

Cruise Plan
2002 Regional Monitoring Program
CTR Wet Season Water Cruise
January 28-30, 2002

Objectives

The objectives of the 2002 CTR wet season water cruise are:

1. Perform a solid phase extraction on 100 liters of water at 3 stations for analysis of PCDD/PCDF (dioxins) by Axys Environmental.
2. Collect four 50ml samples at three stations for analysis of VOCs by CCCSD.
3. Collect two 50ml samples at three stations for analysis of VOCs by Pacific Analytical.
4. Collect 2 four-liter samples at three stations (plus 2 additional samples at one station) for analysis of semi-volatiles by CCCSD.
5. Collect 2 one-liter samples at three stations for analysis of semi-VOCs by Pacific Analytical.
6. Collect 2 one-liter samples at three stations (plus 2 additional samples at one station) for analysis of semi-volatiles by CCCSD.
7. Collect 2 one-liter samples at three stations for analysis of trace metals (Be, Sb, Tl) by UCSC.
8. Collect one 250ml sample at three stations for analysis of trace metals (Be, Sb, Tl) by Caltest.
9. Collect 2 one-liter samples at three stations for analysis of tributyltin by Toxscan.
10. Collect 3 one-liter samples at three stations for analysis of tributyltin by EBMUD.
11. Collect 2 one-liter water samples at three stations for analysis of cyanide by CCCSD.
12. Collect one 250ml sample at three stations for analysis of hardness by BACWA
13. Collect 1 one-liter sample at three stations for analysis of total solids by CCCSD.
14. Collect 1 one-liter sample a minimum of three times at each station for analysis of pH by AMS.
15. Collect continuous CTD data approximately 1 meter below water surface for duration of sampling by AMS.

Personnel assignments for the cruise are given in Table 1. Tentative sampling locations are given in Table 2. The tentative cruise schedule is listed in Table 3.

Personnel

Mr. Salop will oversee sampling operations, compliance with cruise plan and quality assurance guidelines, maintenance of the sample field log and “on-board” electronic database, chain-of-custody procedures, and operation of the CTD. UCSC personnel will be responsible for collection of trace metals samples. The University of Utah Energy and Geoscience Institute (UU) personnel will be responsible for collection of dioxins, volatile organics, and semi-volatile organics. SFEI personnel will assist with organics sampling. Mr. Smith will be responsible for vessel operation and safety.

Table 1. Personnel Assignments for the 2002 Wet Season Water Sampling Cruise.

Name	Affiliation	Duties
Paul Salop	AMS	Cruise manager; trace metals sampling 1/29
Mey Akashah	AMS	CTD, electronic database 1/30
Don Yee	SFEI	Water cruise trace organics sampling
Daniel Oros	SFEI	Water cruise trace organics sampling
Genine Scelfo	UCSC	Water cruise trace metal sampling
Eric Grabowski	UCSC	Water cruise trace metal sampling 1/30
Theresa Lowe	UU	Water cruise trace organics sampling
Gordon Smith	UCSC	<i>RV David Johnston</i> skipper

Sampling Sites

Three sites will be sampled during wet season sampling operations. The locations were selected to be consistent with existing RMP base program sites as follows:

Table 2. Sampling Locations for 2002 Wet Season Water Sampling Cruise.

Site	Latitude	Longitude
Dumbarton Bridge (BA30)	37° 30.90'	122° 08.11'
Yerba Buena Island (BC10)	37° 49.36'	122° 20.96'
Sacramento River (BG20)	38° 03.56'	121° 48.59'

Cruise Schedule

The following cruise schedule depends on weather conditions on the day of sampling. Sampling duration at water sampling stations was estimated at two hours per site. Length of sampling days are estimated to be on average approximately 12 hours. The cruise schedule was developed with the goal of minimizing the amount of time sampling personnel would be on-vessel without sacrificing the geographic spread the sampling will cover.

Table 3. Activity Schedule for 2002 RMP Wet Season Water Sampling Cruise.

Date	Activity	Time
Day 1 1/28/01	Captain Smith transits vessel from Santa Cruz to Emeryville Marina. Organics and AMS sampling personnel mobilize sampling equipment on vessel <i>R/V David Johnson</i> .	0600-1700
Day 2 1/29/01	Capt. Smith transits vessel to Pittsburg Marina (0600-1030 hrs). All sampling personnel meet vessel at Pittsburg Marina for remaining sampling equipment mobilization (1030 hrs). Sample Sacramento River site. Return to Pittsburg Marina. Sampling personnel demobilize vessel, ship samples as needed, and retrieve vehicles and transit to Emeryville via land. Mrs. Smith and Salop transit vessel to Emeryville Marina and demobilize vessel.	0600-1900
Day 3 1/30/01	Sampling personnel mobilize remaining gear on vessel <i>R/V David Johnston</i> at Emeryville Marina. Sample South Bay and Central Bay sites. Return to Emeryville Marina. Sampling personnel demobilize vessel and ship samples as needed.	0700-1800

Cruise Logistics

Lodging Each sampling team will be responsible for their lodging arrangements. The following are suggested facilities:

<u>Location</u>	<u>Dates</u>	<u>Hotel</u>
Emeryville	January 28-30	Four Points by Sheraton 1603 Powell St. Emeryville, CA (510) 547-7888

Directions to Pittsburg Marina From Emeryville, take Highway 80 East to Hercules. At Hercules, approximately 15 miles north on Hwy 80, exit onto Hwy 4 East (toward Stockton). Go east on Hwy 4 for approximately 23 miles and exit at Railroad Ave. in Pittsburg. Turn left onto Railroad. At the end of Railroad, turn left onto 3rd St. At the dead end, turn right onto Marina Blvd. Go approximately 1/8th mile and look for marina. Park vans and proceed to fuel dock where vessel will be docking.

Communications The contact number for the cruise operations will be via the AMS field cell phone, 925-548-2110. Capt. Smith's cell phone number is 831-251-2628.

Tides Applicable tide charts for Carquinez Strait and South Bay are shown below.

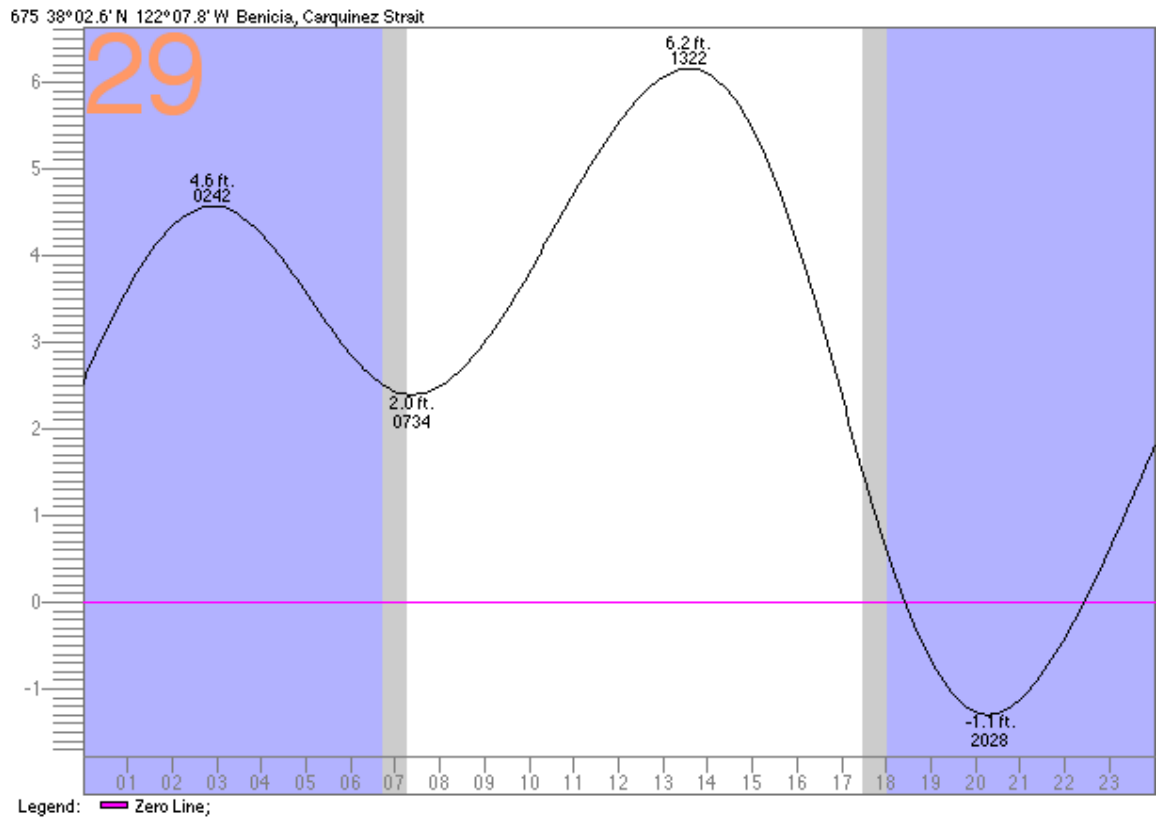


Figure 1 – Tides at Benicia, Carquinez Strait, January 29, 2002

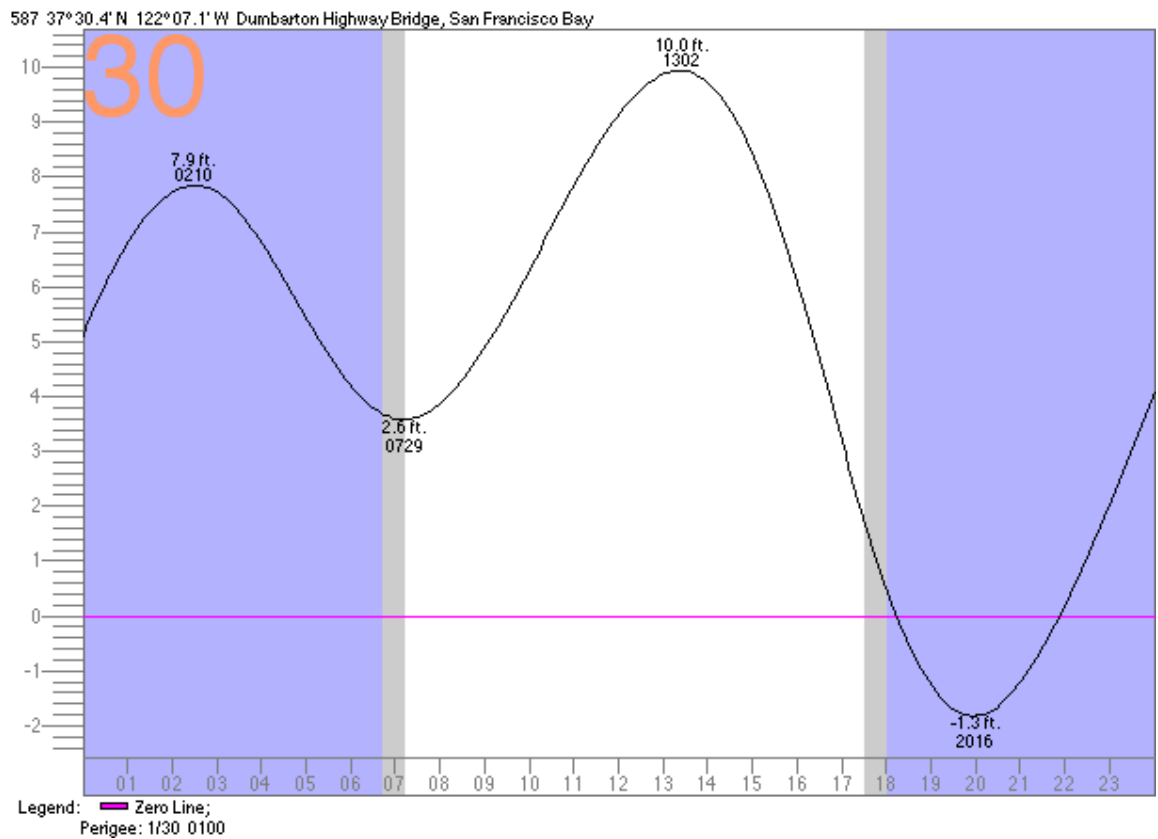


Figure 2 – Tides at Dumbarton Bridge, January 30, 2002