Central Coast Watershed Studies

CCoWS

Legacy Pesticide Sampling in Impaired Surface Waters of the Lower Salinas Region

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1 Introduction

1.1 Background

A number of water bodies in the region that surrounds Monterey Bay are listed as impaired due to 'pesticides' under Section 303(d) of the Clean Water Act. Total Maximum Daily Load (TMDL) plans must be developed for these water bodies. This report summarizes sampling that was done to confirm –or otherwise– that certain legacy pesticides are still present in the listed water bodies.

The work described focused on persistent Organochlorine (OC) pesticides such as DDT (including DDD and DDE), dieldrin, chlordane, and others widely used in agriculture from the mid 1940s to 1973. Not only are these types of pesticides acutely toxic, they can cause significant chronic adverse effects because they are long-lived in the environment (Kegley et al., 1999), thus the term 'legacy' pesticide.

DDT was a particularly effective pesticide because of its acute toxicity to insects, and lesser effect to mammals (Kegley et al., 1999). It was viewed as harmless and was commonly used by the public as well as in commercial agriculture. The success of DDT triggered rapid creation of other similar chemicals such as lindane, dieldrin and chlordane (Olkowski, 1991). However, it was found that these chemicals had significant adverse effects on the environment and human health, and were extremely persistent in the environment long after their initial application. DDT was annually applied in agriculture from 1945 through 1972 until it was federally banned in 1973 (Thornburg et al., 1996; Inman et al., 2000). The present study focused on persistent OC compounds applied in agricultural areas in the Salinas Valley Watershed.

Persistent OC compounds such as DDT, DDE, DDD and polychlorinated biphenyls (PCBs) have been found to mobilize in stream runoff and to be primarily associated with the fine minerals and organic material moving with the suspended sediment load (Masters and Inman, 2000). DDE and DDD are metabolites of DDT, which are lipophilic compounds that readily bind to organic matter in soils and sediments (Inman et al., 2000).

Specifically, OCs appear to be resistant to degradation. Many OCs have been found to survive unchanged in sediment and soils for decades (Kegley et al., 1999). Historically applied OC pesticides such as DDT, aldrin, dieldrin, and toxaphene have been identified as persisting in the environment beyond the time of application (ranging in half-life values from 2-15 years). Numerous studies of coastal lagoons in California show DDT and other OC pesticides present, possibly from erosion of upstream agricultural areas, long after the chemicals were discontinued (Inman et al., 2000).

Bioaccumulation is important with respect to persistent pesticides such as OCs. Organochlorine compounds such as DDT and dieldrin have long half-lives in aerobic environments and tend to bioconcentrate in aquatic organisms (Inman et al., 2000). Chronic exposures of chemicals passed through the food chain are capable of impairing reproduction and development, as well as increase susceptibility to disease. The danger of bioaccumulation results from long-term or repeated exposure to a pesticide. The highest concentrations of bio-accumulating pesticides can be found in animals at the top of the food chain - humans, predatory birds, seals, and other predatory animals. A study done by the National Institutes of Health in 1971, found DDT residue present in all (100%) human tissues sampled (Kegley et al., 1999). In the years between 1970 and 1975, chlorinated hydrocarbon pesticide levels in human fat tissues show DDT, DDD, DDE, dieldrin, heptachlor epoxide, chlordane and aldrin generally decreased from 1972-1975 (Olkowski et al., 1991).

1.2 Aims & general methodology

The primary aim of this study was to determine if certain legacy pesticides are still present in waterways sampled by Risebrough and Jarman (1984) and Mischke et al. (1984).

The determination of presence or absence will guide future efforts to manage legacy pesticides within the context of the TMDL program.

1.3 Previous Work

Some previous studies, monitoring and/or data of pesticides in the 303(d) listed water bodies in the lower Salinas region include:

- State Mussel Watch Program (SMW): www.swrcb.ca.gov/programs/smw
    - 3 reports: State Water Resources Control Board (SWRCB), 1994, 1996, 2000
- Toxic Substances Monitoring Program (TSM): www.swrcb.ca.gov/programs/smw
    - 3 reports: SWRCB, 1993, 1995a, 1995b
- Chemical and Biological Measures of Sediment Quality in the Central Coast Region (SWRCB et al., 1998): a.k.a. Bay Protection and Toxic Cleanup Program (BPTC)
- Central Coast Ambient Monitoring Program (CCAMP): http://www.ccamp.org/
- United States Geological Survey (USGS) water quality data: http://waterdata.usgs.gov/nwis/qwdata&introduction

The data from SMP, TSM and CCAMP are available online from CCAMP. Databases for SMP and TSM are also available at: www.swrcb.ca.gov/programs/smw.

2 Study Area

2.1 Study Area Description

The study area is located in the lower Salinas Valley of Monterey County, California (Fig 2.1). A total of nine study sites (Table 2.1) are located within a system of interconnected rivers, creeks, ditches, sloughs, and lagoons draining into the Monterey Bay National Marine Sanctuary via the Old Salinas River through Moss Landing Harbor and the Salinas River flowing directly to the Pacific Ocean. Each of the sampled water bodies is listed as being impaired due to pesticides under the Clean Water Act, Section 303(d).

The sites have been extensively sampled by the present authors for the current pesticides chlorpyrifos and diazinon. A complete description of this work may be found in Kozlowski et al. (2003).

Table 2.1. Pesticide Monitoring Sites

Site #	Waterway	Location	CCoWS Site Code	Present character
1	Salinas River	Davis Rd.	SAL-DAV	River
2	Salinas Lagoon	Del Monte Rd.	SAL-MON	Lagoon
3	Blanco Drain	Cooper Rd.	BLA-COO	Ag. ditch
4	Blanco Drain	Pump-out station	BLA-PUM	Ditch-sump
5	Reclamation Ditch	San Jon Rd.	REC-JON	Ag./urban ditch
6	Old Salinas River	Potrero Rd.	OLS-POT	Ditch / slough
7	Moss Landing Harbor	Sandholdt Rd.	MOS-SAN	Harbor
8	Tembladero Slough	Railroad Bridge	TEM-RRB	Ditch / slough
9	Moro Cojo Slough	Highway 1	MOR-HW1	Slough

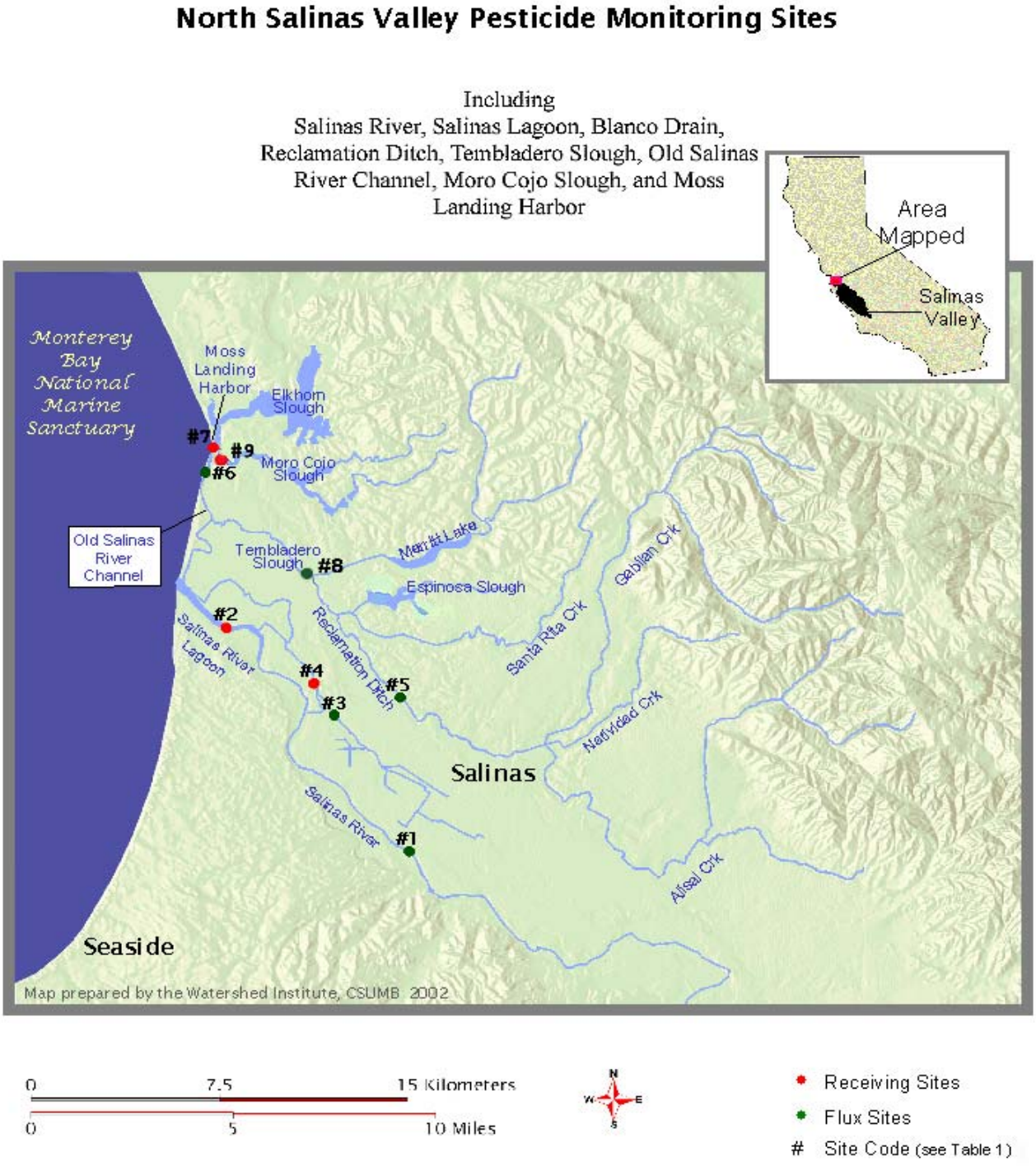

Figure 2.1. Map of North Salinas Valley showing study area and pesticide monitoring sites. (Note: the terms "Flux" and "Receiving" are arbitrary descriptions)

2.2 Site Descriptions

2.2.1 Site 1, SAL-DAV

Site 1 (Fig 2.2) is located on a perennial reach of the Salinas River at the Davis Road crossing, approximately 14 km upstream from Site #2. Site 1 is an ideal location to measure the majority of loads delivered by the Salinas River to receiving waters such as the Salinas Lagoon and the Pacific Ocean. This location could potentially exhibit significant pollutant transport under certain conditions. It also provides *in situ* habitat for species such as the federally threatened steelhead, other native fish of the Salinas River, waterfowl, and other aquatic organisms.

The low flow channel is approximately 5 m wide with sand as the dominant substrate. The main channel ranges from approximately 100 to 200 m wide. Riparian vegetation is abundant and the surrounding land use is primarily row-crop agriculture.

Figure 2.2. Site #1-Salinas River looking upstream from Davis Rd. (Photo: Don Kozlowski, June 2002)

2.2.2 Site 2, SAL-MON

Site 2 (Fig 2.3) is located on the Salinas Lagoon at Del Monte Road, less than 3 km upstream from the mouth with Pacific Ocean. This location receives all the flow and loads of pollutants from the Salinas River as well as some from Site #4 (Blanco Drain). The Salinas Lagoon supports several unique threatened and endangered species including: Menzies Wallflower, Slender-Flowered Gilia, Smith's Blue Butterfly and its host-Coastal Buckwheat, snowy plover, black legless lizard, dune beetle, and south-central coast Steelhead.

The channel is much wider than at Site 1, and the substrate has a higher percentage of silt and clay. Riparian vegetation is less abundant than at Site 1, and the adjacent land use is predominantly row-crop agriculture with some residential and recreational land use.

During winter storm events, flow from the Salinas River will fill this lagoon until it breaches or is breached by the Monterey County Water Resources Agency, sending flows directly to the ocean. Otherwise, flow is directed from the lagoon down the Old Salinas River Channel to Moss Landing Harbor via the Potrero tide gates.

Figure 2.3. Site #2-Salinas Lagoon looking upstream from Del Monte Rd. (Photo: Don Kozlowski, June 2002)

2.2.3 Site 3, BLA-COO

Site 3 (Fig 2.4) is found on the channelized system known as Blanco Drain, one of the more polluted areas according to data from the State Mussel Watch Program. It is located at the Cooper Road crossing, approximately 1.5 km upstream of the receiving area of the Blanco Drain pump station (Site #4). This makes it an ideal site to monitor for pesticide flux contributed by the adjacent land use, row-crop agriculture. Historically a freshwater wetland, the system was channelized to drain storm and agricultural runoff. The drainage originates just south of the city of Salinas and flows north approximately parallel to the Salinas River. Blanco Drain lacks riparian vegetation and is comprised of a predominantly silt/clay substrate.

Figure 2.4. Site #3-Blanco Drain looking upstream from Cooper Rd. (Photo: Don Kozlowski, June 2002)

2.2.4 Site 4, BLA-PUM

Site 4 (Fig 2.5) is located on the Blanco Drain, approximately 1.5 km downstream of Site 3, and immediately upstream from the pump-out station. Blanco Drain flows to the pump-out station where water is impounded (left side of Fig 5) and then pumped into the Salinas River (less than 0.5 km to the west) via a connecting channel (right side of Fig 5). This monitoring location serves as an area of low water flow where sediments settle. The adjacent land use is row-crop agriculture.

Figure 2.5. Site #4-Blanco Drain looking upstream (left) from pump-out station and downstream (right) to the Salinas River. (Photo: Don Kozlowski, June 2002)

2.2.5 Site 5, REC-JON

Site 5 (Fig 2.6) is located on the Reclamation Ditch at San Jon Road. It is approximately 12 km upstream from the confluence of Tembladero Slough and the Old Salinas River channel and approximately 5 km downstream from the city of Salinas. The Reclamation Ditch originates near Carr Lake in Salinas and captures the drainages of Gabilan, Natividad, and Alisal creeks. The Reclamation Ditch was constructed in 1917 to route waters from Salinas and nearby agricultural fields into Tembladero Slough and finally into Moss Landing Harbor through the Potrero tide gates. Site 5 therefore serves as a good 'flux' site for monitoring pesticides from the city and some agriculture on the way to those gates. The Ditch is channelized, lacks riparian vegetation, and the primary substrate is silt/clay. Adjacent land use at this site is row-crop agriculture. This site is also the past and future location of a United States Geological Survey gauging station.

Figure 2.6. Site #5-Reclamation Ditch looking upstream from San Jon Rd. (Photo: Don Kozlowski, June 2002)

2.2.6 Site 6, OLS-POT

Site 6 (Fig 2.7) is located on the Old Salinas River channel at the Potrero Road, approximately 14 km downstream of Site 5. This location serves as a 'flux' site for the study as flow from the channel is directed through the Potrero tide gates. However, the gates tend to slow the flow enough to widen the channel, allowing sediments to drop to the benthos. In this respect, it is also a 'receiving' site. This site will have pollutant contributions from all other upstream sites. The channel has a predominantly silt/clay substrate and lacks significant riparian vegetation. The adjacent land use is mainly row-crop agriculture with some recreational land use.

Figure 2.7. Site #6-Old Salinas River looking upstream from Potrero Rd. (Photo: Don Kozlowski, June 2002)

2.2.7 Site 7, MOS-SAN

Site 7 (Fig 2.8) is located in Moss Landing Harbor at the Sandholdt Road crossing, approximately 1 km downstream of Site 6. This site is the 'receiving' location for flow from the Old Salinas River channel and Tembladero Slough. Being connected to the ocean, it is significantly influenced by the tide. Contribution of pesticide pollution from the Old Salinas River Channel to Elkhorn Slough is largely dependant upon flows past this site and tidal dynamics, in this respect making it a 'flux' site, also. The channel is broad and lacks riparian vegetation, but has abundant tidal marsh vegetation. The primary substrate is silt/clay with some riprap.

Figure 2.8. Site #7-Moss Landing Harbor looking upstream from Sandholdt Rd. bridge. (Photo: Don Kozlowski, February 2003)

2.2.8 Site 8, TEM-RRB

Site 8 (Fig 2.9), the Tembladero Slough sampled at a railroad bridge just west of Highway 183, is immediately downstream from the confluence of the Reclamation Ditch, about 12 km downstream of REC-JON and 5 km upstream of its confluence with the Old Salinas River. It drains agricultural land around the Merritt Lake area just east of the city of Castroville, urban runoff from the cities of Castroville and Prunedale, and grasslands in the hills south of Blackie Rd. The slough is channelized, lacks riparian vegetation in most places, and the primary substrate at the sampling site is sand. Adjacent land use at this site is row-crop agriculture.

Figure 2.9. Site #8-Tembladero Slough looking upstream at the confluence of the Reclamation ditch (on the right). (Photo: Don Kozlowski, July 2003)

2.2.9 Site 9, MOR-HW1

Site 9 (Fig. 2.10) is at the Moro Cojo Slough in Moss Landing where Highway 1 crosses over it. The slough empties directly into the harbor though tide gates under Moss Landing Road and therefore is influenced significantly by tidal action. Although agricultural land is present in its headwaters just north of the city of Castroville, the lower portion of the slough is undergoing restoration efforts to help minimize/mitigate the anthropogenic impacts of surrounding land use. The primary substrate at the sampling point is sand.

Figure 10. Site #9-Moro Cojo Slough from Highway 1. (Photo: Don Kozllowski, July 2003)

3 Methods

3.1 Sample Collection

Nine sites were sampled on each of two monitoring runs. Run 1 spanned the 12th and 13th of March 2003, during a non-storm period. Run 2 occurred during a storm on the 15th of March 2003. A total of 9 water samples and 29 bottom-sediment samples were collected and analyzed, as summarized in the Appendix, Table A.1. All sites were visited within a 24-hour period during each run. During Run 1, 3 bottom sediment samples were collected at each site. One sample was analyzed for Organochlorine (OC) pesticides and Polychlorinated Biphenyls (PCB's), one for Total Organic Carbon (TOC), and one for sediment size distribution. Duplicate OC and TOC samples were taken at REC-JON. During Run 2, water and suspended sediment concentration (SSC) samples were taken, as well as discharge measurements.

All samples were collected and analyzed according to CCoWS protocols described by Watson et. al. (2003), with the exception of samples sent to an external laboratory. One water and two bottom sediment samples (plus REC-JON duplicates) from each site were sent to Agricultural & Priority Pollutants Laboratories (APPL), Inc., for OC/PCB and TOC analysis. CCoWS sample collection and laboratory methods are detailed in the CCoWS protocols document, Version E, Sections 4 and 5. General protocols are addressed below.

At each site, a mid-stream grab-sample of water was collected into a 1-Liter amber glass bottle. Bottom sediment samples were obtained using a sediment sampling dredge or a Teflon sampling scoop and were then placed into a stainless steel bowl and mixed with a stainless steel spoon. An aliquot of this mixture was placed into a wide-mouthed amber glass jar (for OC/PCB analysis), a wide-mouthed clear jar (for TOC analysis) and a plastic wide-mouthed jar (for sediment size classification). SSC samples were obtained using a DH-48 integrated sediment sampler.

All samples were immediately placed in a cooler and transported to the CCoWS laboratory where they were refrigerated at 4°C until analysis. Water velocity was measured either with an impellor-type current meter or by timing a surface float over a measured distance. Several additional water quality parameters were

measured at each site using a YSI 556 Multi-Probe System during the ambient monitoring period at all but two sites.

3.2 Laboratory Methods

3.2.1 CCoWS

Bottom-sediment pesticide concentrations are reported in amount of pesticide to dry weight of sediment (ng/kg). Bottom sediment samples for size classification were split into two portions. A smaller portion was wet-weighed, oven dried, then re-weighed to determine wet-to-dry weight ratio. The rest was used to characterize the % silt/clay component of the bottom sediment samples. This was accomplished by wet sieving the sample through a 63 micron sieve, drying, and reweighing the remaining sand component.

SSC samples were vacuum filtered through a 63 micron sieve. The portion greater than 63 microns was transferred to a glass fiber filter, dried and weighed to determine the sand-sized component. The remaining sample was filtered through a 1.5 micron glass fiber filter, dried and weighed to determine the silt/clay-sized component. Sample volume was determined by dividing the weight of the water in the sample by the density of water. Results were reported in mg/L.

3.2.2 APPL, Inc.

APPL used EPA 8181A and 8082 analysis for the detection of OC pesticides and PCB's in water and soil samples sent by CCoWS. This gas chromatography (GC) method detects 21 different OC pesticides and 7 different PCB compounds at various practical quantitative limits (PQLs) as reported by APPL. For OC pesticides, these PQLs are 0.01 ppb for water samples and 30 ppb for soil samples. For PCBs, the PQLs are 0.1 ppb for water samples and 330 ppb for soil samples.

3.3 Quality Assurance/Quality Control (QA/QC)

3.3.1 Duplicates

Duplicates are derived from homogenized sample splits taken in the field from the same location at the same time. They are used to indicate variability

between like samples. Duplicate water, bottom-sediment OC pesticide and bottom-sediment TOC samples were collected. However, the water duplicate was destroyed upon transport. Duplicate samples were sent to APPL labs for analysis.

3.4 Data Analysis/Calculations

Instantaneous storm loads were calculated by multiplying the concentration (ug/L) by the discharge (L/sec) to obtain micrograms per sec (ug/sec).

4 Results

4.1 Hydrology

The Salinas River hydrology during the dry season (May to November) is largely determined by water releases from the Nacimiento and San Antonio reservoirs. These flows are used for groundwater recharge and managed so that flow reaches the lower Salinas River and percolates without being lost to the ocean. Published stream flow data from the USGS station at Spreckels (approx. 5 km upstream of SAL-DAV) indicates that minimal surface flow made it past this point to affect the system downstream during the summer 2002 (Fig.4.1). The middle reaches of the Salinas River are therefore somewhat disconnected from the lower reaches during the summer, with the possible exception of sub-surface flow. There is no significant natural perennial water feeding the nine site water bodies. Streamflow at the nine sites during June-October 2002 was dominated by agricultural and urban runoff. The primary source of surface water feeding the lower reaches of the Salinas River, the Reclamation Ditch and the Blanco Drain systems was agricultural return water from adjacent farms. Urban runoff from the city of Salinas also contributed to the system via the Reclamation Ditch and an urban drain just upstream of SAL-DAV.

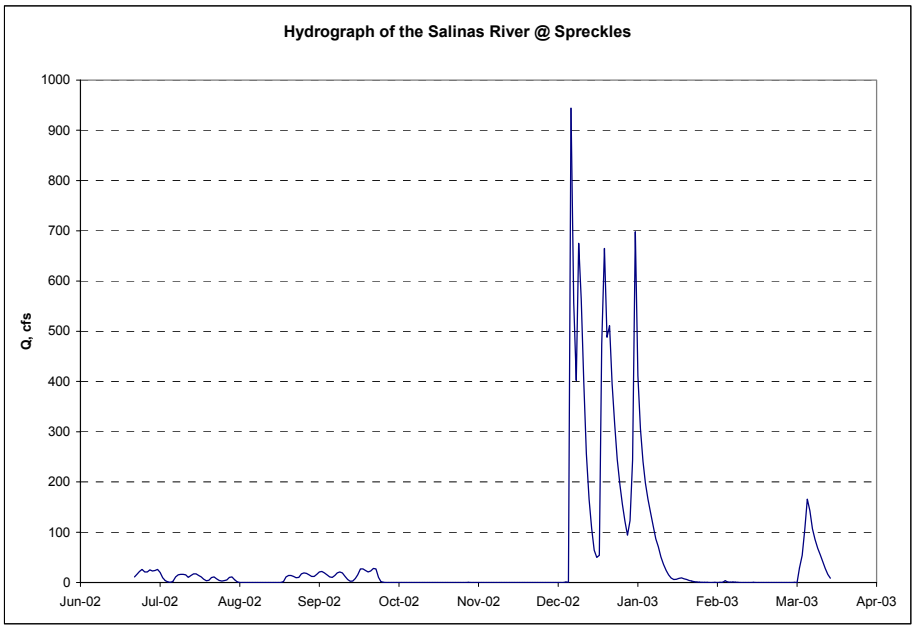

Figure 4.1. Hydrograph of the Salinas River @ Spreckels. Data provided by the USGS http://waterdata.usgs.gov/ca/nwis/dv

Winter precipitation was higher than average in November 2002 and about twice the average in December 2002, while January, February and March 2003 were each under the annual average by over half (see Figure 4.2).

Precipitation in November did not connect the Salinas system at Spreckels, indicating that most of the rain percolated to groundwater rather than running off. This is expected given the long period of dry weather prior to the single storm event that delivered 98% of the month's total precipitation. Any runoff that influenced the Salinas River system was localized and therefore pesticides from the majority of the Salinas watershed would not have been delivered to the study area.

November's rain likely saturated the ground to a point that allowed December's above average precipitation to connect the Salinas system. This is evidenced by the 3-4 peaks of the Spreckels hydrograph in December and the beginning of January as seen in Fig. 4.1. This study did not monitor any December storm events. Only one other storm event in March connected the Salinas River system, and then to a much smaller degree.

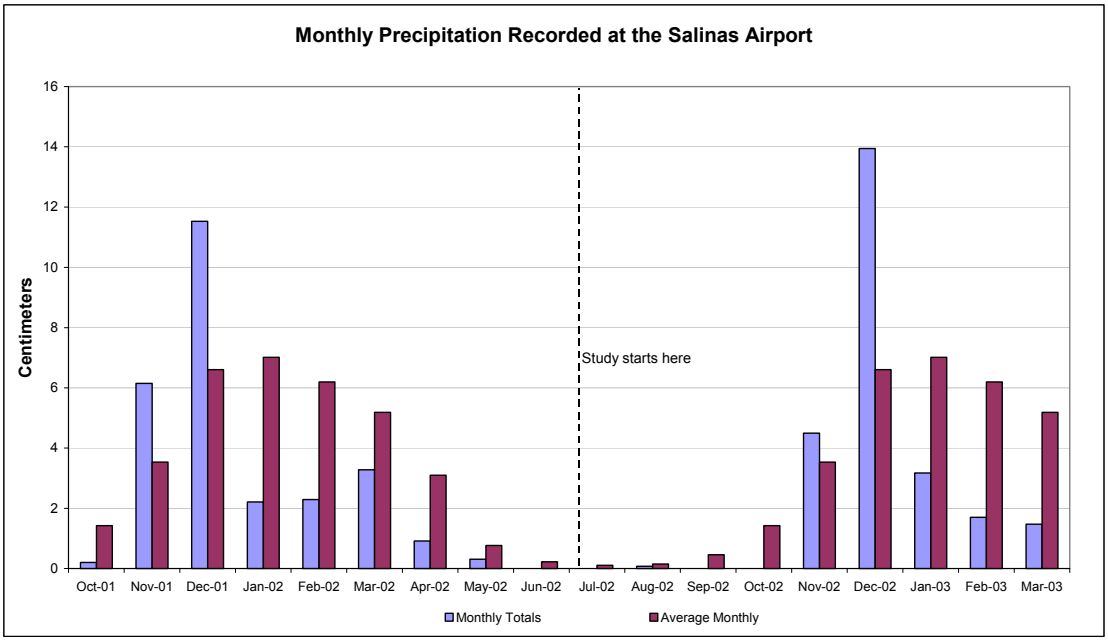

Figure 4.2. Average monthly and 2002-3 monthly total precipitation recorded at the Salinas airport.

The storm event in March that connected the Salinas system was monitored by this study (see Figure 4.3 for a precipitation graph coinciding with the sampling run). In anticipation of a non-connecting event, sampling for the March storm was timed to coincide near the peak of the precipitation and not of the hydrograph. Samples taken during the March events may be expected to have residual pesticide concentrations due to delivery from the December event. Bottom sediment samples were taken to determine legacy pesticide levels just prior to this storm event.

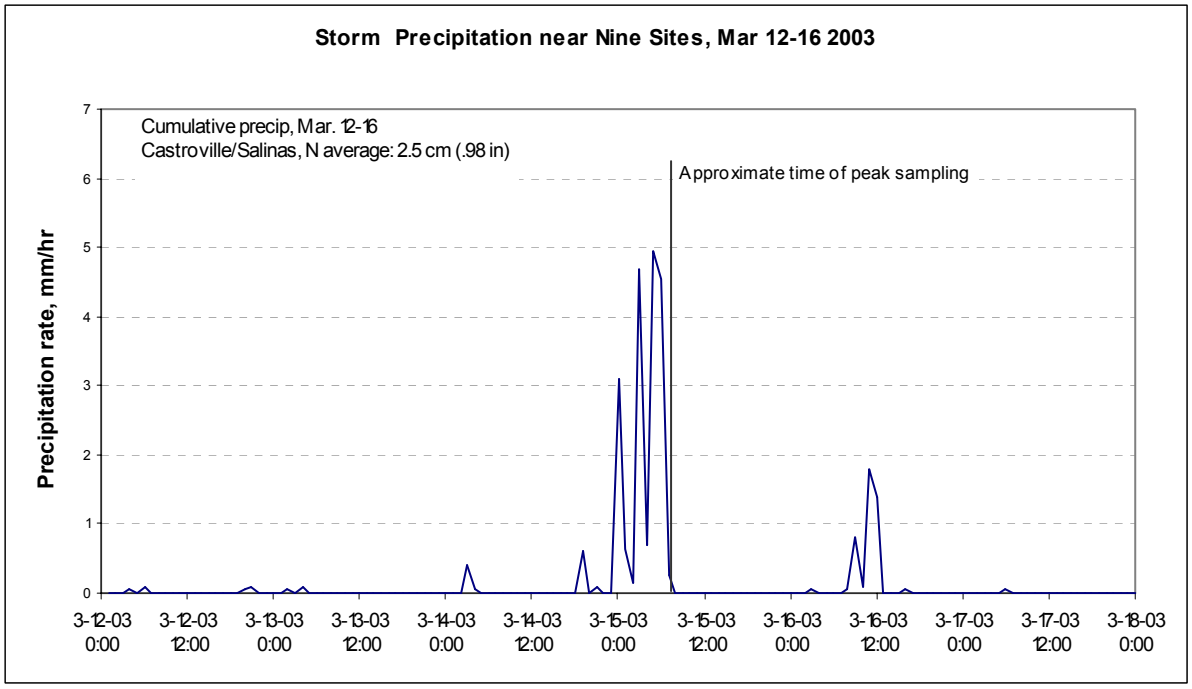

Figure 4.3. Precipitation during storm period monitored in March 2003.

4.2 Quality Assurance/Quality Control (QA/QC)

4.2.1 Duplicates

Duplicate environmental samples taken in the field had acceptable variation amongst sample values. The water duplicate obtained from REC-JON was destroyed in transit. Duplicate samples of bottom sediment for OCs, PCBs and TOCs were obtained and analyzed by APPL, Inc. The relative percent difference (RPD) of the duplicate values obtained for DDE was 18.5%; for TDE/DDD, 11.4%; for TOCs, 10.0%. All other values were at non-detectable levels. This indicates that laboratory analysis can reproduce results from similar environmental samples to within 20%, which is favorable.

4.3 Bottom-sediment size categories

Pesticides typically reach waterways in soluble aqueous form or, more commonly, absorbed onto fine-grained soil particles such as silt and clay (Mount, 1995). Smaller particle sizes translate into greater surface area per mass, thus leading to more adsorption and greater pesticide concentration potential. These fine particles may be suspended in faster flows, but in the low ambient flows of summer tend to fall to the benthos.

A portion of the bottom-sediment samples was used to characterize the percentage of sand to the silt/clay component of the samples. The results are summarized in Table 4.1. In October, SAL-DAV, BLA-PUM, OLS-POT and EPL-EPL had relatively high silt-clay fractions (from 78-98%), while SAL-MON and REC-JON had slightly lower silt-clay fractions (66%). In March, SAL-DAV lost nearly all its silt/clay-sized fraction, presumably flushed by the December connection of the Salinas River system. BLA-PUM changed little in March while OLS-POT had a higher sand fraction. TEM-RRB and MOR-HW1 were not sampled in October. MOS-SAN had relatively little silt/clay (6%), undoubtedly due to the tidal activity at this site, both in October and March.

Table 4.1. Percent by weight of sand vs. silt/clay of bottom sediment samples obtained during October 2002 and March 2003.

Site	% sand	% silt/clay	% sand	% silt/clay
	October, 2002		March, 2003	
Sal-Dav	12	88	98	2
Sal-Mon	34	66	1	99
Bla-Coo	14	86	8	92
Bla-Pum	22	78	31	69
Rec-Jon	34	66	49	51
Ols-Pot	2	98	22	78
Mos-San	94	6	91	9
Tem-Rrb	n/a	n/a	96	4
Mor-Hw1	n/a	n/a	77	23

4.4 General Water Quality Parameters

Several water quality parameters were obtained using a multi-probe data logger system during the ambient sediment collection just prior to the storm event. These data are listed in Table 4.2.

Table 4.2. Data of depth profiles performed during the March sampling run taken with a multi-probe data logger system for each site except TEM-RRB & MOR-HW1.

March 2003 sampling run

Site	Day/Time	Depth (m)	Temp ©	SpCond mS/cm	DO Conc (mg/L)	pH	pHmV	BP	Cond mS/cm	DO %	Resistivity Kohm.cm	Salinity PPT	TDS (g/L)
BLA-COO	12/16:08	0	20.79	2.63	12.18	8.25	-89.6		2.42	137.1	0.41	1.36	1.71
BLA-PUM	12/15:23	0	18.69	2.55	11.30	8.06	-78.3		2.25	122.0	0.45	1.32	1.66
BLA-PUM	12/15:24	0.5	18.62	2.57	10.69	8.16	-84.0		2.26	115.2	0.44	1.33	1.67
EP1-ROG	13/10:48	0	16.76	1.76	9.84	8.19	-85.3		1.48	101.8	0.68	0.89	1.14
EPL-EPL	13/15:14	0	19.86	2.58	6.46	7.44	-43.7		2.32	71.4	0.43	1.33	1.67
MOS-SAN	12/12:53	0	19.30	24.69	7.52	6.91	-13.9		22.01	89.1	0.05	15.06	16.05
MOS-SAN	12/12:54	0.5	19.30	24.78	7.24	7.54	-49.7		22.08	85.9	0.05	15.12	16.11
MOS-SAN	12/12:55	1	15.04	47.17	6.01	7.58	-51.1		38.20	72.1	0.03	30.70	30.66
MOS-SAN	12/12:57	1.3	14.68	48.20	5.14	7.62	-53.1		38.70	61.4	0.03	31.44	31.33
OLS-POT	12/13:29	0	20.94	20.86	9.38	7.84	-66.3		19.24	113.1	0.05	12.52	13.56
OLS-POT	12/13:31	0.35	21.47	23.28	9.99	8.01	-76.4		21.71	122.8	0.05	14.10	15.13
REC-JON	13/10:08	0	16.75	1.35	8.10	8.67	-112.0		1.14	83.8	0.88	0.68	0.88
SAL-DAV	13/9:09	0	17.12	1.35	6.61	7.55	-49.7		1.15	68.8	0.87	0.68	0.88
SAL-DAV	13/9:10	0.5	17.16	1.35	6.85	7.66	-55.7		1.15	71.4	0.87	0.68	0.88
SAL-DAV	13/9:12	1	16.64	1.36	5.12	7.62	-53.7		1.14	52.8	0.87	0.68	0.88
SAL-DAV	13/9:14	1.5	15.18	1.39	3.84	7.53	-48.6		1.13	38.4	0.89	0.70	0.90
SAL-DAV	13/9:15	2	14.06	1.43	3.05	7.40	-40.9		1.13	29.7	0.88	0.72	0.93
SAL-DAV	13/9:17	2.5	13.63	1.60	0.37	7.24	-32.3		1.25	3.5	0.80	0.81	1.04
SAL-MON	12/14:19	0	19.30	18.63	12.39	7.79	-63.2		16.60	143.5	0.06	11.08	12.11
SAL-MON	12/14:20	0.5	19.73	18.53	12.46	7.99	-74.8		16.67	145.5	0.06	11.02	12.05
SAL-MON	12/14:21	1	19.58	18.83	12.20	8.12	-82.1		16.88	142.1	0.06	11.21	12.24
SAL-MON	12/14:23	1.5	18.57	21.25	7.70	7.92	-70.5		18.64	88.8	0.05	12.79	13.81
SAL-MON	12/14:24	2	16.65	27.96	1.50	7.62	-53.4		23.50	17.1	0.04	17.26	18.17
SAL-MON	12/14:25	2.5	16.12	37.67	0.39	7.53	-48.3		31.28	4.5	0.03	23.95	24.49

4.5 Concentrations of OCs, PCBs and TOCs

The concentrations of OCs, PCBs, TOCs, SSC and bottom-sediment silt/clay as well as water discharge for samples collected during the March 2003 winter storm event are summarized in the Appendix. Most values were non-detectable for many analytes. Those pesticide analytes with detectable values at each of the sites are summarized in Table 4.3 and shown graphically in Figure 4.4.

Note that of all OCs and PCBs tested for, only DDT, its metabolites and Dieldrin were detected. No dieldrin was found in any sediment sample. No detectable amounts of any OCs or PCBs were found in either the unfiltered water or bottom sediments at MOR-HW1. The Blanco Drain system had the highest concentrations of LPs overall.

Table 4.3. Legacy pesticide concentrations detected in water and bottom sediment samples at nine-sites.

	Water Matrix, ug/L				Sediment Matrix, ug/kg			
Site	4,4'-DDE	4,4'-DDT	4,4'-TDE/DDD	Dieldrin	4,4'-DDE	4,4'-DDT	4,4'-TDE/DDD	Dieldrin
SAL-DAV	0.02	0.04	nd	0.01	nd	nd	nd	nd
SAL-MON	nd	nd	nd	nd	22	nd	nd	nd
BLA-COO	0.13	0.11	0.04	0.18	190	55	60	nd
BLA-PUM	0.05	0.03	0.03	0.03	130	78	48	nd
REC-JON	0.06	nd	0.04	nd	65*	nd	35*	nd
OLS-POT	0.06	0.03	0.02	nd	61	44	20	nd
MOS-SAN	0.01	nd	0.01	nd	19	nd	nd	nd
TEM-RRB	0.02	nd	nd	nd	27	nd	17	nd
MOR-HW1	nd	nd	nd	nd	nd	nd	nd	nd

Unfiltered water matrix: PQL = .01ug/L, Sediment Matrix: PQL = 30 ug/kg

* average value of the duplicate values

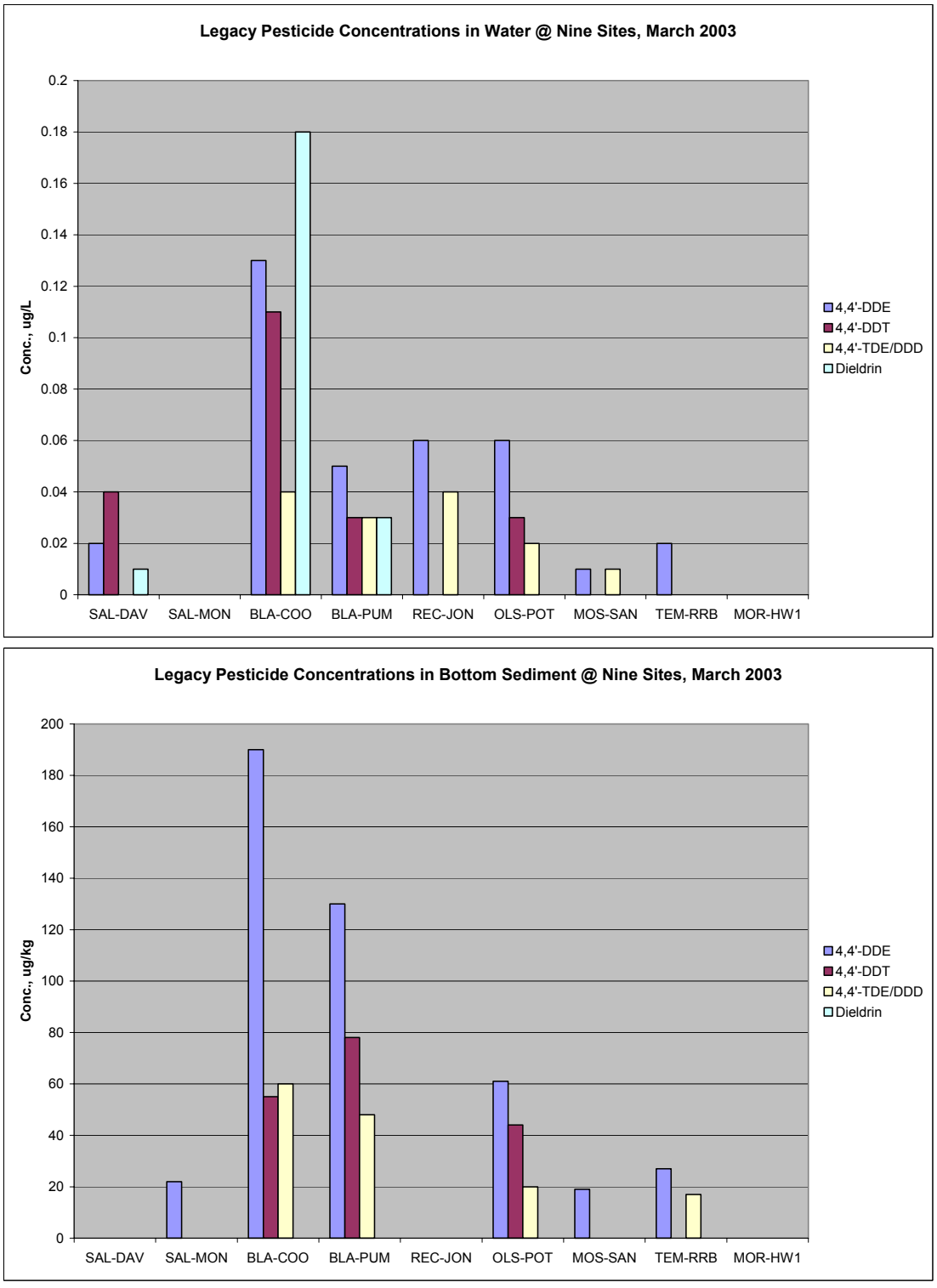

Figure 4.4 Unfiltered water and bottom sediment concentrations of legacy pesticides measured during the March 03, 2003 storm event.

4.6 Instantaneous Loads of Legacy Pesticides

The instantaneous loads (μg/sec) for unfiltered water for all sites throughout the monitoring period are listed in Table 4.4. Relatively large loads of DDT, DDE and TDE/DDD were measured at OLS-POT, which drains directly into the Moss Landing Harbor area. This is due primarily to the large rate of water flow (discharge) measured at the time of sampling, approximately 11.3 m^3/s. REC-JON also displayed relatively large DDE and TDE/DDD loads. BLA-COO had the second highest loads of DDT and the highest loads of Dieldrin, primarily due to the high concentrations observed at this site. Discharge was not measured at MOS-SAN (a tidal site), SAL-DAV or SAL-MON, so loads could not be computed.

	Water Matrix Instantaneous Load, ug/sec			
Site	4,4'-DDE	4,4'-DDT	4,4'-TDE/DDD	Dieldrin
SAL-DAV	n/a	n/a	n/a	n/a
SAL-MON	n/a	n/a	n/a	n/a
BLA-COO	20.48	17.33	6.30	28.35
BLA-PUM	0.10	0.06	0.06	0.06
REC-JON	124.10	0	82.73	0
OLS-POT	679.44	339.72	226.48	0
MOS-SAN	n/a	n/a	n/a	n/a
TEM-RRB	93.67	0.00	0.00	0
MOR-HW1	0	0	0	0

n/a: loads not determined due to unmeasurable/unmeasured discharge

Table 4.4. Instantaneous loads of detectable OC pesticides for March 2003 monitoring event.

4.7 Future analyses

Further analysis of LP relationships with other covariates needs to be performed at a future date following the collection of more comprehensive data. A comparison of bottom sediment concentrations to water concentrations is expected to have strong correlation. Bottom sediment size class and TOC levels need to be compared to sediment LP concentrations, with higher concentrations expected to be associated with smaller grain sizes and more organic material. Water LP concentrations are expected to be higher when suspended solids concentrations are higher. Finally, concentrations of current LPs will need to be compared to past levels and present screening levels of concern.

5 Summary and Conclusions

Nine sampling sites in lower Salinas Valley 303(d) listed water bodies were sampled for legacy pesticides (OCs and PCBs) just prior to and during a winter storm in March 2003. At each site water was collected for analysis. Bottom sediment samples were also obtained and analyzed.

Chemical analysis of unfiltered water samples taken during the storm indicate that of all OC and PCB compounds tested for, only DDT, its metabolites (DDE, TDE/DDD) and Dieldrin were detected. At least one of these compounds was found in 78% of the sites sampled. Values ranged from non-detectable levels for all analytes to 0.18 ppb for Dieldrin, 0.13 ppb for 4,4'-DDE, 0.11ppb for 4,4'-DDT, and 0.04 ppb for 4,4'-TDE/DDD.

Concentrations in the Blanco Drain system, especially BLA-COO, were among the highest measured (4,4'-DDT 0.11 ppb, 4,4'-DDE 0.13 ppb, 4,4'-TDE/DDD 0.04 ppb and Dieldrin 0.18 ppb) by this study. A study performed in 1984 (Risebrough and Jarman, 1984), nearly 20 years prior to this study, found higher levels of 4,4'-DDD (0.27 ppb) and 4,4'-DDE (0.16 ppb) whereas levels of 4,4'-DDT were lower (0.087ppb).

Sites OLS-POT, REC-JON and BLA-PUM had significant amounts also, and most of these compounds, including DDT, were detected in the Salinas River.

These DDT concentrations are below the toxicity LC_{50} (96-hour) levels for commonly tested fish (e.g., rainbow trout LC_{50} is 8.7 µg/L; fathead minnow, 21.5 µg/L), daphnids (4.7 µg/L), and various aquatic invertebrates (1.8-54 µg/L) (EXTOXNET, 2004).

Higher concentrations from OLS-POT along with large water discharges created the largest loads of legacy pesticides moved of all sites observed during this monitoring event. These loads are transported directly to Moss Landing Harbor.

Bottom sediment sample analysis indicated no detectable Dieldrin concentrations in any sample. DDT and related compounds ranged from non-detectable levels to 190 ppb. Again, 78% of the sites had at least one DDT related compound found at detectable levels. Future analysis of these data will

need to correlate TOC and silt/clay composition of sediment material to concentration data.

A report from the California Department of Pesticide Regulation (Mischke et al., 2003) states total DDT levels in sediments of the Blanco Drain sampled in 1984 to average 2100 ppb, with values varying from 220-6300 ppb. Blanco drain sediment samples collected from CCoWS found BLA-COO to have 305 ppb and BLA-PUM to have 256 ppb total DDT.

Data from the Central Coast Ambient Monitoring Program (CCAMP) website indicate average levels of total DDT measured in sediments for the same sites or sites within the same area to be anywhere from 0.1-367.4 ppb for the years 1998 and 1999. Average dieldrin concentrations ranged from 0.6 to 34.8 ppb for the same sites and times.

The data represented in this report constitute only the beginning of a comparative analysis of present to past levels of legacy pesticide concentrations. Primarily they establish that the 303(d) listings remain relevant with respect to legacy pesticides, and that immediate further study is warranted within the context of the Regional TMDL program.

6 References

California Department of Food and Agriculture. Agricultural Sources of DDT Residues in California's Environment. A report prepared in response to House Resolution No. 53. Environmental Hazards Assessment Program. September 1985.

Central Coast Ambient Monitoring Program (CCAMP). Accessed July 2003 http://www.ccamp.org/.

Department of Pesticide Regulation. Agricultural Sources of DDT Residues in California's Environment. Accessed: July 19, 2001 http://www.cdpr.ca.gov/docs/empm/pubs/ ehapreps/ddt/sources.htm

EXTOXNET. Extension Toxicology Network. Pesticide Information Profile. DDT (dichloro-diphenyl-trichloroethane). Cornell University, 2001. Accessed July, 2003. http://extoxnet.orst.edu/pips/ghindex.html

Gilliom, R., J. Barbash, D. Kolpin and S. Larson. 1999. Testing Water Quality for Pesticide Pollution. U.S. Geological Survey investigations reveal widespread contamination of the nation's water resources. Environmental Science and Technology. April 1999.

Inman, D., S. Jenkins, and P. Masters. 2000. Budget of Sediment and Fate of DDT at the Ocean Edge of the Southern California Bight. A Technical Report with combined database and publishable findings.

Kegley, S., L. Neumeister and T. Martin. 1999. Disrupting the Balance. Ecological Impacts of Pesticides in California. Pesticide Action Network.

Kozlowski, D., F. Watson, M. Angelo, J. Larson, J. Wikoff, J. Casagrande, J. Hager, W. Newman, T. Anderson and S. Gilmore. 2003. Monitoring chlorpyrifos & diazinon in impaired surface waters of the lower Salinas region: status report no. 3. Central Coast Watershed Studies (CCoWS), Watershed Institute, CSU Monterey Bay. Report No. WI-2002-06c. http://science.csumb.edu/~ccows/.

Masters, P.and D. Inman. 2000. Transport and Fate of Organochlorines Discharged To The Salt Marsh at Upper Newport Bay, California, USA. Environmental Toxicology and Chemistry, 19 (8): 2076 – 2084.

Mischke, T., K. Brunetti, V. Acosta, D. Weaver and M. Brown. 1985. Agricultural sources of DDT residues in California's environment. California Department of Food and Agriculture, Sacramento, CA. pp.42.

Montgomery, J. 1997. Agrochemicals desk reference 2nd ed. CRC Press LLC. pp 656.

Mount, J. 1995. California rivers and streams: the conflict between fluvial process and land use. University of California Press, Berkeley and Los Angeles, California. pp. 359.

Olkowski, W., S. Daar and H. Olkowski. 1991. Common-Sense Pest Control. Chapter 6: Chemical and Microbial Tools. The Taunton Press.

Risebrough, R. and W. Jarman. 1984. DDT compounds in soils and water particulates of the Salinas Valley, June 25, 1984. A report to the State Water Resources Control Board, November 7, 1984.

State Water Resources Control Board (SWRCB). 1993. 1991 Toxics substance monitoring program report. Sacramento, California. pp 26.

State Water Resources Control Board (SWRCB). 1994. State mussel watch program, 1987-1993 data report. Sacramento, California. pp 20.

State Water Resources Control Board (SWRCB). 1995a. Toxic substances monitoring program report 1992-93. Sacramento, California. pp 32.

State Water Resources Control Board (SWRCB). 1995b. Toxic substances monitoring program, 1994-95 data report. Sacramento, California. pp 29.

State Water Resources Control Board (SWRCB). 1996. State mussel watch program, 1993-1995 data report. Sacramento, California. pp 16.

State Water Resources Control Board (SWRCB), California Regional Water Quality Control Board (RWQCB) Region 3, California Department of Fish and Game (CDFG), University of California Santa Cruz (UCSC), & Moss Landing Marine Labs (MLML). 1998. Chemical and biological measures of sediment quality in the Central Coast region. State Water Resources Control Board Division of Water Quality, Sacramento, California. pp 84.

State Water Resources Control Board (SWRCB). 2000. State mussel watch program, 1995-1997 data report. Sacramento, California. pp 22.

Thornburg, T., R. Weaver, M. Spaulding, A. Grilli, and L. Erickson. 1996. Application of DDT to Agricultural Lands in the Coastal Margins of Central and Southern California. Hart Crowser, Inc. Spaulding Environmental Associates, Inc.

Watson, F., W. Newman, T. Anderson, D. Kozlowski, J. Hager, and J. Casagrande (2003). Protocols for water quality and stream ecology research. Central Coast Watershed Studies (CCoWS), Watershed Institute, CSU Monterey Bay. Report No. WI-2002-05e. http://science.csumb.edu/~ccows/pubs/reports/CCoWS_Protocols_030529_VersionE.pdf

7 Appendix

Table A.1. Legacy pesticide monitoring data surrounding a storm event on March 15th 2003.

Date	Time	Site	Sample ID	Sample matrix	Method	Analyte	value	units	PQL
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	4,4'-DDE	**19**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	4,4'-TDE/DDD	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**77.6**	%	40-123
12-Mar-03	12:20 PM	MOS-SAN	LP01	sediment	EPA 8081A	Surrogate: DECA-PCB	**61**	%	29-125
12-Mar-03	12:20 PM	MOS-SAN	LP01A	sediment	Walkely-Black	TOC	**2300**	mg/Kg	5
12-Mar-03	12:20 PM	MOS-SAN	B1	sediment	wet sieve	silt/clay	**9**	%total	
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	4,4'-DDE	**0.01**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	4,4'-DDT	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	4,4'-TDE/DDD	**0.01**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01

15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Surrogate: DECA	**84**	%	50-126
15-Mar-03	12:40 PM	MOS-SAN	LP15	Water	EPA 8081A/	Surrogate: TCmX	**52.5**	%	30-116
15-Mar-03	12:40 PM	MOS-SAN		Water		discharge	**n/a**	L/sec	
15-Mar-03	12:40 PM	MOS-SAN	#719	Water		SSC (>63 um)	**14.5**	mg/L	
15-Mar-03	12:40 PM	MOS-SAN	#719	Water		SSC (<= 63 um)	**527.0**	mg/L	
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	4,4'-DDE	**61**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	4,4'-DDT	**44**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	4,4'-TDE/DDD	**20**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**74.1**	%	40-123
12-Mar-03	13:25:00 PM	OLS-POT	LP02	sediment	EPA 8081A	Surrogate: DECA-PCB	**92**	%	29-125
12-Mar-03	13:25:00 PM	OLS-POT	LP02A	sediment	Walkely-Black	TOC	**27000**	mg/Kg	5
12-Mar-03	13:25:00 PM	OLS-POT	B2	sediment	wet sieve	silt/clay	**78**	%total	

15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	4,4'-DDE	**0.06**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	4,4'-DDT	**0.03**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	4,4'-TDE/DDD	**0.02**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Surrogate: DECA	**74.7**	%	50-126
15-Mar-03	13:50 PM	OLS-POT	LP18	Water	EPA 8081A/	Surrogate: TCmX	**51.5**	%	30-116
15-Mar-03	13:50 PM	OLS-POT		Water		discharge	**11324.1**	L/sec	
15-Mar-03	13:50 PM	OLS-POT	#414	Water		SSC (>63 um)	**42.1**	mg/L	
15-Mar-03	13:50 PM	OLS-POT	#414	Water		SSC (<= 63 um)	**1019.4**	mg/L	
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	4, 4'-DDE	**22**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	4,4'-TDE/DDD	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330

12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**69**	%	40-123
12-Mar-03	14:15 pm	SAL-MON	LP03	sediment	EPA 8081A	Surrogate: DECA-PCB	**76.7**	%	29-125
12-Mar-03	14:15 pm	SAL-MON	LP03A	sediment	Walkely-Black	TOC	**16000**	mg/Kg	5
12-Mar-03	14:15 pm	SAL-MON	B3	sediment	wet sieve	silt/clay	**99**	%total	
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	4,4'-DDE	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	4,4'-DDT	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	4,4'-TDE/DDD	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Surrogate: DECA	**91.8**	%	50-126
15-Mar-03	8:15 AM	SAL-MON	LP16	Water	EPA 8081A/	Surrogate: TCmX	**53.6**	%	30-116
15-Mar-03	8:15 AM	SAL-MON		Water		discharge	**n/a**	L/sec	
15-Mar-03	8:15 AM	SAL-MON	#511	Water		SSC (>63 um)	**11.0**	mg/L	
15-Mar-03	8:15 AM	SAL-MON	#511	Water		SSC (<= 63 um)	**177.5**	mg/L	
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	4,4'-DDE	**130**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	4,4'-DDT	**78**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	4,4'-TDE/DDD	**48**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30

12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**66**	%	40-123
12-Mar-03	15:15 pm	BLA-PUM	LP04	sediment	EPA 8081A	Surrogate: DECA-PCB	**71.7**	%	29-125
12-Mar-03	15:15 pm	BLA-PUM	LP04A	sediment	Walkely-Black	TOC	**16000**	mg/Kg	5
12-Mar-03	15:15 pm	BLA-PUM	B4	sediment	wet sieve	silt/clay	**69**	%total	
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	4,4'-DDE	**0.05**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	4,4'-DDT	**0.03**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	4,4'-TDE/DDD	**0.03**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Dieldrin	**0.03**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Surrogate: DECA	**100**	%	50-126
15-Mar-03	6:30 AM	BLA-PUM	LP13	Water	EPA 8081A/	Surrogate: TCmX	**50**	%	30-116
15-Mar-03	6:30 AM	BLA-PUM		Water		discharge	**2**	L/sec	
15-Mar-03	6:30 AM	BLA-PUM	#718	Water		SSC (>63 um)	**8.8**	mg/L	
15-Mar-03	6:30 AM	BLA-PUM	#718	Water		SSC (<= 63 um)	**143.7**	mg/L	
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	4,4'-DDE	**190**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	4,4'-DDT	**55**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	4,4'-TDE/DDD	**60**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30

12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**67.7**	%	40-123
12-Mar-03	16:10 pm	BLA-COO	LP05	sediment	EPA 8081A	Surrogate: DECA-PCB	**79**	%	29-125
12-Mar-03	16:10 pm	BLA-COO	LP05A	sediment	Walkely-Black	TOC	**31000**	mg/Kg	5
12-Mar-03	16:10 pm	BLA-COO	B5	sediment	wet sieve	silt/clay	**92**	%total	
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	4,4'-DDE	**0.13**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	4,4'-DDT	**0.11**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	4,4'-TDE/DDD	**0.04**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Dieldrin	**0.18**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1

15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Surrogate: DECA	**77.3**	%	50-126
15-Mar-03	5:45 AM	BLA-COO	LP12	Water	EPA 8081A/	Surrogate: TCmX	**43.8**	%	30-116
15-Mar-03	5:45 AM	BLA-COO		Water		discharge	**157.5**	L/sec	
15-Mar-03	5:45 AM	BLA-COO	^482	Water		SSC (>63 um)	**19.7**	mg/L	
15-Mar-03	5:45 AM	BLA-COO	^482	Water		SSC (<= 63 um)	**1105.9**	mg/L	
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	4,4'-DDE	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	4,4'-TDE/DDD	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**85.2**	%	40-123
13-Mar-03	9:10 AM	SAL-DAV	LP06	sediment	EPA 8081A	Surrogate: DECA-PCB	**99.1**	%	29-125
13-Mar-03	9:10 AM	SAL-DAV	LP06A	sediment	Walkely-Black	TOC	**1600**	mg/Kg	5
13-Mar-03	9:10 AM	SAL-DAV	B6	sediment	wet sieve	silt/clay	**2**	%total	
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	4,4'-DDE	**0.02**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	4,4'-DDT	**0.04**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	4,4'-TDE/DDD	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Dieldrin	**0.01**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01

15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Surrogate: DECA	**105**	50-126	%
15-Mar-03	9:15 AM	SAL-DAV	LP17	Water	EPA 8081A/	Surrogate: TCmX	**57.8**	30-116	%
15-Mar-03	9:15 AM	SAL-DAV		Water		discharge	**n/a**	L/sec	
15-Mar-03	9:15 AM	SAL-DAV	^597	Water		SSC (>63 um)	**0**	mg/L	
15-Mar-03	9:15 AM	SAL-DAV	^597	Water		SSC (<= 63 um)	**58.0**	mg/L	
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	4,4'-DDE	**71**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	4,4'-TDE/DDD	**37**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**70.8**	%	40-123
13-Mar-03	10:10:00 AM	REC-JON	LP07	sediment	EPA 8081A	Surrogate: DECA-PCB	**79.1**	%	29-125
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	4,4'-DDE	**59**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	4,4'-TDE/DDD	**33**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30

13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**67.9**	%	40-123
13-Mar-03	10:10:00 AM	REC-JON	LP071	sediment	EPA 8081A	Surrogate: DECA-PCB	**76.2**	%	29-125
13-Mar-03	10:10:00 AM	REC-JON	LP07A	sediment	Walkely-Black	TOC	**21000**	mg/Kg	5
13-Mar-03	10:10:00 AM	REC-JON	B7	sediment	wet sieve	silt/clay	**51**	%total	
13-Mar-03	10:10:00 AM	REC-JON	LP07B	sediment	Walkely-Black	TOC	**19000**	mg/Kg	5
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	4,4'-DDE	**0.06**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	4,4'-DDT	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	4,4'-TDE/DDD	**0.04**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Surrogate: DECA	**81**	50-126	%
15-Mar-03	05:15 AM	REC-JON	LP11	Water	EPA 8081A/	Surrogate: TCmX	**49.5**	30-116	%
15-Mar-03	05:15 AM	REC-JON		Water		discharge	**2068.3**	L/sec	

15-Mar-03	05:15 AM	REC-JON	#508	Water		SSC (>63 um)	**22.1**	mg/L	
15-Mar-03	05:15 AM	REC-JON	#508	Water		SSC (<= 63 um)	**463.9**	mg/L	
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	4,4'-DDE	**27**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	4,4'-TDE/DDD	**17**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**71.9**	%	40-123
13-Mar-03	10:45 AM	TEM-RRB	LP08	sediment	EPA 8081A	Surrogate: DECA-PCB	**78.2**	%	29-125
13-Mar-03	10:45 AM	TEM-RRB	LP08A	sediment	Walkely-Black	TOC	**22000**	mg/Kg	5
13-Mar-03	10:45 AM	TEM-RRB	B8	sediment	wet sieve	silt/clay	**23**	%total	
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	4,4'-DDE	**0.02**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	4,4'-DDT	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	4,4'-TDE/DDD	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1

15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Surrogate: DECA	**91.9**	%	50-126
15-Mar-03	7:00 AM	TEM-RRB	LP10	Water	EPA 8081A/	Surrogate: TCmX	**49.9**	%	30-116
15-Mar-03	7:00 AM	TEM-RRB		Water		Discharge	**4683.7**	L/sec	
15-Mar-03	7:00 AM	TEM-RRB	^487	Water		SSC (>63 um)	**10.6**	mg/L	
15-Mar-03	7:00 AM	TEM-RRB	^487	Water		SSC (<= 63 um)	**249.1**	mg/L	
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	4,4'-DDE	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	4,4'-DDT	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	4,4'-TDE/DDD	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	a-BHC	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	a-Chlordane	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Aldrin	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	b-BHC	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	d-BHC	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Dieldrin	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endosulfan I	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endosulfan II	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endosulfan sulfate	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endrin	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endrin aldehyde	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Endrin ketone	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	g-BHC (Lindane)	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	g-Chlordane	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Heptachlor	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Heptachlor epoxide	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Methoxychlor	**nd**	ug/Kg	30
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1016	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1221	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1232	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1242	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1248	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1254	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	PCB-1260	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Toxaphene	**nd**	ug/Kg	330
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Surrogate; 2,4,5,6 - Tetrechloro-m-xylene	**69.3**	%	40-123
13-Mar-03	12:15 PM	MOR-HW1	LP09	sediment	EPA 8081A	Surrogate: DECA-PCB	**77.6**	%	29-125
13-Mar-03	12:15 PM	MOR-HW1	LP09A	sediment	Walkely-Black	TOC	**7000**	mg/Kg	5
13-Mar-03	12:15 PM	MOR-HW1	B9	sediment	wet sieve	silt/clay	**4**	%total	
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	4,4'-DDE	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	4,4'-DDT	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	4,4'-TDE/DDD	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	a-BHC	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	a-Chlordane	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Aldrin	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	b-BHC	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	d-BHC	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Dieldrin	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endosulfan I	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endosulfan II	**nd**	ug/L	0.01

15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endosulfan sulfate	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endrin	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endrin aldehyde	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Endrin ketone	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	g-BHC (Lindane)	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	g-Chlordane	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Heptachlor	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Heptachlor epoxide	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Methoxychlor	**nd**	ug/L	0.01
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1016	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1221	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1232	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1242	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1248	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1254	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	PCB-1260	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Toxaphene	**nd**	ug/L	0.1
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Surrogate: DECA	**92.5**	%	50-126
15-Mar-03	12:20 PM	MOR-HW1	LP14	Water	EPA 8081A/	Surrogate: TCmX	**47.5**	%	30-116
15-Mar-03	12:20 PM	MOR-HW1		Water		discharge	**N/A**	L/sec	
15-Mar-03	12:20 PM	MOR-HW1	^578	Water		SSC (>63 um)	**0**	mg/L	
15-Mar-03	12:20 PM	MOR-HW1	^578	Water		SSC (<= 63 um)	**359.19991**	mg/L	