

NOAA Technical Report EDS 18



GATE Convection Subprogram Data Center: Shipboard Precipitation Data

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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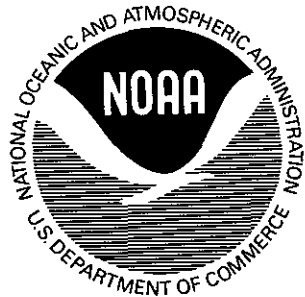
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- EDS 10 BOMEX Temporary Archive Description of Available Data. Terry de la Moriniere, January 1972. (COM-72-50289)
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**GATE Convection
Subprogram Data Center:
Shipboard Precipitation
Data**

Center for Experiment Design and
Data Analysis

Ward R. Sequin
Paul Sabol

Washington, D.C.
November 1976

U.S. DEPARTMENT OF COMMERCE

Elliot L. Richardson, Secretary

National Oceanic and Atmospheric Administration

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GATE CONVECTION SUBPROGRAM DATA CENTER: SHIPBOARD PRECIPITATION DATA

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ABSTRACT. This report presents precipitation amounts at the time resolution they were recorded on shipboard WMO marine logs during the 1974 GARP Atlantic Tropical Experiment (GATE). Tabulations include both daily amounts and precipitation totals for each of the three observation phases.

INTRODUCTION

The international GARP¹ Atlantic Tropical Experiment (GATE) was conducted in the summer of 1974 in the eastern Atlantic as a means of estimating the effects of smaller tropical weather systems on the synoptic-scale circulations. The field operations were divided into three observation phases, with ships from the participating nations stationed as shown in figures 1, 2, and 3.

One of the objectives of GATE was the investigation of cloud clusters and convective interactions. In support of these objectives, a Convection Subprogram Data Center was established by international agreement at the Center for Experiment Design and Data Analysis, which was given the task of processing and validating individual national data sets into products necessary for meeting the analytical requirements of the GATE Convection Subprogram. The precipitation data presented in this report, as part of that task, were derived from standard WMO marine observations.

Tables 1 through 48 show rainfall amounts as reported by each ship. Recording frequency varied: on the USSR ships the Acad. Korolov, Priboy, Poryv, Prof. Vize, Okean, E. Krenkel, Prof. Zubov, and Musson² it was every 3 hr; on the Canadian Quadra and on the Meteor, Planet, and Fay from the Federal Republic of Germany, hourly; on the United Kingdom's Hecla and the U.S. ships Oceanographer, Researcher, Dallas, Gilliss, and Vanguard, every 6 hr. The French ship Bidassoa did not report rainfall. Only the time periods for which there was a measurable amount of precipitation are included in the tables. All data were checked against weather observations as

1

Global Atmospheric Research Program.

2

The Musson, not shown in figures 1-3, served as a roving ship near the position occupied by the Prof. Zubov.

recorded in the WMO marine logs to ensure that there was agreement between prevailing weather conditions at the time of reported rainfall.

Daily totals and totals for each of the three observation phases are shown in tables 49, 50, and 51, where the ships are arranged roughly in the order from north to south in which they were stationed in the array for each observation phase (figs. 1-3). Values shown in parentheses indicate amounts measured when individual ships were traveling to and from station; in all other cases precipitation amounts cover the whole days (from 0000 to 2300 GMT) during which the ships occupied their designated positions, and phase totals are only for the latter amounts. On-station dates and times for each ship are listed in the appendix.

Precipitation data for the U.S. ships at a higher time resolution than given here will be presented in a forthcoming NOAA Technical Report ("U.S. National Processing Center for GATE: B-Scale Ship Precipitation Data," by Ward R. Seguin and Raymond B. Crayton).

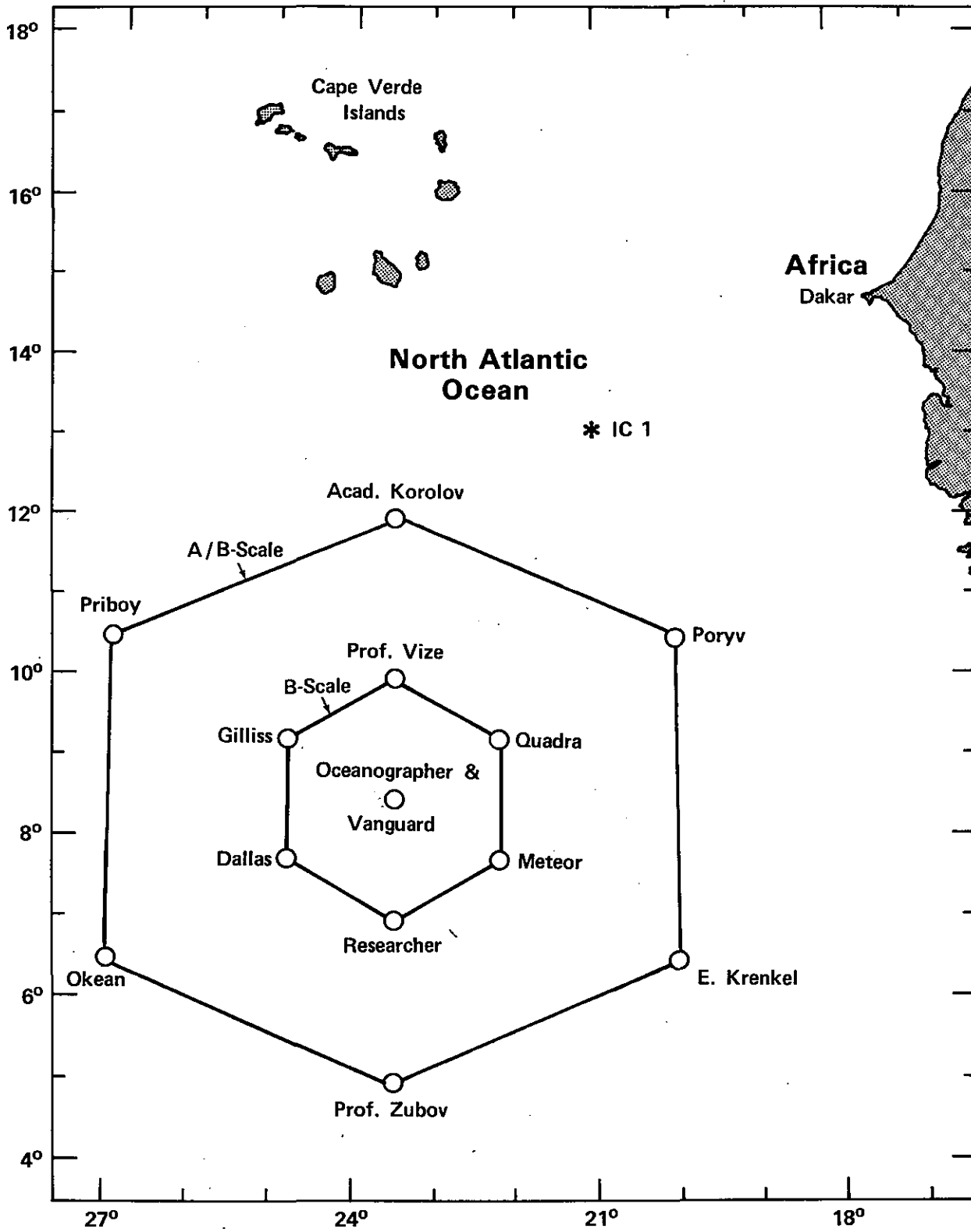


Figure 1.--Ship array during Phase I.

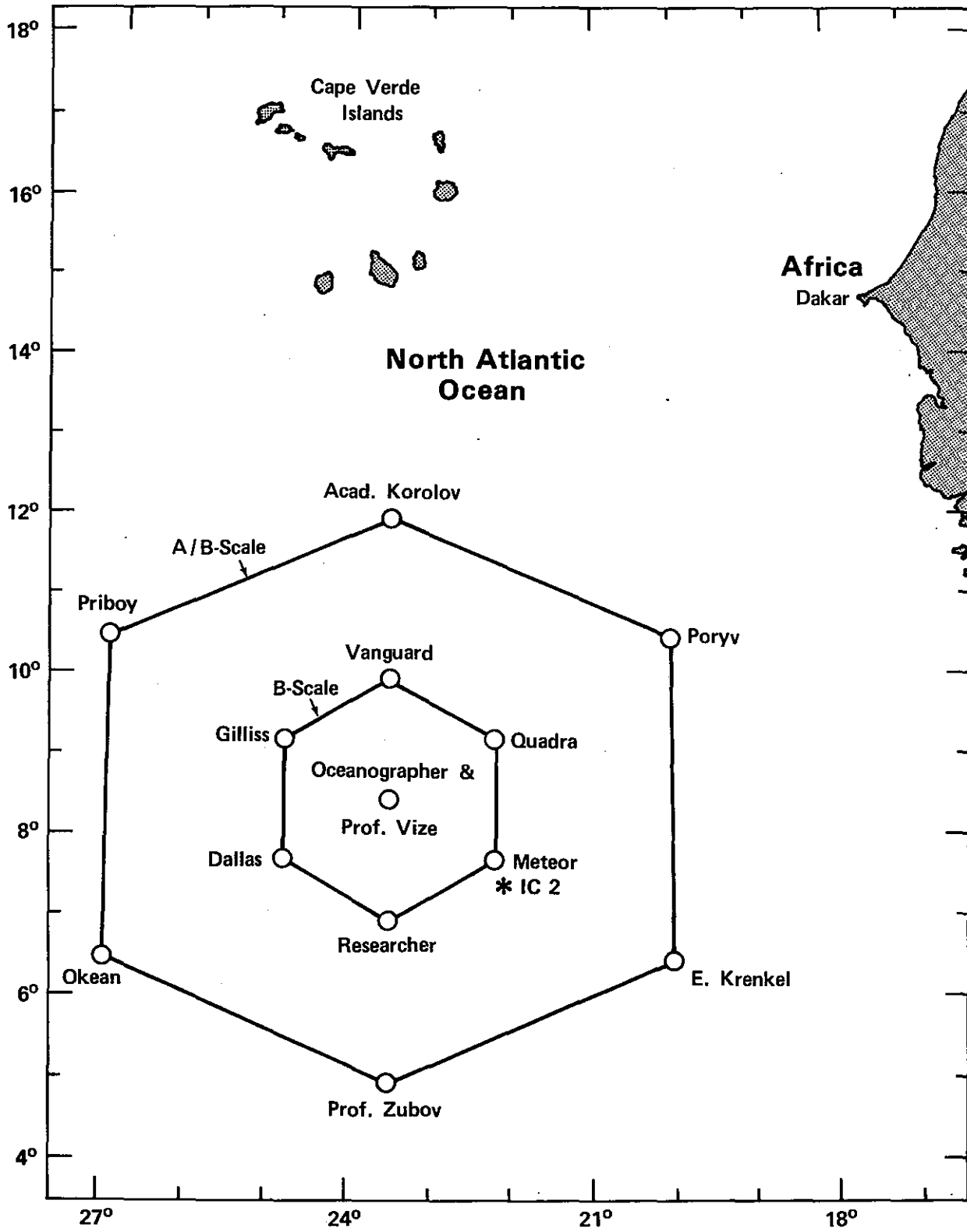


Figure 2.--Ship array during Phase II.

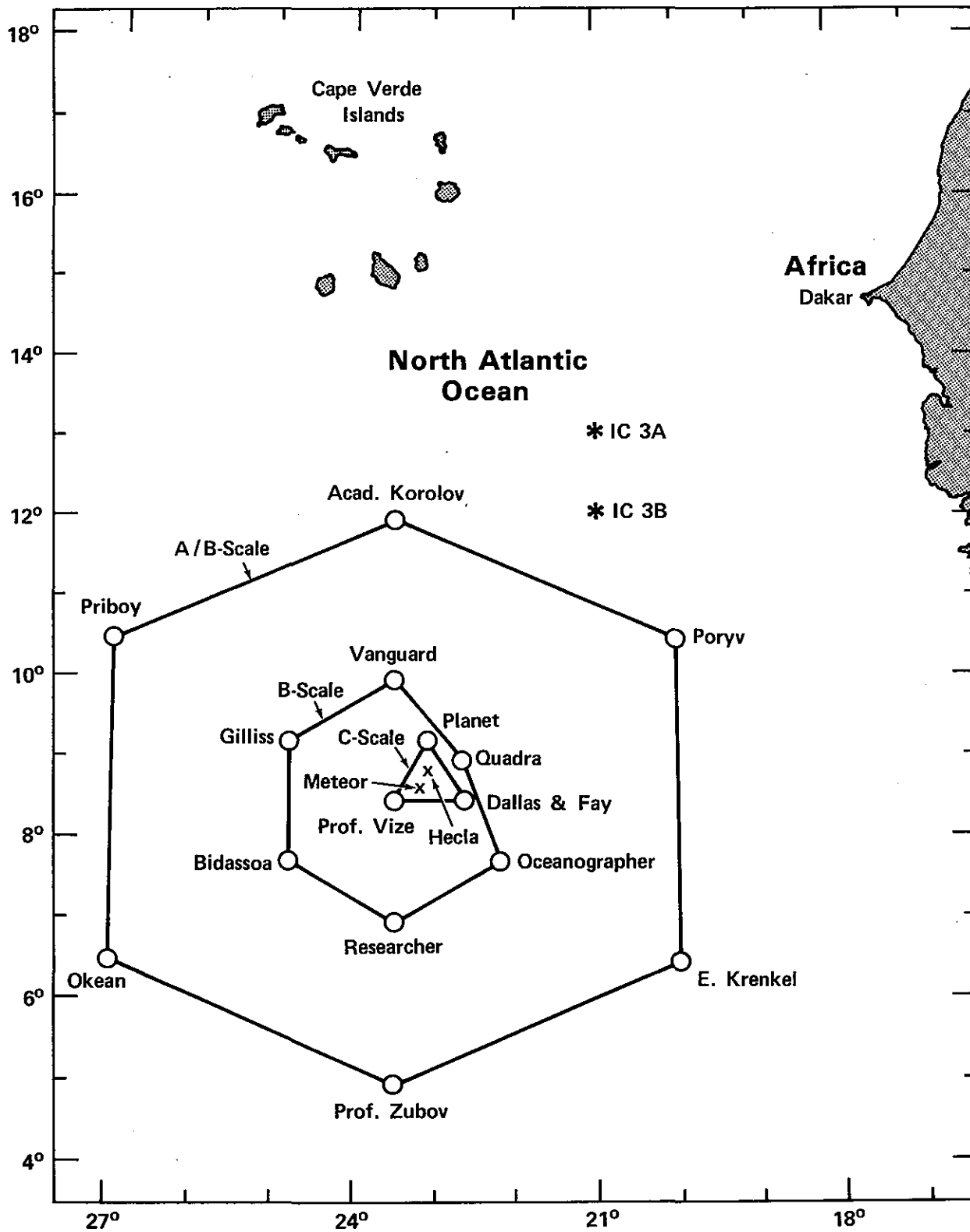


Figure 3.—Ship array during Phase III.

Table 1.--Korolov rainfall data for Phase I

START TIME (GMT)	STOP TIME (GMT)	3 HOUR
JUL. DATE HOUR	JUL. DATE HOUR	AMOUNT (MM)
TOTAL PRECIPITATION AMOUNT IS		0.0 MM

Table 2.--Korolov rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL. DATE	DATE	HOUR	JUL. DATE	DATE	HOUR	
226	AUG 14	300	226	AUG 14	600	2.0
TOTAL PRECIPITATION AMOUNT IS						2.0 MM

Table 3.--Korolov rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
243	AUG 31	300	243	AUG 31	600	3.0
245	SEP 2	2100	246	SEP 3	000	10.0
249	SEP 6	300	249	SEP 6	600	20.0
249	SEP 6	600	249	SEP 6	900	9.0
249	SEP 6	2100	250	SEP 7	000	1.0
251	SEP 8	600	251	SEP 8	900	2.0
251	SEP 8	2100	252	SEP 9	000	79.0
252	SEP 9	000	252	SEP 9	300	12.0
257	SEP 14	900	257	SEP 14	1200	6.0
257	SEP 14	1200	257	SEP 14	1500	2.0
257	SEP 14	1800	257	SEP 14	2100	4.0
257	SEP 14	2100	258	SEP 15	000	6.0
258	SEP 15	000	258	SEP 15	300	4.0
260	SEP 17	900	260	SEP 17	1200	1.0

TOTAL PRECIPITATION AMOUNT IS 159.0 MM

Table 4.--Poryv rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
188	JUL 7	2100	189	JUL 8	000	3.0
189	JUL 8	1500	189	JUL 8	1800	1.0
192	JUL 11	1500	192	JUL 11	1800	2.0
193	JUL 12	2100	194	JUL 13	000	14.0
194	JUL 13	300	194	JUL 13	600	1.0
194	JUL 13	600	194	JUL 13	900	2.0
194	JUL 13	900	194	JUL 13	1200	5.0
194	JUL 13	1200	194	JUL 13	1500	4.0
195	JUL 14	000	195	JUL 14	300	12.0
195	JUL 14	600	195	JUL 14	900	8.0
195	JUL 14	1500	195	JUL 14	1800	25.0
195	JUL 14	1800	195	JUL 14	2100	32.0
195	JUL 14	2100	196	JUL 15	000	1.0
196	JUL 15	000	196	JUL 15	300	16.0
197	JUL 16	000	197	JUL 16	300	3.0

TOTAL PRECIPITATION AMOUNT IS 129.0 MM

Table 5.--Poryv rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	1200	209	JUL 28	1500	4.0
209	JUL 28	1500	209	JUL 28	1800	17.0
209	JUL 28	1800	209	JUL 28	2100	7.0
209	JUL 28	2100	210	JUL 29	000	31.0
210	JUL 29	300	210	JUL 29	600	12.0
211	JUL 30	300	211	JUL 30	600	3.0
217	AUG 5	300	217	AUG 5	600	7.0
217	AUG 5	600	217	AUG 5	900	2.0
217	AUG 5	900	217	AUG 5	1200	1.0
217	AUG 5	1200	217	AUG 5	1500	7.0
217	AUG 5	1500	217	AUG 5	1800	4.0
218	AUG 6	900	218	AUG 6	1200	1.0
219	AUG 7	1200	219	AUG 7	1500	1.0
220	AUG 8	1200	220	AUG 8	1500	1.0
220	AUG 8	2100	221	AUG 9	000	2.0
221	AUG 9	900	221	AUG 9	1200	1.0
225	AUG 13	900	225	AUG 13	1200	3.0
225	AUG 13	1200	225	AUG 13	1500	1.0
225	AUG 13	1500	225	AUG 13	1800	2.0

TOTAL PRECIPITATION AMOUNT IS 107.0 MM

Table 6.--Poryv rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	600	242	AUG 30	900	2.0
242	AUG 30	1200	242	AUG 30	1500	1.0
243	AUG 31	300	243	AUG 31	600	1.0
245	SEP 2	1200	245	SEP 2	1500	1.0
248	SEP 5	900	248	SEP 5	1200	2.0
248	SEP 5	1200	248	SEP 5	1500	15.0
249	SEP 6	1500	249	SEP 6	1800	2.0
251	SEP 8	000	251	SEP 8	300	7.0
251	SEP 8	300	251	SEP 8	600	3.0
255	SEP 12	600	255	SEP 12	900	6.0
256	SEP 13	1800	256	SEP 13	2100	2.0
257	SEP 14	1500	257	SEP 14	1800	4.0
258	SEP 15	900	258	SEP 15	1200	2.0
258	SEP 15	1500	258	SEP 15	1800	1.0
258	SEP 15	1800	258	SEP 15	2100	2.0
259	SEP 16	000	259	SEP 16	300	1.0
259	SEP 16	900	259	SEP 16	1200	3.0
260	SEP 17	1800	260	SEP 17	2100	1.0
261	SEP 18	1800	261	SEP 18	2100	26.0
TOTAL PRECIPITATION AMOUNT IS						82.0 MM

Table 7.--Krenkel rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
178	JUN 27	2100	179	JUN 28	000	29.0
179	JUN 28	300	179	JUN 28	600	6.0
179	JUN 28	900	179	JUN 28	1200	16.0
179	JUN 28	1500	179	JUN 28	1800	3.0
180	JUN 29	300	180	JUN 29	600	1.0
180	JUN 29	900	180	JUN 29	1200	1.0
180	JUN 29	1500	180	JUN 29	1800	4.0
180	JUN 29	2100	181	JUN 30	000	1.0
182	JUL 1	900	182	JUL 1	1200	3.0
182	JUL 1	1500	182	JUL 1	1800	12.0
183	JUL 2	1500	183	JUL 2	1800	12.0
185	JUL 4	300	185	JUL 4	600	18.0
185	JUL 4	2100	186	JUL 5	000	38.0
187	JUL 6	300	187	JUL 6	600	18.0
187	JUL 6	900	187	JUL 6	1200	11.0
189	JUL 8	300	189	JUL 8	600	2.0
189	JUL 8	600	189	JUL 8	900	30.0
189	JUL 8	2100	190	JUL 9	000	3.0
190	JUL 9	1500	190	JUL 9	1800	3.0
190	JUL 9	1800	190	JUL 9	2100	5.0
193	JUL 12	300	193	JUL 12	600	19.0
193	JUL 12	600	193	JUL 12	900	2.0
193	JUL 12	1200	193	JUL 12	1500	7.0
193	JUL 12	1500	193	JUL 12	1800	1.0
194	JUL 13	600	194	JUL 13	900	6.0
194	JUL 13	1200	194	JUL 13	1500	4.0
194	JUL 13	1800	194	JUL 13	2100	1.0
194	JUL 13	2100	195	JUL 14	000	4.0
195	JUL 14	000	195	JUL 14	300	7.0
195	JUL 14	1800	195	JUL 14	2100	1.0
195	JUL 14	2100	196	JUL 15	000	8.0
196	JUL 15	000	196	JUL 15	300	7.0
196	JUL 15	1800	196	JUL 15	2100	5.0

TOTAL PRECIPITATION AMOUNT IS 288.0 MM

Table 8.--Krenkel rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
213	AUG	1	1800	213	AUG	1	2100	8.0
214	AUG	2	600	214	AUG	2	900	5.0
214	AUG	2	900	214	AUG	2	1200	16.0
214	AUG	2	1200	214	AUG	2	1500	2.0
214	AUG	2	1500	214	AUG	2	1800	2.0
214	AUG	2	1800	214	AUG	2	2100	1.0
215	AUG	3	000	215	AUG	3	300	1.0
215	AUG	3	300	215	AUG	3	600	2.0
215	AUG	3	600	215	AUG	3	900	1.0
215	AUG	3	900	215	AUG	3	1200	2.0
215	AUG	3	1200	215	AUG	3	1500	3.0
215	AUG	3	1500	215	AUG	3	1800	1.0
215	AUG	3	1800	215	AUG	3	2100	1.0
215	AUG	3	2100	216	AUG	4	000	1.0
216	AUG	4	300	216	AUG	4	600	2.0
216	AUG	4	600	216	AUG	4	900	1.0
222	AUG	10	1500	222	AUG	10	1800	1.0
223	AUG	11	1200	223	AUG	11	1500	23.0
223	AUG	11	1500	223	AUG	11	1800	2.0
TOTAL PRECIPITATION AMOUNT IS						75.0	MM	

Table 9.--Krenkel rainfall data for Phase III

START TIME		(GMT)	STOP TIME		(GMT)	3 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
244	SEP	1	1800	244	SEP	1	2100	1.0
245	SEP	2	000	245	SEP	2	300	28.0
245	SEP	2	300	245	SEP	2	600	31.0
245	SEP	2	600	245	SEP	2	900	2.0
245	SEP	2	900	245	SEP	2	1200	1.0
245	SEP	2	1800	245	SEP	2	2100	1.0
245	SEP	2	2100	246	SEP	3	000	1.0
246	SEP	3	000	246	SEP	3	300	1.0
247	SEP	4	900	247	SEP	4	1200	3.0
249	SEP	6	000	249	SEP	6	300	3.0
249	SEP	6	300	249	SEP	6	600	1.0
249	SEP	6	600	249	SEP	6	900	1.0
253	SEP	10	900	253	SEP	10	1200	2.0
253	SEP	10	1200	253	SEP	10	1500	25.0
253	SEP	10	1500	253	SEP	10	1800	2.0
254	SEP	11	1800	254	SEP	11	2100	14.0
254	SEP	11	2100	255	SEP	12	000	4.0
258	SEP	15	2100	259	SEP	16	000	1.0
259	SEP	16	900	259	SEP	16	1200	13.0
TOTAL PRECIPITATION AMOUNT IS 135.0 MM								

Table 10.--Zubov rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
178	JUN 27	2100	179	JUN 28	000	3.0
179	JUN 28	000	179	JUN 28	300	3.0
179	JUN 28	300	179	JUN 28	600	2.0
179	JUN 28	1500	179	JUN 28	1800	2.0
179	JUN 28	1800	179	JUN 28	2100	3.0
179	JUN 28	2100	180	JUN 29	000	13.0
180	JUN 29	000	180	JUN 29	300	13.0
180	JUN 29	300	180	JUN 29	600	1.0
181	JUN 30	000	181	JUN 30	300	6.0
181	JUN 30	1800	181	JUN 30	2100	1.0
186	JUL 5	1500	186	JUL 5	1800	1.0
190	JUL 9	1800	190	JUL 9	2100	3.0
190	JUL 9	2100	191	JUL 10	000	5.0
191	JUL 10	000	191	JUL 10	300	5.0
191	JUL 10	300	191	JUL 10	600	2.0
191	JUL 10	600	191	JUL 10	900	27.0
191	JUL 10	1200	191	JUL 10	1500	1.0
192	JUL 11	900	192	JUL 11	1200	10.0
192	JUL 11	1200	192	JUL 11	1500	2.0
192	JUL 11	1500	192	JUL 11	1800	2.0
192	JUL 11	1800	192	JUL 11	2100	6.0
192	JUL 11	2100	193	JUL 12	000	4.0
193	JUL 12	000	193	JUL 12	300	2.0
193	JUL 12	300	193	JUL 12	600	1.0
193	JUL 12	600	193	JUL 12	900	1.0
193	JUL 12	900	193	JUL 12	1200	8.0
196	JUL 15	000	196	JUL 15	300	16.0
196	JUL 15	300	196	JUL 15	600	8.0
196	JUL 15	1800	196	JUL 15	2100	13.0
197	JUL 16	1800	197	JUL 16	2100	2.0

TOTAL PRECIPITATION AMOUNT IS 166.0 MM

Table 11.--Zubov rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
216	AUG 4	1500	216	AUG 4	1800	1.0
TOTAL PRECIPITATION AMOUNT IS					1.0 MM	

Table 12.--Zubov rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
247	SEP	4	2100	248	SEP	5	000	38.0
249	SEP	6	600	249	SEP	6	900	2.0
249	SEP	6	900	249	SEP	6	1200	7.0
249	SEP	6	1200	249	SEP	6	1500	6.0
252	SEP	9	300	252	SEP	9	600	1.0
254	SEP	11	1500	254	SEP	11	1800	1.0
255	SEP	12	000	255	SEP	12	300	3.0
255	SEP	12	2100	256	SEP	13	000	7.0

TOTAL PRECIPITATION AMOUNT IS 65.0 MM

Table 13.--Musson rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
179	JUN 28	900	179	JUN 28	1200	30.0
179	JUN 28	2100	180	JUN 29	000	1.0
180	JUN 29	300	180	JUN 29	600	24.0
180	JUN 29	900	180	JUN 29	1200	1.0
181	JUN 30	300	181	JUN 30	600	10.0
181	JUN 30	2100	182	JUL 1	000	2.0
186	JUL 5	1500	186	JUL 5	1800	3.0
190	JUL 9	1500	190	JUL 9	1800	5.0
190	JUL 9	2100	191	JUL 10	000	4.0
191	JUL 10	300	191	JUL 10	600	36.0
191	JUL 10	900	191	JUL 10	1200	1.0
191	JUL 10	1500	191	JUL 10	1800	12.0
192	JUL 11	900	192	JUL 11	1200	1.0
192	JUL 11	1500	192	JUL 11	1800	18.0
192	JUL 11	2100	193	JUL 12	000	12.0
193	JUL 12	300	193	JUL 12	600	3.0
193	JUL 12	900	193	JUL 12	1200	2.0
193	JUL 12	2100	194	JUL 13	000	7.0
196	JUL 15	300	196	JUL 15	600	3.0
TOTAL PRECIPITATION AMOUNT IS 175.0 MM						

Table 14.--Musson rainfall data for Phase II

START TIME (GMT)				STOP TIME (GMT)				3 HOUR AMOUNT (MM)
JUL.	DATE	HR		JUL.	DATE	HR		
215	AUG	3	1200	215	AUG	3	1500	5.0
215	AUG	3	1800	215	AUG	3	2100	1.0
216	AUG	4	1200	216	AUG	4	1500	1.0
218	AUG	6	900	218	AUG	6	1200	2.0
TOTAL PRECIPITATION AMOUNT IS								9.0 MM

Table 15.--Musson rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
247	SEP 4	2100	248	SEP 5	000	3.0
248	SEP 5	000	248	SEP 5	300	1.0
249	SEP 6	600	249	SEP 6	900	5.0
249	SEP 6	900	249	SEP 6	1200	18.0
249	SEP 6	1200	249	SEP 6	1500	3.0
254	SEP 11	1200	254	SEP 11	1500	31.0
255	SEP 12	000	255	SEP 12	300	5.0
255	SEP 12	2100	256	SEP 13	000	8.0
256	SEP 13	300	256	SEP 13	600	2.0
256	SEP 13	1200	256	SEP 13	1500	2.0
256	SEP 13	1500	256	SEP 13	1800	1.0
262	SEP 19	1800	262	SEP 19	2100	6.0
TOTAL PRECIPITATION AMOUNT IS						85.0 MM

Table 16.--Okean rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
178	JUN 27	2100	179	JUN 28	000	1.0
179	JUN 28	600	179	JUN 28	900	1.0
179	JUN 28	900	179	JUN 28	1200	1.0
179	JUN 28	1500	179	JUN 28	1800	2.0
179	JUN 28	1800	179	JUN 28	2100	8.0
179	JUN 28	2100	180	JUN 29	000	7.0
181	JUN 30	600	181	JUN 30	900	6.0
181	JUN 30	900	181	JUN 30	1200	54.0
181	JUN 30	1200	181	JUN 30	1500	19.0
181	JUN 30	1500	181	JUN 30	1800	5.0
181	JUN 30	1800	181	JUN 30	2100	6.0
182	JUL 1	900	182	JUL 1	1200	3.0
182	JUL 1	1200	182	JUL 1	1500	1.0
182	JUL 1	1800	182	JUL 1	2100	1.0
183	JUL 2	000	183	JUL 2	300	1.0
183	JUL 2	300	183	JUL 2	600	2.0
183	JUL 2	600	183	JUL 2	900	1.0
188	JUL 7	900	188	JUL 7	1200	1.0
189	JUL 8	900	189	JUL 8	1200	15.0
189	JUL 8	1200	189	JUL 8	1500	7.0
190	JUL 9	600	190	JUL 9	900	6.0
190	JUL 9	1800	190	JUL 9	2100	1.0
191	JUL 10	000	191	JUL 10	300	2.0
191	JUL 10	300	191	JUL 10	600	1.0
192	JUL 11	1800	192	JUL 11	2100	32.0
192	JUL 11	2100	193	JUL 12	000	26.0
193	JUL 12	900	193	JUL 12	1200	1.0
193	JUL 12	1800	193	JUL 12	2100	27.0
193	JUL 12	2100	194	JUL 13	000	6.0
194	JUL 13	1800	194	JUL 13	2100	12.0
194	JUL 13	2100	195	JUL 14	000	4.0
195	JUL 14	300	195	JUL 14	600	1.0
195	JUL 14	600	195	JUL 14	900	15.0
195	JUL 14	900	195	JUL 14	1200	17.0
195	JUL 14	1200	195	JUL 14	1500	2.0
196	JUL 15	2100	197	JUL 16	000	8.0

TOTAL PRECIPITATION AMOUNT IS 303.0 MM

Table 17.--Okean rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	1200	209	JUL 28	1500	2.0
212	JUL 31	1500	212	JUL 31	1800	2.0
215	AUG 3	300	215	AUG 3	600	14.0
215	AUG 3	1500	215	AUG 3	1800	6.0
216	AUG 4	600	216	AUG 4	900	1.0
217	AUG 5	1800	217	AUG 5	2100	1.0
217	AUG 5	2100	218	AUG 6	000	9.0
223	AUG 11	300	223	AUG 11	600	8.0
223	AUG 11	600	223	AUG 11	900	1.0
223	AUG 11	900	223	AUG 11	1200	1.0
224	AUG 12	900	224	AUG 12	1200	6.0
224	AUG 12	1200	224	AUG 12	1500	14.0
224	AUG 12	1500	224	AUG 12	1800	20.0
224	AUG 12	1800	224	AUG 12	2100	2.0

TOTAL PRECIPITATION AMOUNT IS 87.0 MM

Table 18.--Okean rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	300	11.0
242	AUG 30	300	242	AUG 30	600	2.0
242	AUG 30	1200	242	AUG 30	1500	5.0
243	AUG 31	1500	243	AUG 31	1800	3.0
245	SEP 2	900	245	SEP 2	1200	1.0
245	SEP 2	1200	245	SEP 2	1500	10.0
246	SEP 3	000	246	SEP 3	300	1.0
246	SEP 3	600	246	SEP 3	900	2.0
246	SEP 3	900	246	SEP 3	1200	2.0
246	SEP 3	2100	247	SEP 4	000	7.0
247	SEP 4	000	247	SEP 4	300	1.0
247	SEP 4	600	247	SEP 4	900	10.0
247	SEP 4	900	247	SEP 4	1200	25.0
247	SEP 4	1200	247	SEP 4	1500	3.0
249	SEP 6	000	249	SEP 6	300	2.0
249	SEP 6	600	249	SEP 6	900	1.0
250	SEP 7	1500	250	SEP 7	1800	5.0
251	SEP 8	900	251	SEP 8	1200	6.0
251	SEP 8	1200	251	SEP 8	1500	1.0
251	SEP 8	1500	251	SEP 8	1800	3.0
251	SEP 8	1800	251	SEP 8	2100	4.0
251	SEP 8	2100	252	SEP 9	000	6.0
252	SEP 9	000	252	SEP 9	300	9.0
255	SEP 12	1200	255	SEP 12	1500	24.0
255	SEP 12	1500	255	SEP 12	1800	11.0
255	SEP 12	1800	255	SEP 12	2100	1.0
256	SEP 13	900	256	SEP 13	1200	2.0
256	SEP 13	1200	256	SEP 13	1500	14.0
256	SEP 13	1500	256	SEP 13	1800	34.0
256	SEP 13	1800	256	SEP 13	2100	2.0
257	SEP 14	000	257	SEP 14	300	5.0
257	SEP 14	300	257	SEP 14	600	2.0
257	SEP 14	600	257	SEP 14	900	1.0
261	SEP 18	900	261	SEP 18	1200	2.0
262	SEP 19	1200	262	SEP 19	1500	1.0

TOTAL PRECIPITATION AMOUNT IS 219.0 MM

Table 19.--Priboy rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
185	JUL 4	2100	186	JUL 5	000	1.0
188	JUL 7	900	188	JUL 7	1200	1.0
195	JUL 14	000	195	JUL 14	300	1.0
195	JUL 14	900	195	JUL 14	1200	9.0
196	JUL 15	300	196	JUL 15	600	1.0
TOTAL PRECIPITATION AMOUNT IS						13.0 MM

Table 20.--Priboy rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
213	AUG	1	2100	214	AUG	2	000	8.0
214	AUG	2	000	214	AUG	2	300	4.0
214	AUG	2	1200	214	AUG	2	1500	1.0
214	AUG	2	1500	214	AUG	2	1800	1.0
218	AUG	6	000	218	AUG	6	300	1.0
218	AUG	6	600	218	AUG	6	900	2.0
218	AUG	6	900	218	AUG	6	1200	1.0
218	AUG	6	1200	218	AUG	6	1500	7.0
218	AUG	6	1800	218	AUG	6	2100	1.0
219	AUG	7	300	219	AUG	7	600	1.0
219	AUG	7	1500	219	AUG	7	1800	7.0
219	AUG	7	1800	219	AUG	7	2100	2.0
219	AUG	7	2100	220	AUG	8	000	1.0
220	AUG	8	000	220	AUG	8	300	1.0
220	AUG	8	300	220	AUG	8	600	1.0
220	AUG	8	600	220	AUG	8	900	2.0
220	AUG	8	900	220	AUG	8	1200	1.0
220	AUG	8	1200	220	AUG	8	1500	2.0
221	AUG	9	000	221	AUG	9	300	1.0
221	AUG	9	300	221	AUG	9	600	1.0
221	AUG	9	600	221	AUG	9	900	4.0
221	AUG	9	900	221	AUG	9	1200	2.0
221	AUG	9	1200	221	AUG	9	1500	1.0
222	AUG	10	900	222	AUG	10	1200	11.0
222	AUG	10	1200	222	AUG	10	1500	9.0
222	AUG	10	1500	222	AUG	10	1800	35.0
222	AUG	10	1800	222	AUG	10	2100	2.0
222	AUG	10	2100	223	AUG	11	000	1.0
224	AUG	12	2100	225	AUG	13	000	1.0
225	AUG	13	000	225	AUG	13	300	1.0
225	AUG	13	1200	225	AUG	13	1500	1.0
226	AUG	14	000	226	AUG	14	300	1.0
227	AUG	15	000	227	AUG	15	300	1.0

TOTAL PRECIPITATION AMOUNT IS 116.0 MM

Table 21.--Priboy rainfall data for Phase III

START TIME (GMT)				STOP TIME (GMT)				3 HOUR
JUL.	DATE	HR	HR	JUL.	DATE	HR	HR	AMOUNT (MM)
243	AUG	31	600	243	AUG	31	900	3.0
245	SEP	2	600	245	SEP	2	900	1.0
245	SEP	2	900	245	SEP	2	1200	1.0
245	SEP	2	1500	245	SEP	2	1800	4.0
245	SEP	2	1800	245	SEP	2	2100	2.0
246	SEP	3	000	246	SEP	3	300	2.0
246	SEP	3	300	246	SEP	3	600	1.0
246	SEP	3	600	246	SEP	3	900	4.0
248	SEP	5	600	248	SEP	5	900	3.0
249	SEP	6	600	249	SEP	6	900	1.0
249	SEP	6	900	249	SEP	6	1200	1.0
249	SEP	6	1800	249	SEP	6	2100	1.0
250	SEP	7	2100	251	SEP	8	000	2.0
251	SEP	8	000	251	SEP	8	300	1.0
251	SEP	8	300	251	SEP	8	600	1.0
251	SEP	8	600	251	SEP	8	900	1.0
251	SEP	8	900	251	SEP	8	1200	1.0
251	SEP	8	1200	251	SEP	8	1500	1.0
251	SEP	8	1500	251	SEP	8	1800	1.0
252	SEP	9	1800	252	SEP	9	2100	1.0
253	SEP	10	300	253	SEP	10	600	1.0
253	SEP	10	600	253	SEP	10	900	4.0
253	SEP	10	1800	253	SEP	10	2100	4.0
253	SEP	10	2100	254	SEP	11	000	2.0
254	SEP	11	1800	254	SEP	11	2100	3.0
255	SEP	12	000	255	SEP	12	300	1.0
255	SEP	12	1500	255	SEP	12	1800	1.0
257	SEP	14	900	257	SEP	14	1200	1.0
257	SEP	14	1800	257	SEP	14	2100	1.0
258	SEP	15	600	258	SEP	15	900	1.0
258	SEP	15	900	258	SEP	15	1200	1.0
259	SEP	16	900	259	SEP	16	1200	1.0
259	SEP	16	1200	259	SEP	16	1500	1.0
259	SEP	16	2100	260	SEP	17	000	1.0
260	SEP	17	300	260	SEP	17	600	1.0
260	SEP	17	900	260	SEP	17	1200	1.0
260	SEP	17	1200	260	SEP	17	1500	1.0
260	SEP	17	1500	260	SEP	17	1800	1.0
260	SEP	17	2100	261	SEP	18	000	1.0
261	SEP	18	000	261	SEP	18	300	1.0
TOTAL PRECIPITATION AMOUNT IS				62.0 MM				

Table 22.--Oceanographer rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
179	JUN 28	1200	179	JUN 28	1800	8.0
180	JUN 29	1800	181	JUN 30	000	14.0
181	JUN 30	1200	181	JUN 30	1800	2.0
181	JUN 30	1800	182	JUL 1	000	12.0
182	JUL 1	000	182	JUL 1	600	8.0
182	JUL 1	600	182	JUL 1	1200	0.3
182	JUL 1	1800	183	JUL 2	000	0.3
183	JUL 2	600	183	JUL 2	1200	21.0
183	JUL 2	1200	183	JUL 2	1800	4.0
185	JUL 4	600	185	JUL 4	1200	0.3
185	JUL 4	1800	186	JUL 5	000	0.3
188	JUL 7	000	188	JUL 7	600	3.0
188	JUL 7	600	188	JUL 7	1200	5.0
188	JUL 7	1200	188	JUL 7	1800	29.0
188	JUL 7	1800	189	JUL 8	000	110.0
189	JUL 8	000	189	JUL 8	600	49.0
189	JUL 8	600	189	JUL 8	1200	2.0
189	JUL 8	1200	189	JUL 8	1800	7.0
189	JUL 8	1800	190	JUL 9	000	3.0
194	JUL 13	1800	195	JUL 14	000	2.0
195	JUL 14	000	195	JUL 14	600	11.0
195	JUL 14	600	195	JUL 14	1200	0.3
196	JUL 15	000	196	JUL 15	600	25.0
196	JUL 15	600	196	JUL 15	1200	4.0

TOTAL PRECIPITATION AMOUNT IS 320.5 MM

Table 23.--Oceanographer rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	000	209	JUL 28	600	0.3
214	AUG 2	1800	215	AUG 3	000	14.0
215	AUG 3	1800	216	AUG 4	000	0.3
217	AUG 5	1200	217	AUG 5	1800	3.0
217	AUG 5	1800	218	AUG 6	000	1.0
220	AUG 8	600	220	AUG 8	1200	2.0
220	AUG 8	1200	220	AUG 8	1800	2.0
220	AUG 8	1800	221	AUG 9	000	2.0
222	AUG 10	000	222	AUG 10	600	12.0
224	AUG 12	1200	224	AUG 12	1800	0.2
224	AUG 12	1800	225	AUG 13	000	0.2
TOTAL PRECIPITATION AMOUNT IS						37.0 MM

Table 24.--Oceanographer rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	600	12.0
245	SEP 2	000	245	SEP 2	600	2.0
245	SEP 2	1200	245	SEP 2	1800	1.0
247	SEP 4	000	247	SEP 4	600	3.0
247	SEP 4	600	247	SEP 4	1200	1.0
247	SEP 4	1200	247	SEP 4	1800	22.0
248	SEP 5	1200	248	SEP 5	1800	2.0
248	SEP 5	1800	249	SEP 6	000	3.0
249	SEP 6	000	249	SEP 6	600	3.0
249	SEP 6	600	249	SEP 6	1200	11.0
249	SEP 6	1200	249	SEP 6	1800	2.0
249	SEP 6	1800	250	SEP 7	000	8.0
250	SEP 7	600	250	SEP 7	1200	0.5
254	SEP 11	1800	255	SEP 12	000	13.0
255	SEP 12	1200	255	SEP 12	1800	21.0
259	SEP 16	600	259	SEP 16	1200	14.0
259	SEP 16	1200	259	SEP 16	1800	10.0
260	SEP 17	1200	260	SEP 17	1800	5.0
262	SEP 19	1200	262	SEP 19	1800	21.0

TOTAL PRECIPITATION AMOUNT IS 154.5 MM

Table 25.--Vanguard rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HR	JUL.	DATE	HR	
180	JUN 29	1800	181	JUN 30	000	26.0
181	JUN 30	000	181	JUN 30	600	0.2
181	JUN 30	1200	181	JUN 30	1800	2.0
181	JUN 30	1800	182	JUL 1	000	11.0
182	JUL 1	000	182	JUL 1	600	10.0
182	JUL 1	1200	182	JUL 1	1800	2.0
182	JUL 1	1800	183	JUL 2	000	2.0
183	JUL 2	000	183	JUL 2	600	9.0
183	JUL 2	600	183	JUL 2	1200	14.0
183	JUL 2	1200	183	JUL 2	1800	8.0
183	JUL 2	1800	184	JUL 3	000	5.0
184	JUL 3	1200	184	JUL 3	1800	0.2
185	JUL 4	600	185	JUL 4	1200	3.0
185	JUL 4	1200	185	JUL 4	1800	3.0
185	JUL 4	1800	186	JUL 5	000	1.0
188	JUL 7	000	188	JUL 7	600	3.0
188	JUL 7	600	188	JUL 7	1200	16.0
188	JUL 7	1200	188	JUL 7	1800	12.0
188	JUL 7	1800	189	JUL 8	000	12.0
189	JUL 8	000	189	JUL 8	600	14.0
189	JUL 8	600	189	JUL 8	1200	2.0
189	JUL 8	1200	189	JUL 8	1800	12.0
189	JUL 8	1800	190	JUL 9	000	30.0
194	JUL 13	1800	195	JUL 14	000	10.0
195	JUL 14	000	195	JUL 14	600	6.0
195	JUL 14	600	195	JUL 14	1200	2.0
195	JUL 14	1800	196	JUL 15	000	9.0
196	JUL 15	000	196	JUL 15	600	21.0
196	JUL 15	600	196	JUL 15	1200	5.0

TOTAL PRECIPITATION AMOUNT IS 250.4 MM

Table 26.--Vanguard rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	600	209	JUL 28	1200	4.0
209	JUL 28	1200	209	JUL 28	1800	8.0
210	JUL 29	000	210	JUL 29	600	3.0
210	JUL 29	600	210	JUL 29	1200	1.0
210	JUL 29	1200	210	JUL 29	1800	17.0
210	JUL 29	1800	211	JUL 30	000	1.0
211	JUL 30	000	211	JUL 30	600	2.0
211	JUL 30	600	211	JUL 30	1200	1.0
213	AUG 1	000	213	AUG 1	600	1.0
213	AUG 1	600	213	AUG 1	1200	1.0
213	AUG 1	1200	213	AUG 1	1800	24.0
213	AUG 1	1800	214	AUG 2	000	2.0
214	AUG 2	600	214	AUG 2	1200	11.0
215	AUG 3	1200	215	AUG 3	1800	1.0
216	AUG 4	000	216	AUG 4	600	0.3
217	AUG 5	1200	217	AUG 5	1800	3.0
217	AUG 5	1800	218	AUG 6	000	3.0
218	AUG 6	000	218	AUG 6	600	10.0
218	AUG 6	600	218	AUG 6	1200	6.0
218	AUG 6	1800	219	AUG 7	000	0.3
219	AUG 7	1800	220	AUG 8	000	18.0
220	AUG 8	000	220	AUG 8	600	12.0
220	AUG 8	600	220	AUG 8	1200	5.0
220	AUG 8	1200	220	AUG 8	1800	1.0
220	AUG 8	1800	221	AUG 9	000	1.0
221	AUG 9	000	221	AUG 9	600	2.0
221	AUG 9	600	221	AUG 9	1200	2.0
221	AUG 9	1200	221	AUG 9	1800	0.3
221	AUG 9	1800	222	AUG 10	000	10.0
222	AUG 10	000	222	AUG 10	600	1.0
222	AUG 10	600	222	AUG 10	1200	0.5
222	AUG 10	1200	222	AUG 10	1800	0.5
224	AUG 12	1200	224	AUG 12	1800	0.5
224	AUG 12	1800	225	AUG 13	000	18.0
225	AUG 13	000	225	AUG 13	600	17.0
225	AUG 13	600	225	AUG 13	1200	4.0
225	AUG 13	1200	225	AUG 13	1800	51.0
225	AUG 13	1800	226	AUG 14	000	13.0

TOTAL PRECIPITATION AMOUNT IS 256.4 MM

Table 27.--Vanguard rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
245	SEP	2	000	245	SEP	2	600	0.3
249	SEP	6	000	249	SEP	6	600	0.3
249	SEP	6	1200	249	SEP	6	1800	2.0
249	SEP	6	1800	250	SEP	7	000	0.3
250	SEP	7	000	250	SEP	7	600	5.0
251	SEP	8	600	251	SEP	8	1200	0.3
252	SEP	9	600	252	SEP	9	1200	4.0
252	SEP	9	1200	252	SEP	9	1800	55.0
252	SEP	9	1800	253	SEP	10	000	7.0
253	SEP	10	600	253	SEP	10	1200	0.6
253	SEP	10	1200	253	SEP	10	1800	6.0
254	SEP	11	1200	254	SEP	11	1800	1.0
255	SEP	12	600	255	SEP	12	1200	1.0
256	SEP	13	1200	256	SEP	13	1800	41.0
256	SEP	13	1800	257	SEP	14	000	25.0
257	SEP	14	600	257	SEP	14	1200	1.0
257	SEP	14	1200	257	SEP	14	1800	0.3
257	SEP	14	1800	258	SEP	15	000	43.0
258	SEP	15	000	258	SEP	15	600	0.5
258	SEP	15	1800	259	SEP	16	000	0.6
259	SEP	16	000	259	SEP	16	600	2.0
259	SEP	16	1200	259	SEP	16	1800	4.0
259	SEP	16	1800	260	SEP	17	000	14.0
260	SEP	17	000	260	SEP	17	600	0.5
260	SEP	17	600	260	SEP	17	1200	5.0
260	SEP	17	1200	260	SEP	17	1800	0.5
261	SEP	18	000	261	SEP	18	600	3.0

TOTAL PRECIPITATION AMOUNT IS 223.2 MM

Table 28.--Vize rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
187	JUL 6	1500	187	JUL 6	1800	7.0
195	JUL 14	1200	195	JUL 14	1500	17.0
196	JUL 15	300	196	JUL 15	600	5.0
TOTAL PRECIPITATION AMOUNT IS						29.0 MM

Table 29.--Vize rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	900	209	JUL 28	1200	3.0
209	JUL 28	2100	210	JUL 29	000	4.0
210	JUL 29	000	210	JUL 29	300	11.0
210	JUL 29	300	210	JUL 29	600	3.0
213	AUG 1	000	213	AUG 1	300	3.0
213	AUG 1	300	213	AUG 1	600	19.0
213	AUG 1	1500	213	AUG 1	1800	2.0
213	AUG 1	1800	213	AUG 1	2100	19.0
213	AUG 1	2100	214	AUG 2	000	8.0
214	AUG 2	000	214	AUG 2	300	3.0
214	AUG 2	1800	214	AUG 2	2100	1.0
214	AUG 2	2100	215	AUG 3	000	8.0
217	AUG 5	000	217	AUG 5	300	2.0
217	AUG 5	900	217	AUG 5	1200	1.0
217	AUG 5	1500	217	AUG 5	1800	2.0
220	AUG 8	1200	220	AUG 8	1500	1.0
222	AUG 10	000	222	AUG 10	300	2.0
222	AUG 10	300	222	AUG 10	600	3.0
222	AUG 10	600	222	AUG 10	900	9.0
TOTAL PRECIPITATION AMOUNT IS 104.0 MM						

Table 30.--Vize rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			3 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	2100	243	AUG 31	000	2.0
245	SEP 2	1800	245	SEP 2	2100	8.0
249	SEP 6	1200	249	SEP 6	1500	1.0
250	SEP 7	900	250	SEP 7	1200	1.0
256	SEP 13	1200	256	SEP 13	1500	2.0
257	SEP 14	000	257	SEP 14	300	11.0
257	SEP 14	300	257	SEP 14	600	11.0
257	SEP 14	600	257	SEP 14	900	1.0
257	SEP 14	1500	257	SEP 14	1800	8.0
257	SEP 14	1800	257	SEP 14	2100	2.0
257	SEP 14	2100	258	SEP 15	000	1.0
258	SEP 15	300	258	SEP 15	600	1.0
258	SEP 15	2100	259	SEP 16	000	3.0
260	SEP 17	300	260	SEP 17	600	1.0
260	SEP 17	600	260	SEP 17	900	3.0
260	SEP 17	1200	260	SEP 17	1500	4.0
TOTAL PRECIPITATION AMOUNT IS						60.0 MM

Table 31.--Quadra rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
179	JUN 28	1500	179	JUN 28	1600	0.3
179	JUN 28	1600	179	JUN 28	1700	1.0
179	JUN 28	1700	179	JUN 28	1800	2.0
179	JUN 28	1800	179	JUN 28	1900	0.5
180	JUN 29	1700	180	JUN 29	1800	0.3
180	JUN 29	2300	181	JUN 30	000	0.5
181	JUN 30	000	181	JUN 30	100	2.0
183	JUL 2	300	183	JUL 2	400	0.3
183	JUL 2	500	183	JUL 2	600	7.0
183	JUL 2	600	183	JUL 2	700	2.0
183	JUL 2	1600	183	JUL 2	1700	20.0
183	JUL 2	1700	183	JUL 2	1800	26.0
183	JUL 2	1800	183	JUL 2	1900	0.3
184	JUL 3	2000	184	JUL 3	2100	1.0
184	JUL 3	2200	184	JUL 3	2300	0.3
184	JUL 3	2300	185	JUL 4	000	2.0
188	JUL 7	400	188	JUL 7	500	4.0
188	JUL 7	600	188	JUL 7	700	1.0
188	JUL 7	700	188	JUL 7	800	1.0
188	JUL 7	800	188	JUL 7	900	1.0
188	JUL 7	900	188	JUL 7	1000	2.0
188	JUL 7	1100	188	JUL 7	1200	2.0
188	JUL 7	1200	188	JUL 7	1300	0.3
188	JUL 7	1900	188	JUL 7	2000	0.5
188	JUL 7	2000	188	JUL 7	2100	0.5
188	JUL 7	2100	188	JUL 7	2200	3.0
188	JUL 7	2200	188	JUL 7	2300	0.5
189	JUL 8	300	189	JUL 8	400	0.3
189	JUL 8	800	189	JUL 8	900	0.5
189	JUL 8	1500	189	JUL 8	1600	0.3
189	JUL 8	1600	189	JUL 8	1700	1.0
189	JUL 8	2000	189	JUL 8	2100	1.0
189	JUL 8	2100	189	JUL 8	2200	0.5
194	JUL 13	700	194	JUL 13	800	1.0
194	JUL 13	1300	194	JUL 13	1400	0.5
194	JUL 13	1400	194	JUL 13	1500	4.0
194	JUL 13	1500	194	JUL 13	1600	16.0
194	JUL 13	1600	194	JUL 13	1700	1.0
194	JUL 13	1900	194	JUL 13	2000	10.0
195	JUL 14	400	195	JUL 14	500	5.0
195	JUL 14	500	195	JUL 14	600	3.0
195	JUL 14	600	195	JUL 14	700	1.0
195	JUL 14	700	195	JUL 14	800	0.3
195	JUL 14	1200	195	JUL 14	1300	0.3

Table 31.--Quadra rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
195	JUL 14	1300	195	JUL 14	1400	5.0
195	JUL 14	1400	195	JUL 14	1500	1.0
195	JUL 14	1500	195	JUL 14	1600	0.5
195	JUL 14	1600	195	JUL 14	1700	10.0
195	JUL 14	1700	195	JUL 14	1800	2.0
195	JUL 14	1800	195	JUL 14	1900	0.5
195	JUL 14	2000	195	JUL 14	2100	0.5
195	JUL 14	2100	195	JUL 14	2200	0.5
195	JUL 14	2200	195	JUL 14	2300	3.0
195	JUL 14	2300	196	JUL 15	000	0.3
196	JUL 15	100	196	JUL 15	200	0.5
196	JUL 15	200	196	JUL 15	300	6.0
196	JUL 15	300	196	JUL 15	400	9.0
196	JUL 15	400	196	JUL 15	500	2.0
196	JUL 15	500	196	JUL 15	600	1.0
196	JUL 15	600	196	JUL 15	700	1.0
196	JUL 15	800	196	JUL 15	900	1.0
196	JUL 15	900	196	JUL 15	1000	1.0
196	JUL 15	1000	196	JUL 15	1100	1.0
196	JUL 15	1100	196	JUL 15	1200	1.0
196	JUL 15	1200	196	JUL 15	1300	0.5
197	JUL 16	600	197	JUL 16	700	0.5

TOTAL PRECIPITATION AMOUNT IS 174.8 MM

Table 32.--Quadra rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HR	JUL.	DATE	HR	
210	JUL 29	300	210	JUL 29	400	1.0
210	JUL 29	400	210	JUL 29	500	0.3
210	JUL 29	900	210	JUL 29	1000	1.0
210	JUL 29	1000	210	JUL 29	1100	4.0
210	JUL 29	1100	210	JUL 29	1200	2.0
210	JUL 29	1200	210	JUL 29	1300	3.0
210	JUL 29	1300	210	JUL 29	1400	10.0
210	JUL 29	1400	210	JUL 29	1500	6.0
210	JUL 29	1500	210	JUL 29	1600	12.0
210	JUL 29	1600	210	JUL 29	1700	2.0
210	JUL 29	1700	210	JUL 29	1800	1.0
211	JUL 30	900	211	JUL 30	1000	0.3
212	JUL 31	700	212	JUL 31	800	18.0
212	JUL 31	800	212	JUL 31	900	23.0
212	JUL 31	900	212	JUL 31	1000	2.0
212	JUL 31	1100	212	JUL 31	1200	0.3
212	JUL 31	1700	212	JUL 31	1800	0.3
212	JUL 31	2100	212	JUL 31	2200	0.5
213	AUG 1	1600	213	AUG 1	1700	0.5
213	AUG 1	1700	213	AUG 1	1800	6.0
213	AUG 1	1800	213	AUG 1	1900	2.0
213	AUG 1	2100	213	AUG 1	2200	1.0
213	AUG 1	2200	213	AUG 1	2300	0.3
214	AUG 2	500	214	AUG 2	600	0.3
214	AUG 2	600	214	AUG 2	700	0.3
214	AUG 2	1300	214	AUG 2	1400	0.3
214	AUG 2	1800	214	AUG 2	1900	6.0
215	AUG 3	400	215	AUG 3	500	0.3
216	AUG 4	1500	216	AUG 4	1600	0.3
217	AUG 5	700	217	AUG 5	800	0.5
217	AUG 5	1700	217	AUG 5	1800	1.0
217	AUG 5	1800	217	AUG 5	1900	1.0
217	AUG 5	1900	217	AUG 5	2000	2.0
218	AUG 6	200	218	AUG 6	300	2.0
218	AUG 6	300	218	AUG 6	400	1.0
218	AUG 6	400	218	AUG 6	500	0.3
219	AUG 7	1500	219	AUG 7	1600	0.3
219	AUG 7	1600	219	AUG 7	1700	2.0
219	AUG 7	1700	219	AUG 7	1800	0.5
219	AUG 7	1800	219	AUG 7	1900	0.3
220	AUG 8	200	220	AUG 8	300	1.0
220	AUG 8	300	220	AUG 8	400	1.0
221	AUG 9	1900	221	AUG 9	2000	23.0
221	AUG 9	2000	221	AUG 9	2100	1.0

Table 32.--Quadra rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
221	AUG 9	2100	221	AUG 9	2200	0.3
225	AUG 13	1800	225	AUG 13	1900	3.0
225	AUG 13	2000	225	AUG 13	2100	0.3
226	AUG 14	600	226	AUG 14	700	0.5

TOTAL PRECIPITATION AMOUNT IS 145.0 MM

Table 33.--Quadra rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
244	SEP	1	1000	244	SEP	1	1100	1.0
244	SEP	1	1200	244	SEP	1	1300	2.0
244	SEP	1	1300	244	SEP	1	1400	0.3
245	SEP	2	200	245	SEP	2	300	0.5
245	SEP	2	700	245	SEP	2	800	0.3
245	SEP	2	1700	245	SEP	2	1800	0.3
245	SEP	2	1800	245	SEP	2	1900	1.0
248	SEP	5	500	248	SEP	5	600	1.0
248	SEP	5	600	248	SEP	5	700	0.3
248	SEP	5	700	248	SEP	5	800	1.0
248	SEP	5	800	248	SEP	5	900	1.0
248	SEP	5	1200	248	SEP	5	1300	0.5
248	SEP	5	1300	248	SEP	5	1400	1.0
248	SEP	5	1400	248	SEP	5	1500	0.5
248	SEP	5	1500	248	SEP	5	1600	17.0
248	SEP	5	1600	248	SEP	5	1700	5.0
248	SEP	5	1700	248	SEP	5	1800	2.0
248	SEP	5	1800	248	SEP	5	1900	1.0
248	SEP	5	1900	248	SEP	5	2000	0.3
249	SEP	6	2200	249	SEP	6	2300	0.5
249	SEP	6	2300	250	SEP	7	000	0.5
250	SEP	7	000	250	SEP	7	100	1.0
250	SEP	7	100	250	SEP	7	200	0.3
251	SEP	8	300	251	SEP	8	400	0.5
251	SEP	8	600	251	SEP	8	700	2.0
251	SEP	8	700	251	SEP	8	800	4.0
251	SEP	8	800	251	SEP	8	900	0.5
251	SEP	8	2300	252	SEP	9	000	0.3
252	SEP	9	000	252	SEP	9	100	0.5
252	SEP	9	100	252	SEP	9	200	0.3
252	SEP	9	1000	252	SEP	9	1100	0.3
252	SEP	9	1100	252	SEP	9	1200	25.0
252	SEP	9	1200	252	SEP	9	1300	2.0
252	SEP	9	1300	252	SEP	9	1400	0.5
253	SEP	10	000	253	SEP	10	100	0.5
253	SEP	10	100	253	SEP	10	200	0.3
255	SEP	12	1100	255	SEP	12	1200	0.5
255	SEP	12	1200	255	SEP	12	1300	2.0
256	SEP	13	400	256	SEP	13	500	5.0
256	SEP	13	500	256	SEP	13	600	4.0
256	SEP	13	600	256	SEP	13	700	2.0
256	SEP	13	700	256	SEP	13	800	26.0
256	SEP	13	800	256	SEP	13	900	6.0
256	SEP	13	900	256	SEP	13	1000	10.0

36.3

92.2

Table 33.--Quadra rainfall data for Phase III

START TIME JUL. DATE	(GMT) HOUR	STOP TIME JUL. DATE	(GMT) HOUR	1 HOUR AMOUNT (MM)
256	SEP 13	256	SEP 13	5.0
256	SEP 13	256	SEP 13	28.0
256	SEP 13	256	SEP 13	4.0
256	SEP 13	256	SEP 13	1.0
256	SEP 13	256	SEP 13	5.0
256	SEP 13	256	SEP 13	5.0
256	SEP 13	256	SEP 13	2.0
256	SEP 13	256	SEP 13	3.0
256	SEP 13	256	SEP 13	1.0
256	SEP 13	256	SEP 13	0.3
257	SEP 14	257	SEP 14	0.3
257	SEP 14	257	SEP 14	0.5
257	SEP 14	257	SEP 14	1.0
257	SEP 14	257	SEP 14	1.0
257	SEP 14	257	SEP 14	0.5
257	SEP 14	257	SEP 14	0.5
257	SEP 14	257	SEP 14	2.0
259	SEP 16	259	SEP 16	0.5
259	SEP 16	259	SEP 16	1.0
259	SEP 16	259	SEP 16	0.5
259	SEP 16	259	SEP 16	1.0
259	SEP 16	259	SEP 16	0.5
259	SEP 16	259	SEP 16	1.0
259	SEP 16	259	SEP 16	2.0
259	SEP 16	259	SEP 16	0.3
259	SEP 16	259	SEP 16	2.0
259	SEP 16	259	SEP 16	1.0
260	SEP 17	260	SEP 17	5.0
260	SEP 17	260	SEP 17	2.0
262	SEP 19	262	SEP 19	6.0
262	SEP 19	262	SEP 19	18.0
262	SEP 19	262	SEP 19	18.0
262	SEP 19	262	SEP 19	0.5
262	SEP 19	262	SEP 19	0.3
262	SEP 19	262	SEP 19	0.3
262	SEP 19	262	SEP 19	8.0
262	SEP 19	262	SEP 19	0.3
262	SEP 19	262	SEP 19	5.0
TOTAL PRECIPITATION AMOUNT IS 263.8 MM				

Table 34.--Meteor rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
179	JUN 28	700	179	JUN 28	800	17.2
179	JUN 28	800	179	JUN 28	900	8.0
179	JUN 28	900	179	JUN 28	1000	2.8
179	JUN 28	1100	179	JUN 28	1200	3.7
179	JUN 28	1200	179	JUN 28	1300	3.4
179	JUN 28	1300	179	JUN 28	1400	0.1
179	JUN 28	1800	179	JUN 28	1900	0.6
179	JUN 28	2200	179	JUN 28	2300	0.1
180	JUN 29	1600	180	JUN 29	1700	1.2
180	JUN 29	1700	180	JUN 29	1800	4.8
180	JUN 29	1800	180	JUN 29	1900	0.6
180	JUN 29	1900	180	JUN 29	2000	0.2
180	JUN 29	2000	180	JUN 29	2100	0.3
180	JUN 29	2100	180	JUN 29	2200	0.1
181	JUN 30	1700	181	JUN 30	1800	1.0
181	JUN 30	1800	181	JUN 30	1900	0.1
182	JUL 1	900	182	JUL 1	1000	0.7
182	JUL 1	1200	182	JUL 1	1300	0.4
182	JUL 1	1300	182	JUL 1	1400	0.1
182	JUL 1	1400	182	JUL 1	1500	0.1
182	JUL 1	2100	182	JUL 1	2200	19.3
182	JUL 1	2200	182	JUL 1	2300	3.0
182	JUL 1	2300	183	JUL 2	000	1.2
183	JUL 2	700	183	JUL 2	800	14.2
183	JUL 2	800	183	JUL 2	900	0.3
183	JUL 2	900	183	JUL 2	1000	2.1
183	JUL 2	1000	183	JUL 2	1100	0.3
183	JUL 2	2100	183	JUL 2	2200	0.4
184	JUL 3	1400	184	JUL 3	1500	1.1
185	JUL 4	1800	185	JUL 4	1900	2.0
185	JUL 4	1900	185	JUL 4	2000	0.6
187	JUL 6	2200	187	JUL 6	2300	2.3
188	JUL 7	300	188	JUL 7	400	0.1
188	JUL 7	400	188	JUL 7	500	5.6
188	JUL 7	500	188	JUL 7	600	3.7
188	JUL 7	900	188	JUL 7	1000	0.7
188	JUL 7	1000	188	JUL 7	1100	1.0
188	JUL 7	1100	188	JUL 7	1200	1.4
188	JUL 7	1300	188	JUL 7	1400	0.1
188	JUL 7	1700	188	JUL 7	1800	5.6
188	JUL 7	1800	188	JUL 7	1900	10.6
188	JUL 7	1900	188	JUL 7	2000	18.9
188	JUL 7	2000	188	JUL 7	2100	9.6
188	JUL 7	2100	188	JUL 7	2200	9.2

Table 34.--Meteor rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
188	JUL	7	2200	188	JUL	7	2300	5.1
188	JUL	7	2300	189	JUL	8	000	1.7
189	JUL	8	000	189	JUL	8	100	0.3
189	JUL	8	1100	189	JUL	8	1200	2.3
189	JUL	8	1200	189	JUL	8	1300	1.6
189	JUL	8	1300	189	JUL	8	1400	0.1
189	JUL	8	1500	189	JUL	8	1600	1.2
189	JUL	8	1600	189	JUL	8	1700	1.3
189	JUL	8	1700	189	JUL	8	1800	1.7
190	JUL	9	000	190	JUL	9	100	0.2
190	JUL	9	300	190	JUL	9	400	0.8
194	JUL	13	400	194	JUL	13	500	1.6
194	JUL	13	900	194	JUL	13	1000	1.3
194	JUL	13	1000	194	JUL	13	1100	30.0
194	JUL	13	1100	194	JUL	13	1200	1.1
194	JUL	13	1200	194	JUL	13	1300	0.1
194	JUL	13	1300	194	JUL	13	1400	1.3
194	JUL	13	1400	194	JUL	13	1500	3.2
194	JUL	13	1500	194	JUL	13	1600	1.4
194	JUL	13	1700	194	JUL	13	1800	0.9
194	JUL	13	1800	194	JUL	13	1900	0.3
194	JUL	13	1900	194	JUL	13	2000	1.5
194	JUL	13	2000	194	JUL	13	2100	2.4
194	JUL	13	2100	194	JUL	13	2200	0.8
194	JUL	13	2200	194	JUL	13	2300	0.3
195	JUL	14	000	195	JUL	14	100	0.7
195	JUL	14	100	195	JUL	14	200	0.1
195	JUL	14	300	195	JUL	14	400	1.2
195	JUL	14	400	195	JUL	14	500	0.1
195	JUL	14	700	195	JUL	14	800	0.1
195	JUL	14	900	195	JUL	14	1000	0.7
195	JUL	14	1000	195	JUL	14	1100	1.6
195	JUL	14	1100	195	JUL	14	1200	0.3
195	JUL	14	1200	195	JUL	14	1300	1.4
195	JUL	14	1300	195	JUL	14	1400	0.7
195	JUL	14	1400	195	JUL	14	1500	0.1
195	JUL	14	1700	195	JUL	14	1800	0.5
195	JUL	14	2200	195	JUL	14	2300	0.1
196	JUL	15	1100	196	JUL	15	1200	2.7
196	JUL	15	1200	196	JUL	15	1300	1.3
196	JUL	15	1400	196	JUL	15	1500	0.1
196	JUL	15	1500	196	JUL	15	1600	0.3
196	JUL	15	1700	196	JUL	15	1800	0.2

TOTAL PRECIPITATION AMOUNT IS 233.5 MM

Table 35.--Meteor rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	300	209	JUL 28	400	0.2
209	JUL 28	400	209	JUL 28	500	11.2
209	JUL 28	500	209	JUL 28	600	3.7
209	JUL 28	600	209	JUL 28	700	3.4
209	JUL 28	700	209	JUL 28	800	1.7
209	JUL 28	800	209	JUL 28	900	0.8
209	JUL 28	900	209	JUL 28	1000	0.4
209	JUL 28	1000	209	JUL 28	1100	0.2
209	JUL 28	1100	209	JUL 28	1200	0.1
209	JUL 28	1200	209	JUL 28	1300	0.4
209	JUL 28	1400	209	JUL 28	1500	0.1
209	JUL 28	1500	209	JUL 28	1600	0.8
209	JUL 28	1600	209	JUL 28	1700	1.6
209	JUL 28	1700	209	JUL 28	1800	0.3
209	JUL 28	1900	209	JUL 28	2000	0.2
209	JUL 28	2000	209	JUL 28	2100	1.3
209	JUL 28	2100	209	JUL 28	2200	1.9
209	JUL 28	2200	209	JUL 28	2300	0.4
210	JUL 29	300	210	JUL 29	400	0.1
210	JUL 29	400	210	JUL 29	500	1.6
210	JUL 29	500	210	JUL 29	600	0.3
211	JUL 30	900	211	JUL 30	1000	0.2
211	JUL 30	1000	211	JUL 30	1100	0.1
211	JUL 30	1300	211	JUL 30	1400	0.5
211	JUL 30	1400	211	JUL 30	1500	0.8
211	JUL 30	1500	211	JUL 30	1600	6.2
211	JUL 30	1600	211	JUL 30	1700	4.9
211	JUL 30	1700	211	JUL 30	1800	1.1
211	JUL 30	1800	211	JUL 30	1900	1.1
211	JUL 30	1900	211	JUL 30	2000	0.1
212	JUL 31	500	212	JUL 31	600	0.8
212	JUL 31	600	212	JUL 31	700	0.2
212	JUL 31	700	212	JUL 31	800	1.9
214	AUG 2	700	214	AUG 2	800	3.9
214	AUG 2	800	214	AUG 2	900	2.8
214	AUG 2	900	214	AUG 2	1000	1.0
214	AUG 2	1000	214	AUG 2	1100	0.9
215	AUG 3	000	215	AUG 3	100	1.2
215	AUG 3	100	215	AUG 3	200	1.0
215	AUG 3	200	215	AUG 3	300	23.2
215	AUG 3	300	215	AUG 3	400	9.7
215	AUG 3	400	215	AUG 3	500	0.7
215	AUG 3	500	215	AUG 3	600	0.1
215	AUG 3	1300	215	AUG 3	1400	0.3

Table 35.--Meteor rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
215	AUG	3	1400	215	AUG	3	1500	0.1
215	AUG	3	2200	215	AUG	3	2300	0.4
216	AUG	4	600	216	AUG	4	700	2.0
216	AUG	4	700	216	AUG	4	800	0.6
216	AUG	4	800	216	AUG	4	900	0.7
216	AUG	4	900	216	AUG	4	1000	1.5
216	AUG	4	1000	216	AUG	4	1100	1.0
216	AUG	4	1100	216	AUG	4	1200	1.4
216	AUG	4	1200	216	AUG	4	1300	0.4
216	AUG	4	1300	216	AUG	4	1400	0.7
216	AUG	4	1400	216	AUG	4	1500	3.6
216	AUG	4	1500	216	AUG	4	1600	2.0
216	AUG	4	1600	216	AUG	4	1700	1.2
216	AUG	4	1700	216	AUG	4	1800	0.7
216	AUG	4	1900	216	AUG	4	2000	1.5
216	AUG	4	2000	216	AUG	4	2100	0.1
216	AUG	4	2200	216	AUG	4	2300	0.6
216	AUG	4	2300	217	AUG	5	000	0.8
217	AUG	5	900	217	AUG	5	1000	0.1
217	AUG	5	1400	217	AUG	5	1500	0.3
218	AUG	6	1000	218	AUG	6	1100	0.2
220	AUG	8	500	220	AUG	8	600	1.0
221	AUG	9	1800	221	AUG	9	1900	2.7
221	AUG	9	1900	221	AUG	9	2000	7.6
221	AUG	9	2000	221	AUG	9	2100	0.7
221	AUG	9	2100	221	AUG	9	2200	0.2
222	AUG	10	000	222	AUG	10	100	1.4
222	AUG	10	100	222	AUG	10	200	0.6
222	AUG	10	200	222	AUG	10	300	0.5
222	AUG	10	300	222	AUG	10	400	0.3
222	AUG	10	400	222	AUG	10	500	2.1
222	AUG	10	500	222	AUG	10	600	1.2
224	AUG	12	200	224	AUG	12	300	0.2
224	AUG	12	300	224	AUG	12	400	0.3
224	AUG	12	400	224	AUG	12	500	0.6
224	AUG	12	500	224	AUG	12	600	0.6
224	AUG	12	600	224	AUG	12	700	0.6
224	AUG	12	700	224	AUG	12	800	1.0
224	AUG	12	800	224	AUG	12	900	1.3
224	AUG	12	900	224	AUG	12	1000	0.9
224	AUG	12	1000	224	AUG	12	1100	4.1
224	AUG	12	1100	224	AUG	12	1200	9.2
224	AUG	12	1200	224	AUG	12	1300	3.7
224	AUG	12	1300	224	AUG	12	1400	0.2

Table 35.--Meteor rainfall data for Phase II

START TIME JUL. DATE	(GMT) HOUR	STOP TIME JUL. DATE	(GMT) HOUR	1 HOUR AMOUNT (MM)
224 AUG 12	1700	224 AUG 12	1800	1.6
224 AUG 12	1800	224 AUG 12	1900	8.2
224 AUG 12	1900	224 AUG 12	2000	4.5
224 AUG 12	2000	224 AUG 12	2100	11.8
224 AUG 12	2100	224 AUG 12	2200	2.1
TOTAL PRECIPITATION AMOUNT IS 182.5 MM				

Table 36.--Meteor rainfall data for Phase III

START TIME JUL. DATE	(GMT) HOUR	STOP TIME JUL. DATE	(GMT) HOUR	1 HOUR AMOUNT (MM)		
242	AUG 30	200	242	AUG 30	300	0.3
242	AUG 30	600	242	AUG 30	700	0.6
242	AUG 30	700	242	AUG 30	800	0.2
242	AUG 30	2200	242	AUG 30	2300	1.5
242	AUG 30	2300	243	AUG 31	000	2.1
243	AUG 31	900	243	AUG 31	1000	1.1
243	AUG 31	1100	243	AUG 31	1200	0.1
245	SEP 2	200	245	SEP 2	300	4.7
245	SEP 2	300	245	SEP 2	400	0.3
245	SEP 2	1000	245	SEP 2	1100	0.1
245	SEP 2	1200	245	SEP 2	1300	0.5
245	SEP 2	1700	245	SEP 2	1800	2.7
245	SEP 2	1800	245	SEP 2	1900	1.2
245	SEP 2	1900	245	SEP 2	2000	0.9
245	SEP 2	2000	245	SEP 2	2100	4.0
245	SEP 2	2100	245	SEP 2	2200	2.3
246	SEP 3	1100	246	SEP 3	1200	2.0
246	SEP 3	1200	246	SEP 3	1300	0.1
246	SEP 3	2200	246	SEP 3	2300	2.1
246	SEP 3	2300	247	SEP 4	000	0.6
248	SEP 5	000	248	SEP 5	100	0.8
248	SEP 5	100	248	SEP 5	200	0.4
248	SEP 5	200	248	SEP 5	300	0.1
248	SEP 5	400	248	SEP 5	500	0.1
248	SEP 5	700	248	SEP 5	800	0.6
248	SEP 5	800	248	SEP 5	900	0.2
248	SEP 5	1000	248	SEP 5	1100	4.5
248	SEP 5	1100	248	SEP 5	1200	3.7
248	SEP 5	1200	248	SEP 5	1300	0.7
249	SEP 6	1700	249	SEP 6	1800	0.5
249	SEP 6	1800	249	SEP 6	1900	0.1
250	SEP 7	1100	250	SEP 7	1200	0.4
250	SEP 7	1500	250	SEP 7	1600	0.1
250	SEP 7	2000	250	SEP 7	2100	0.2
250	SEP 7	2100	250	SEP 7	2200	0.1
251	SEP 8	300	251	SEP 8	400	0.2
251	SEP 8	2100	251	SEP 8	2200	0.1
252	SEP 9	200	252	SEP 9	300	0.2
252	SEP 9	300	252	SEP 9	400	0.4
252	SEP 9	1300	252	SEP 9	1400	0.2
252	SEP 9	1400	252	SEP 9	1500	1.4
252	SEP 9	1500	252	SEP 9	1600	0.4
252	SEP 9	1600	252	SEP 9	1700	0.4
252	SEP 9	1700	252	SEP 9	1800	0.1

Table 36.--Meteor rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
252	SEP	9	1900	252	SEP	9	2000	0.1
252	SEP	9	2000	252	SEP	9	2100	0.6
252	SEP	9	2100	252	SEP	9	2200	1.8
252	SEP	9	2200	252	SEP	9	2300	0.3
252	SEP	9	2300	253	SEP	10	000	0.7
253	SEP	10	000	253	SEP	10	100	0.2
255	SEP	12	400	255	SEP	12	500	1.8
255	SEP	12	600	255	SEP	12	700	0.3
255	SEP	12	700	255	SEP	12	800	0.1
255	SEP	12	1400	255	SEP	12	1500	0.1
256	SEP	13	300	256	SEP	13	400	0.3
256	SEP	13	1300	256	SEP	13	1400	10.9
256	SEP	13	1400	256	SEP	13	1500	6.7
256	SEP	13	1800	256	SEP	13	1900	0.3
256	SEP	13	1900	256	SEP	13	2000	0.6
256	SEP	13	2000	256	SEP	13	2100	0.5
257	SEP	14	000	257	SEP	14	100	0.8
257	SEP	14	100	257	SEP	14	200	0.2
257	SEP	14	200	257	SEP	14	300	5.9
257	SEP	14	300	257	SEP	14	400	9.2
257	SEP	14	400	257	SEP	14	500	0.4
257	SEP	14	500	257	SEP	14	600	4.1
257	SEP	14	600	257	SEP	14	700	2.6
257	SEP	14	700	257	SEP	14	800	0.2
257	SEP	14	800	257	SEP	14	900	0.1
257	SEP	14	1400	257	SEP	14	1500	3.2
257	SEP	14	1500	257	SEP	14	1600	0.8
257	SEP	14	1600	257	SEP	14	1700	4.9
257	SEP	14	1700	257	SEP	14	1800	12.4
257	SEP	14	1800	257	SEP	14	1900	22.3
257	SEP	14	1900	257	SEP	14	2000	0.4
257	SEP	14	2000	257	SEP	14	2100	0.1
257	SEP	14	2100	257	SEP	14	2200	0.2
257	SEP	14	2200	257	SEP	14	2300	0.2
257	SEP	14	2300	258	SEP	15	000	0.4
258	SEP	15	000	258	SEP	15	100	0.2
258	SEP	15	100	258	SEP	15	200	3.6
258	SEP	15	300	258	SEP	15	400	4.8
258	SEP	15	2000	258	SEP	15	2100	0.1
259	SEP	16	100	259	SEP	16	200	3.3
259	SEP	16	200	259	SEP	16	300	0.6
259	SEP	16	300	259	SEP	16	400	0.4
259	SEP	16	500	259	SEP	16	600	0.3
259	SEP	16	800	259	SEP	16	900	2.5

Table 36.--Meteor rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
259	SEP 16	900	259	SEP 16	1000	5.0
259	SEP 16	1000	259	SEP 16	1100	13.3
260	SEP 17	1100	260	SEP 17	1200	0.2
260	SEP 17	1200	260	SEP 17	1300	0.7
260	SEP 17	1300	260	SEP 17	1400	0.4
260	SEP 17	1400	260	SEP 17	1500	0.6
260	SEP 17	1500	260	SEP 17	1600	0.1
260	SEP 17	1600	260	SEP 17	1700	0.2
260	SEP 17	1700	260	SEP 17	1800	0.1
260	SEP 17	1800	260	SEP 17	1900	0.1
261	SEP 18	1800	261	SEP 18	1900	0.5
262	SEP 19	600	262	SEP 19	700	0.4
262	SEP 19	1000	262	SEP 19	1100	5.1
262	SEP 19	1100	262	SEP 19	1200	5.4
262	SEP 19	1200	262	SEP 19	1300	1.3
262	SEP 19	1300	262	SEP 19	1400	0.9
262	SEP 19	1500	262	SEP 19	1600	8.5
262	SEP 19	1600	262	SEP 19	1700	2.2
262	SEP 19	1700	262	SEP 19	1800	0.2

TOTAL PRECIPITATION AMOUNT IS 198.0 MM

Table 37.--Researcher rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
179	JUN 28	000	179	JUN 28	600	13.0 0
179	JUN 28	600	179	JUN 28	1200	60.0 0 ← 179 12-18 1.1
180	JUN 29	1200	180	JUN 29	1800	5.0 2.8
180	JUN 29	1800	181	JUN 30	000	90.0 76.0
181	JUN 30	000	181	JUN 30	600	2.0 4.1
181	JUN 30	1200	181	JUN 30	1800	6.0 0.8
181	JUN 30	1800	182	JUL 1	000	3.0 3.6
182	JUL 1	1200	182	JUL 1	1800	16.0 17.8
182	JUL 1	1800	183	JUL 2	000	0.5 0
183	JUL 2	000	183	JUL 2	600	17.0 15.6
183	JUL 2	600	183	JUL 2	1200	0.3 0.3 (✓)
183	JUL 2	1200	183	JUL 2	1800	1.0 0.6
183	JUL 2	1800	184	JUL 3	000	13.0 12.2
184	JUL 3	000	184	JUL 3	600	7.0 4.1
184	JUL 3	600	184	JUL 3	1200	8.0 0.5
185	JUL 4	1200	185	JUL 4	1800	6.0 4.6
186	JUL 5	1200	186	JUL 5	1800	10.0 4.7
187	JUL 6	600	187	JUL 6	1200	0.5 0.4 ← 186 18-00 2.8
188	JUL 7	000	188	JUL 7	600	1.0 1.0
188	JUL 7	600	188	JUL 7	1200	6.0 5.3
188	JUL 7	1200	188	JUL 7	1800	2.0 10.2
188	JUL 7	1800	189	JUL 8	000	1.0 2.2
189	JUL 8	600	189	JUL 8	1200	6.0 4.8
189	JUL 8	1200	189	JUL 8	1800	100.0 20.3
189	JUL 8	1800	190	JUL 9	000	17.0 109.2 ← 193 12-18 0.3
194	JUL 13	000	194	JUL 13	600	0.3 0.8
195	JUL 14	000	195	JUL 14	600	0.4 1.8
195	JUL 14	600	195	JUL 14	1200	9.0 10.2
195	JUL 14	1200	195	JUL 14	1800	0.3 0.5
195	JUL 14	1800	196	JUL 15	000	0.3 0 ← 196 6-12 0.5
196	JUL 15	1200	196	JUL 15	1800	1.0 0.3 ← 196

TOTAL PRECIPITATION AMOUNT IS 402.6 MM

Table 38.--Researcher rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
209	JUL	28	000	209	JUL	28	600	34.0
209	JUL	28	600	209	JUL	28	1200	11.0
209	JUL	28	1200	209	JUL	28	1800	3.0
209	JUL	28	1800	210	JUL	29	000	4.0
210	JUL	29	000	210	JUL	29	600	6.0
210	JUL	29	600	210	JUL	29	1200	4.0
214	AUG	2	1800	215	AUG	3	000	10.0
215	AUG	3	000	215	AUG	3	600	3.0
215	AUG	3	600	215	AUG	3	1200	8.0
215	AUG	3	1200	215	AUG	3	1800	1.0
215	AUG	3	1800	216	AUG	4	000	3.0
216	AUG	4	1200	216	AUG	4	1800	1.0
217	AUG	5	000	217	AUG	5	600	1.0
217	AUG	5	600	217	AUG	5	1200	1.0
219	AUG	7	600	219	AUG	7	1200	3.0
219	AUG	7	1800	220	AUG	8	000	0.2
220	AUG	8	000	220	AUG	8	600	1.0
220	AUG	8	600	220	AUG	8	1200	0.2
221	AUG	9	1200	221	AUG	9	1800	7.0
222	AUG	10	600	222	AUG	10	1200	9.0
224	AUG	12	000	224	AUG	12	600	19.0
224	AUG	12	600	224	AUG	12	1200	1.0
224	AUG	12	1200	224	AUG	12	1800	0.2
225	AUG	13	000	225	AUG	13	600	2.0
TOTAL PRECIPITATION AMOUNT IS 132.6 MM								

Table 39.--Researcher rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	600	1.0
242	AUG 30	600	242	AUG 30	1200	8.0
243	AUG 31	1800	244	SEP 1	000	0.2
244	SEP 1	000	244	SEP 1	600	0.6
245	SEP 2	000	245	SEP 2	600	2.0
245	SEP 2	600	245	SEP 2	1200	0.5
245	SEP 2	1200	245	SEP 2	1800	21.0
245	SEP 2	1800	246	SEP 3	000	3.0
246	SEP 3	1200	246	SEP 3	1800	1.0
246	SEP 3	1800	247	SEP 4	000	5.0
247	SEP 4	000	247	SEP 4	600	6.0
247	SEP 4	600	247	SEP 4	1200	4.0
247	SEP 4	1200	247	SEP 4	1800	5.0
247	SEP 4	1800	248	SEP 5	000	30.0
248	SEP 5	600	248	SEP 5	1200	0.5
248	SEP 5	1800	249	SEP 6	000	24.0
249	SEP 6	000	249	SEP 6	600	1.0
249	SEP 6	600	249	SEP 6	1200	0.5
249	SEP 6	1200	249	SEP 6	1800	0.5
253	SEP 10	600	253	SEP 10	1200	0.2
253	SEP 10	1200	253	SEP 10	1800	1.0
254	SEP 11	000	254	SEP 11	600	0.6
254	SEP 11	1800	255	SEP 12	000	36.0
255	SEP 12	000	255	SEP 12	600	0.5
255	SEP 12	1200	255	SEP 12	1800	2.0
255	SEP 12	1800	256	SEP 13	000	1.0
256	SEP 13	1800	257	SEP 14	000	1.0
257	SEP 14	1200	257	SEP 14	1800	1.0
259	SEP 16	600	259	SEP 16	1200	34.0
259	SEP 16	1200	259	SEP 16	1800	8.0
259	SEP 16	1800	260	SEP 17	000	23.0
260	SEP 17	000	260	SEP 17	600	0.1
260	SEP 17	600	260	SEP 17	1200	2.0
260	SEP 17	1200	260	SEP 17	1800	1.0
260	SEP 17	1800	261	SEP 18	000	0.6
261	SEP 18	000	261	SEP 18	600	3.0

TOTAL PRECIPITATION AMOUNT IS 228.8 MM

Table 40.--Dallas rainfall data for Phase I

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
180	JUN 29	000	180	JUN 29	600	2.0
180	JUN 29	600	180	JUN 29	1200	4.0
181	JUN 30	000	181	JUN 30	600	0.5
181	JUN 30	1200	181	JUN 30	1800	1.0
182	JUL 1	000	182	JUL 1	600	0.3
183	JUL 2	600	183	JUL 2	1200	2.0
183	JUL 2	1200	183	JUL 2	1800	24.0
184	JUL 3	000	184	JUL 3	600	0.3
188	JUL 7	000	188	JUL 7	600	0.3
188	JUL 7	1200	188	JUL 7	1800	7.0
189	JUL 8	600	189	JUL 8	1200	4.0
189	JUL 8	1200	189	JUL 8	1800	8.0
194	JUL 13	000	194	JUL 13	600	5.0
194	JUL 13	600	194	JUL 13	1200	0.3
194	JUL 13	1800	195	JUL 14	000	15.0
195	JUL 14	000	195	JUL 14	600	10.0
197	JUL 16	000	197	JUL 16	600	0.3
TOTAL PRECIPITATION AMOUNT IS						84.0 MM

Table 41.--Dallas rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
209	JUL 28	000	209	JUL 28	600	26.0
209	JUL 28	600	209	JUL 28	1200	16.0
210	JUL 29	600	210	JUL 29	1200	4.0
211	JUL 30	000	211	JUL 30	600	14.0
211	JUL 30	600	211	JUL 30	1200	3.0
211	JUL 30	1200	211	JUL 30	1800	15.0
211	JUL 30	1800	212	JUL 31	000	7.0
212	JUL 31	000	212	JUL 31	600	0.5
212	JUL 31	600	212	JUL 31	1200	0.2
213	AUG 1	000	213	AUG 1	600	1.0
213	AUG 1	600	213	AUG 1	1200	13.0
213	AUG 1	1200	213	AUG 1	1800	19.0
213	AUG 1	1800	214	AUG 2	000	9.0
214	AUG 2	000	214	AUG 2	600	7.0
214	AUG 2	600	214	AUG 2	1200	47.0
214	AUG 2	1200	214	AUG 2	1800	14.0
214	AUG 2	1800	215	AUG 3	000	9.0
215	AUG 3	000	215	AUG 3	600	7.0
215	AUG 3	600	215	AUG 3	1200	0.6
216	AUG 4	600	216	AUG 4	1200	3.0
217	AUG 5	000	217	AUG 5	600	3.0
217	AUG 5	600	217	AUG 5	1200	26.0
217	AUG 5	1200	217	AUG 5	1800	0.2
218	AUG 6	1200	218	AUG 6	1800	2.0
220	AUG 8	600	220	AUG 8	1200	0.3
220	AUG 8	1200	220	AUG 8	1800	2.0
220	AUG 8	1800	221	AUG 9	000	2.0
222	AUG 10	600	222	AUG 10	1200	1.0
222	AUG 10	1200	222	AUG 10	1800	0.2
224	AUG 12	600	224	AUG 12	1200	0.2
224	AUG 12	1200	224	AUG 12	1800	4.0

TOTAL PRECIPITATION AMOUNT IS 256.2 MM

Table 42.--Dallas rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	600	1.0
245	SEP 2	1200	245	SEP 2	1800	1.0
246	SEP 3	600	246	SEP 3	1200	3.0
246	SEP 3	1200	246	SEP 3	1800	4.0
246	SEP 3	1800	247	SEP 4	000	2.0
248	SEP 5	600	248	SEP 5	1200	0.3
248	SEP 5	1200	248	SEP 5	1800	12.0
249	SEP 6	600	249	SEP 6	1200	2.0
252	SEP 9	600	252	SEP 9	1200	7.0
252	SEP 9	1200	252	SEP 9	1800	7.0
252	SEP 9	1800	253	SEP 10	000	1.0
254	SEP 11	1800	255	SEP 12	000	0.2
255	SEP 12	000	255	SEP 12	600	3.0
255	SEP 12	600	255	SEP 12	1200	90.0
255	SEP 12	1200	255	SEP 12	1800	10.0
256	SEP 13	000	256	SEP 13	600	0.2
256	SEP 13	600	256	SEP 13	1200	5.0
256	SEP 13	1200	256	SEP 13	1800	39.0
256	SEP 13	1800	257	SEP 14	000	27.0
257	SEP 14	000	257	SEP 14	600	14.0
257	SEP 14	600	257	SEP 14	1200	3.0
257	SEP 14	1800	258	SEP 15	000	1.0
259	SEP 16	000	259	SEP 16	600	5.0
259	SEP 16	600	259	SEP 16	1200	1.0
259	SEP 16	1200	259	SEP 16	1800	1.0
260	SEP 17	000	260	SEP 17	600	6.0

TOTAL PRECIPITATION AMOUNT IS 245.7 MM

Table 43.--Gilliss rainfall data for Phase I

START TIME (GMT)				STOP TIME (GMT)				6 HOUR AMOUNT (MM)
JUL.	DATE	HR		JUL.	DATE	HR		
183	JUL	2	1800	184	JUL	3	000	1.0
187	JUL	6	1200	187	JUL	6	1800	2.0
187	JUL	6	1800	188	JUL	7	000	21.0
188	JUL	7	000	188	JUL	7	600	41.0
189	JUL	8	000	189	JUL	8	600	0.3
189	JUL	8	1200	189	JUL	8	1800	4.0
189	JUL	8	1800	190	JUL	9	000	5.0
195	JUL	14	000	195	JUL	14	600	1.0
195	JUL	14	600	195	JUL	14	1200	21.0
195	JUL	14	1200	195	JUL	14	1800	30.0
195	JUL	14	1800	196	JUL	15	000	0.3
196	JUL	15	000	196	JUL	15	600	3.0
196	JUL	15	600	196	JUL	15	1200	0.5
TOTAL PRECIPITATION AMOUNT IS								130.1 MM

Table 44.--Gilliss rainfall data for Phase II

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
218	AUG	6	000	218	AUG	6	600	7.0
218	AUG	6	600	218	AUG	6	1200	18.0
218	AUG	6	1800	219	AUG	7	000	1.0
219	AUG	7	000	219	AUG	7	600	0.3
219	AUG	7	1200	219	AUG	7	1800	5.0
220	AUG	8	600	220	AUG	8	1200	5.0
220	AUG	8	1200	220	AUG	8	1800	7.0
220	AUG	8	1800	221	AUG	9	000	17.0
222	AUG	10	600	222	AUG	10	1200	8.0
222	AUG	10	1200	222	AUG	10	1800	0.3
224	AUG	12	1800	225	AUG	13	000	0.5
225	AUG	13	000	225	AUG	13	600	2.0
225	AUG	13	1800	226	AUG	14	000	0.5
226	AUG	14	000	226	AUG	14	600	0.5
226	AUG	14	1800	227	AUG	15	000	1.0
227	AUG	15	1200	227	AUG	15	1800	1.0
227	AUG	15	1800	228	AUG	16	000	1.0
229	AUG	17	1200	229	AUG	17	1800	1.0
TOTAL PRECIPITATION AMOUNT IS 76.1 MM								

Table 45.--Gilliss rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			6 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	600	5.0
242	AUG 30	600	242	AUG 30	1200	0.3
242	AUG 30	1200	242	AUG 30	1800	0.3
242	AUG 30	1800	243	AUG 31	000	13.0
245	SEP 2	600	245	SEP 2	1200	20.0
245	SEP 2	1200	245	SEP 2	1800	13.0
245	SEP 2	1800	246	SEP 3	000	2.0
246	SEP 3	600	246	SEP 3	1200	2.0
246	SEP 3	1200	246	SEP 3	1800	0.2
248	SEP 5	000	248	SEP 5	600	1.0
248	SEP 5	600	248	SEP 5	1200	27.0
248	SEP 5	1200	248	SEP 5	1800	15.0
248	SEP 5	1800	249	SEP 6	000	4.0
253	SEP 10	600	253	SEP 10	1200	0.5
253	SEP 10	1200	253	SEP 10	1800	7.0
254	SEP 11	1800	255	SEP 12	000	0.3
256	SEP 13	1200	256	SEP 13	1800	0.3
256	SEP 13	1800	257	SEP 14	000	32.0
257	SEP 14	000	257	SEP 14	600	1.0
257	SEP 14	600	257	SEP 14	1200	14.0
257	SEP 14	1200	257	SEP 14	1800	22.0
258	SEP 15	000	258	SEP 15	600	0.2
259	SEP 16	600	259	SEP 16	1200	2.0
259	SEP 16	1200	259	SEP 16	1800	4.0
259	SEP 16	1800	260	SEP 17	000	9.0
260	SEP 17	000	260	SEP 17	600	7.0
260	SEP 17	600	260	SEP 17	1200	11.0
260	SEP 17	1200	260	SEP 17	1800	15.0
261	SEP 18	1800	262	SEP 19	000	3.0
262	SEP 19	000	262	SEP 19	600	2.0
262	SEP 19	1200	262	SEP 19	1800	0.2

TOTAL PRECIPITATION AMOUNT IS 233.3 MM

233.3

Table 46.--Planet rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
242	AUG 30	000	242	AUG 30	100	0.1
242	AUG 30	100	242	AUG 30	200	0.1
242	AUG 30	200	242	AUG 30	300	0.1
242	AUG 30	400	242	AUG 30	500	5.4
242	AUG 30	500	242	AUG 30	600	5.4
242	AUG 30	1600	242	AUG 30	1700	0.7
244	SEP 1	1000	244	SEP 1	1100	0.4
244	SEP 1	1200	244	SEP 1	1300	2.7
245	SEP 2	800	245	SEP 2	900	3.4
245	SEP 2	900	245	SEP 2	1000	2.8
245	SEP 2	1000	245	SEP 2	1100	0.1
245	SEP 2	1300	245	SEP 2	1400	6.0
245	SEP 2	1400	245	SEP 2	1500	15.7
245	SEP 2	1500	245	SEP 2	1600	7.3
245	SEP 2	1600	245	SEP 2	1700	4.1
245	SEP 2	1700	245	SEP 2	1800	5.2
245	SEP 2	1800	245	SEP 2	1900	2.0
245	SEP 2	1900	245	SEP 2	2000	2.0
245	SEP 2	2000	245	SEP 2	2100	2.0
245	SEP 2	2100	245	SEP 2	2200	1.5
248	SEP 5	600	248	SEP 5	700	6.3
248	SEP 5	1600	248	SEP 5	1700	3.1
248	SEP 5	1700	248	SEP 5	1800	4.0
248	SEP 5	1800	248	SEP 5	1900	0.8
248	SEP 5	1900	248	SEP 5	2000	0.8
248	SEP 5	2000	248	SEP 5	2100	0.8
249	SEP 6	2000	249	SEP 6	2100	1.0
249	SEP 6	2100	249	SEP 6	2200	1.7
250	SEP 7	1000	250	SEP 7	1100	0.4
250	SEP 7	1900	250	SEP 7	2000	3.0
250	SEP 7	2000	250	SEP 7	2100	3.5
250	SEP 7	2100	250	SEP 7	2200	0.5
251	SEP 8	400	251	SEP 8	500	2.4
251	SEP 8	500	251	SEP 8	600	2.8
251	SEP 8	600	251	SEP 8	700	2.8
251	SEP 8	700	251	SEP 8	800	2.4
252	SEP 9	1200	252	SEP 9	1300	0.3
252	SEP 9	2000	252	SEP 9	2100	0.2
255	SEP 12	1100	255	SEP 12	1200	2.0
255	SEP 12	1200	255	SEP 12	1300	1.8
255	SEP 12	1300	255	SEP 12	1400	0.2
256	SEP 13	1400	256	SEP 13	1500	1.5
256	SEP 13	1500	256	SEP 13	1600	3.0
256	SEP 13	1600	256	SEP 13	1700	0.3

Table 46.--Planet rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
256	SEP 13	1700	256	SEP 13	1800	0.3
256	SEP 13	1800	256	SEP 13	1900	0.3
256	SEP 13	1900	256	SEP 13	2000	0.6
256	SEP 13	2000	256	SEP 13	2100	0.6
256	SEP 13	2100	256	SEP 13	2200	0.5
257	SEP 14	200	257	SEP 14	300	8.0
257	SEP 14	300	257	SEP 14	400	2.0
257	SEP 14	1000	257	SEP 14	1100	1.7
257	SEP 14	1200	257	SEP 14	1300	1.8
257	SEP 14	1300	257	SEP 14	1400	2.2
257	SEP 14	1400	257	SEP 14	1500	1.9
257	SEP 14	1500	257	SEP 14	1600	1.9
257	SEP 14	1600	257	SEP 14	1700	2.0
257	SEP 14	1700	257	SEP 14	1800	0.1
257	SEP 14	2100	257	SEP 14	2200	14.9
258	SEP 15	900	258	SEP 15	1000	0.3
258	SEP 15	1000	258	SEP 15	1100	14.0
258	SEP 15	1100	258	SEP 15	1200	1.7
259	SEP 16	200	259	SEP 16	300	0.5
259	SEP 16	900	259	SEP 16	1000	0.1
259	SEP 16	1000	259	SEP 16	1100	2.2
259	SEP 16	1100	259	SEP 16	1200	0.6
259	SEP 16	1200	259	SEP 16	1300	0.5
259	SEP 16	1300	259	SEP 16	1400	0.3
259	SEP 16	1400	259	SEP 16	1500	0.4
259	SEP 16	1500	259	SEP 16	1600	0.4
259	SEP 16	1600	259	SEP 16	1700	0.4
260	SEP 17	300	260	SEP 17	400	0.8
260	SEP 17	400	260	SEP 17	500	0.9
260	SEP 17	500	260	SEP 17	600	0.1
260	SEP 17	1000	260	SEP 17	1100	0.3
261	SEP 18	1900	261	SEP 18	2000	0.9
262	SEP 19	400	262	SEP 19	500	0.1
262	SEP 19	500	262	SEP 19	600	0.1
262	SEP 19	600	262	SEP 19	700	0.1
262	SEP 19	800	262	SEP 19	900	0.1
262	SEP 19	900	262	SEP 19	1000	0.9
262	SEP 19	1000	262	SEP 19	1100	0.9
262	SEP 19	1100	262	SEP 19	1200	1.0
262	SEP 19	1200	262	SEP 19	1300	4.8
262	SEP 19	1300	262	SEP 19	1400	5.2
262	SEP 19	1400	262	SEP 19	1500	11.4
262	SEP 19	1600	262	SEP 19	1700	0.2
262	SEP 19	1700	262	SEP 19	1800	0.3

Table 46.--Planet rainfall data for Phase III

START TIME (GMT)	STOP TIME (GMT)	1 HOUR
JUL. DATE HOUR	JUL. DATE HOUR	AMOUNT (MM)
262 SEP 19 1800	262 SEP 19 1900	0.1
TOTAL PRECIPITATION AMOUNT IS 201.0 MM		

Table 47.--Fay rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)		
JUL.	DATE	HOUR	JUL.	DATE	HOUR			
246	SEP	3	400	246	SEP	3	500	0.5
246	SEP	3	600	246	SEP	3	700	1.0
246	SEP	3	800	246	SEP	3	900	0.5
247	SEP	4	1700	247	SEP	4	1800	0.3
247	SEP	4	1800	247	SEP	4	1900	6.6
248	SEP	5	1400	248	SEP	5	1500	0.8
249	SEP	6	2100	249	SEP	6	2200	0.3
249	SEP	6	2200	249	SEP	6	2300	0.5
249	SEP	6	2300	250	SEP	7	000	1.3
250	SEP	7	100	250	SEP	7	200	1.3
252	SEP	9	1600	252	SEP	9	1700	9.1
252	SEP	9	1700	252	SEP	9	1800	9.7
252	SEP	9	1800	252	SEP	9	1900	0.5
255	SEP	12	200	255	SEP	12	300	0.8
255	SEP	12	700	255	SEP	12	800	7.6
255	SEP	12	800	255	SEP	12	900	33.0
255	SEP	12	1000	255	SEP	12	1100	25.4
255	SEP	12	1100	255	SEP	12	1200	7.6
255	SEP	12	1200	255	SEP	12	1300	7.6
255	SEP	12	1300	255	SEP	12	1400	1.0
255	SEP	12	1400	255	SEP	12	1500	0.3
256	SEP	13	300	256	SEP	13	400	1.3
256	SEP	13	900	256	SEP	13	1000	1.3
256	SEP	13	1000	256	SEP	13	1100	2.3
256	SEP	13	1100	256	SEP	13	1200	2.5
256	SEP	13	1200	256	SEP	13	1300	2.0
256	SEP	13	1300	256	SEP	13	1400	0.5
256	SEP	13	1400	256	SEP	13	1500	1.8
256	SEP	13	1600	256	SEP	13	1700	29.2
256	SEP	13	1800	256	SEP	13	1900	0.5
256	SEP	13	2000	256	SEP	13	2100	6.1
256	SEP	13	2100	256	SEP	13	2200	14.7
256	SEP	13	2200	256	SEP	13	2300	16.8
256	SEP	13	2300	257	SEP	14	000	5.6
257	SEP	14	100	257	SEP	14	200	0.3
257	SEP	14	300	257	SEP	14	400	0.5
257	SEP	14	400	257	SEP	14	500	0.5
257	SEP	14	800	257	SEP	14	900	0.5
257	SEP	14	900	257	SEP	14	1000	3.3
257	SEP	14	1000	257	SEP	14	1100	0.3
257	SEP	14	1800	257	SEP	14	1900	0.8
257	SEP	14	1900	257	SEP	14	2000	3.6
259	SEP	16	500	259	SEP	16	600	0.8
259	SEP	16	600	259	SEP	16	700	0.3

Table 47.--Fay rainfall data for Phase III

START TIME (GMT)			STOP TIME (GMT)			1 HOUR AMOUNT (MM)
JUL.	DATE	HOUR	JUL.	DATE	HOUR	
259	SEP 16	1500	259	SEP 16	1600	17.3
260	SEP 17	200	260	SEP 17	300	8.1
260	SEP 17	300	260	SEP 17	400	0.3
261	SEP 18	1800	261	SEP 18	1900	3.8
261	SEP 18	2000	261	SEP 18	2100	0.3
262	SEP 19	1400	262	SEP 19	1500	1.3
262	SEP 19	1500	262	SEP 19	1600	29.2
262	SEP 19	1600	262	SEP 19	1700	0.3
TOTAL PRECIPITATION AMOUNT IS 271.8 MM						

Table 48.--Hecla rainfall data for Phase III

START TIME (GMT)		STOP TIME (GMT)		6 HOUR AMOUNT (MM)		
JUL. DATE	HOUR	JUL. DATE	HOUR			
242	AUG 30	000	242	AUG 30	600	11.0
242	AUG 30	1200	242	AUG 30	1800	3.0
243	AUG 31	000	243	AUG 31	600	0.1
245	SEP 2	600	245	SEP 2	1200	1.0
245	SEP 2	1200	245	SEP 2	1800	3.0
245	SEP 2	1800	246	SEP 3	000	9.0
246	SEP 3	1800	247	SEP 4	000	3.0
247	SEP 4	600	247	SEP 4	1200	0.1
247	SEP 4	1200	247	SEP 4	1800	3.0
247	SEP 4	1800	248	SEP 5	000	3.0
248	SEP 5	000	248	SEP 5	600	9.0
248	SEP 5	600	248	SEP 5	1200	12.0
248	SEP 5	1200	248	SEP 5	1800	3.0
249	SEP 6	1200	249	SEP 6	1800	5.0
249	SEP 6	1800	250	SEP 7	000	2.0
251	SEP 8	000	251	SEP 8	600	1.0
252	SEP 9	600	252	SEP 9	1200	12.0
252	SEP 9	1200	252	SEP 9	1800	10.0
252	SEP 9	1800	253	SEP 10	000	2.0
255	SEP 12	1200	255	SEP 12	1800	9.0
256	SEP 13	600	256	SEP 13	1200	1.0
256	SEP 13	1200	256	SEP 13	1800	3.0
256	SEP 13	1800	257	SEP 14	000	2.0
257	SEP 14	000	257	SEP 14	600	2.0
257	SEP 14	600	257	SEP 14	1200	13.0
257	SEP 14	1200	257	SEP 14	1800	20.0
257	SEP 14	1800	258	SEP 15	000	0.3
258	SEP 15	1800	259	SEP 16	000	2.0
259	SEP 16	000	259	SEP 16	600	4.0
259	SEP 16	600	259	SEP 16	1200	8.0
260	SEP 17	200	260	SEP 17	800	4.0
260	SEP 17	1200	260	SEP 17	1800	5.0
261	SEP 18	1200	261	SEP 18	1800	0.2
262	SEP 19	600	262	SEP 19	1200	2.0

TOTAL PRECIPITATION AMOUNT IS 167.7 MM

Table 49.--Daily amounts and precipitation totals for Phase I (mm)

Ship	June					July																Phase total	
	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
<u>Korolov</u>																							0
<u>Priboy</u>									1			1							10		1		13
<u>Vize</u>											7								17		5		29
<u>Poryv</u>												3	1			2	14	12	78	16	3		129
<u>Gilliss</u>			T	T	T		1			T	23	41	9					T	52	4	T		130
<u>Quadra</u>			4	1	2		56	3	T			16	4	T			T	33	33	24	1		175
<u>Oceanographer</u>			8	14	14	9	25	T	1	T		147	61				T	2	11	29			321
<u>Vanguard</u>			T	(26)	13	14	36	T	7			43	58	T				T	25	26			222
<u>Dallas</u>			T	6	2	T	26	T	T		T	7	12	T			T	21	10	T	T		84
<u>Meteor</u>			36	7	1	25	17	1	3		2	73	9	1				46	8	5			234
<u>Okean</u>		(1)	19		90	5	4					1	22	7	3	58	34	16	35	8			302
<u>Researcher</u>			72	95	11	17	31	15	6	10	1	10	122	T		T	T	T	10	1			401
<u>Krenkel</u>		(29)	(25)	7		15	12		56		29		35	8			29	15	16	(12)			222
<u>Zubov</u>		(3)	23	14	7					1			8	35	24	12				37	2		163
<u>Musson</u>			(31)	(25)	12					3			9	49	31	12				3			119

T = trace

Table 50.--Daily amounts and precipitation totals for Phase II (mm)

Ship	July				August													Phase total					
	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	
<u>Korolov</u>																		2				2	
<u>Priboy</u>					8	6				12	11	7	9	58		1	2	1	(1)				115
<u>Vanguard</u>	(12)	(22)	1		28	11	1	T	6	16	18	19	14	2		19	85						220
<u>Poryv</u>	(59)	12	3						(21)	(1)	(1)	3	1				6						25
<u>Gilliss</u>									(T)	(26)	5	29	T	8		T	3	2	2		7		56
<u>Quadra</u>	(T)	42	T	44	10	7	T	T	5	3	3	2	24			T	3	1	T	(T)	(T)		145
<u>Oceanographer</u>	T	T	(T)			(14)	(T)		4		T	6		12		1		T		(T)	(T)		23
<u>Vize</u>	(7)	(14)			(51)	12			5			1		14									32
<u>Dallas</u>	42	4	39	1	42	77	8	3	29	2		4		1		5					(T)	(T)	257
<u>Meteor</u>	29	2	15	3		9	37	19	T	T		1	11	6		51							183
<u>Okean</u>	2			2			20	1	10							10	42						87
<u>Researcher</u>	52	10		T		10	15	1	2	T	(3)	(1)	(7)	(9)	T	21	2						113
<u>Krenkel</u>					8	26	12	3								1	25						75
<u>Zubov</u>								1															1
<u>Musson</u>							6	1		2													9

T = trace

Table 51.--Daily amounts and precipitation totals for Phase III (mm)

Ship	August		September																			Phase total	
	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
<u>Korolov</u>		3		10				30		81	12					18	4		1			159	
<u>Priboy</u>		(3)		8	7			3	3	2	6	1	11	3	2		2	2	3	5	(1)		58
<u>Vanguard</u>		T		T	T	T	T	T	3	5	T	66	7	8	1	66	44	1	20	1	3		225
<u>Poryv</u>		3	1		1			17	2		10				6	2	4	5	4	(1)	26		81
<u>Gilliss</u>		(19)		T	35	2	T	47		T	T		8	T	T	32	37	T	15	33	3	(2)	212
<u>Planet</u>		(12)		3	52			16	3	7	10	1			4	7	37	16	5	2	1	(25)	164
<u>Quadra</u>			T	3	2	T		31	1	1	7	29	1		3	107	6		10	7	T	(56)	208
<u>Hecla</u>		14	T		13	3	6	24	7		1	24			9	6	35	2	(12)	(9)	T	(2)	144
<u>Meteor</u>		(5)	(1)		17	5		11	1	1	T	7	T		2	19	68	9	25	2	(T)	(24)	167
<u>Vize</u>		(2)			8					1	1					2	34	(4)		8			54
<u>Dallas</u>		1			1	9	T	13	2	T	T	15		T	98	71	18		7	6	T		241
<u>Fay</u>					2	7		1	2	1		19			83	85	10		18	8	4	31	271
<u>Oceanographer</u>		12	T		3	T	26	5	24	1				13	21		T		24	5	T	(21)	134
<u>Okean</u>		18	3		11	12	39		3	5	20	9			36	52	8				2	(1)	218
<u>Researcher</u>		9	T	1	27	6	45	24	2				1	37	3	1	1	T	65	4	3	(T)	229
<u>Krenkel</u>				(1)	(64)	1	3		5				29	18				1	13				70
<u>Zubov</u>						38		15			1		1	10									65
<u>Musson</u>						3	1	26					31	13	5							(6)	79

T = trace

APPENDIX

On-Station Dates and Times

Table A.1.--On-station dates and times for Phase I

Ship	Beginning			Ending		
	Julian day	Date (1974)	Time (GMT)	Julian day	Date (1974)	Time (GMT)
<u>A/B-scale ships</u>						
<u>Acad. Korolov</u>	179	June 28	0000	197	July 16	2300
<u>Poryv</u>	179	June 28	0000	197	July 16	2300
<u>E. Krenkel</u>	179	June 28	0500	196	July 15	1700
<u>Prof. Zubov</u>	179	June 28	0000	197	July 16	2300
<u>Musson</u>	180	June 29	1100	197	July 16	0000
<u>Okean</u>	179	June 28	0000	197	July 16	2300
<u>Priboy</u>	179	June 28	0000	197	July 16	2300
<u>B-scale ships</u>						
<u>Oceanographer</u>	179	June 28	0000	197	July 16	2300
<u>Vanguard</u>	180	June 29	1100	197	July 16	1900
<u>Prof. Vize</u>	179	June 28	0000	197	July 16	2300
<u>Quadra</u>	179	June 28	0000	197	July 16	2300
<u>Meteor</u>	178	June 27	2100	197	July 16	2300
<u>Researcher</u>	179	June 28	0000	197	July 16	2300
<u>Dallas</u>	179	June 28	0000	197	July 16	2300
<u>Gilliss</u>	179	June 28	0000	197	July 16	2300

Table A.2.--On-station dates and times for Phase II

Ship	Beginning			Ending		
	Julian day	Date (1974)	Time (GMT)	Julian day	Date (1974)	Time (GMT)
<u>A/B-scale ships</u>						
<u>Acad. Korolov</u>	209	July 28	0000	227	Aug. 15	1900
<u>Poryv</u>	209	July 28	1100	217	Aug. 5	2100
"	219	Aug. 7	2200	227	Aug. 15	2300
<u>E. Krenkel</u>	211	July 30	0500	227	Aug. 15	2300
<u>Prof. Zubov</u>	209	July 28	0700	227	Aug. 15	0700
<u>Musson</u>	210	July 29	0900	227	Aug. 17	0000
<u>Okean</u>	209	July 28	0000	227	Aug. 15	1400
<u>Priboy</u>	209	July 28	0000	227	Aug. 15	1800
<u>B-scale ships</u>						
<u>Oceanographer</u>	209	July 28	0000	211	July 30	1800
"	215	Aug. 3	0100	228	Aug. 16	0000
<u>Prof. Vize</u>	213	Aug. 1	0800	227	Aug. 15	2300
<u>Vanguard</u>	210	July 29	1200	227	Aug. 15	1900
<u>Quadra</u>	209	July 28	0600	227	Aug. 15	2300
<u>Meteor</u>	209	July 28	0000	228	Aug. 16	0500
<u>Researcher</u>	209	July 28	0000	219	Aug. 7	1700
"	222	Aug. 10	1100	228	Aug. 16	0000
<u>Dallas</u>	209	July 28	0000	227	Aug. 15	1900
<u>Gilliss</u>	218	Aug. 6	2100	229	Aug. 17	2300

Table A.3.--On-station dates and times for Phase III

Ship	Beginning			Ending		
	Julian day	Date (1974)	Time (GMT)	Julian day	Date (1974)	Time (GMT)
<u>A/B-scale ships</u>						
<u>Acad. Korolov</u>	242	Aug. 30	2000	261	Sept. 18	2300
<u>Poryv</u>	242	Aug. 30	0000	260	Sept. 17	0900
"	260	Sept. 17	2000	261	Sept. 18	2300
<u>E. Krenkel</u>	242	Aug. 30	0000	243	Aug. 31	1700
"	245	Sept. 2	1000	261	Sept. 18	2300
<u>Prof. Zubov</u>	242	Aug. 30	0000	261	Sept. 18	1900
<u>Musson</u>	242	Aug. 30	2100	261	Sept. 18	2000
<u>Okean</u>	242	Aug. 30	0000	262	Sept. 19	1700
<u>Priboy</u>	243	Aug. 31	0900	261	Sept. 18	0400
<u>B-scale ships</u>						
<u>Meteor</u>	243	Aug. 31	0200	261	Sept. 18	0100
<u>Prof. Vize</u>	242	Aug. 30	2100	258	Sept. 15	2200
"	259	Sept. 16	1000	261	Sept. 18	0700
<u>Vanguard</u>	242	Aug. 30	0000	261	Sept. 18	2300
<u>Quadra</u>	242	Aug. 30	0000	262	Sept. 19	1900
<u>Oceanographer</u>	242	Aug. 30	0000	262	Sept. 19	1100
<u>Researcher</u>	242	Aug. 30	0000	261	Sept. 18	2300
<u>Bidassoa</u>	242	Aug. 30	0300	262	Sept. 19	2300
<u>Gilliss</u>	242	Aug. 30	0000	262	Swpt. 19	1700

Table A.3.--On-station dates and times for Phases III (continued)

Ship	Beginning			Ending		
	Julian day	Date (1974)	Time (GMT)	Julian day	Date (1974)	Time (GMT)
<u>C-scale ships</u>						
<u>Planet</u>	243	Aug. 31	0000	262	Sept. 19	2000
<u>Dallas</u>	242	Aug. 30	0200	261	Sept. 18	2300
<u>Fay</u>	243	Aug. 31	1200	262	Sept. 16	2300
<u>Hecla</u>	242	Aug. 30	0000	259	Sept. 16	1200
"	260	Sept. 17	1200	262	Sept. 19	1000