14-inch square driven concrete pile including bending moment, shear force, and lateral deflection were estimated for bridge abutment location on static and seismic condition; see Plates D1 through D3.



14-in square driven concrete pile (assume pile top at mudline)



14-in square driven concrete pile(assume pile top at bottom of mudline)



14-in square driven concrete pile (assume pile top at bottom of mudline)

DISTRIBUTION

2 copies: Mr. James Crumpley
Moffatt & Nichol
3780 Kilroy Airport Way, Suite 600
Long Beach, Ca 90806

QUALITY CONTROL REVIEWER

V.R. Nadeswaran., P.E., G.E.
Principal

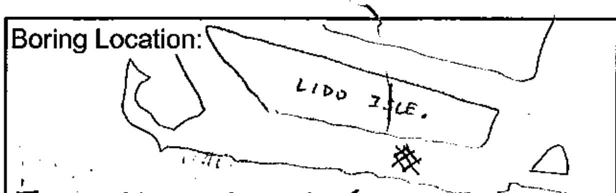
JL/GMD:cfp

Attachment F-2
Excerpts from 2009 CAD Feasibility Study in Lower Newport Bay

Soil Boring Processing Log

ANCHOR QEA

Boring Location:



Time: 0900 Tide: +4.0'
Leadline Depth = 15 ft
Elevation: -11 ft MLLW   Datum: MLLW
Obs. Well Install. Yes [x] No

Boring CNB-CAD-1 Date 5-6-09 Sheet 1 of 3
Job Newport Harbor CAD Job No.
Logged By Whelan + Stofferahn Weather Nice
Drilled By Gregg Drilling
Drill Type/ Method Mud Rotary
Sampling Method Split Spoon
Bottom of Boring ATD Water Level Depth
33°36.5057' N - 117°54.9050' W   1679889.43 N 6587525.41 E

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	DEPTH To	SAMPLE Type	SAMPLE Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
		Tide						0		Elev -11		
		+4'	0915	0.5'	1.5'	ARCH	S-1A	1	WOR WOR	Grey CLAY/SILT (very soft)	Sampler sinks into mud 1 foot.	
				1.5'	2'	ARCH.	S-1B	(3) 2	3	Grey, silty fine-med SAND with shells.		
			0925	2.5'	4'	ARCH	S-2	3 (7) 4	2 2 5	Loose, grey, sl silty SAND with frequent small shell fragments. -15	Poor recovery.	
		+3.7'	0935	5	6.5'	↑ S-3	S-3	5 (11) 6	4 5 6	Med. dense, grey, fine SAND with a layer of shell hash.	Poor recovery.	
				7.5	9'	CHEM + G.S.	S-4	7 8 (17) 9	7 7 10	med dense, greyish brown, med-fine sand w/ few shell fragments -20	half recovery	
				10	11.5	ARCH.	S-5	10 (17) 11 12	5 7 10	Med. dense, grey, SAND with occasional shell fragments		
								13				
								14		-25		
				15	16.5'	Chem only	S-6	15 (27) 16	10 13 14	-26 Med. dense, grey, coarse-med SAND with trace shell frags	Enough recovery to fill chemistry jars, but that's all.	
								17				
								18				
								19		-30		
								20				

4
5
6

5·8·10
5·6·9

Soil Boring Processing Log

ANCHOR QEA

Boring Location:	Boring CNB-CAD-1 Date ___ Sheet 2 of 3
	Job Newport Harbor CAD Job No. ___
	Logged By ___ Weather ___
	Drilled By ___
	Drill Type/ Method ___
	Sampling Method ___
Elevation: Datum:	Bottom of Boring ___ ATD Water Level Depth ___
Obs. Well Install. Yes No	

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	To	SAMPLE Type	Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
		TIDE +3.1'	1025	20	21.5'	G.S. +ARCH	S-7	20–21 (85)	22 / 39 / 46	-32 very dense? Light brown, medium SAND. Trace shell frags. (One plate of mica?)	Overfilled sampler? Copper collars are dented - blow counts may be artificially high.	
								22–24		-35		
		+2.75'	1100	25	26.5	ARCH.	S-8	25–26 (80)	17 / 34 / 46	Very dense, light brown, fine-med SAND.	Blow count appears accurate.	
								27–29		-38		
		+2'	1120	30	31.5'	CHEM + G.S.	S-9	30–31 (60/5)	50 / 50/5"	Very dense, light brown medium SAND layer over fine SAND layer		
								32–34		-43		
							S-10	35–36 (50/6)	25 / 50/6"	very dense, brown fine SAND.		
								37–40		-48		

30'

7'

10' rod
20' rod
20' rod
+ 3' sampler 53' rod.

53 - 7 = 46' below deck
Water depth = 15' - 2' tide change = 13'
46' - 13 = 33'

Tide

Soil Boring Processing Log

ANCHOR QEA

Boring Location:	Boring CNB-CAD-1 Date ___ Sheet 3 of 3
	Job Newport Harbor CAD Job No. ___
	Logged By ___ Weather ___
	Drilled By ___
	Drill Type/ Method ___
	Sampling Method ___
Elevation: Datum:	Bottom of Boring ___ ATD Water Level Depth
Obs. Well Install. Yes No	

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	To	SAMPLE Type	Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
								40				
								41				
								42				
								43		-53		
								44				
								45 (50/5")	30	Very dense, brown,		
		+1.5'	1230	45	46.5'	CHEM + G.S.	S-11	46	65 / 66	fine SAND.		
								47				
								48		-58 Advance 15'	more feet	
								59				
								60	17	Very dense, grey, fine		
				60	61.5'	G.S.	S-12	61 (58)	23 / 35	silty SAND		
								62		3' sampler	END OF	
								63		25' +25' 10'	BORING	
								64		+15 +5	-61.5'	
								5		rods 83' long		
								6		8' stickup		
								7		75' below deck		
								8		-12' deep water		
								9		-63' elevation		
								0				

Calscience Environmental Laboratories, Inc.

May 20, 2009

Tracy Stofferahn
Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Subject: **Calscience Work Order No.: 09-05-0488**
Client Reference: Newport Harbor

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/6/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Danielle Gonsman
Project Manager

Calscience Environmental Laboratories, Inc.

CASE NARRATIVE

Calscience Work Order No.: 09-05-0488

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the sediment samples.

Sample Condition on Receipt

Six (6) sediment samples in glass jars were received for this project on May 6, 2009. The samples were transferred to the laboratory in an ice-chest with wet ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory ranged was 3.8°C. The samples were logged into the Laboratory Information Management System (LIMS), given laboratory identification numbers, and stored in refrigeration units pending analysis.

Tests Performed

Testing was performed in accordance with the chain-of-custody instructions and the project work plan. The following testing was performed as requested:

Trace Metals by EPA 6020
Mercury by EPA 7471A
PAHs by EPA 8270C SIM
Organochlorine Pesticides by EPA 8081A
PCB Aroclors by EPA 8082
Organotins by Krone, et al.
TOC by EPA 9060A
Total Solids by SM 2540 B
Total Sulfide by EPA 376.2M
Dissolved Sulfide by EPA 376.2M
Ammonia by SM 4500-NH3 B/C (M)

Testing for grain size was subcontracted to PTS Laboratories in Santa Fe Springs, California. This data is included and follows the chemistry data.

Data Summary

Holding times

All holding time requirements were met.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed for each test. All parameters were within control limits.

Matrix Spikes

Matrix spike analyses were performed at required frequencies. One of the project samples (Calscience Work Order 09-05-0616) was spiked for each applicable method. Each parameter was within control limits for each method with the following exceptions.

For the metals by EPA 6020, the matrix spike recovery for antimony fell just below the established control limit for this metal. However, the corresponding LCS/LCSD recoveries for antimony were in control, suggesting a possible matrix interference effect, and the data is released with no further qualifications.

For the organotins, the MSD recovery for TBT fell above the established control limit. However, TBT was not found in any of the samples at the indicated reporting limit, and thus the elevated MSD recovery is moot. Also, the corresponding LCS/LCSD recoveries for TBT were in control, and the data is thus released without further action.

Surrogates

The surrogate recoveries for each applicable test, and all samples, were within acceptable control limits, with the exception of the PCBs. For sample CNB-CAD-1-S9, the surrogate 2,4,5,6-Tetrachloro-m-xylene fell above the established control limit for this compound. However, the PCBs were undetected in the sample, so the elevated recovery has no effect on the data.

Acronyms

MS/MSD:	Matrix Spike/Matrix Spike Duplicate
LCS/LCSD:	Laboratory Control Sample/Laboratory Control Sample Duplicate
RPD:	Relative Percent Difference

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA	Date Received: 05/06/09
28202 Cabot Road, Suite 425	Work Order No: 09-05-0488
Laguna Niguel, CA 92677-1271	Preparation: EPA 3050B / EPA 7471A Total
	Method: EPA 6020 / EPA 7471A
	Units: mg/kg
Project: Newport Harbor	Page 1 of 2

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S3/4	**09-05-0488-1-A**	**05/06/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 22:16**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:29:05 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.605	1		Mercury	ND	0.101	1	
Arsenic	2.10	0.121	1		Nickel	1.64	0.121	1	
Beryllium	ND	0.121	1		Selenium	0.164	0.121	1	
Cadmium	ND	0.121	1		Silver	ND	0.121	1	
Chromium	2.79	0.121	1		Thallium	ND	0.121	1	
Copper	8.76	0.121	1		Zinc	8.76	1.21	1	
Lead	0.467	0.121	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S6	**09-05-0488-2-A**	**05/06/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 22:22**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:31:22 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.600	1		Mercury	ND	0.100	1	
Arsenic	2.54	0.120	1		Nickel	1.25	0.120	1	
Beryllium	ND	0.120	1		Selenium	0.154	0.120	1	
Cadmium	ND	0.120	1		Silver	ND	0.120	1	
Chromium	1.99	0.120	1		Thallium	ND	0.120	1	
Copper	5.36	0.120	1		Zinc	5.82	1.20	1	
Lead	0.411	0.120	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S9	**09-05-0488-4-A**	**05/06/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 22:27**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:33:36 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.599	1		Mercury	ND	0.100	1	
Arsenic	2.15	0.120	1		Nickel	1.99	0.120	1	
Beryllium	ND	0.120	1		Selenium	0.162	0.120	1	
Cadmium	ND	0.120	1		Silver	ND	0.120	1	
Chromium	4.20	0.120	1		Thallium	ND	0.120	1	
Copper	26.9	0.120	1		Zinc	17.3	1.20	1	
Lead	0.589	0.120	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3050B / EPA 7471A Total
Method: EPA 6020 / EPA 7471A
Units: mg/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S11	**09-05-0488-5-A**	**05/06/09 00:00**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09 22:33**	**090508L07**

Comment(s): -Mercury was analyzed on 5/8/2009 3:35:46 PM with batch 090508L02
-Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.611	1		Mercury	ND	0.102	1	
Arsenic	1.44	0.122	1		Nickel	1.45	0.122	1	
Beryllium	ND	0.122	1		Selenium	0.136	0.122	1	
Cadmium	ND	0.122	1		Silver	ND	0.122	1	
Chromium	3.22	0.122	1		Thallium	ND	0.122	1	
Copper	13.0	0.122	1		Zinc	9.63	1.22	1	
Lead	0.605	0.122	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,503**	**N/A**	**Solid**	**ICP/MS 03**	**05/08/09**	**05/14/09 10:18**	**090508L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.500	1		Lead	ND	0.100	1	
Arsenic	ND	0.100	1		Nickel	ND	0.100	1	
Beryllium	ND	0.100	1		Selenium	ND	0.100	1	
Cadmium	ND	0.100	1		Silver	ND	0.100	1	
Chromium	ND	0.100	1		Thallium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-007-6,279**	**N/A**	**Solid**	**Mercury**	**05/08/09**	**05/08/09 14:57**	**090508L02**

Parameter	Result	RL	DF	Qual
Mercury	ND	0.0835	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA	Date Received: 05/06/09
28202 Cabot Road, Suite 425	Work Order No: 09-05-0488
Laguna Niguel, CA 92677-1271	Preparation: EPA 3545
	Method: Organotins by Krone et al.
	Units: ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S3/4	**09-05-0488-1-B**	**05/06/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 18:48**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.6	1		Tetrabutyltin	ND	3.6	1	
Monobutyltin	ND	3.6	1		Tributyltin	ND	3.6	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	114	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S6	**09-05-0488-2-B**	**05/06/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 19:20**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.6	1		Tetrabutyltin	ND	3.6	1	
Monobutyltin	ND	3.6	1		Tributyltin	ND	3.6	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	104	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S9	**09-05-0488-4-A**	**05/06/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 19:52**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.6	1		Tetrabutyltin	ND	3.6	1	
Monobutyltin	ND	3.6	1		Tributyltin	ND	3.6	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	110	50-130							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S11	**09-05-0488-5-A**	**05/06/09 00:00**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 20:24**	**090514L12**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.7	1		Tetrabutyltin	ND	3.7	1	
Monobutyltin	ND	3.7	1		Tributyltin	ND	3.7	1	
Surrogates:	REC (%)	Control Limits		Qual					
Tripentyltin	114	50-130							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	Organotins by Krone et al.
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-016-653**	**N/A**	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09 11:17**	**090514L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Dibutyltin	ND	3.0	1		Tetrabutyltin	ND	3.0	1	
Monobutyltin	ND	3.0	1		Tributyltin	ND	3.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Tripentyltin	79	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg

Project: Newport Harbor

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S3/4	**09-05-0488-1-B**	**05/06/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 12:47**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	24	1		Benzo (b) Fluoranthene	ND	24	1	
2-Methylnaphthalene	ND	24	1		Benzo (a) Pyrene	ND	24	1	
Acenaphthylene	ND	24	1		Benzo (g,h,i) Perylene	ND	24	1	
Acenaphthene	ND	24	1		Indeno (1,2,3-c,d) Pyrene	ND	24	1	
Fluorene	ND	24	1		Dibenz (a,h) Anthracene	ND	24	1	
Phenanthrene	ND	24	1		1-Methylnaphthalene	ND	24	1	
Anthracene	ND	24	1		Benzo (e) Pyrene	ND	24	1	
Fluoranthene	ND	24	1		Perylene	ND	24	1	
Pyrene	ND	24	1		Biphenyl	ND	24	1	
Benzo (a) Anthracene	ND	24	1		1-Methylphenanthrene	ND	24	1	
Chrysene	ND	24	1		2,6-Dimethylnaphthalene	ND	24	1	
Benzo (k) Fluoranthene	ND	24	1		1,6,7-Trimethylnaphthalene	ND	24	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	115	18-162			2-Fluorobiphenyl	96	14-146		
p-Terphenyl-d14	103	34-148							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S6	**09-05-0488-2-B**	**05/06/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 13:33**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	24	1		Benzo (b) Fluoranthene	ND	24	1	
2-Methylnaphthalene	ND	24	1		Benzo (a) Pyrene	ND	24	1	
Acenaphthylene	ND	24	1		Benzo (g,h,i) Perylene	ND	24	1	
Acenaphthene	ND	24	1		Indeno (1,2,3-c,d) Pyrene	ND	24	1	
Fluorene	ND	24	1		Dibenz (a,h) Anthracene	ND	24	1	
Phenanthrene	ND	24	1		1-Methylnaphthalene	ND	24	1	
Anthracene	ND	24	1		Benzo (e) Pyrene	ND	24	1	
Fluoranthene	ND	24	1		Perylene	ND	24	1	
Pyrene	ND	24	1		Biphenyl	ND	24	1	
Benzo (a) Anthracene	ND	24	1		1-Methylphenanthrene	ND	24	1	
Chrysene	ND	24	1		2,6-Dimethylnaphthalene	ND	24	1	
Benzo (k) Fluoranthene	ND	24	1		1,6,7-Trimethylnaphthalene	ND	24	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	116	18-162			2-Fluorobiphenyl	92	14-146		
p-Terphenyl-d14	78	34-148							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S9	**09-05-0488-4-A**	**05/06/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 14:19**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	24	1		Benzo (b) Fluoranthene	ND	24	1	
2-Methylnaphthalene	ND	24	1		Benzo (a) Pyrene	ND	24	1	
Acenaphthylene	ND	24	1		Benzo (g,h,i) Perylene	ND	24	1	
Acenaphthene	ND	24	1		Indeno (1,2,3-c,d) Pyrene	ND	24	1	
Fluorene	ND	24	1		Dibenz (a,h) Anthracene	ND	24	1	
Phenanthrene	ND	24	1		1-Methylnaphthalene	ND	24	1	
Anthracene	ND	24	1		Benzo (e) Pyrene	ND	24	1	
Fluoranthene	ND	24	1		Perylene	ND	24	1	
Pyrene	ND	24	1		Biphenyl	ND	24	1	
Benzo (a) Anthracene	ND	24	1		1-Methylphenanthrene	ND	24	1	
Chrysene	ND	24	1		2,6-Dimethylnaphthalene	ND	24	1	
Benzo (k) Fluoranthene	ND	24	1		1,6,7-Trimethylnaphthalene	ND	24	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	117	18-162			2-Fluorobiphenyl	91	14-146		
p-Terphenyl-d14	68	34-148							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S11	**09-05-0488-5-A**	**05/06/09 00:00**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 15:04**	**090511L01**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	24	1		Benzo (b) Fluoranthene	ND	24	1	
2-Methylnaphthalene	ND	24	1		Benzo (a) Pyrene	ND	24	1	
Acenaphthylene	ND	24	1		Benzo (g,h,i) Perylene	ND	24	1	
Acenaphthene	ND	24	1		Indeno (1,2,3-c,d) Pyrene	ND	24	1	
Fluorene	ND	24	1		Dibenz (a,h) Anthracene	ND	24	1	
Phenanthrene	ND	24	1		1-Methylnaphthalene	ND	24	1	
Anthracene	ND	24	1		Benzo (e) Pyrene	ND	24	1	
Fluoranthene	ND	24	1		Perylene	ND	24	1	
Pyrene	ND	24	1		Biphenyl	ND	24	1	
Benzo (a) Anthracene	ND	24	1		1-Methylphenanthrene	ND	24	1	
Chrysene	ND	24	1		2,6-Dimethylnaphthalene	ND	24	1	
Benzo (k) Fluoranthene	ND	24	1		1,6,7-Trimethylnaphthalene	ND	24	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	120	18-162			2-Fluorobiphenyl	95	14-146		
p-Terphenyl-d14	71	34-148							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-471-23**	**N/A**	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09 12:00**	**090511L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	20	1		Benzo (b) Fluoranthene	ND	20	1	
2-Methylnaphthalene	ND	20	1		Benzo (a) Pyrene	ND	20	1	
Acenaphthylene	ND	20	1		Benzo (g,h,i) Perylene	ND	20	1	
Acenaphthene	ND	20	1		Indeno (1,2,3-c,d) Pyrene	ND	20	1	
Fluorene	ND	20	1		Dibenz (a,h) Anthracene	ND	20	1	
Phenanthrene	ND	20	1		1-Methylnaphthalene	ND	20	1	
Anthracene	ND	20	1		Benzo (e) Pyrene	ND	20	1	
Fluoranthene	ND	20	1		Perylene	ND	20	1	
Pyrene	ND	20	1		Biphenyl	ND	20	1	
Benzo (a) Anthracene	ND	20	1		1-Methylphenanthrene	ND	20	1	
Chrysene	ND	20	1		2,6-Dimethylnaphthalene	ND	20	1	
Benzo (k) Fluoranthene	ND	20	1		1,6,7-Trimethylnaphthalene	ND	20	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Nitrobenzene-d5	76	18-162			2-Fluorobiphenyl	56	14-146		
p-Terphenyl-d14	49	34-148							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S3/4	**09-05-0488-1-B**	**05/06/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 12:20**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	122	50-130			Decachlorobiphenyl	104	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S6	**09-05-0488-2-B**	**05/06/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 12:39**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	97	50-130			Decachlorobiphenyl	87	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S9	**09-05-0488-4-A**	**05/06/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 12:58**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	135	50-130		2	Decachlorobiphenyl	115	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S11	**09-05-0488-5-A**	**05/06/09 00:00**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 13:17**	**090511L06**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	12	1		Aroclor-1248	ND	12	1	
Aroclor-1221	ND	12	1		Aroclor-1254	ND	12	1	
Aroclor-1232	ND	12	1		Aroclor-1260	ND	12	1	
Aroclor-1242	ND	12	1		Aroclor-1262	ND	12	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	129	50-130			Decachlorobiphenyl	124	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-565-106**	**N/A**	**Solid**	**GC 31**	**05/11/09**	**05/18/09 11:41**	**090511L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aroclor-1016	ND	10	1		Aroclor-1248	ND	10	1	
Aroclor-1221	ND	10	1		Aroclor-1254	ND	10	1	
Aroclor-1232	ND	10	1		Aroclor-1260	ND	10	1	
Aroclor-1242	ND	10	1		Aroclor-1262	ND	10	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	107	50-130			Decachlorobiphenyl	88	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Newport Harbor			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S3/4	**09-05-0488-1-B**	**05/06/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 14:10**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	24	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	103	50-130		Decachlorobiphenyl	76	50-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S6	**09-05-0488-2-B**	**05/06/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 14:37**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	24	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	81	50-130		Decachlorobiphenyl	65	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S9	**09-05-0488-4-A**	**05/06/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 15:04**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Heptachlor	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	24	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	111	50-130			Decachlorobiphenyl	79	50-130		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CNB-CAD-1-S11	**09-05-0488-5-A**	**05/06/09 00:00**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 15:32**	**090511L05**

Comment(s): -Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.2	1		4,4'-DDT	ND	1.2	1	
Alpha-BHC	ND	1.2	1		Endosulfan I	ND	1.2	1	
Beta-BHC	ND	1.2	1		Endosulfan II	ND	1.2	1	
Delta-BHC	ND	1.2	1		Endosulfan Sulfate	ND	1.2	1	
Gamma-BHC	ND	1.2	1		Endrin	ND	1.2	1	
Chlordane	ND	12	1		Endrin Aldehyde	ND	1.2	1	
Dieldrin	ND	1.2	1		Endrin Ketone	ND	1.2	1	
Trans-nonachlor	ND	1.2	1		Heptachlor	ND	1.2	1	
2,4'-DDD	ND	1.2	1		Heptachlor Epoxide	ND	1.2	1	
Cis-nonachlor	ND	1.2	1		Methoxychlor	ND	1.2	1	
2,4'-DDE	ND	1.2	1		Toxaphene	ND	24	1	
2,4'-DDT	ND	1.2	1		Alpha Chlordane	ND	1.2	1	
4,4'-DDD	ND	1.2	1		Gamma Chlordane	ND	1.2	1	
4,4'-DDE	ND	1.2	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2,4,5,6-Tetrachloro-m-Xylene	93	50-130			Decachlorobiphenyl	74	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-858-29**	**N/A**	**Solid**	**GC 51**	**05/11/09**	**05/19/09 12:21**	**090511L05**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aldrin	ND	1.0	1		4,4'-DDT	ND	1.0	1	
Alpha-BHC	ND	1.0	1		Endosulfan I	ND	1.0	1	
Beta-BHC	ND	1.0	1		Endosulfan II	ND	1.0	1	
Delta-BHC	ND	1.0	1		Endosulfan Sulfate	ND	1.0	1	
Gamma-BHC	ND	1.0	1		Endrin	ND	1.0	1	
Chlordane	ND	10	1		Endrin Aldehyde	ND	1.0	1	
Dieldrin	ND	1.0	1		Endrin Ketone	ND	1.0	1	
Trans-nonachlor	ND	1.0	1		Heptachlor	ND	1.0	1	
2,4'-DDD	ND	1.0	1		Heptachlor Epoxide	ND	1.0	1	
Cis-nonachlor	ND	1.0	1		Methoxychlor	ND	1.0	1	
2,4'-DDE	ND	1.0	1		Toxaphene	ND	20	1	
2,4'-DDT	ND	1.0	1		Alpha Chlordane	ND	1.0	1	
4,4'-DDD	ND	1.0	1		Gamma Chlordane	ND	1.0	1	
4,4'-DDE	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	104	50-130		Decachlorobiphenyl	101	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-1-S3/4	**09-05-0488-1**	**05/06/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	ND	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	730	600	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	82.7	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	ND	0.24	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-1-S6	**09-05-0488-2**	**05/06/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	ND	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	720	600	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	83.4	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.67	0.24	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-1-S9	**09-05-0488-4**	**05/06/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	0.24	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	2000	600	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	83.5	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.50	0.24	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271			

Project: Newport Harbor

Client Sample Number	Lab Sample Number	Date Collected	Matrix
CNB-CAD-1-S11	**09-05-0488-5**	**05/06/09**	**Solid**

Comment(s): (9) Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total (9)	0.12	0.12	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved (9)	ND	0.12	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic (9)	730	610	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	81.8	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N) (9)	0.68	0.24	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

Client Sample Number	Lab Sample Number	Date Collected	Matrix
Method Blank		**N/A**	**Solid**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Sulfide, Total	ND	0.10	0.2		mg/kg	05/12/09	05/12/09	EPA 376.2M
Sulfide, Dissolved	ND	0.10	0.2		mg/kg	05/11/09	05/11/09	EPA 376.2M
Carbon, Total Organic	ND	500	1		mg/kg	N/A	05/07/09	EPA 9060A
Solids, Total	ND	0.100	1		%	05/12/09	05/12/09	SM 2540 B
Ammonia (as N)	ND	0.20	1		mg/kg	05/15/09	05/15/09	SM 4500-NH3 B/C (M)

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3050B
Method: EPA 6020

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	79	83	80-120	5	0-20	3
Arsenic	101	108	80-120	6	0-20	
Beryllium	109	113	80-120	3	0-20	
Cadmium	102	105	80-120	3	0-20	
Chromium	100	101	80-120	1	0-20	
Copper	111	105	80-120	4	0-20	
Lead	99	101	80-120	2	0-20	
Nickel	103	105	80-120	2	0-20	
Selenium	101	103	80-120	2	0-20	
Silver	99	102	80-120	3	0-20	
Thallium	97	101	80-120	4	0-20	
Zinc	106	106	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3050B
Method: EPA 6020

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-05-0616-3	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508S07**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	104	103	75-125	1	0-20	
Arsenic	106	110	75-125	4	0-20	
Beryllium	113	109	75-125	4	0-20	
Cadmium	105	103	75-125	1	0-20	
Chromium	96	94	75-125	2	0-20	
Copper	106	102	75-125	3	0-20	
Lead	100	101	75-125	1	0-20	
Nickel	103	101	75-125	2	0-20	
Selenium	104	101	75-125	3	0-20	
Silver	104	100	75-125	4	0-20	
Thallium	101	102	75-125	1	0-20	
Zinc	104	101	75-125	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received:	05/06/09
Work Order No:	09-05-0488
Preparation:	EPA 7471A Total
Method:	EPA 7471A

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	112	112	71-137	0	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

nelac — ACCREDITED IN ACCORDANCE WITH

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received	05/06/09
Work Order No:	09-05-0488
Preparation:	EPA 7471A Total
Method:	EPA 7471A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-05-0616-3	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508S02**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	107	110	75-125	3	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: Organotins by Krone et al.

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**GC/MS Y**	**05/14/09**	**05/15/09**	**090514S12**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	112	126	50-130	11	0-20	
Tributyltin	120	145	50-130	19	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: 05/06/09
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**GC/MS MM**	**05/11/09**	**05/15/09**	**090511S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	138	138	40-160	0	0-20	
2-Methylnaphthalene	141	142	40-160	0	0-20	
Acenaphthylene	132	131	40-160	0	0-20	
Acenaphthene	137	138	40-160	0	0-20	
Fluorene	139	139	40-160	0	0-20	
Phenanthrene	141	138	40-160	2	0-20	
Anthracene	117	122	40-160	4	0-20	
Fluoranthene	116	126	40-160	8	0-20	
Pyrene	122	120	40-160	2	0-46	
Benzo (a) Anthracene	131	132	40-160	1	0-20	
Chrysene	129	125	40-160	3	0-20	
Benzo (k) Fluoranthene	147	146	40-160	1	0-20	
Benzo (b) Fluoranthene	150	154	40-160	3	0-20	
Benzo (a) Pyrene	143	143	40-160	0	0-20	
Benzo (g,h,i) Perylene	135	133	40-160	2	0-20	
Indeno (1,2,3-c,d) Pyrene	158	149	40-160	6	0-20	
Dibenz (a,h) Anthracene	138	136	40-160	2	0-20	
1-Methylnaphthalene	141	141	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA		Date Received:	05/06/09
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	EPA 8082

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**GC 31**	**05/11/09**	**05/18/09**	**090511S06**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1016	120	126	50-135	5	0-25	
Aroclor-1260	90	96	50-135	6	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received:	05/06/09
Work Order No:	09-05-0488
Preparation:	EPA 3545
Method:	EPA 8081A

Project Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0616-3	**Solid**	**GC 51**	**05/11/09**	**05/19/09**	**090511S05**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aldrin	96	94	50-135	2	0-25	
Alpha-BHC	89	88	50-135	1	0-25	
Beta-BHC	99	97	50-135	2	0-25	
Delta-BHC	106	103	50-135	2	0-25	
Gamma-BHC	93	92	50-135	2	0-25	
Dieldrin	87	85	50-135	2	0-25	
4,4'-DDD	94	89	50-135	5	0-25	
4,4'-DDE	99	97	50-135	2	0-25	
4,4'-DDT	91	88	50-135	3	0-25	
Endosulfan I	88	86	50-135	2	0-25	
Endosulfan II	87	84	50-135	4	0-25	
Endosulfan Sulfate	84	80	50-135	4	0-25	
Endrin	99	96	50-135	3	0-25	
Endrin Aldehyde	66	73	50-135	10	0-25	
Endrin Ketone	83	75	50-135	9	0-25	
Heptachlor	100	98	50-135	2	0-25	
Heptachlor Epoxide	88	87	50-135	1	0-25	
Methoxychlor	91	88	50-135	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0488

Project: Newport Harbor

Matrix: Solid

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	MS% REC	MSD % REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	EPA 9060A	09-05-0616-3	05/07/09	N/A	94	93	75-125	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0488

Project: Newport Harbor

Matrix: Solid

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Sulfide, Total	EPA 376.2M	09-05-0616-3	05/12/09	0.27	0.27	0	0-25	
Sulfide, Dissolved	EPA 376.2M	09-05-0616-3	05/11/09	ND	ND	NA	0-25	
Ammonia (as N)	SM 4500-NH3 B/C (M)	09-05-0616-3	05/15/09	0.76	0.76	0	0-25	
Solids, Total	SM 2540 B	09-05-0616-3	05/12/09	73.8	72.7	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA	Date Received: N/A
28202 Cabot Road, Suite 425	Work Order No: 09-05-0488
Laguna Niguel, CA 92677-1271	Preparation: EPA 3050B
	Method: EPA 6020

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,503	**Solid**	**ICP/MS 03**	**05/08/09**	**05/11/09**	**090508L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Antimony	92	92	80-120	73-127	1	0-20	
Arsenic	90	83	80-120	73-127	8	0-20	
Beryllium	108	111	80-120	73-127	2	0-20	
Cadmium	100	98	80-120	73-127	1	0-20	
Chromium	91	92	80-120	73-127	0	0-20	
Copper	103	102	80-120	73-127	1	0-20	
Lead	96	96	80-120	73-127	0	0-20	
Nickel	98	99	80-120	73-127	1	0-20	
Selenium	96	94	80-120	73-127	2	0-20	
Silver	99	99	80-120	73-127	0	0-20	
Thallium	99	96	80-120	73-127	2	0-20	
Zinc	100	99	80-120	73-127	1	0-20	

Total number of LCS compounds : 12
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA		Date Received:	N/A
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 7471A Total
		Method:	EPA 7471A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-007-6,279	**Solid**	**Mercury**	**05/08/09**	**05/08/09**	**090508L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	102	101	85-121	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA		Date Received:	N/A
28202 Cabot Road, Suite 425		Work Order No:	09-05-0488
Laguna Niguel, CA 92677-1271		Preparation:	EPA 3545
		Method:	Organotins by Krone et al.

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-653	**Solid**	**GC/MS Y**	**05/14/09**	**05/17/09**	**090514L12**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	94	90	50-130	4	0-20	
Tributyltin	91	104	50-130	13	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA	Date Received: N/A
28202 Cabot Road, Suite 425	Work Order No: 09-05-0488
Laguna Niguel, CA 92677-1271	Preparation: EPA 3545
	Method: EPA 8270C SIM PAHs

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-471-23	**Solid**	**GC/MS MM**	**05/11/09**	**05/16/09**	**090511L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Naphthalene	77	77	40-160	20-180	0	0-20	
2-Methylnaphthalene	78	78	40-160	20-180	1	0-20	
Acenaphthylene	73	74	40-160	20-180	1	0-20	
Acenaphthene	79	79	48-108	38-118	0	0-11	
Fluorene	77	77	40-160	20-180	1	0-20	
Phenanthrene	80	80	40-160	20-180	0	0-20	
Anthracene	59	59	40-160	20-180	1	0-20	
Fluoranthene	74	75	40-160	20-180	1	0-20	
Pyrene	79	77	40-160	20-180	2	0-16	
Benzo (a) Anthracene	76	77	40-160	20-180	0	0-20	
Chrysene	73	73	40-160	20-180	1	0-20	
Benzo (k) Fluoranthene	77	80	40-160	20-180	3	0-20	
Benzo (b) Fluoranthene	84	85	40-160	20-180	2	0-20	
Benzo (a) Pyrene	78	79	40-160	20-180	1	0-20	
Benzo (g,h,i) Perylene	77	74	40-160	20-180	3	0-20	
Indeno (1,2,3-c,d) Pyrene	82	82	40-160	20-180	0	0-20	
Dibenz (a,h) Anthracene	66	65	40-160	20-180	1	0-20	
1-Methylnaphthalene	77	78	40-160	20-180	2	0-20	

Total number of LCS compounds : 18
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience
Environmental
Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: EPA 8082

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-565-106	**Solid**	**GC 31**	**05/11/09**	**05/18/09**	**090511L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1016	118	99	50-135	17	0-25	
Aroclor-1260	107	94	50-135	12	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0488
Preparation: EPA 3545
Method: EPA 8081A

Project: Newport Harbor

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-858-29	**Solid**	**GC 51**	**05/11/09**	**05/19/09**	**090511L05**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Aldrin	99	91	50-135	36-149	8	0-25	
Alpha-BHC	100	92	50-135	36-149	8	0-25	
Beta-BHC	100	93	50-135	36-149	7	0-25	
Delta-BHC	106	97	50-135	36-149	9	0-25	
Gamma-BHC	101	93	50-135	36-149	8	0-25	
Dieldrin	98	91	50-135	36-149	7	0-25	
4,4'-DDD	100	93	50-135	36-149	6	0-25	
4,4'-DDE	95	92	50-135	36-149	3	0-25	
4,4'-DDT	99	92	50-135	36-149	7	0-25	
Endosulfan I	94	90	50-135	36-149	4	0-25	
Endosulfan II	95	89	50-135	36-149	6	0-25	
Endosulfan Sulfate	96	90	50-135	36-149	7	0-25	
Endrin	103	95	50-135	36-149	8	0-25	
Endrin Aldehyde	98	90	50-135	36-149	8	0-25	
Endrin Ketone	91	86	50-135	36-149	6	0-25	
Heptachlor	102	94	50-135	36-149	8	0-25	
Heptachlor Epoxide	93	91	50-135	36-149	3	0-25	
Methoxychlor	96	90	50-135	36-149	7	0-25	

Total number of LCS compounds : 18
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Anchor QEA
28202 Cabot Road, Suite 425
Laguna Niguel, CA 92677-1271

Date Received: N/A
Work Order No: 09-05-0488

Project: Newport Harbor

Matrix : Solid

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Carbon, Total Organic	EPA 9060A	099-06-013-380	05/07/09	N/A	6000	5440	91	80-120	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-05-0488

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Chain of Custody Record & Laboratory Analysis Request

Page 1 of 1 Turnaround Requested: standard

Anchor Contact: Tracy Stofferahn

0488

ANCHOR ENVIRONMENTAL CA, L.P.
28202 Cabot Road, Suite 620
Laguna Niguel, CA 92677
Ph: (949) 347-2780 Fax: (949) 347-2781

Lab Contact: Danielle Gonsman	Proj. Name: Newport Harbor
Lab: Calscience	Proj. Number: 090243-01
Address: 7440 Lincoln Way, Garden Grove, CA 92841	Sampler: MPW / TLS
Phone: 714-895-5494	Shipping Method: CEL Pick-up
Fax: 714-894-7501	AirBill:

Analyses Requested

	Sample ID	Sample Date	Sample Time	Sample Martix	# Containers	EPA 6020/7471 Priority Pollutant Metals + Mercury	EPA 8082 PCBs	EPA 8081A OC Pesticides	ASTM D4464 Grain Size	EPA 8270 OC SIMS PAHs	EPA 9060 A TOC	SM 2540 B Total Solids	Krone, et al. Organotins	SM 4500-NH3 Ammonia	EPA 376.2 M Sulfide (Total + Dissolved)	Notes/ Comments:
1	CNB-CAD-1-S3/4	5-6-09		SED	3	X	X	X	X	X	X	X	X	X	X	
2	CNB-CAD-1-S6	↓		↓	2	X	X	X		X	X	X	X	X	X	
3	CNB-CAD-1-S7	↓		↓	1				X							
4	CNB-CAD-1-S9	↓		↓	3	X	X	X	X	X	X	X	X	X	X	
5	CNB-CAD-1-S11	↓		↓	3	X	X	X	X	X	X	X	X	X	X	
6	CNB-CAD-1-S12	↓		↓	1				X							

Relinquished: (Signature) [signature]	Relinquished: (Signature) [signature]	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Tracy Stofferahn	Printed Name: PHUONG LE	Printed Name:	
Company: Anchor QEA	Company: CEL	Company:	
Date/Time: 5/6/09 4:04 PM	Date/Time: 5/6/09 1700	Date/Time:	
Received By: [signature]	Received By: [signature]	Received By:	
Printed Name: PHUONG LE	Printed Name: S. PATEL	Printed Name:	
Company: CEL	Company: CEL	Company:	# of Coolers: / Cooler Temp(s):
Date/Time: 5/6/09 1604	Date/Time: 5/6/09 1700	Date/Time:	COC Seals Intact? / Bottles Intact?

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05-0486

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ANCHOR DATE: 5/6/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 4.0 °C - 0.2 °C (CF) = 3.8 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: pl

CUSTODY SEALS INTACT:

☐ Cooler ☐________ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: pl

☐ Sample ☐________ ☐ No (Not Intact) ☑ Not Present Initial: [illegible]

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☑8ozCGJ ☑16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐________

Water: ☐VOA ☐VOAh ☐VOAna2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PB ☐100PBna2 ☐______ ☐______ ☐______

Air: ☐Tedlar® ☐Summa® ☐______ **Other:** ☐____________ **Checked/Labeled by:** [illegible]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** AH

Preservative: h: HCL n: HNO3 na2: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** RH

PTS Laboratories, Inc.

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

May 20, 2009

Danielle Gonsman
Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427

Re: PTS File No: 39393
09-05-0488

Dear Ms. Gonsman:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your 09-05-0488 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. An electronic version of the report has previously been sent to your attention via the internet. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2504.

Sincerely,
PTS Laboratories

Rachel Spitz
Project Manager

Encl.

PTS Laboratories

Project Name: N/A
Project Number: 09-05-0488

PTS File No: 39393
Client: Calscience

TEST PROGRAM

CORE ID	Depth ft.	Core Recovery ft.	Grain Size Analysis ASTM D4464M						Notes
		Plugs:	Grab						
Rcvd. 5/8/09									
CNB-CAD-1-S3/4	N/A	N/A	X						
CNB-CAD-1-S7	N/A	N/A	X						
CNB-CAD-1-S9	N/A	N/A	X						
CNB-CAD-1-S11	N/A	N/A	X						
CNB-CAD-1-S12	N/A	N/A	X						
TOTALS:	5 Jars		5						

Laboratory Test Program Notes

PTS Laboratories, Inc.

Calscience
PTS File No: 39393

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: N/A
PROJECT NO: 09-05-0488

Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
CNB-CAD-1-S3/4	N/A	Medium sand	0.529	0.00	0.00	64.42	33.69	1.44	0.45	1.89
CNB-CAD-1-S7	N/A	Medium sand	0.906	0.00	0.00	92.35	6.07	1.25	0.34	1.58
CNB-CAD-1-S9	N/A	Medium sand	0.567	0.00	0.00	65.66	30.42	3.18	0.74	3.92
CNB-CAD-1-S11	N/A	Fine sand	0.303	0.00	0.00	19.66	74.27	4.63	1.44	6.07
CNB-CAD-1-S12	N/A	Fine sand	0.086	0.00	0.00	0.00	61.80	33.84	4.37	38.20

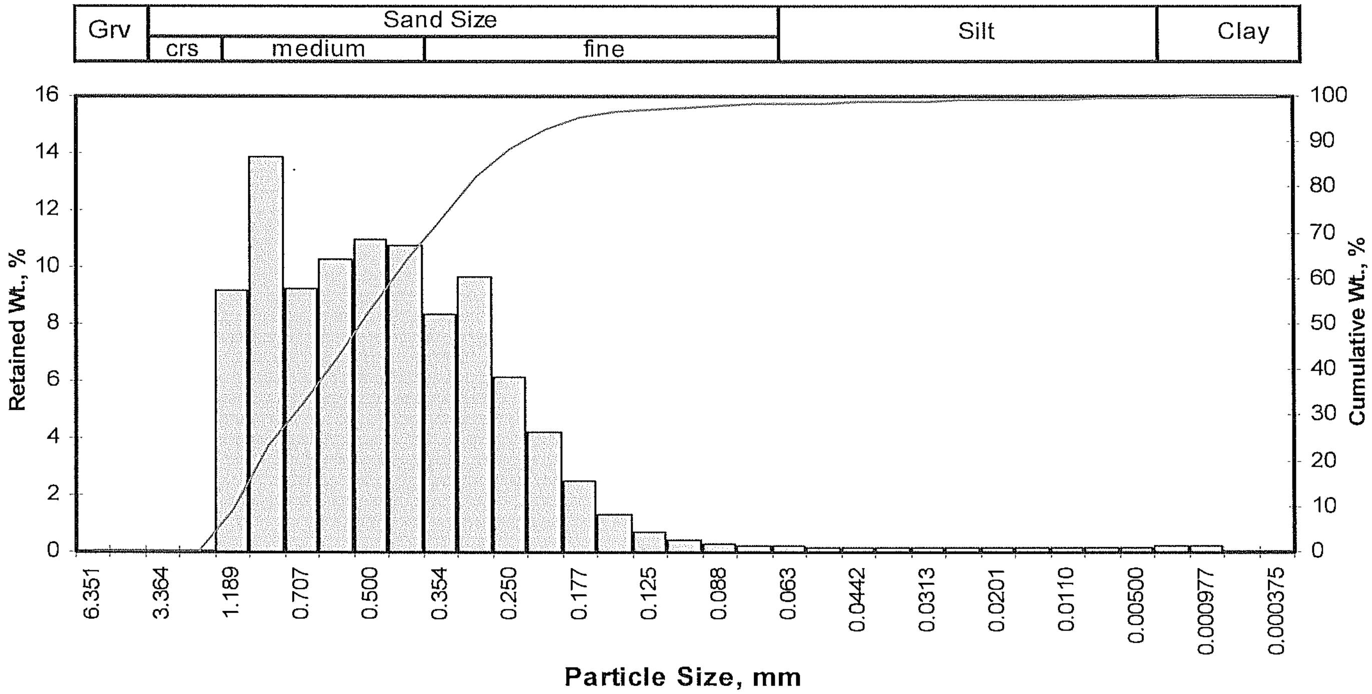
(1) Based on Mean from Trask

*Particles >2 mm screened off due to equipment restrictions.

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39393
Project:	N/A	**Sample ID:**	CNB-CAD-1-S3/4
Project No:	09-05-0488	**Depth, ft:**	N/A



Opening		Phi of	U.S.	Sample Weight,	Increment Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	9.20	9.19	9.19
0.0331	0.841	0.25	20	13.90	13.89	23.08
0.0278	0.707	0.50	25	9.27	9.26	32.35
0.0234	0.595	0.75	30	10.30	10.29	42.64
0.0197	0.500	1.00	35	11.00	10.99	53.63
0.0166	0.420	1.25	40	10.80	10.79	64.42
0.0139	0.354	1.50	45	8.33	8.32	72.75
0.0117	0.297	1.75	50	9.63	9.62	82.37
0.0098	0.250	2.00	60	6.15	6.15	88.52
0.0083	0.210	2.25	70	4.19	4.19	92.70
0.0070	0.177	2.50	80	2.49	2.49	95.19
0.0059	0.149	2.75	100	1.30	1.30	96.49
0.0049	0.125	3.00	120	0.70	0.70	97.19
0.0041	0.105	3.25	140	0.42	0.42	97.61
0.0035	0.088	3.50	170	0.28	0.28	97.89
0.0029	0.074	3.75	200	0.22	0.22	98.11
0.0025	0.063	4.00	230	0.19	0.19	98.30
0.0021	0.053	4.25	270	0.16	0.16	98.46
0.00174	0.0442	4.50	325	0.13	0.13	98.59
0.00146	0.0372	4.75	400	0.12	0.12	98.71
0.00123	0.0313	5.00	450	0.11	0.11	98.82
0.000986	0.0250	5.32	500	0.13	0.13	98.95
0.000790	0.0201	5.64	635	0.11	0.11	99.06
0.000615	0.0156	6.00		0.11	0.11	99.17
0.000435	0.0110	6.50		0.13	0.13	99.30
0.000308	0.00781	7.00		0.12	0.12	99.42
0.000197	0.00500	7.65		0.13	0.13	99.55
0.000077	0.00195	9.00		0.21	0.21	99.76
0.000038	0.000977	10.00		0.22	0.22	99.98
0.000019	0.000488	11.00		0.02	0.02	100.00
0.000015	0.000375	11.38		0.00	0.00	100.00
TOTALS				**100.10**	**100.00**	**100.00**

Cumulative Weight Percent greater than

Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.59	0.0593	1.507
10	-0.22	0.0459	1.166
16	0.00	0.0395	1.003
25	0.30	0.0319	0.811
40	0.69	0.0245	0.622
50	0.92	0.0208	0.529
60	1.15	0.0178	0.451
75	1.56	0.0134	0.340
84	1.82	0.0112	0.284
90	2.09	0.0093	0.235
95	2.48	0.0071	0.179

Measure	Trask	Inman	Folk-Ward
Median, phi	0.92	0.92	0.92
Median, in.	0.0208	0.0208	0.0208
Median, mm	0.529	0.529	0.529
Mean, phi	0.80	0.91	0.91
Mean, in.	0.0227	0.0210	0.0210
Mean, mm	0.575	0.534	0.532
Sorting	1.546	0.911	0.921
Skewness	0.991	-0.013	0.002
Kurtosis	0.254	0.687	1.002

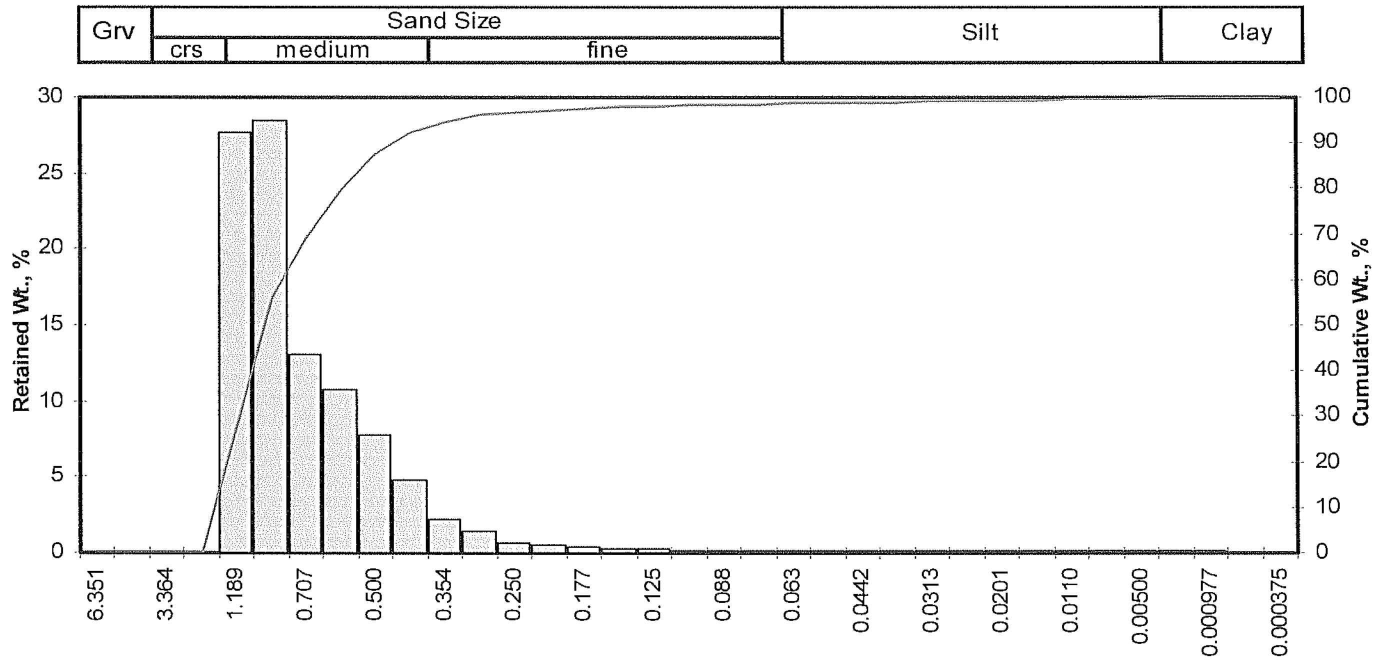
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	64.42
Fine Sand	200	33.69
Silt	>0.005 mm	1.44
Clay	<0.005 mm	0.45
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39393
Project:	N/A	**Sample ID:**	CNB-CAD-1-S7
Project No:	09-05-0488	**Depth, ft:**	N/A



Particle Size, mm

Opening		Phi of	U.S.	Sample	Increment	Cumulative
Inches	Millimeters	Screen	No.	Weight, grams	Weight, percent	Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	27.70	27.73	27.73
0.0331	0.841	0.25	20	28.40	28.43	56.16
0.0278	0.707	0.50	25	13.00	13.01	69.17
0.0234	0.595	0.75	30	10.70	10.71	79.88
0.0197	0.500	1.00	35	7.74	7.75	87.63
0.0166	0.420	1.25	40	4.72	4.72	92.35
0.0139	0.354	1.50	45	2.16	2.16	94.51
0.0117	0.297	1.75	50	1.45	1.45	95.96
0.0098	0.250	2.00	60	0.67	0.67	96.63
0.0083	0.210	2.25	70	0.48	0.48	97.12
0.0070	0.177	2.50	80	0.36	0.36	97.48
0.0059	0.149	2.75	100	0.26	0.26	97.74
0.0049	0.125	3.00	120	0.21	0.21	97.95
0.0041	0.105	3.25	140	0.18	0.18	98.13
0.0035	0.088	3.50	170	0.16	0.16	98.29
0.0029	0.074	3.75	200	0.13	0.13	98.42
0.0025	0.063	4.00	230	0.13	0.13	98.55
0.0021	0.053	4.25	270	0.13	0.13	98.68
0.00174	0.0442	4.50	325	0.11	0.11	98.79
0.00146	0.0372	4.75	400	0.10	0.10	98.89
0.00123	0.0313	5.00	450	0.10	0.10	98.98
0.000986	0.0250	5.32	500	0.12	0.12	99.10
0.000790	0.0201	5.64	635	0.11	0.11	99.21
0.000615	0.0156	6.00		0.10	0.10	99.31
0.000435	0.0110	6.50		0.12	0.12	99.43
0.000308	0.00781	7.00		0.11	0.11	99.54
0.000197	0.00500	7.65		0.12	0.12	99.66
0.000077	0.00195	9.00		0.17	0.17	99.83
0.000038	0.000977	10.00		0.15	0.15	99.98
0.000019	0.000488	11.00		0.02	0.02	100.00
0.000015	0.000375	11.38		0.00	0.00	100.00
TOTALS				**99.90**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.86	0.0717	1.821
10	-0.73	0.0653	1.658
16	-0.57	0.0583	1.482
25	-0.32	0.0493	1.252
40	-0.03	0.0403	1.024
50	0.14	0.0357	0.906
60	0.32	0.0315	0.799
75	0.64	0.0253	0.643
84	0.88	0.0213	0.542
90	1.13	0.0180	0.458
95	1.58	0.0131	0.334

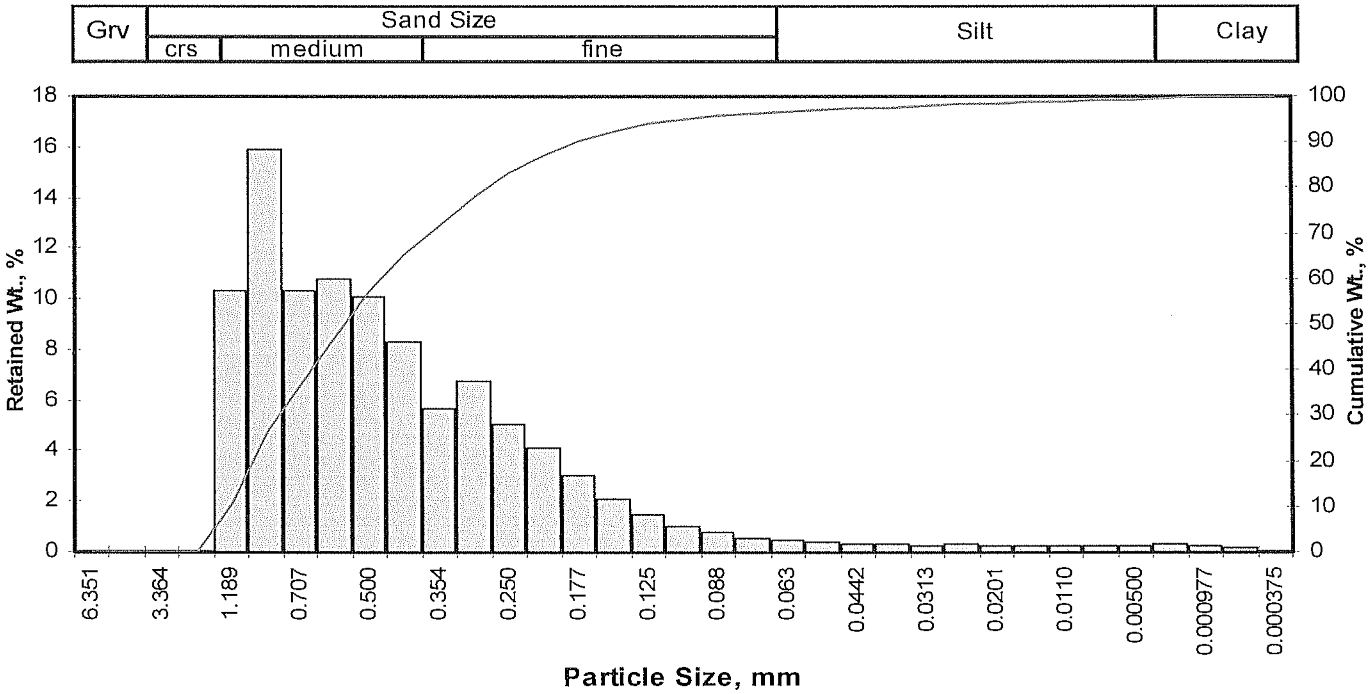
Measure	Trask	Inman	Folk-Ward
Median, phi	0.14	0.14	0.14
Median, in.	0.0357	0.0357	0.0357
Median, mm	0.906	0.906	0.906
Mean, phi	0.08	0.16	0.15
Mean, in.	0.0373	0.0353	0.0354
Mean, mm	0.948	0.896	0.900
Sorting	1.395	0.725	0.734
Skewness	0.990	0.022	0.100
Kurtosis	0.253	0.689	1.045
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	92.35
Fine Sand	200	6.07
Silt	>0.005 mm	1.25
Clay	<0.005 mm	0.34
	Total	**100**

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39393
Project:	N/A	**Sample ID:**	CNB-CAD-1-S9
Project No:	09-05-0488	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	10.30	10.29	10.29
0.0331	0.841	0.25	20	15.90	15.88	26.17
0.0278	0.707	0.50	25	10.30	10.29	36.46
0.0234	0.595	0.75	30	10.80	10.79	47.25
0.0197	0.500	1.00	35	10.10	10.09	57.34
0.0166	0.420	1.25	40	8.33	8.32	65.66
0.0139	0.354	1.50	45	5.69	5.68	71.35
0.0117	0.297	1.75	50	6.72	6.71	78.06
0.0098	0.250	2.00	60	5.03	5.02	83.09
0.0083	0.210	2.25	70	4.10	4.10	87.18
0.0070	0.177	2.50	80	3.01	3.01	90.19
0.0059	0.149	2.75	100	2.10	2.10	92.29
0.0049	0.125	3.00	120	1.47	1.47	93.76
0.0041	0.105	3.25	140	1.03	1.03	94.79
0.0035	0.088	3.50	170	0.74	0.74	95.52
0.0029	0.074	3.75	200	0.56	0.56	96.08
0.0025	0.063	4.00	230	0.44	0.44	96.52
0.0021	0.053	4.25	270	0.38	0.38	96.90
0.00174	0.0442	4.50	325	0.33	0.33	97.23
0.00146	0.0372	4.75	400	0.29	0.29	97.52
0.00123	0.0313	5.00	450	0.26	0.26	97.78
0.000986	0.0250	5.32	500	0.29	0.29	98.07
0.000790	0.0201	5.64	635	0.25	0.25	98.32
0.000615	0.0156	6.00		0.23	0.23	98.55
0.000435	0.0110	6.50		0.26	0.26	98.81
0.000308	0.00781	7.00		0.22	0.22	99.03
0.000197	0.00500	7.65		0.23	0.23	99.26
0.000077	0.00195	9.00		0.34	0.34	99.60
0.000038	0.000977	10.00		0.26	0.26	99.86
0.000019	0.000488	11.00		0.14	0.14	100.00
0.000015	0.000375	11.38		0.00	0.00	100.00
TOTALS				**100.10**	**100.00**	**100.00**

Cumulative Weight Percent greater than

Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.64	0.0612	1.554
10	-0.27	0.0475	1.207
16	-0.07	0.0413	1.050
25	0.21	0.0340	0.863
40	0.58	0.0263	0.668
50	0.82	0.0223	0.567
60	1.08	0.0186	0.473
75	1.64	0.0127	0.322
84	2.06	0.0095	0.241
90	2.48	0.0070	0.179
95	3.32	0.0039	0.100

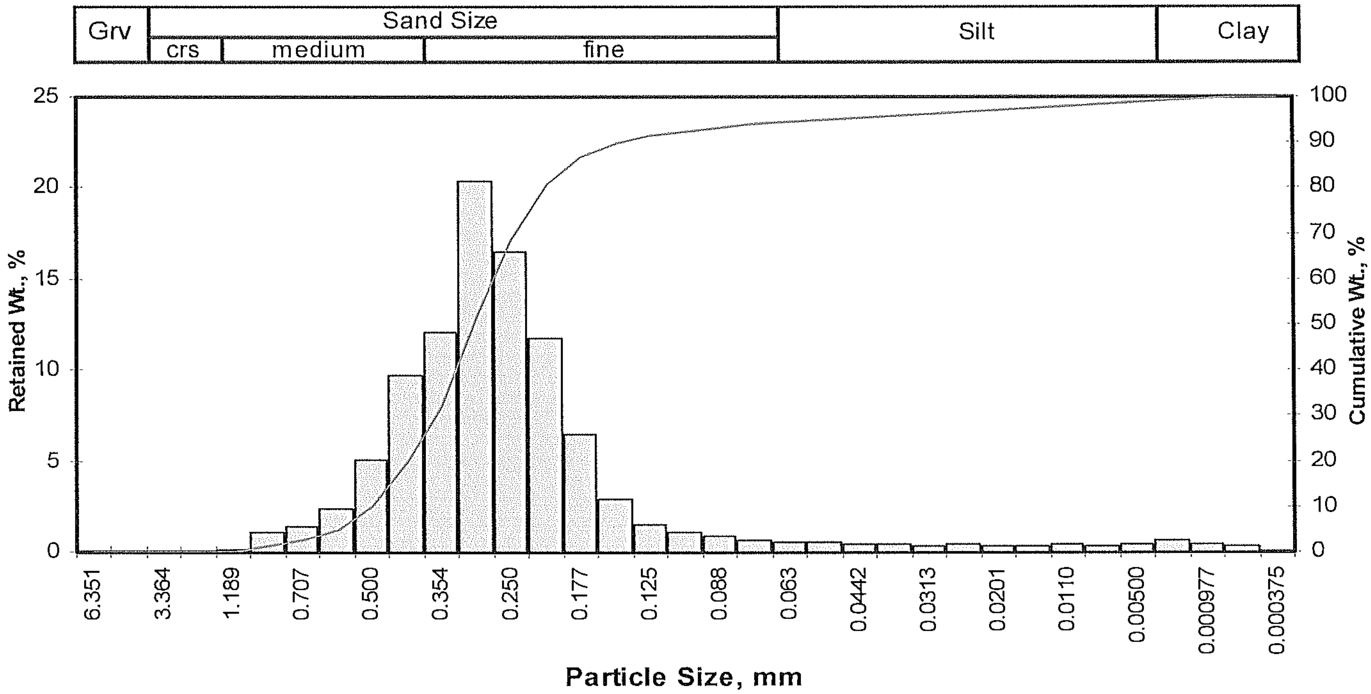
Measure	Trask	Inman	Folk-Ward
Median, phi	0.82	0.82	0.82
Median, in.	0.0223	0.0223	0.0223
Median, mm	0.567	0.567	0.567
Mean, phi	0.76	0.99	0.93
Mean, in.	0.0233	0.0198	0.0206
Mean, mm	0.592	0.503	0.523
Sorting	1.637	1.063	1.131
Skewness	0.929	0.164	0.215
Kurtosis	0.263	0.862	1.140
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	65.66
Fine Sand	200	30.42
Silt	>0.005 mm	3.18
Clay	<0.005 mm	0.74
	Total	**100**

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Calscience	**PTS File No:**	39393
Project:	N/A	**Sample ID:**	CNB-CAD-1-S11
Project No:	09-05-0488	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.10	0.10	0.10
0.0331	0.841	0.25	20	1.13	1.13	1.23
0.0278	0.707	0.50	25	1.35	1.35	2.58
0.0234	0.595	0.75	30	2.34	2.34	4.92
0.0197	0.500	1.00	35	5.07	5.07	9.98
0.0166	0.420	1.25	40	9.69	9.68	19.66
0.0139	0.354	1.50	45	12.10	12.09	31.75
0.0117	0.297	1.75	50	20.40	20.38	52.13
0.0098	0.250	2.00	60	16.50	16.48	68.62
0.0083	0.210	2.25	70	11.80	11.79	80.41
0.0070	0.177	2.50	80	6.45	6.44	86.85
0.0059	0.149	2.75	100	2.91	2.91	89.76
0.0049	0.125	3.00	120	1.55	1.55	91.31
0.0041	0.105	3.25	140	1.09	1.09	92.39
0.0035	0.088	3.50	170	0.86	0.86	93.25
0.0029	0.074	3.75	200	0.68	0.68	93.93
0.0025	0.063	4.00	230	0.57	0.57	94.50
0.0021	0.053	4.25	270	0.50	0.50	95.00
0.00174	0.0442	4.50	325	0.45	0.45	95.45
0.00146	0.0372	4.75	400	0.40	0.40	95.85
0.00123	0.0313	5.00	450	0.36	0.36	96.21
0.000986	0.0250	5.32	500	0.41	0.41	96.62
0.000790	0.0201	5.64	635	0.37	0.37	96.99
0.000615	0.0156	6.00		0.36	0.36	97.35
0.000435	0.0110	6.50		0.42	0.42	97.77
0.000308	0.00781	7.00		0.37	0.37	98.14
0.000197	0.00500	7.65		0.42	0.42	98.56
0.000077	0.00195	9.00		0.68	0.68	99.24
0.000038	0.000977	10.00		0.43	0.43	99.67
0.000019	0.000488	11.00		0.30	0.30	99.97
0.000015	0.000375	11.38		0.03	0.03	100.00
TOTALS				**100.10**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.75	0.0233	0.593
10	1.00	0.0197	0.500
16	1.16	0.0177	0.449
25	1.36	0.0153	0.389
40	1.60	0.0130	0.330
50	1.72	0.0119	0.303
60	1.87	0.0108	0.274
75	2.14	0.0090	0.228
84	2.39	0.0075	0.191
90	2.79	0.0057	0.145
95	4.25	0.0021	0.053

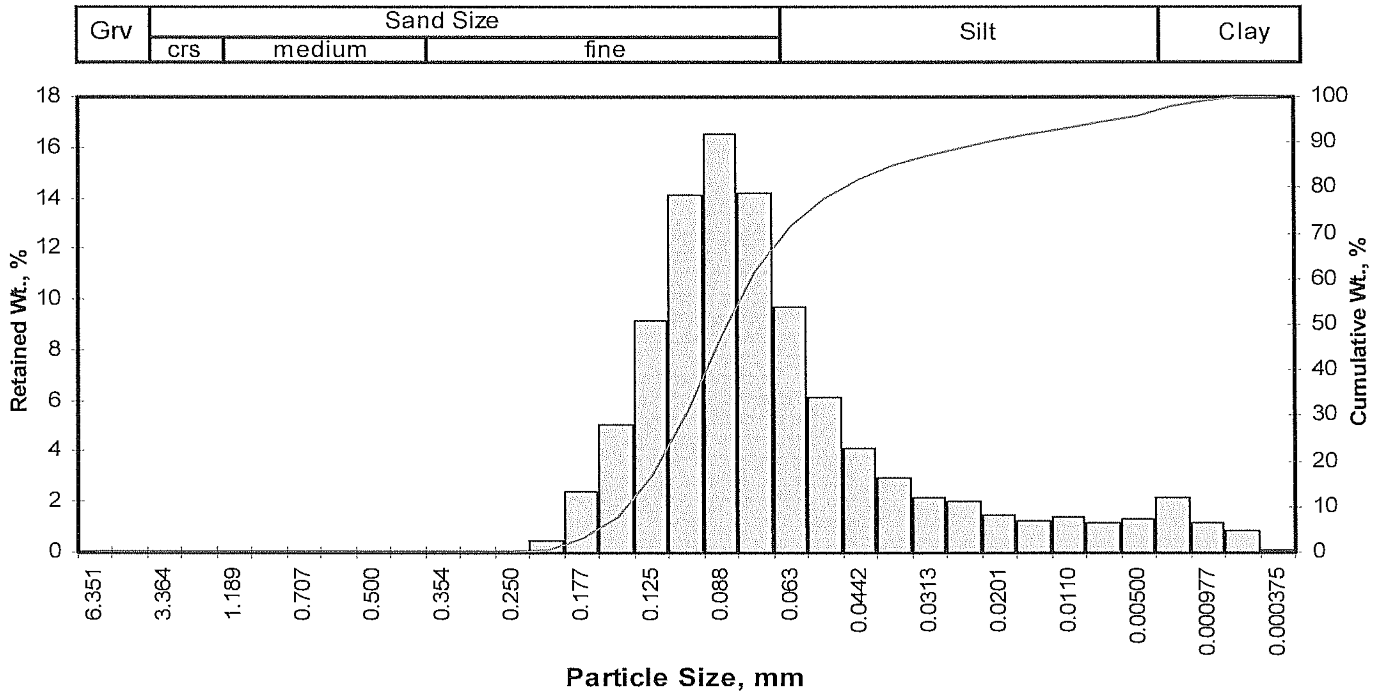
Measure	Trask	Inman	Folk-Ward
Median, phi	1.72	1.72	1.72
Median, in.	0.0119	0.0119	0.0119
Median, mm	0.303	0.303	0.303
Mean, phi	1.70	1.77	1.76
Mean, in.	0.0121	0.0115	0.0117
Mean, mm	0.309	0.293	0.296
Sorting	1.308	0.617	0.838
Skewness	0.983	0.079	0.262
Kurtosis	0.228	1.832	1.848

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	19.66
Fine Sand	200	74.27
Silt	>0.005 mm	4.63
Clay	<0.005 mm	1.44
	Total	**100**

PTS Laboratories, Inc. — **Particle Size Analysis - ASTM D4464M**

Client:	Calscience	**PTS File No:**	39393
Project:	N/A	**Sample ID:**	CNB-CAD-1-S12
Project No:	09-05-0488	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.01	0.01	0.01
0.0083	0.210	2.25	70	0.46	0.46	0.47
0.0070	0.177	2.50	80	2.38	2.38	2.85
0.0059	0.149	2.75	100	5.04	5.04	7.88
0.0049	0.125	3.00	120	9.13	9.13	17.01
0.0041	0.105	3.25	140	14.10	14.10	31.11
0.0035	0.088	3.50	170	16.50	16.49	47.60
0.0029	0.074	3.75	200	14.20	14.20	61.80
0.0025	0.063	4.00	230	9.74	9.74	71.53
0.0021	0.053	4.25	270	6.16	6.16	77.69
0.00174	0.0442	4.50	325	4.12	4.12	81.81
0.00146	0.0372	4.75	400	2.96	2.96	84.77
0.00123	0.0313	5.00	450	2.17	2.17	86.94
0.000986	0.0250	5.32	500	2.02	2.02	88.96
0.000790	0.0201	5.64	635	1.50	1.50	90.46
0.000615	0.0156	6.00		1.27	1.27	91.73
0.000435	0.0110	6.50		1.37	1.37	93.10
0.000308	0.00781	7.00		1.20	1.20	94.29
0.000197	0.00500	7.65		1.34	1.34	95.63
0.000077	0.00195	9.00		2.21	2.21	97.84
0.000038	0.000977	10.00		1.19	1.19	99.03
0.000019	0.000488	11.00		0.87	0.87	99.90
0.000015	0.000375	11.38		0.10	0.10	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than

Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.61	0.0065	0.164
10	2.81	0.0056	0.143
16	2.97	0.0050	0.127
25	3.14	0.0045	0.113
40	3.38	0.0038	0.096
50	3.54	0.0034	0.086
60	3.72	0.0030	0.076
75	4.14	0.0022	0.057
84	4.69	0.0015	0.039
90	5.54	0.0008	0.021
95	7.34	0.0002	0.006

Measure	Trask	Inman	Folk-Ward
Median, phi	3.54	3.54	3.54
Median, in.	0.0034	0.0034	0.0034
Median, mm	0.086	0.086	0.086
Mean, phi	3.56	3.83	3.73
Mean, in.	0.0033	0.0028	0.0030
Mean, mm	0.085	0.070	0.075
Sorting	1.414	0.856	1.145
Skewness	0.934	0.334	0.470
Kurtosis	0.233	1.763	1.941
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	61.80
Silt	>0.005 mm	33.84
Clay	<0.005 mm	4.37
	Total	100

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

TO: PTS Laboratories

CHAIN OF CUSTODY RECORD

DATE: 05/07/09
PAGE: 1 OF 1

LABORATORY CLIENT: Calscience Environmental Laboratories, Inc.	CLIENT PROJECT NAME / NUMBER: 09-05-0488
ADDRESS: 7440 Lincoln Way	P.O. NO.: 09-05-0488
CITY: Garden Grove, CA 92841-1427	PROJECT CONTACT: Danielle Gonsman
TEL: (714) 895-5494	E-MAIL: dgonsman@calscience.com
SAMPLER(S): (PRINT)	QUOTE NO.:
LAB USE ONLY: 39393	

TURNAROUND TIME: ___ SAME DAY ___ 24 HR ___ 48HR ___ 72 HR ___ 5 DAYS _X_ NORMAL

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS

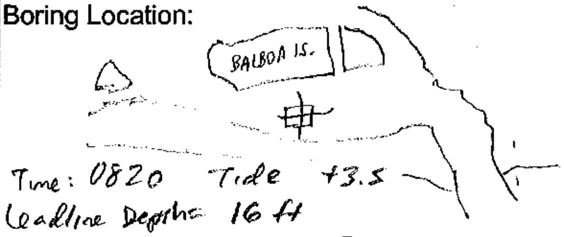
REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	GRAIN SIZE, ASTM D4464
✓	CNB-CAD-1-S3/4	05/06/09		SED	1	X
✓	CNB-CAD-1-S7	05/06/09		SED	1	X
✓	CNB-CAD-1-S9	05/06/09		SED	1	X
✓	CNB-CAD-1-S11	05/06/09		SED	1	X
✓	CNB-CAD-1-S12	05/06/09		SED	1	X

Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
[signature] (CALSCIENCE)	[signature] PTS Labs	5/18/09 pm ~~05/07/09~~	1245
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:

Soil Boring Processing Log

ANCHOR QEA

Boring Location:	Boring CNB-CAD-3 Date 5-7-09 Sheet 1 of 3
	Job Newport Harbor CAD Job No.
Time: 0820 Tide +3.5	Logged By Whelan/Stoltenhan Weather
Leadline Depth: 16 ft	Drilled By Gregg Drilling
Elevation: ~12.5 ft MLLW. Datum: MLLW	Drill Type/ Method
Obs. Well Install. Yes No	Sampling Method
	Bottom of Boring ATD Water Level Depth
	33°36.0914' N 117°53.5559' W. 1677382.82 N 6594375.39 E

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	DEPTH To	SAMPLE Type	SAMPLE Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
				0.5'	2'	ARCH (2 jars)	S-1A / S-1B	1–2	WOR ↓	Very soft Dark grey Clayey SILT (8") over Dark grey silty SAND (4")	S-1A/1B	
			0835	~~3~~ 3.5'	~~6.5~~ 4.5'	ARCH.	S-2	(9)	2, 4, 5	Dark grey, sl. silty medium SAND with some shell fragments	S-2	
				5.5	7'	COMBINE S-3 + S-4 FOR CHEM	S3	(14)	4, 6, 8	Med dense, brown, C-M SAND w/shell frags.	S-3 + S-4	
				7.5	9'		S-4	(10)	3, 4, 6	↓ (same)		
											START COMPOSITE SAMPLE ⇓	
				12.5	14	ARCH.	S-5	(55)	14, 25, 30	Dense to very dense, brown, med-coarse SAND with trace gravel & shell fragments.		
				17.5	19'	ARCH.	S-6	(70)	22, 31, 39	Very dense, brownish-grey, sl.silty fine SAND.		

Depth scale: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

4
6
8

20
37
40

28 - 6 22 16 d = 6' [4-5' 16 20 15 20 3 ~~18~~ 38' 18 18

Soil Boring Processing Log

ANCHOR QEA

Boring Location:	Boring CNB-CAD-3 Date 5-7-09 Sheet 2 of 3
	Job ___ Job No. ___
	Logged By ___ Weather ___
	Drilled By ___
	Drill Type/ Method ___
	Sampling Method
Elevation: Datum:	Bottom of Boring ___ ATD Water Level Depth
Obs. Well Install. Yes No	

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	To	SAMPLE Type	Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
				22.5	24	CHEM	S-7	23–24 (77)	20 / 37 / 40	Very dense, greyish brown, sl. silty fine SAND		
			0935	27.5	29	ARCH	S-8	28–29 (81)	16 / 40 / 41	same, with thin lens of shell hash.		
				32.5	34	ARCH.	S-9	33–34	13 / 38 / 54	Very dense, greyish brown fine SAND.		
				37.5	39	ARCH.	S-10	38–39 (50/5")	26 / 64 / 65	Very dense, grey, fine SAND.		

Depth scale: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Margin notes: 3' 20 20 10 } 53; 5' stickup 16' depth 21'; 32; 23/50/72

16/40/41 26/64/65

Soil Boring Processing Log

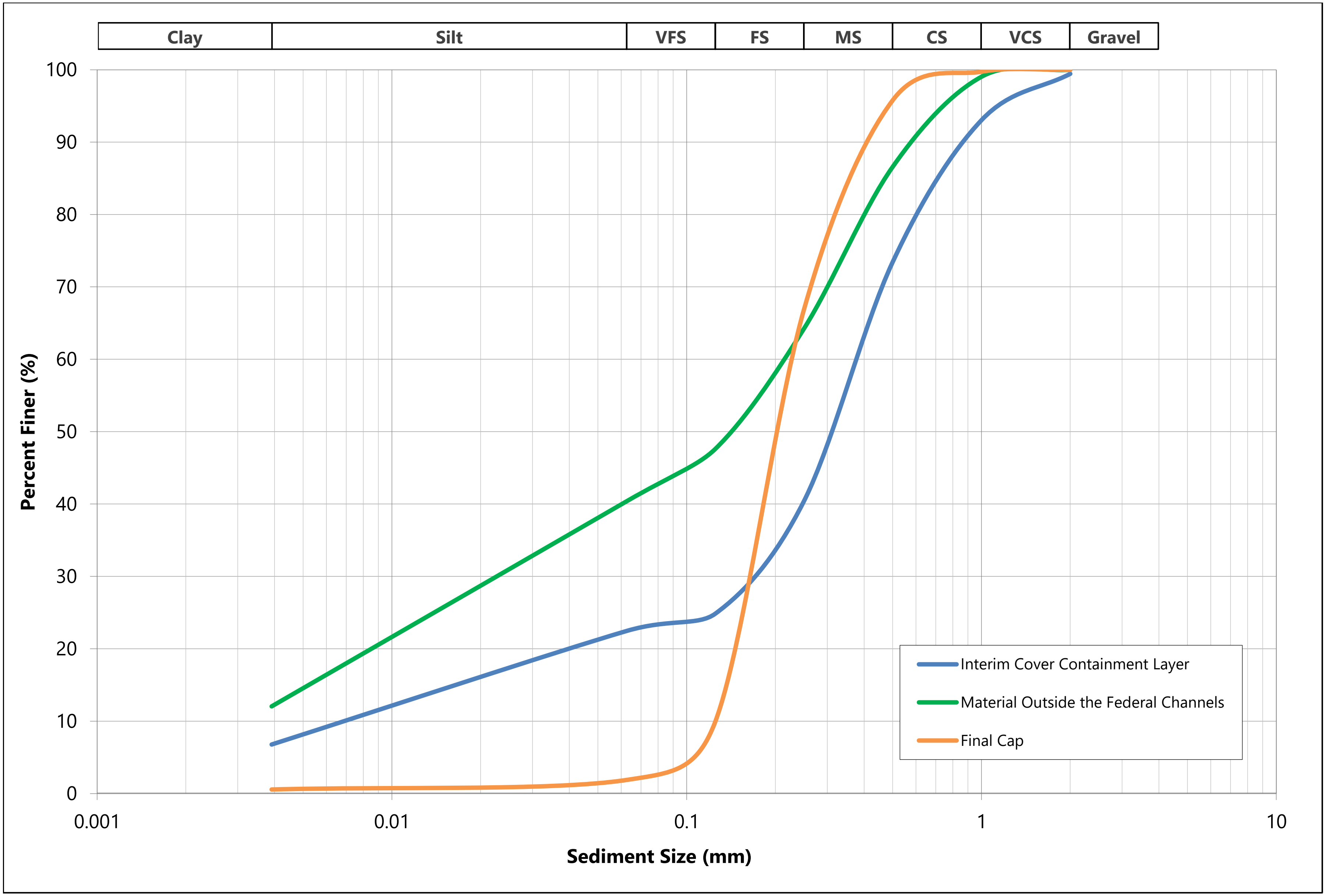
ANCHOR QEA

Boring Location:	Boring CNB-CAD-3 Date 5-7-09 Sheet 3 of 3
	Job ______ Job No. ______
	Logged By ______ Weather ______
	Drilled By ______
	Drill Type/ Method ______
	Sampling Method
Elevation: Datum:	Bottom of Boring ______ ATD Water Level Depth
Obs. Well Install. Yes No	

SIZE (%) G Max.	S Range	F Att. Limits	Time	DEPTH From	DEPTH To	SAMPLE Type	SAMPLE Number	SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
		TIDE						40				
								41				
								42				
		+3.5'	1015	42.5	44	CHEM	S-11	43 (50/4) 44	29 72 82	V. dense grey fine SAND, Trace shell frags		
								45				
								46				
								47			Grading finer & siltier with depth	
				47.5	49	ARCH	S-12	48 (72) 49	16 33 39	V. dense grey fine SAND		
								50				
								51				Rod check
								52				25 25 20 3 — 73
		+3.3'	1040	52.5	54	ARCH	S-13	53 (67) 54	15 31 36	V. dense, grey, sl. silty fine SAND Trace shell frags		73-21 =52
								55				
								56		END COMPOSITE	SAMPLE.	
								57				
				57.5	59	ARCH	S-14	58 (59) 59	10 23 36	V. dense grey silty fine SAND		
								60		END.		

5 check
16
21
✓

Figures



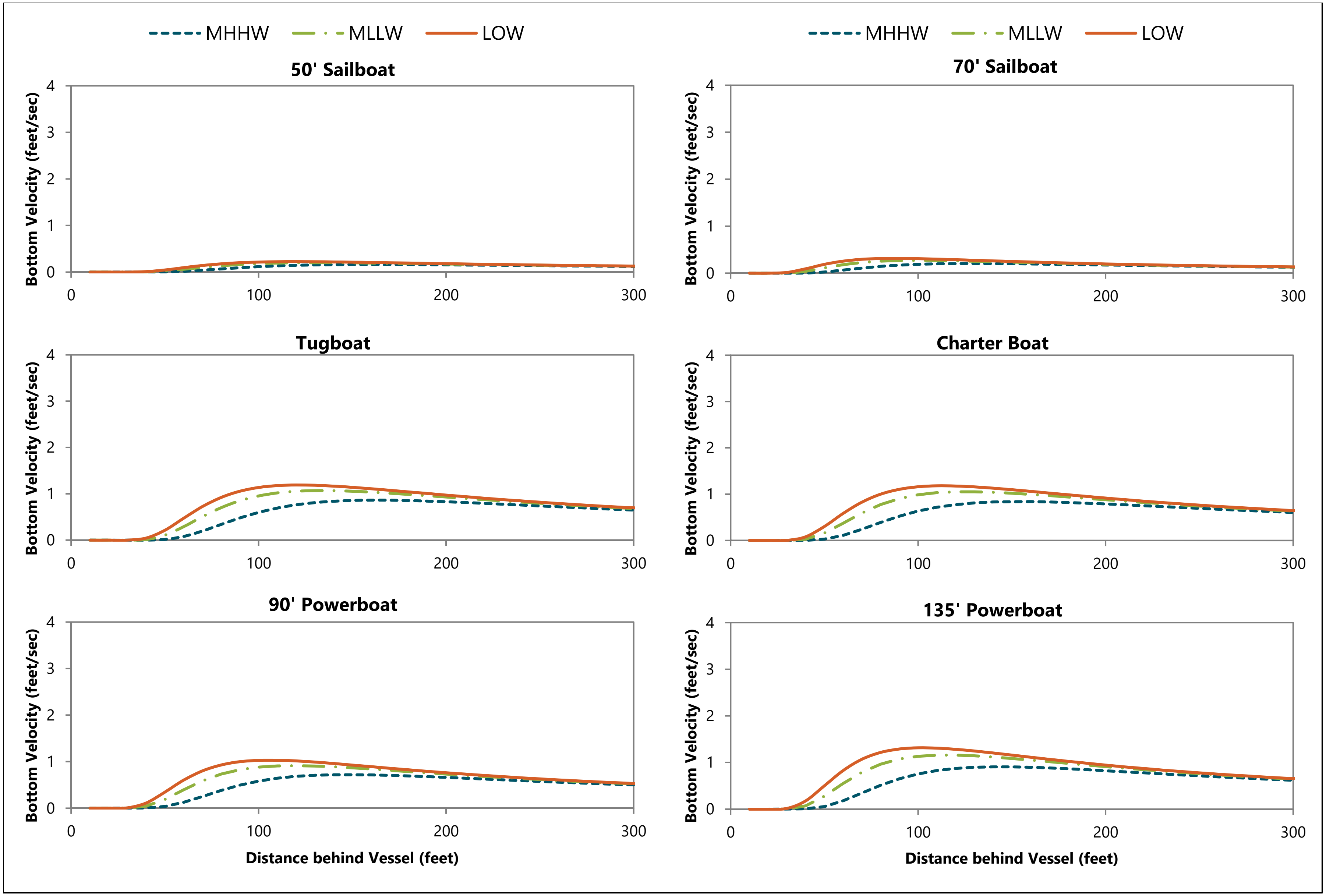
ANCHOR QEA

Figure E-1

CAD Facility Material Sediment Composition

Appendix E Vessel Scour Analysis

Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay



NOTE: Elevation at -30 feet MLLW

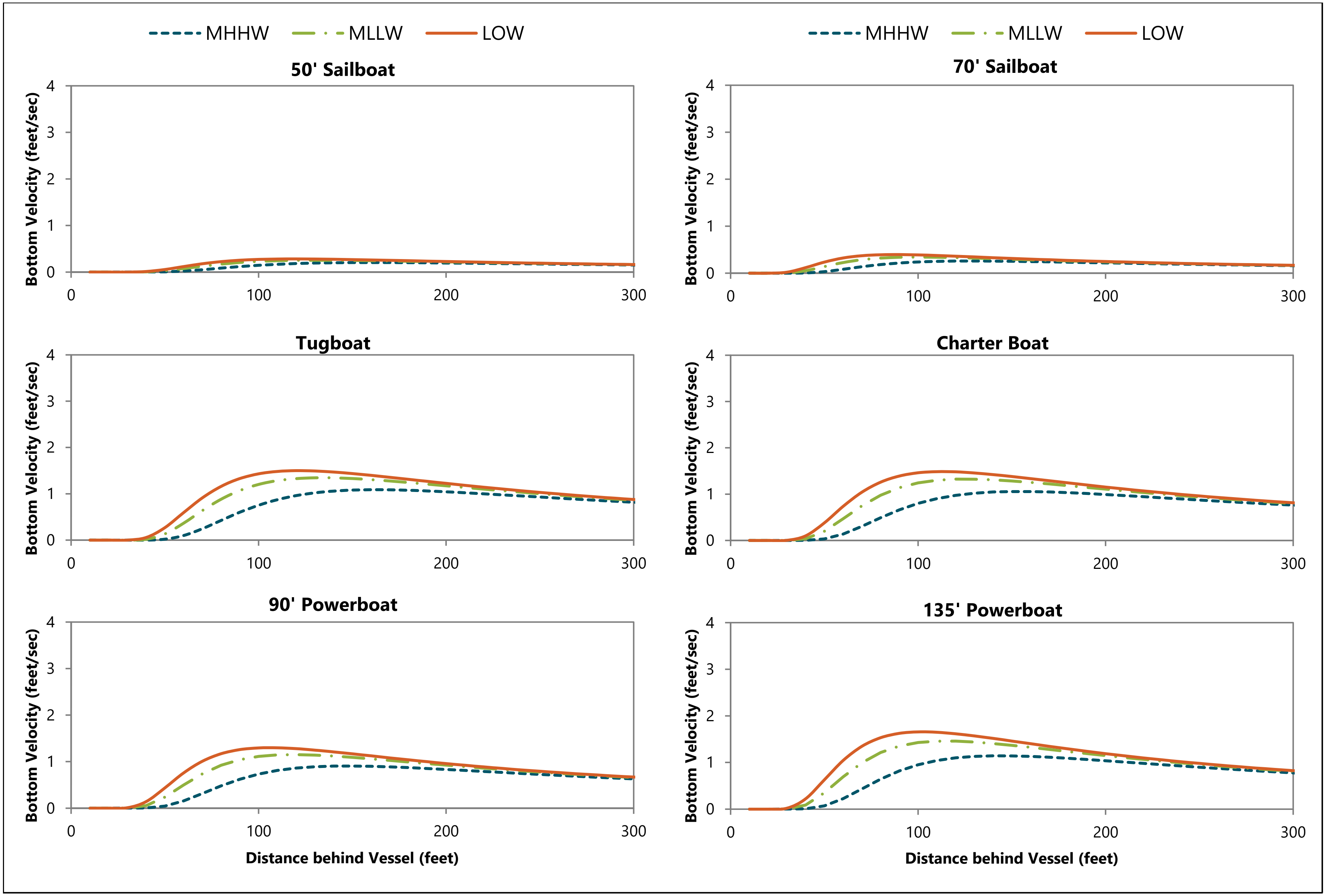
ANCHOR QEA

Figure E-2

Propeller Wash Velocities at Interim Cover Containment Layer Surface for 25% Vessel Power

Appendix E Vessel Scour Analysis

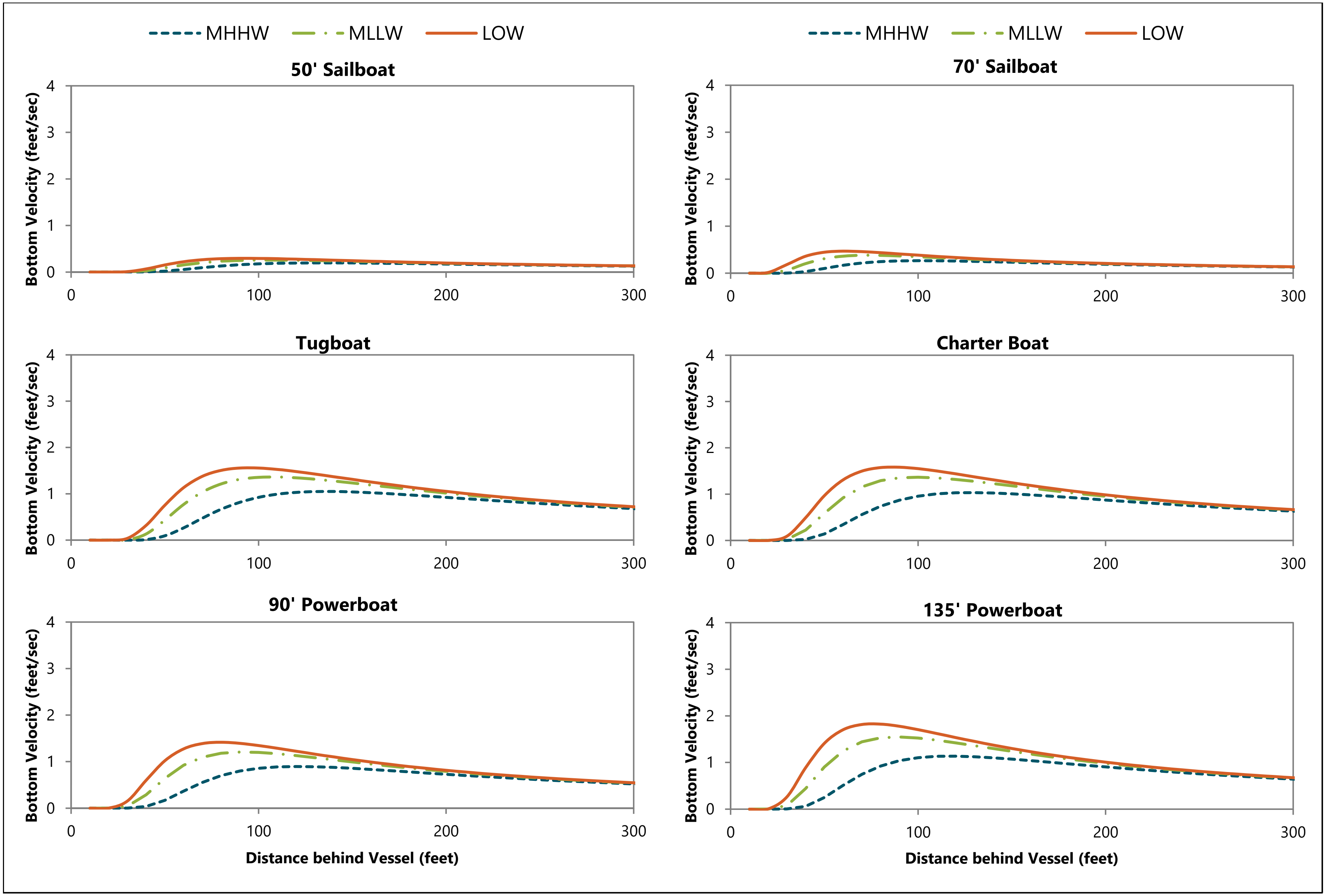
Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay



NOTE: Elevation at -30 feet MLLW

Figure E-3

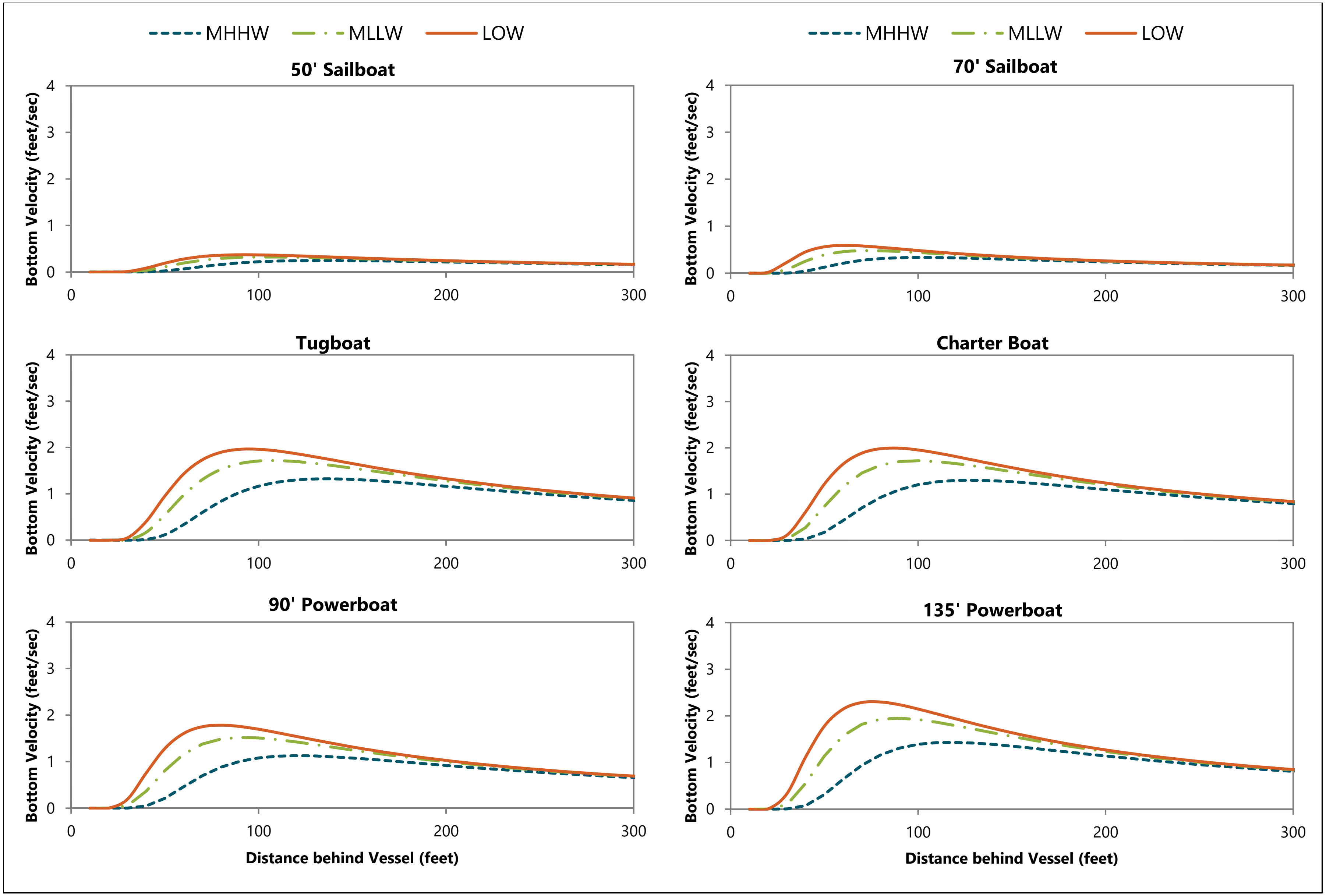
Propeller Wash Velocities at Interim Cover Containment Layer Surface for 50% Vessel Power



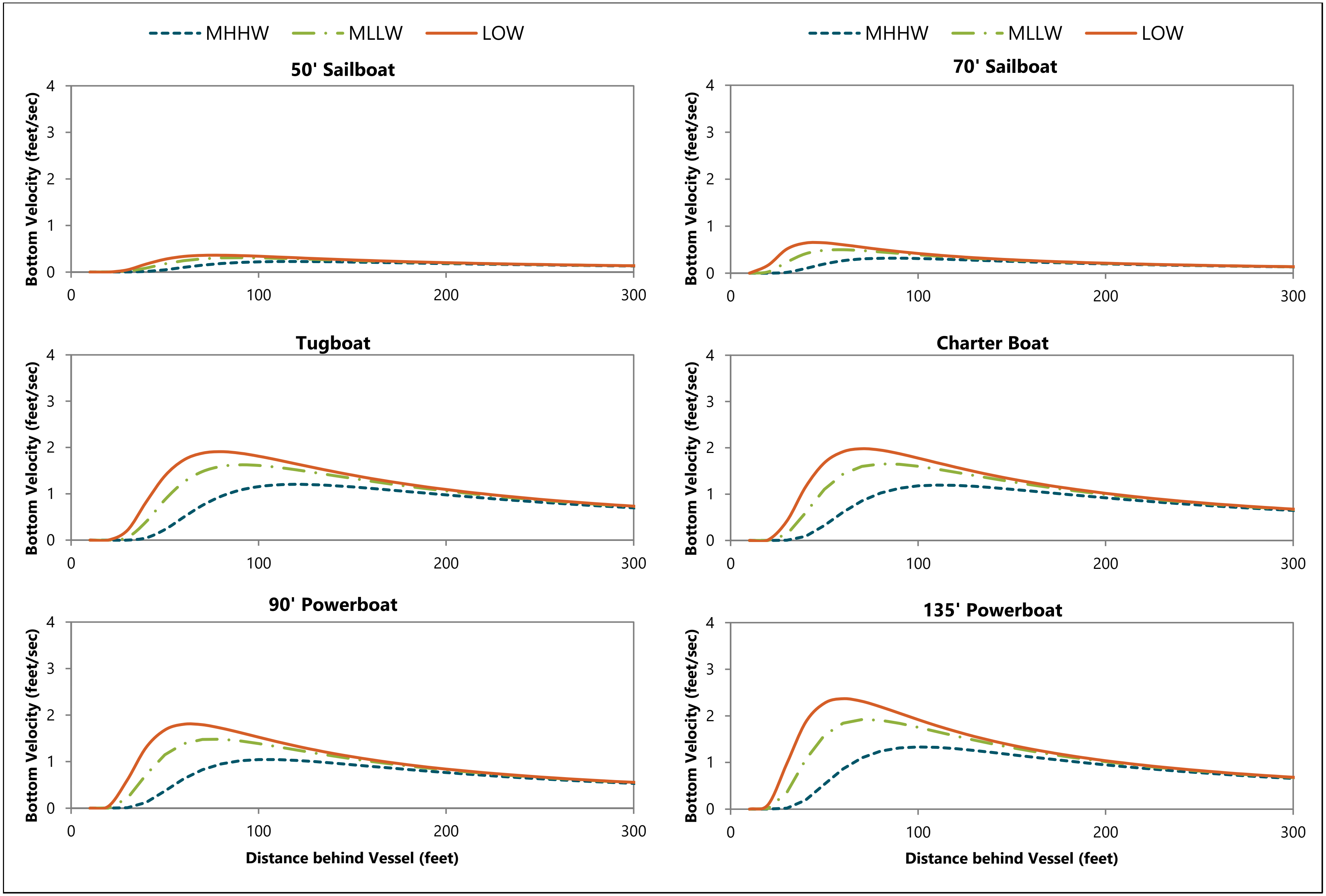
NOTE: Elevation at -25 feet MLLW

Figure E-4

Propeller Wash Velocities at Material Outside the Federal Channels Surface for 25% Vessel Power



NOTE: Elevation at -25 feet MLLW

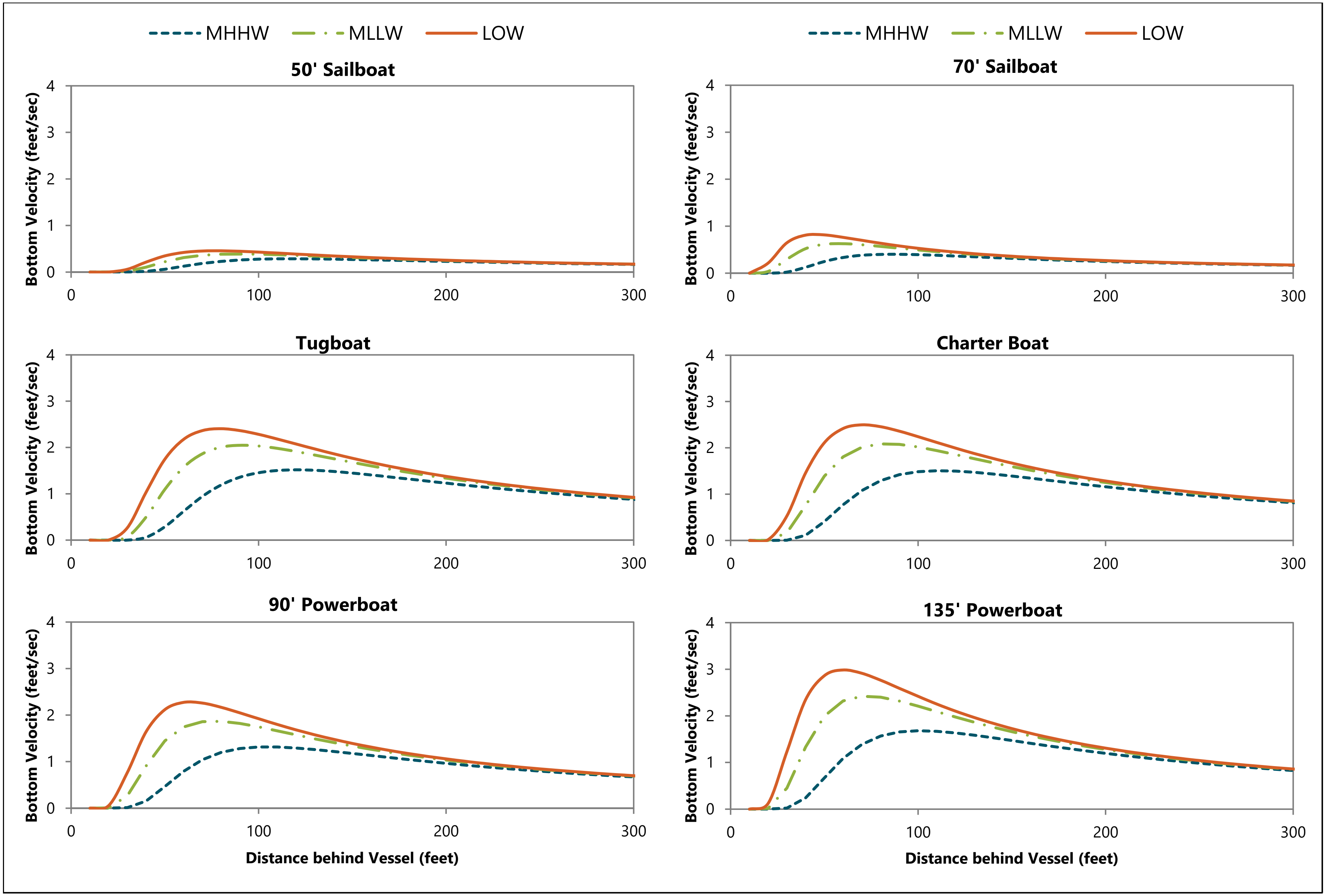


NOTE: Elevation at -22 feet MLLW

ANCHOR QEA

Figure E-6

Propeller Wash Velocities at Final Cap Surface for 25% Vessel Power



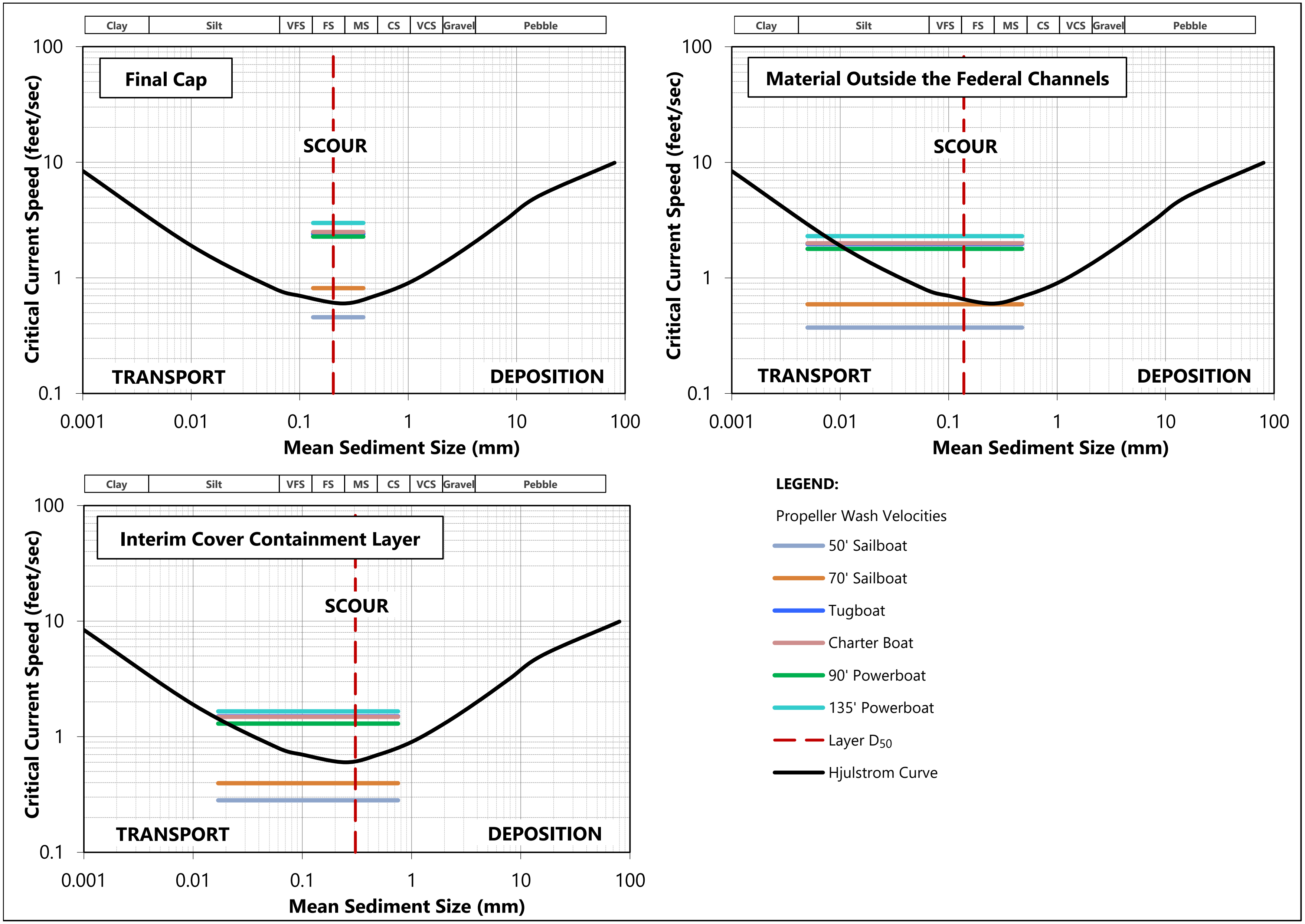
NOTE: Elevation at -22 feet MLLW

Figure E-7

Propeller Wash Velocities at Final Cap Surface for 50% Vessel Power

Appendix E Vessel Scour Analysis

Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay



NOTE: Propeller wash velocities shown for 50% vessel power at LOW

Figure E-8
Hjulstrom Curve for Proposed CAD Facility Layers

Appendix E Vessel Scour Analysis
Draft Basis of Design Report Sediment Dredging and Confined Aquatic Disposal, Lower Newport Bay

Appendix F
Geotechnical Investigations

Appendix F
Geotechnical Investigations

Attachment F-1
Geotechnical Investigation by Diaz Yourman & Associates

DIAZ • YOURMAN
& ASSOCIATES
Geotechnical Services

A Report Prepared for:

Bay Island Club, Inc.
C/O Moffatt & Nichol
3780 Kilroy Airport Way, Suite 600
Long Beach, CA 90806

GEOTECHNICAL INVESTIGATION
BAY ISLAND SEA WALL AND BRIDGE
NEWPORT BEACH, CALIFORNIA

Project No. 2005-041

by

Jusam Lee
Civil Engineer 67736

REGISTERED PROFESSIONAL ENGINEER
JUSAM LEE
No. C 67736
Exp. 6/30/07
CIVIL
STATE OF CALIFORNIA

Gerald M. Diaz
Geotechnical Engineer 269

REGISTERED PROFESSIONAL ENGINEER
GERALD M. DIAZ
269
EXP 12-31-07
GEOTECHNICAL
STATE OF CALIFORNIA

Diaz•Yourman & Associates
1616 East 17th Street
Santa Ana, CA 92705-8509
(714) 245-2920

January 15, 2007

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation performed by Diaz•Yourman & Associates (DYA) for the proposed Bay Island Sea Wall and Bridge rehabilitation project in Newport Beach, California. Moffat & Nichol Engineers authorized this work on September 20, 2005. Our findings, conclusions, and recommendations were presented and discussed as they were developed. A draft report was submitted January 17, 2006; final comments were received in January 2007.

1.1 PROJECT DESCRIPTION

Bay Island is located at the Balboa peninsula in Newport Beach, California, as shown on the Vicinity Map, Figure 1. An Aerial view of the island is shown on the Site Plan, Figure 2.

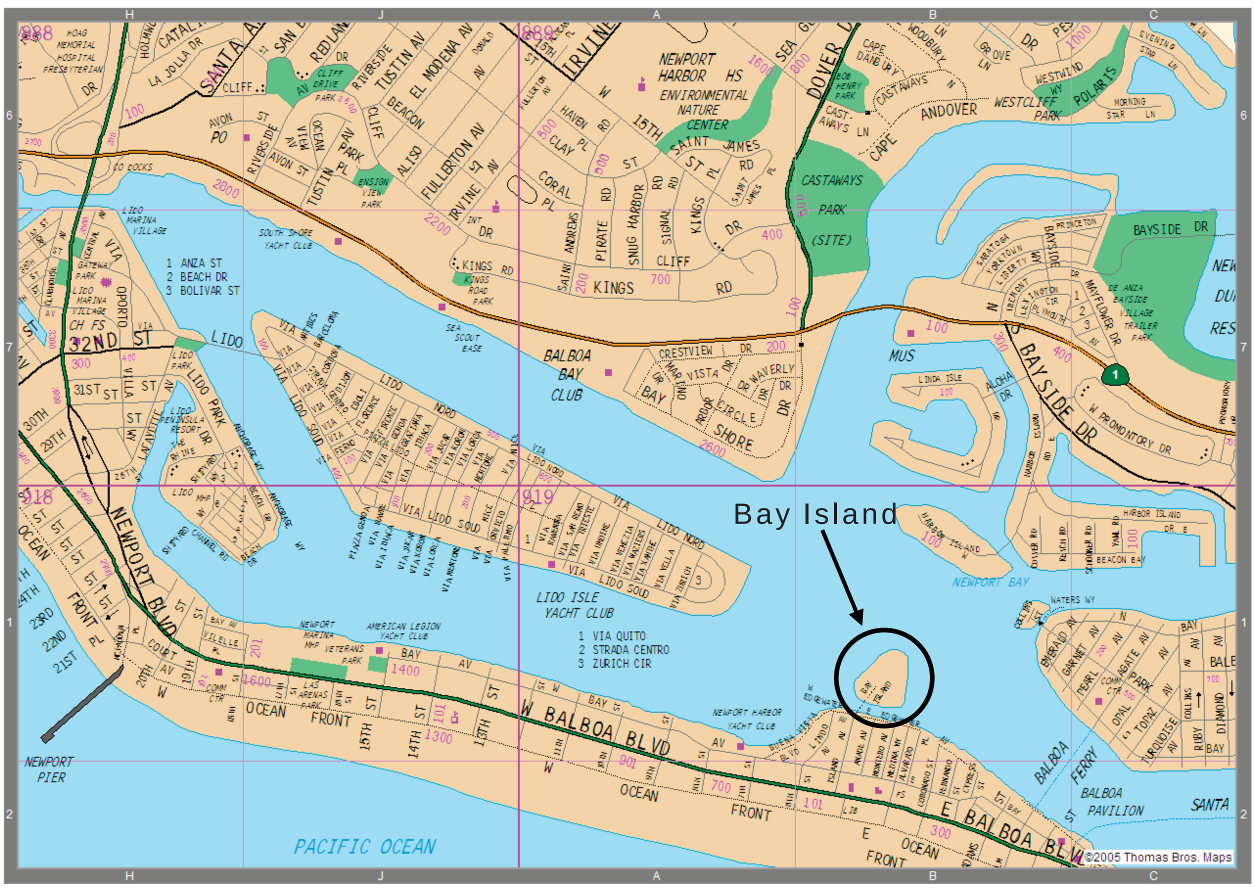


Figure 1 - VICINITY MAP

K:\datafls\PROJECTS\2005\2005-041\cad\rev-site plan.dwg

Figure 2 - SITE PLAN

The island is surrounded by concrete and steel sheet pile bulkheads, except where sand beaches are present on the east and west sides. Access is provided by a 140-foot-long reinforced concrete pedestrian bridge. The bridge has multiple pre-cast concrete deck panels simply supported on driven precast concrete piles with cast in place pile caps. An initial condition assessment was conducted by Cash & Associates in June 2004 for the existing infrastructure including utility line, bridge, and sea wall. Based on the findings of that report, additional studies are being undertaken. We understand that the proposed project will probably consist of the following features.

- Replacing the existing pedestrian bridge to increase service load and capability (to allow emergency and maintenance vehicle access) and meet current seismic standards.
- Improving, renovating, and/or replacing approximately 1,500 feet of existing sheet pile bulkhead seawall, because of corrosion and, in one area, significant rotation toward water side.

The proposed grades will be near existing grades.

1.2 PURPOSE AND SCOPE

The purpose of DYA's investigation was to provide geotechnical input for the design of the proposed project. The scope of our services consisted of the following tasks:

- Reviewing data.
- Conducting a field investigation.
- Performing laboratory tests on selected samples.
- Performing engineering analyses to develop conclusions and recommendations regarding the following:
  - Site conditions
  - Geologic and seismic hazards
  - Bridge foundation type and design criteria
  - Lateral earth pressures (active and passive) for seawall bulkhead design
  - Resistance to lateral loads
  - Soil corrosion potential
- Preparing this report.

2.0 DATA REVIEW, FIELD INVESTIGATION, AND LABORATORY TESTING

Geotechnical data from the project vicinity presented in previous reports were reviewed to supplement site data collected during this investigation. A list of the documents reviewed is presented in the bibliography (Section 7.0).

The field investigation, conducted from November 8 to November 10, 2005, and November 21, 2005, consisted of drilling five soil borings at the locations shown on Figure 2. The originally proposed scope of the field investigation had to be modified. DYA initially proposed three borings using rotary wash drilling techniques using a truck-mounted drill rig on the peninsula, and a limited access drill rig on the island. In addition, four cone penetration tests (CPTs) with a limited access rig were proposed on the island; however, CPT tests were not performed due to concerns regarding the load capacity of bridge. DYA and Moffat & Nichol judged that the CPT rig weight and engine vibration could possibly cause damage to the existing bridge and utility line. Therefore, the revised boring locations (shown on Figure 2), using a limited access drill rig, were chosen to provide areal coverage of the project site within the budget. The boring depths, ranging from approximately 8 to 80 feet, were selected to extend to the depth of significant influence of the proposed loads and to investigate liquefaction potential. Details of the field investigation, including sampling procedures and boring logs, are presented in Appendix A.

Soil samples collected from the borings were re-examined in the laboratory to substantiate field classifications. Selected soil samples were tested for moisture content, dry density, grain-size distribution, percent passing the No. 200 sieve, shear strength, and corrosion potential (pH, electrical resistivity, soluble chlorides, and soluble sulfates). The soil samples tested are identified on the boring logs. Laboratory test data are summarized on the boring logs in Appendix A and presented on individual test reports in Appendix B.

3.0 SITE CONDITIONS

Our interpretation of the surface and subsurface conditions is based on our current investigation and a brief review of historical information.

3.1 SURFACE CONDITIONS

Bay Island was a natural sand island prior to development. Figure 3, an overlay of the topography from approximately 1875 on a recent topographic map, shows how the original island has been expanded. Local history notes that occasional flooding occurred during the time the first house was present near the turn of the 20th century. Over the years, the island was filled and shaped to its current configuration using sand dredged from the adjacent channels, and the use of waterfront bulkhead/seawalls. As shown on Figure 2, the island is partially surrounded by steel and concrete sheet pile walls; it is connected to the mainland (Balboa Peninsula) with a pedestrian bridge approximately 10 feet wide and 140 feet long. The existing ground surface elevation ranges from approximately 6 to 8 feet above mean lower low water level (MLLW). The existing perimeter sea walls consist of steel sheet piles with tiebacks at the northwest, south, and southeast sides, and concrete soldier piles and concrete panels with tiebacks on the west side of the island. Severe corrosion and significant rotation toward the water side was observed in the steel sheet pile walls on the southeast side of the island.

3.2 SUBSURFACE CONDITIONS

The subsurface soils generally consist of fill overlying natural and alluvial sandy soil. The fill thickness is unknown at this time because of the absence of maps of original and existing topography and pre-fill bathymetric surveys. However, based on soil conditions encountered in the borings, we expect the fill thickness to range from 15 to 20 feet. Because of difficulty in distinguishing between the fill and natural soil, no distinction between fill and natural soils was made on the boring logs and cross sections.

k:\datfls\project\2006-100\example.dwg

Reference: The first hydrographic survey map of the Bay, approximately 1875, The picture history of balboa island, 1906-1981

Figure 3 - HISTORIC CONDITIONS

The idealized soil profiles based on laboratory test data and field investigation are presented on Figure 4, Figure 5, and Table 1 and consisted of four design layers (DL-1 through DL-4). The data generally indicates improvement with depth, with strength gain in layer DL-2 and very high strength in layer DL-4. Boring B-4, performed in the beach area, was terminated at approximately 8 feet below the ground surface (bgs) due to loss of drilling mud circulation. The soil type and standard penetration test (SPT) blow counts in Boring B-4 were similar to that encountered at other borings. The loss of mud circulation was not attributed to significant voids or very loose soils at this boring location. The absence of vegetation or topsoil at this location resulted in the recirculation of drill mud back up to the surface rather than into the mud pan. Groundwater could not be measured or correctly measured during drilling operations due to the drilling technique, but it is assumed to be near sea level, approximately 5 feet bgs. The groundwater will be tidally influenced.

Table 1 - SUMMARY OF GEOTECHNICAL CHARACTERISTICS

SOIL LAYER	APPROXIMATE ELEVATION (feet MLLW)		AVERAGE UNCORRECTED SPT BLOW COUNT[1] (bpf)	TOTAL UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	EFFECTIVE FRICTION ANGLE (deg)
	Top of Layer	Bottom of Layer				
DL1 - Sandy Soils	7.5	-1.5	7	115	13	30
DL2 - Sandy Soils	-1.5	-10.5	23	122	22	32
DL3 - Sandy Soils	-10.5	-20.5	38	123	20	35
DL4 - Sandy Soils	-20.5	-72.5	67	121	23	38

Notes:

1. Includes equivalent SPT blow counts converted from modified California sampler. Value does not include SPT blow counts where refusal was met.

- Assumed design groundwater level, Elevation + 5 feet MLLW.
- SPT = standard penetration test.
- bpf = blows per foot.
- pcf = pounds per cubic foot.

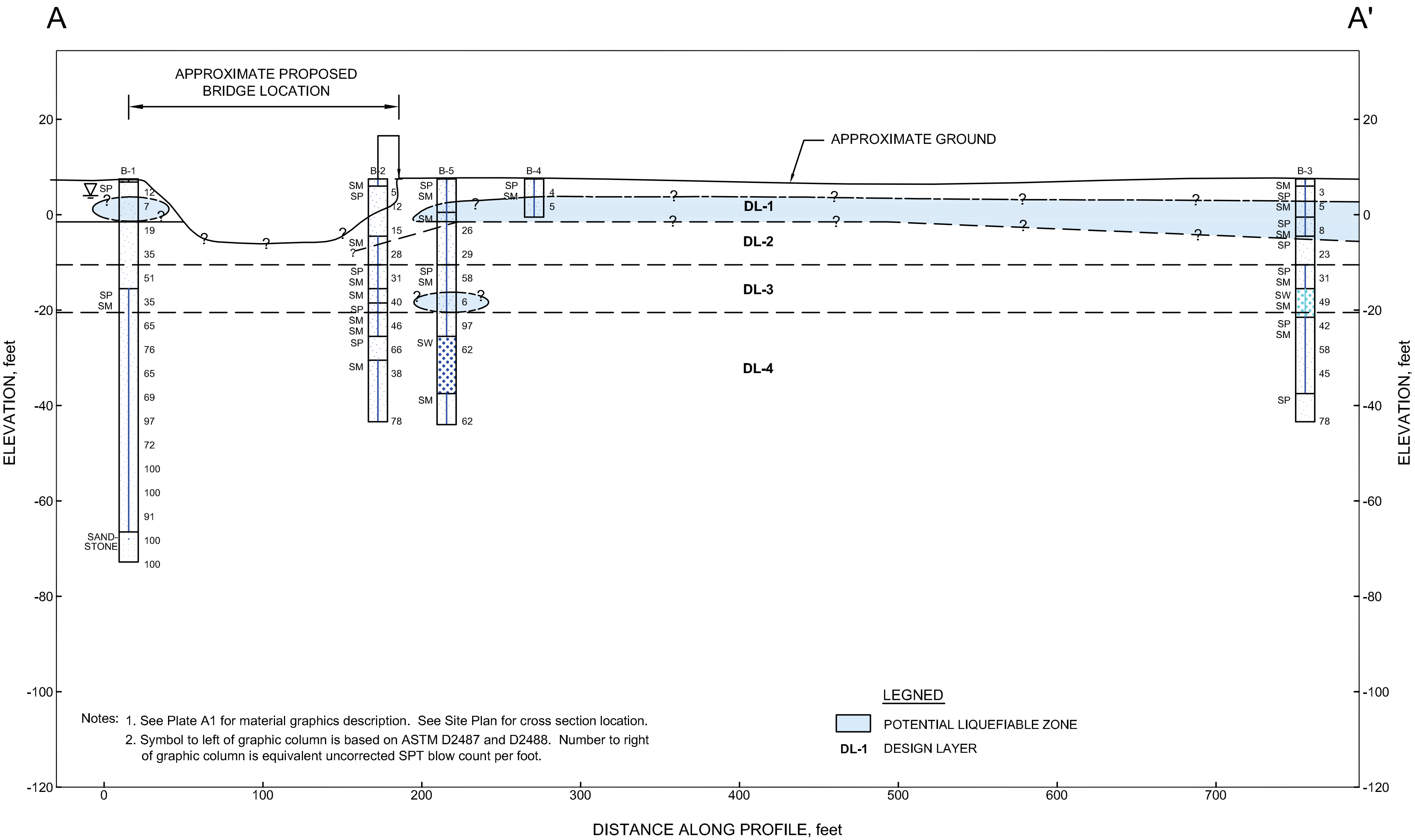


Figure 4 - CROSS SECTION A-A'

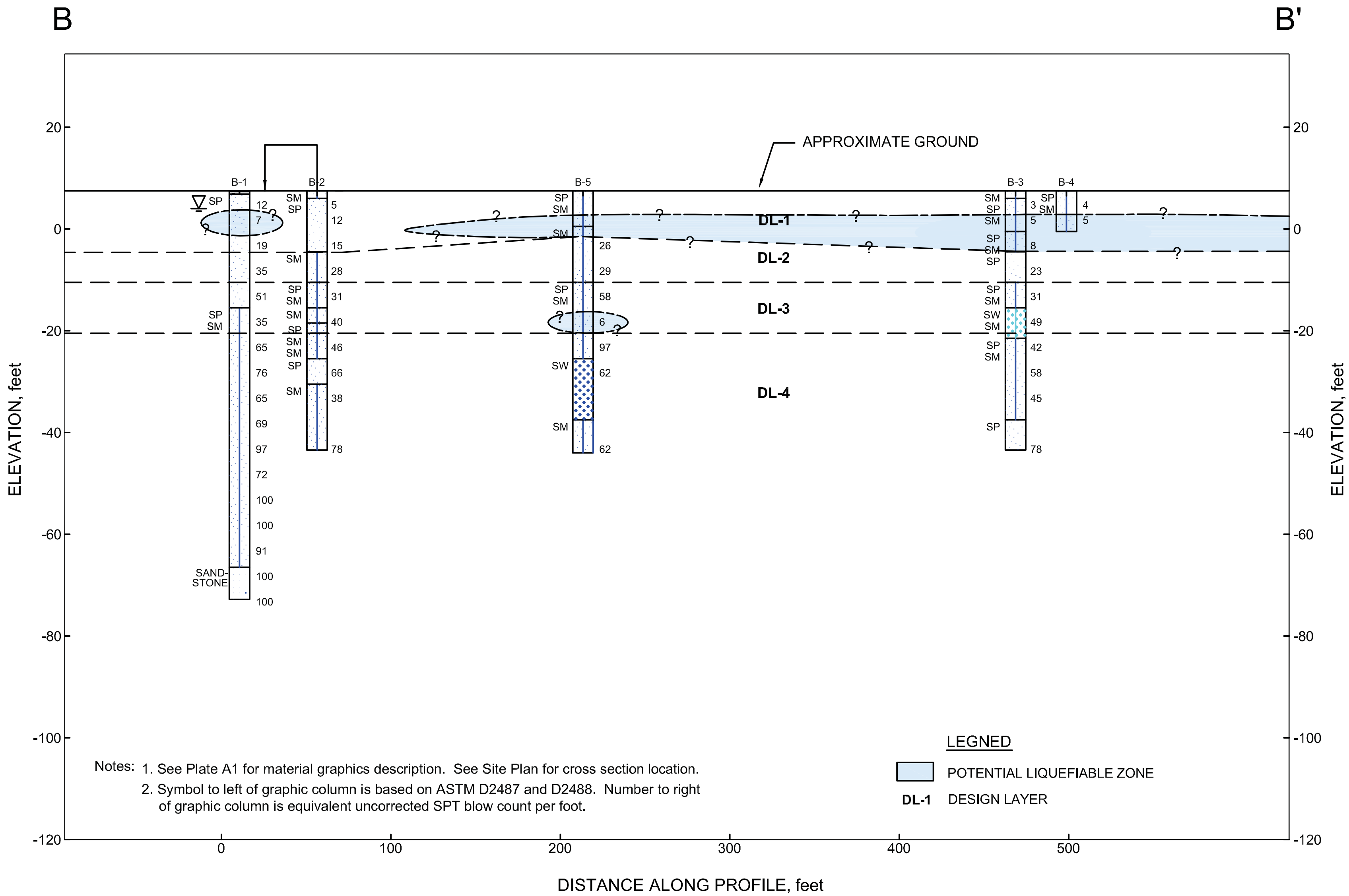


Figure 5 - CROSS SECTION B-B'

4.0 CONCLUSIONS AND RECOMMENDATIONS

The primary geotechnical considerations for the proposed project are the earth pressures for the sheet pile wall and pile capacities for the bridge foundation and seismic loading. Geotechnical recommendations are provided below.

4.1 SEISMIC/GEOLOGIC HAZARDS

The site, like most of Southern California, will be subject to strong ground shaking during major earthquakes. Seismic design can be performed in accordance with the criteria listed in Table 2.

Table 2 - SEISMIC DESIGN CRITERIA

CHARACTERISTIC	CRITERIA
Alquist-Priolo Special Study Zone Act	Site outside special study zones
California Building Code (CBC) Seismic Zone Factor (z)	0.4
CBC Soil Profile	S_F[1]
CBC Seismic Source Type / Distance (km)	B / 2 km
CBC Near Source Factors, Na and Nv	1.3 and 1.6
California Seismic Hazards Mapping Act, Liquefaction Zone	Site within liquefaction zone
California Seismic Hazards Mapping Act, Landslide Zone	Site outside landslide zone
CGS Peak Ground Acceleration,[2] g	0.39

Notes:

1. The site was classified as S_F but can be assumed to be S_D to estimate the design acceleration response spectra.
2. California Geological Survey, 10 percent probability of exceedance in 50 years, alluvial site.

Liquefaction analyses were based on the following:

- Subsurface data from this investigation and an assumed groundwater depth of 5 feet bgs.
- R. B. Seed, et al. (2003) guidelines (see Appendix C).
- A peak ground acceleration of 0.39g.
- An earthquake moment magnitude of 6.6.

We judge that limited zones of the subsurface soils are subject to liquefaction, as shown on Figure 4, Figure 5, and Table 3. Liquefaction-induced settlement was estimated to be approximately 1 to 3 inches based on Tokimatsu and Seed (1987).

The liquefaction evaluation and seismic settlement calculations are presented in Appendix C.

Table 3 - SUMMARY OF LIQUEFACTION INDUCED SETTLEMENT

IDENTIFICATION	DEPTH OF POTENTIALLY LIQUEFIABLE LAYERS (feet)	CALCULATED LIQUEFATION INDUCED SETTLEMENT (inches)
B-1	5 to 8	1
B-2	--	--
B-3	5 to 12	2.5
B-5	23 to 28[1]	2

Notes:
1. In Boring B-5, liquefaction is likely to occur from 5 to 8 feet based on soil conditions encountered in adjacent borings. Additional settlement of approximately 1 inch is therefore likely.
- Peak ground acceleration = 0.39g.

4.2 EARTHWORK

4.2.1 Site Preparation and Grading

Some grading will be required at the bridge approaches and behind the new bulkheads. Prior to the start of construction, the following should be performed:

- All utilities should be located in the field and either rerouted, removed, abandoned, or protected.
- Areas to be graded should be stripped of vegetation and debris, and the material removed from the site.
- Topsoil materials should be stockpiled for later use in landscaped areas.
- Pavement and concrete should be separated for recycling.
- Areas to receive fill should be compacted to 90 percent relative compaction[1].

Where the soils at the bottom of the excavation preclude compaction, they should be excavated to a sufficient depth such that a firm and unyielding surface is achieved at the planned bottom of excavation or the base of fill. Generally, an overexcavation depth of 1 to 2 feet is sufficient.

Fill and backfill should be compacted by:

- Placing in loose layers less than 8 inches thick.
- Moisture conditioning to above-optimum moisture content.

[1] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the American Society for Testing Materials (ASTM) D1557-91 test method. Optimum moisture content is the moisture content corresponding to the maximum dry density, as determined by the ASTM D1557-91 test method.

- Compacting to at least 90 percent relative compaction.

Import materials for fill and select backfill should meet the criteria in Table 4. Select backfill is material placed within a horizontal distance of 5 feet or one-half of the wall height, whichever is greater, behind retaining walls.

Table 4 - IMPORT FILL AND SELECT BACKFILL CRITERIA

CRITERIA	IMPORT FILL	SELECT BACKFILL
Maximum particle size (inches)	4	1
Maximum liquid limit (%)	10	5
Maximum plasticity index (%)	5	0
Maximum percentage passing the No. 200 sieve (%)	40	30
Minimum sand equivalent	20	20

The soils encountered in the borings are expected to meet the above criteria for select backfill.

Site grading may be accomplished with conventional heavy-duty construction equipment. The fill should be compacted using soil compactors or vibratory drum roller, as defined by the Caterpillar Performance Handbook (1998), or equivalent. However, to avoid overstressing walls, backfill should be compacted using lightweight compaction equipment behind the walls.

4.2.2 Excavations and Temporary and Permanent Slopes

The stability of temporary excavations is a function of several factors, including the total time the excavation is exposed, moisture condition, soil type and consistency, and contractor's operations. The contractor is responsible for excavation safety. As a guideline, temporary construction excavations greater than 3 feet but less than 10 feet deep should be planned with slopes no steeper than 1.5H:1V (horizontal to vertical). For steeper temporary construction slopes or deeper excavations, shoring should be provided for stability and protection.

Because of the shallow groundwater levels and proximity of the ocean, significant dewatering may be required. The construction method must consider construction dewatering and excavation stability. The effectiveness of shoring and dewatering are largely dependent on the construction method. Therefore they should be designed by the contractor. Construction methods should, therefore, attempt to reduce the amount of construction dewatering. Conventional construction methods consist of driving sheetpile walls to considerable depth below the proposed bottom of excavation to provide an effective cut-off wall. Generally, dewatering within the shored excavation can be achieved using well points within confined cut-off perimeter walls. Dewatering should commence prior to the excavation reaching the groundwater level and the ground water must be monitored and maintained well below the bottom of the excavation sufficient to maintain a stable bottom.

For preliminary design purposes, a dewatering system using well points at close spacing along the inside perimeter of the excavation can be considered. It should be noted that if the dewatering system is not properly designed and operated in concert with the shoring system, installation and excavation, an unstable “quick” bottom condition might occur during excavation. Deep dewatering could cause settlement of this site and adjacent sites due to an increase of the effective weight of soil. Accordingly, the depth and lateral influence of the dewatering scheme must be planned to reduce the influence of dewatering beneath nearby improvements. The contractor should strictly adhere to grading requirements of city and applicable health and safety regulations, including the Occupational Safety and Health Administration (OSHA).

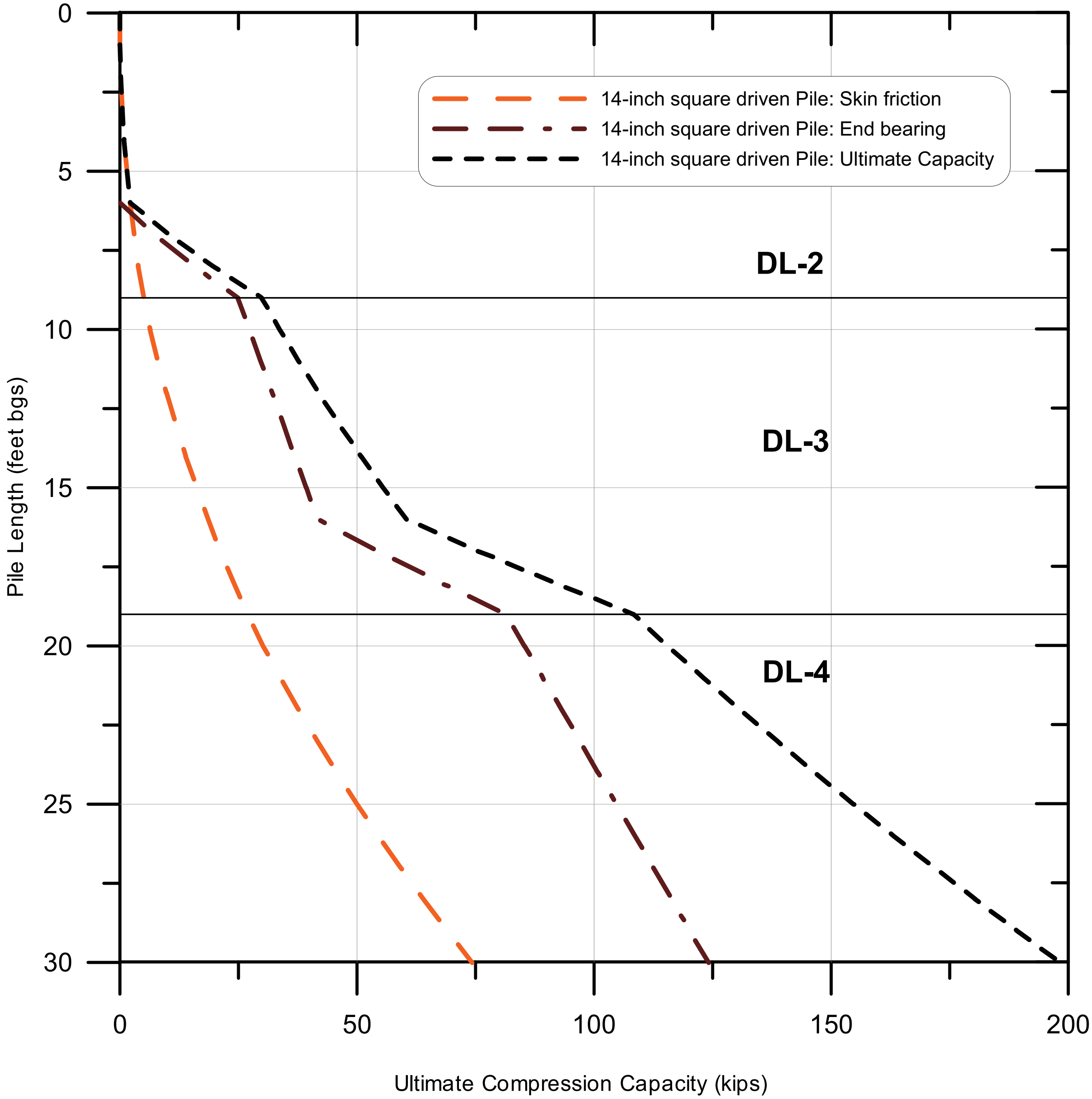
Permanent compacted fill slopes should be planned no steeper than 2H:1V. The slopes should be covered with vegetation or paved to reduce surface erosion.

4.3 BRIDGE FOUNDATION DESIGN

Shallow foundations were not considered feasible for bridge support because of the presence of the existing channel and potential liquefaction at shallow depths (excessive settlement and differential settlement during seismic loading). Pile foundations should extend to a uniform, competent soil layer below potentially liquefiable layers. We understand that the top of the pile elevation will be at an approximate elevation of -2 feet MLLW. Potentially liquefiable layers were not present beneath the proposed pile top elevation in borings adjacent to the proposed bridge. However, since a potentially liquefiable layer was encountered in another boring within the design layer DL-3, we recommend that the piles extend and tip within the design layer DL-4. Driven piles (steel piles or prestressed, precast concrete piles) that develop their capacity from a combination of friction and end-bearing are suitable for the project.

4.3.1 Pile Foundations

Pile axial and lateral capacities were evaluated for 14-inch square precast concrete piles. Pile axial capacities were evaluated using the computer program APILE^{Plus}4.0 for Windows. This computer program has the capability to estimate the vertical pile performance using four different approaches: the American Petroleum Institute (API) recommended practice 2A (RP2A), the U.S. Federal Highway Administration (FHWA), the U.S. Army Corps of Engineers (USACE), and the Lambda method. The axial pile capacity results are summarized on Figure 6. Settlement calculations were also performed using the computer program APILE^{Plus}4.0 for Windows. The pile head downward movement for applied axial load (40kips) with a factor of safety of 2 or more was estimated to be less than ½ inch.



Note:
1. Ultimate compression capacity based on skin friction and end bearing capacity.
2. A minimum factor of safety (FS) of 2 and 3 should be applied to ultimate skin capacity and end bearing capacity respectively to estimate allowable static compression.
3. A minimum FS of 1.5 should be applied to ultimate skin and end bearing compression to estimate allowable seismic compression.
4. The ultimate tension capacity may be assumed to be equivalent to 60% of ultimate skin friction.
5. A minimum FS of 2 should be applied to the ultimate tension capacity to estimate allowable static tension.
6. A minimum FS of 1.2 should be applied to the ultimate tension to estimate allowable seismic tension.
7. Calculation assumed sloping dredge line (5H:1V).
8. Based on soil conditions from boring adjacent to the bridge location, liquefaction and liquefaction induced downdrag etc. were considered negligible below mudline.

Figure 6 - AXIAL PILE CAPACITY - PILE TOP AT MUDLINE

The minimum center-to-center spacing between the piles should be no less than three pile diameters. For piles spaced at three pile diameters or greater, group efficiency reduction factors need not be applied for axial pile capacity calculation.

Analyses for lateral capacity of vertical piles were performed using the computer program LPILE^{PLUS}5.0 for Windows (Ensoft, 2004), using non-linear p-y (lateral load deflection) curves and a finite-difference solution. Lateral pile capacity results are summarized in Table 5 and are also presented in Appendix D.

Table 5 - SUMMARY OF PILE LATERAL LOAD ANALYSES

PILE TYPE	BOUNDARY CONDITION	AXIAL LOAD (kips)	LATERAL LOAD (kips)	APPLIED MOMENT (kips-inches)	PILE HEAD DEFECTION (inches)	MAXIMUM MOMENT (kips-feet)/ Depth (feet)	MAXIMUM SHEAR (kips)/ Depth (feet)
14-in. square Driven pile	Free Head	40	6.7	0	0.5	31.1/7.4	6.7/0
	Free Head	40	10.8	0	1	55.8/7.8	10.8/0
	Fixed Head	40	17.3	0	0.5	87.8/0	17.3/0
	Fixed Head	40	28.4	0	1	156.9/0	28.4/0

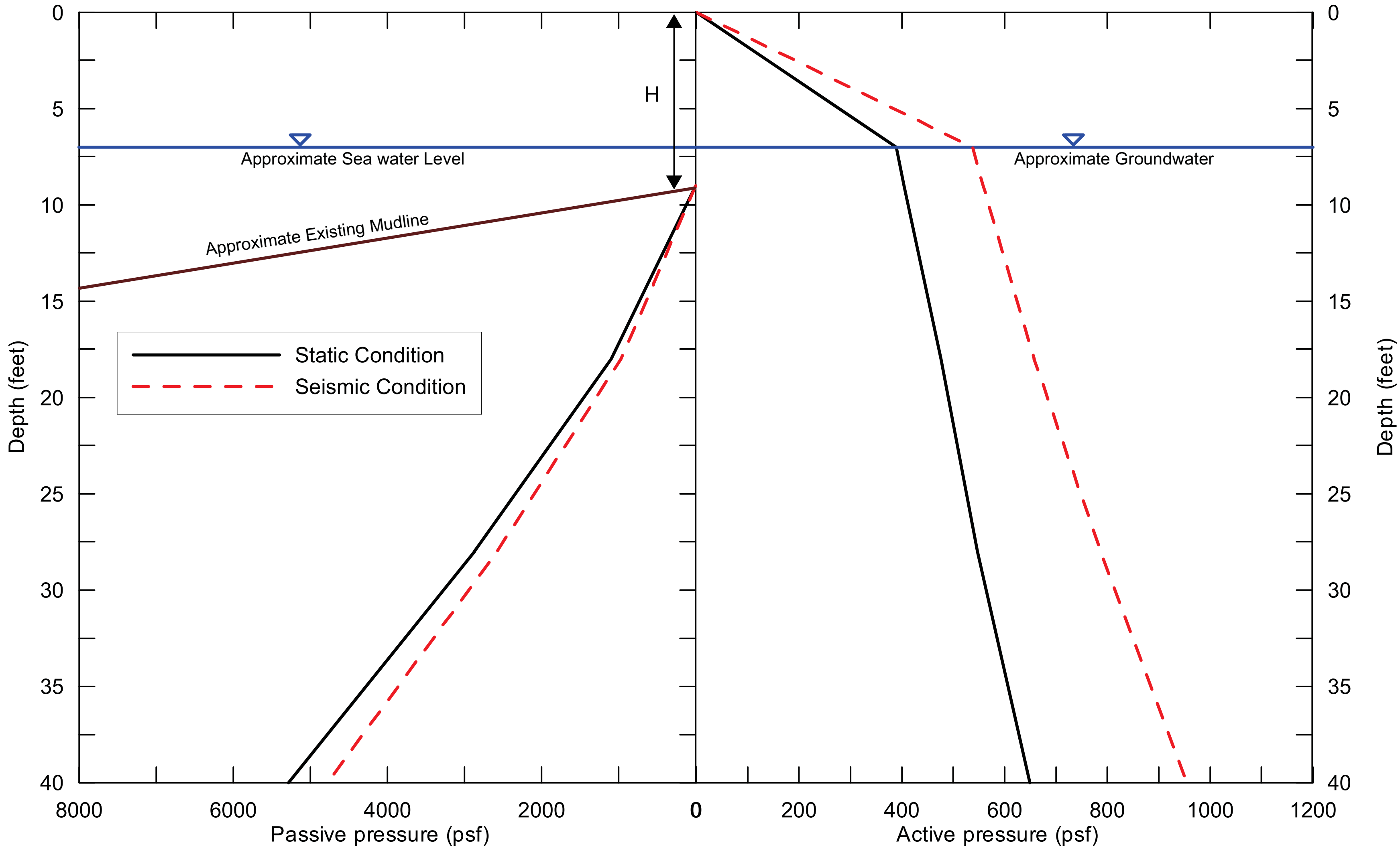
Note:
- Assumed pile top at mudline.
- Lateral capacity of batter piles would be equal to the horizontal component of axial capacity.

4.4 LATERAL EARTH PRESSURES

Lateral earth pressures for sheet pile wall design are presented on Figure 7 and are based on existing material noted in Table 1. These lateral pressures are based on water level at the retained side and the water side to be at the same elevation. The groundwater level on the retained side may, however, have the potential to be at a slightly higher level than the water side because of tidal variation and slower drainage. Analyses should be performed considering this potential imbalance of water pressure as noted on Figure 7.

4.5 RESISTANCE TO LATERAL LOADS

At the bridge foundation locations, the lateral loads can be resisted by pile foundations as discussed in Section 4.3.1. For the sheet pile walls, the lateral loads can be resisted by an allowable passive soil pressure and tieback forces as outlined on Figure 7 and Figure 8, respectively.



Note: 1. Calculations based on flexible wall with sloping dredge line (5H:1V).
2. Passive pressures consider existing slope. FS of overturning and sliding for static loading condition is 1.5. FS of overturning and sliding for seismic loading condition is 1.
3. If upslope above the wall is present within a horizontal distance equal or less than the height of the wall(H) the active lateral pressures should be increased. For 2H:1V slopes above the wall, increase active pressures by 50 percent; for 1.5H:1V slope, increase the active pressures by 100 percent.
4. A seismic coefficient of 0.2g (50 percent of peak ground acceleration [PGA]) was used to calculate pressure during seismic condition.
5. Surcharge was not considered in calculation. If surcharge (q) present, use additional surcharge pressure, P_q=0.45q on active pressure.
6. To analyze potential imbalance of hydrostatic pressures on the sheet ple wall consider the case during which the groundwater level could be 5 feet higher on the retained side. The net water pressure can be cacluated using a fluid weight of 64 pcf.
7. For seismic conditions additional pressures could be applied on the wall becuase of liquefaction. For liquefiable layers present above the mudline assume additional pressures of 40psf/unit length.

Figure 7 - LATERAL EARTH PRESURE ON SHEET PILE WALL

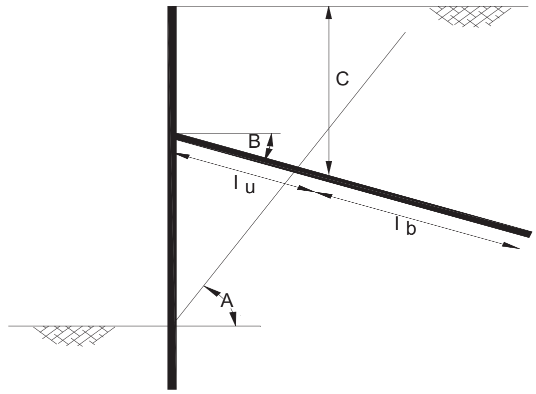
4.6 TIEBACK ANCHORS

4.6.1 Design

Tieback anchors can be installed for both temporary and permanent conditions. For temporary conditions, corrosion protection of the steel tieback anchors is not critical if corrosion is small or minor compared to the total amount of steel present. However, for permanent installation, corrosion protection is critical. For permanent installations, at a minimum, dual corrosion protection is required. This dual corrosion usually consists of an epoxy coated tieback anchor completely enclosed in grout or a concrete sheath. Corrosion protection can also consist of active catholic protection. Section 4.7 provides details on the tieback anchor corrosion protection.

For permanent tieback anchors, provisions should be made to install instrumentation to check on the loads of the anchors after construction has been completed. This instrumentation can consist of strain gauges, load cells, and other types of equipment to check that the tieback anchors are carrying the full design load. Also, permanent access to the tieback anchors for periodic retention, if necessary, should be provided. The retaining walls should also include survey monuments such that both the vertical and lateral positions can be checked using conventional surveying instruments.

Tieback anchors can be designed based on the recommendations provided by the Post-Tensioning Institute (PTI, 1996) for prestressed soil anchors as outlined on Figure 8. All anchors should be tested as described below.



A = 60° B = 10° to 40° C = 4 feet (minimum) l_u = Unbonded length (5-foot minimum) (not to be used for tieback capacity)	f_{all} = Allowable tieback friction/square foot surface area = 40C psf (1,000 PSF maximum) single stage grout = 80C psf (2,000 PSF maximum) secondary or post grouting l_b = Bonded length (allowable tieback length for capacity)
Note: • In case of anchored tieback, lateral capacity of anchored pile should be verified.	

Figure 8 - TIEBACK ANCHORS

The tieback anchor capacities presented on Figure 8 were developed for conventionally single-stage grouted tieback anchors. Recently, secondary or post grouted anchors have been used in Southern California. These post-grouted tieback anchors can develop more capacity than conventional single grout anchors as noted on Figure 8. However, the capacity of the post-grouted anchors can vary significantly depending on the method used for grouting, the pressure of the grouting, type of grout, and other factors. Therefore, if post-grouting tieback anchors are selected by the contractor, the capacities should be reviewed prior to installation. Also, the testing program described in Section 4.6.2 should be increased to check on the effectiveness of the grouting program.

4.6.2 Testing

Tieback anchors should be tested in general accordance with the recommendations and procedures described by the Post-Tensioning Institute (1996) and at the frequency, test loads, and criteria outlined in Table 6, whichever is more restrictive. The allowable design capacities of all tiebacks should be verified by a program of proof test and performance tests. Selected representative tieback(s) at each wall should be selected by the geotechnical engineer and tested to 200 percent of the design load for a 24-hour period to check the estimated design capacity. In addition to the above test, a minimum of 5 percent of all tiebacks shall be proof tested to 200 percent of design load for 30 minutes and all remaining anchors should be proof tested to

150 percent of design load for 15 minutes as outlined in Table 6. Where satisfactory, tests are not achieved on the initial anchors, the anchor diameter, length, and/or grouting program should be increased until satisfactory test results are obtained. Alternatively, the design load could be decreased and the number of anchors increased.

Table 6 - TIEBACK ANCHOR TESTING

Testing Load (percent of working load)	200	200	150
Test Type	Performance	Performance	Proof
Test Duration after Load Application	24 hours	30 minutes	15 minutes
Maximum Deflection after Load Application, inches	0.5	0.25	0.10
Early termination after load application Movement (inches) @ Time (hours)	<0.1@4	--	--
	<0.5@12	--	--
Number of Tests	Selected representative tiebacks	5% of all tiebacks	All remaining anchors

After a satisfactory test, each anchor should be locked-off at no less than 110 percent of rated design load. The locked-off load should be verified by rechecking the load in the anchor. If the lift-off load varies by more than 10 percent from required lock-off (110 percent of design load), the anchorage should be reset and the lift-off measurement repeated until a satisfactory reading is obtained.

The testing equipment and set up should be provided by the contractor and reviewed by DYA. The installation of the anchors and the testing of the completed anchors should be observed by DYA personnel.

4.7 SOIL CORROSION POTENTIAL

Analytical chemical test results from three tests performed during this investigation indicated 21-42 parts per million (ppm) soluble sulfate concentrations in the near-surface soils. These test results indicate that Type II cement can be used with a maximum water/cement materials ratio in accordance with CBC standard 1904.3.1.

Table 7 - CORROSION POTENTIAL

	CALTRANS CRITERIA FOR CORROSIVE MATERIALS	RANGE OF VALUES
pH	<5.5	8.2 - 9.1
Soluble sulfate content (ppm)	>2,000	21 -42
Soluble chloride content (ppm)	>500	139 - 1,940
Electrical resistivity (ohm-cm)	<1,000	300 - 4,200

We suggest that permanent tieback anchors follow the recommendations provided by the Post-Tensioning Institute for Class 1, encapsulated tendons. Table 8 and Figure 9 summarize these recommendations.

Table 8 - ANCHOR CORROSION PROTECTION

PROTECTION REQUIREMENTS CLASS I ENCAPSULATED TENDON		
Anchorage	**Unbonded Length**	**Tendon Bond Length**
Trumpet Cover if Exposed	Grease-filled sheath, or Grout-filled sheath, or Epoxy for fully bonded anchors	Grout-filled encapsulation, or Epoxy

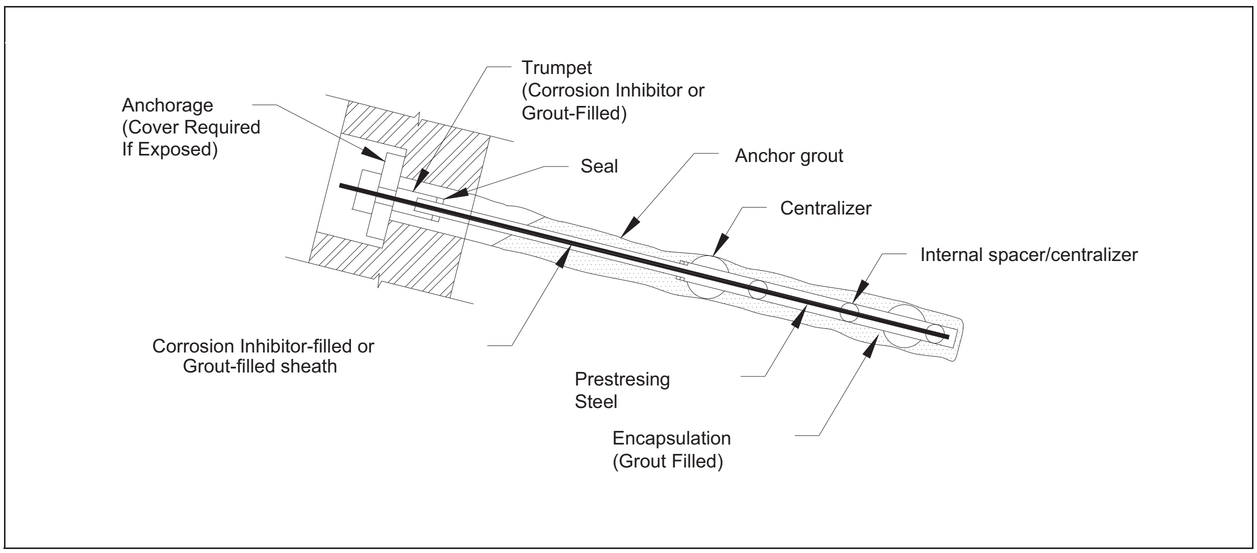


Figure 9 - ENCAPSULATED TENDON RECOMMENDATION

5.0 PLAN REVIEW, CONSTRUCTION OBSERVATION, AND TESTING

DYA should be retained to review the finished grading earthwork and foundation plans and specifications for conformance with the intent of our recommendations. The review will enable DYA to modify the recommendations if final design conditions are different than presently understood.

During construction, DYA should provide field observation and testing to check that the site preparation, excavation, foundation installation, and finished grading conform to the intent of these recommendations, project plans, and specifications. This would allow DYA to develop supplemental recommendations as appropriate for the actual soil conditions encountered and the specific construction techniques used by the contractor.

As needed during construction, DYA should be retained to consult on geotechnical questions, construction problems, and unanticipated site conditions.

6.0 LIMITATIONS

This report has been prepared for this project in accordance with generally accepted geotechnical engineering practices common to the local area. No other warranty, expressed or implied, is made.

The analyses and recommendations contained in this report are based on the literature review, field investigation, and laboratory testing conducted in the area. The results of the field investigation indicate subsurface conditions only at the specific locations and times, and only to the depths penetrated. They do not necessarily reflect strata variations that may exist between such locations. Although subsurface conditions have been explored as part of the investigation, we have not conducted chemical laboratory testing on samples obtained or evaluated the site with respect to the presence or potential presence of contaminated soil or groundwater conditions.

The validity of our recommendations is based in part on assumptions about the stratigraphy. Observations during construction can help confirm such assumptions. If subsurface conditions different from those described are noted during construction, recommendations in this report must be reevaluated. DYA should be retained to observe earthwork construction in order to help confirm that our assumptions and recommendations are valid or to modify them accordingly. In accordance with UBC Appendix Chapter 33 Section 3317, DYA cannot assume responsibility or liability for the adequacy of recommendations if we do not observe construction.

This report is intended for use only for the project described. In the event that any changes in the nature, design, or location of the facilities are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by DYA. We are not responsible for any claims, damages, or liability associated with the interpretation of subsurface data or reuse of the subsurface data or engineering analyses without our express written authorization.

7.0 BIBLIOGRAPHY

American Society for Testing and Materials (ASTM), 2004, Annual Book of Standards, Vols. 4.08 and 4.09, Soil and Rock.

Balboa Island Heritage, 1981, The Picture History of Balboa Island 1906-1981, Galliard Press.

Building News, 2003, "Greenbook," Standard Specifications for Public Works Construction.

California Department of Transportation, 1995, Highway Design Manual, Fifth Edition.

California Department of Transportation, 1999, Standard Specifications.

California Department of Transportation, 2003, Corrosion Guidelines, Materials Engineering and Testing Service, Corrosion Technology Branch, September 2003.

California Division of Mines and Geology, 1998, Seismic Hazard Zones, Newport Beach Quadrangle, 1998.

California Division of Mines and Geology, 1998, Open File Report 97-98, Seismic Hazard Evaluation for the Anaheim and Newport Beach 7.5-Minute Quadrangle, Orange County, California, 1998

California Division of Mines and Geology, 1994, Fault Rupture Hazard Zones in California, Special Publication No. 42.

California Division of Mines and Geology, 1997, Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

California Geological Survey Website, www.gmw.consrv.ca.gov.

Condition Assessment, 2004 Cash & Associates

International Conference of Building Officials, 2001, California Building Code, Code of Regulations, Title 24, Part 2.

International Conference of Building Officials, 1998, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, February 1998.

International Conference of Building Officials, 2000, International Building Code.

Isihara, K., 1985, Stability of Natural Deposits During Earthquakes, Proceedings of 11th International Conference on Soil Mechanics and Foundation Engineering, San Francisco, California, Volume 1, pp. 321-376.

Isihara, K., and Yoshimine, M., 1992, Evaluation of Settlements in Sand Deposits Following Liquefaction During Earthquakes, Japanese Society of Soil Mechanics and Foundation Engineering, Vol. 32, No. 1, pp173-188, March, 1992.

Seed, R.B., and Harder, L.F., 1990, SPT-Based Analysis of Cyclic Pore Pressure Generation and Undrained Residual Shear Strength, Proceedings of the H. Bolton Seed Memorial Symposium, University of California, Berkeley, CA, Volume 2, pp 351-376.

Seed, R.B., K.O. Cetin, R.E.S. Moss, A.M. Kammerer, J. Wu, J.M. Pestana, M.F. Riemer, R.B. Sancio, J.D. Bray, R.E. Kayen, and A. Faris, 2003, Recent Advances in Soil Liquefaction Engineering: A Unified and Consistent Framework, 26th Annual ASCE Los Angeles Geotechnical Spring Seminar, Keynote Presentation, H.M.S. Queen Mary, Long Beach, California.

Southern California Earthquake Center, 1999, Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California, March 1999.

Southern California Earthquake Center, 2002, Recommended procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Landslide Hazards in California, June 2002.

Tokimatsu, K, Seed, H.B., 1987, Evaluation of Settlements in Sands Due to Earthquake Shaking, Journal of Geotechnical Engineering Division, ASCE, Volume 113, No. GT8, pp 861-878, August, 1987.

Youd, T.L., Hansen, C.M., and Bartlett, S.F., 2002, Revised MLR Equations for Prediction of Lateral Spread Displacement, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Volume 128, No. 12, pp 1007-1017, December 2002.

APPENDIX A
FIELD INVESTIGATION

APPENDIX A - FIELD INVESTIGATION

The field investigation for the proposed project consisted of drilling five borings (B-1 through B-5) to depths ranging from approximately 8 to 80 feet. The approximate boring locations are shown on Figure 2.

Four borings on Bay Island were drilled by Pacific Drilling, Inc. on November 8 through 10, 2005, with a limited access drill rig using rotary wash drilling techniques. One boring on the mainland for the bridge abutment location was drilled by C & L, Inc. on November 21, 2005, with a truck-mounted mobile drill rig using rotary wash drilling techniques. Our field engineer observed the drilling operations and collected drive samples for visual examination and subsequent laboratory testing. Drive samples were collected with a 2.4-inch-inside-diameter (3.0-inch-outside-diameter) modified California split-barrel sample lined with brass tubes and a standard split-spoon penetrometer with dimensions in accordance with ASTM 3550 and 1586, respectively. Both samplers were driven with a 140-pound hammer falling 30 inches. A cathead with 2.5 loops hammer was used to lift the hammer. The blows required to drive the modified California sampler were converted to equivalent standard penetration test (SPT) N-values by multiplying by 0.65 (N = 0.65 x modified California blows per foot).

The cone penetration tests (CPTs) with a limited access rig was proposed but not performed due to limited accessibility on the bridge.

Soils encountered in the borings were classified in general accordance with the ASTM Soil Classification System (ASTM D2487 and 2488), which is summarized on Plate A1. Boring logs presented on Plates A2 through A11 were prepared from visual examination of the samples, cuttings obtained during drilling operations, and results of laboratory tests.

Groundwater could not be measured or correctly measured during the field investigation due to the drilling technique; however, we expect the groundwater at approximately a depth of 5 below the ground surface. Borings were backfilled with cement and bentonite chip.

Boring locations were identified in the field by measuring from known locations using a measuring wheel or using a hand-held differential Global Positioning System (GPS) unit with a 6-foot horizontal accuracy.

SOIL CLASSIFICATION SYSTEM-ASTM D2487

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

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

"Push" Sampler

Split Barrel "Drive" Sampler With Liner

Standard Penetration Test (SPT) Sampler

Bag Sample

Concrete/Rock Core

Groundwater Surface

NP = Nonplastic
EI = Expansion Index Test
SG = Specific Gravity
SE = Sand Equivalent
UC = Unconfined Comp.
CD = Consol. Drained Comp.
CU = Consol. Undrained Comp.
UU = Undrained, Unconsol. Comp.
RV = R-Value
CA = Chemical Analysis
DS = Direct Shear
CN = Consolidation
SA = Grain size; HD = Hydrometer
MD = Compaction Test
[PID] Reading in ppm above background

SPT "N" = Uncorrected equivalent blow count for last foot of driving (set to 100 for driving refusal)
= 0.65 x modified California blows per foot

KEY TO LOG OF BORINGS

Bay Island Sea Wall

Project No. 2005-041

PLATE

A1

Template: DYLG1; Prj ID: 2005-041.GPJ

BORING LOCATION:	See Figure 2	**ELEVATION AND DATUM (feet):**	8 MLLW
LATITUDE:	33° 36' 21.6" N	**LONGITUDE:**	117° 54' 20.8" W
DRILLING EQUIPMENT:	Mayhew 1000	**DRILLING METHOD:**	Rotary Wash
BORING DIAMETER (inches):	5	**BORING DEPTH (feet):**	80
DATE STARTED:	11/21/05	**DATE COMPLETED:**	11/21/05
SPT HAMMER DROP:	30 inches **WT:** 140 lbs	**DRIVE HAMMER DROP:**	30 inches **WT:** 140 lbs
LOGGED BY: QL	**CHECKED BY:** JL	**DRIVE SAMPLER DIAMETER (inches)**	**ID:** 2.4 **OD:** 3

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
							ASPHALT CONCRETE - 2 inches						
							SILTY GRAVEL with SAND (GM); brown, moist, medium dense, fine to coarse gravel, fine-grained sand; BASE - 6 inches						
5				4 8 11	12		POORLY GRADED SAND (SP); olive brown, moist, loose, fine-grained sand, trace seashell fragments wet						
	5			5 5 6	7			99	24			2	DS
0							medium dense, fine- to coarse-grained sand						
	10			8 15 15	19			109	17			1	SA CA
-5													
	15			9 15 20	35		dense, no seashell fragments						
-10													
	20			18 35 44	51		trace fine gravel	104	21				DS
-15							POORLY GRADED SAND with SILT (SP-SM); dark greenish gray, wet, dense, fine-grained sand						
	25			12 16 19	35							6	
-20													

LOG OF BORING B-1

Bay Island Sea Wall

Project No. 2005-041

PLATE

A2

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
				23 50/6 "	65		olive brown, dense to very dense, fine- to coarse-grained sand	107	19				
-25													
	35			15 32 44	76		very dense, fine- to medium-grained sand						
-30													
	40			26 50/6 "	65		fine-grained sand, trace seashell fragments					5	
-35													
	45			40 30 39	69		dark greenish gray, no seashell fragments						
-40													
	50			30 50/4 "	97			100	25				
-45													
	55			19 32 40	72								
-50													
	60			35 50/3 "	100								
-55													
	65			36 50/6 "	100								
-60													

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
				15 40 50/3 "	91								
-65													
	75			50/3 "	100		SANDSTONE (BEDROCK)?; very dark gray, wet, very dense, fine-grained sand					20	
-70													
	80			50/4 "	100		Bottom of boring at 80.3 feet. Groundwater encountered at 3.5 feet during drilling. Boring backfilled with cement/bentonite grout. Surface patched with cold patch asphalt.						
-75													
	85												
-80													
	90												
-85													
	95												
-90													
	100												
-95													
	105												
-100													

LOG OF BORING B-1

Bay Island Sea Wall

Project No. 2005-041

PLATE

A4

Template: DYLG1; Prj ID: 2005-041.GPJ

BORING LOCATION: See Figure 2	**ELEVATION AND DATUM (feet):** 8 MLLW
LATITUDE: 33° 36' 23.2" N	**LONGITUDE:** 117° 54' 19.9" W
DRILLING EQUIPMENT: Mini Mole	**DRILLING METHOD:** Rotary Wash
BORING DIAMETER (inches): 6	**BORING DEPTH (feet):** 51
DATE STARTED: 11/9/05	**DATE COMPLETED:** 11/9/05
SPT HAMMER DROP: 30 inches **WT:** 140 lbs	**DRIVE HAMMER DROP:** 30 inches **WT:** 140 lbs
LOGGED BY: JL **CHECKED BY:** QL	**DRIVE SAMPLER DIAMETER (inches)** **ID:** 2.4 **OD:** 3

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
							SILTY SAND (SM); brown, moist, loose, fine-grained sand, trace roots						
5				3 3 4	5		POORLY GRADED SAND (SP); olive brown, moist, very loose, fine-grained sand, trace seashell fragments	121	5			2	DS
	5			6 7 5	12		medium dense, trace cemented sand, trace fine gravel						CA
0							wet, fine- to coarse-grained sand						
	10			4 7 8	15							3	SA
-5							SILTY SAND (SM); olive brown, wet, medium dense, fine-grained sand						
	15			12 20 23	28			97	25				
-10							POORLY GRADED SAND with SILT (SP-SM); olive brown, wet, dense, fine-grained sand						
	20			12 14 17	31								
-15							SILTY SAND (SM); dark greenish gray, wet, dense, fine-grained sand						
	25			12 30 32	40			91	30				DS
							POORLY GRADED SAND with SILT (SP-SM); brown, wet, dense, fine-grained sand						
-20							SILTY SAND (SM); olive brown, wet, dense, fine-grained sand						

LOG OF BORING B-2

Bay Island Sea Wall

Project No. 2005-041

PLATE

A5

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
				20 21 25	46								
-25							POORLY GRADED SAND (SP); brown, wet, very dense, fine- to medium-grained sand, trace seashell fragments						
	35			30 51/6 "	66								
-30							SILTY SAND (SM); greenish gray, wet, dense, fine-grained sand, trace seashell fragments						
	40			12 19 19	38								
-35													
	45												
-40													
	50			30 50/5 "	78		very dense, no seashell	98	24				
							Bottom of boring at 51 feet. Groundwater not measured during drilling. Boring backfilled with cement/bentonite grout.						
-45													
	55												
-50													
	60												
-55													
	65												
-60													

LOG OF BORING B-2

Page 2 of 2
Bay Island Sea Wall
Project No. 2005-041

PLATE
A6

Template: DYLG1; Prj ID: 2005-041.GPJ

BORING LOCATION: See Figure 2		**ELEVATION AND DATUM (feet):** 8 MLLW	
LATITUDE: 33° 36' 27.2" N		**LONGITUDE:** 117° 54' 15.0" W	
DRILLING EQUIPMENT: Mini Mole		**DRILLING METHOD:** Rotary Wash	
BORING DIAMETER (inches): 6		**BORING DEPTH (feet):** 51	
DATE STARTED: 11/8/05		**DATE COMPLETED:** 11/8/05	
SPT HAMMER DROP: 30 inches **WT:** 140 lbs		**DRIVE HAMMER DROP:** 30 inches **WT:** 140 lbs	
LOGGED BY: JL	**CHECKED BY:** QL	**DRIVE SAMPLER DIAMETER (inches)**	**ID:** 2.4 **OD:** 3

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
							SILTY SAND (SM); dark brown, moist, loose, fine-grained sand, trace roots						
5				2 2 2	3		POORLY GRADED SAND with SILT (SP-SM); yellowish brown, moist, very loose, fine-grained sand						
	5			5 3 5	5		dark greenish gray, trace seashell fragments					8	
0							POORLY GRADED SAND with SILT (SP-SM); dark gray, wet, loose, fine-grained sand, trace seashell fragments						
	10			4 4 4	8								CA
-5							POORLY GRADED SAND (SP); dark gray, wet, medium dense, fine- to medium-grained sand, trace seashell fragments						
	15			8 18 18	23			100	23			2	
-10							POORLY GRADED SAND with SILT (SP-SM); dark gray, wet, dense, fine- to medium-grained sand, few seashell fragments						
	20			11 17 14	31								
-15							WELL-GRADED SAND (SW); yellowish brown, wet, dense, fine- to coarse-grained sand, trace seashell fragments						
	25			17 30 45	49			107	15			1	
-20													
							POORLY GRADED SAND with SILT (SP-SM); olive brown,						

LOG OF BORING B-3

Bay Island Sea Wall

Project No. 2005-041

PLATE

A7

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
				15 17 25	42		wet, dense, fine-grained sand						
-25													
	35			17 30 50/5 "	58			99	24				
-30													
	40			14 17 28	45		fine- to coarse-grained sand						
-35													
	45						POORLY GRADED SAND (SP); brown, wet, very dense, coarse-grained sand, few fine gravel, little seashell fragments						
-40													
	50			21 50/5 "	78								
							Bottom of boring at 51 feet. Groundwater not measured during drilling. Boring backfilled with cement/bentonite grout.						
-45													
	55												
-50													
	60												
-55													
	65												
-60													

LOG OF BORING B-3

Page 2 of 2
Bay Island Sea Wall
Project No. 2005-041

PLATE
A8

Template: DYLG1; Prj ID: 2005-041.GPJ

BORING LOCATION: See Figure 2	**ELEVATION AND DATUM (feet):** 8 MLLW
LATITUDE: 33° 36' 22.6" N	**LONGITUDE:** 117° 54' 16.6" W
DRILLING EQUIPMENT: Mini Mole	**DRILLING METHOD:** Rotary Wash
BORING DIAMETER (inches): 6	**BORING DEPTH (feet):** 8
DATE STARTED: 11/10/05	**DATE COMPLETED:** 11/10/05
SPT HAMMER DROP: 30 inches **WT:** 140 lbs	**DRIVE HAMMER DROP:** 30 inches **WT:** 140 lbs
LOGGED BY: JL **CHECKED BY:** QL	**DRIVE SAMPLER DIAMETER (inches)** **ID:** 2.4 **OD:** 3

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
							POORLY GRADED SAND with SILT (SP-SM); brown, moist, very loose, fine-grained sand						
5				3 3 3	4			90	11				
	5			2 3 5	5		very loose to loose, wet						
0													
							Boring terminated at 8 feet due to loss of circulation. Groundwater not measured during drilling. Boring backfilled with cement/bentonite grout.						
	10												
-5													
	15												
-10													
	20												
-15													
	25												
-20													

LOG OF BORING B-4

Page 1 of 1

Bay Island Sea Wall

Project No. 2005-041

PLATE

A9

BORING LOCATION:	See Figure 2	**ELEVATION AND DATUM (feet):**	8 MLLW
LATITUDE:	33° 36' 22.9" N	**LONGITUDE:**	117° 54' 18.7" W
DRILLING EQUIPMENT:	Mini Mole	**DRILLING METHOD:**	Rotary Wash
BORING DIAMETER (inches):	6	**BORING DEPTH (feet):**	52
DATE STARTED:	11/10/05	**DATE COMPLETED:**	11/10/05
SPT HAMMER DROP:	30 inches **WT:** 140 lbs	**DRIVE HAMMER DROP:**	30 inches **WT:** 140 lbs
LOGGED BY: JL	**CHECKED BY:** QL	**DRIVE SAMPLER DIAMETER (inches)**	**ID:** 2.4 **OD:** 3

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
	0						POORLY GRADED SAND with SILT (SP-SM); brown, moist, very loose, fine-grained sand						
	7						SILTY SAND (SM); olive brown, wet, medium dense, fine-grained sand						
	10			14 16 24	26			98	24				CA
	15			10 14 15	29		trace seashell fragments						
	18						POORLY GRADED SAND with SILT (SP-SM); olive brown, wet, dense, fine- to medium-grained sand						
	20			21 40 50	58			111	15				DS
	25			1 2 4	6		loose					6	SA

LOG OF BORING B-5

Page 1 of 2
Bay Island Sea Wall
Project No. 2005-041

PLATE
A10

Elevation (feet)	Depth (feet)	Sampler	Symbol	Blows per 6 Inches	Equiv. SPT N Blows per Foot	Field Unc. Comp. Str. (tsf)	DESCRIPTION	Dry Density (pcf)	Moisture Content (%)	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve	Other Tests [PID]
				30 50/4 "	97		very dense						
-25							WELL GRADED SAND with SILT (SW-SM); olive brown, wet, very dense, fine- to coarse-grained sand						
	35			25 30 32	62		trace seashell fragments					6	
-30	40												
-35	45						SILTY SAND (SM); greenish brown, wet, very dense, fine-grained sand						
-40	50			17 28 34	62								
-45							Bottom of boring at 51.5 feet. Groundwater not measured during drilling. Boring backfilled with cement/bentonite grout.						
-50	55												
-55	60												
-60	65												