Publication No. 10-02-012 Appendix G

Appendix G Study of Atmospheric Deposition of Air Toxics to the Surface of Puget Sound, PCB Atmospheric Deposition Rates and Loads

Introduction

Atmospheric deposition of toxic contaminants was identified as a potentially important contributor of lead (Pb), arsenic (As), persistent organic pollutants (POPs), such as polybromindated diphenyl ethers (PBDEs), polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) to the mass of toxics entering Puget Sound each year (U.S. Environmental Protection Agency [EPA] 1991). Diverse sources include both natural processes, such as forest fires and volcanos, and anthropogenic activities. The later may release toxics to the atmosphere in a gas and/or particulate phase from sources such as vehicular exhaust, other mobile combustion sources, smoke from wood-burning stoves or slash burning, commercial and industrial emissions and material storage, urban infrastructure, and dust from soil erosion. During the 1980s, Puget Sound studies measured toxic chemicals in airborne particulates in coastal regions and found the concentrations exceeded the draft sediment criteria (EPA 1991). This emphasized the need to better understand the deposition and potential accumulation of air toxics into marine sediment, and ultimately, food webs. Since that time, many studies have demonstrated the ecological and economic significance of the deposition of air toxics onto sensitive coastal ecosystems (e.g., Swackhamer et al., 1988; Leister and Baker, 1994; Offenberg and Baker 1997; Gustafson and Dickhut 1997). By definition, POPs became a significant source of concern in many atmospheric studies due to their incalcitrant properties and documented long-range atmospheric transport patterns. In particular, PCBs were targeted since they have only anthropogenic sources and were still detected ubiquitously even after their production was phased out by many countries in the 1970s-1980s (Leister and Baker, 1994; Noël et al., 2009; Diamond et al., 2010; Fraser, 2010; Gasic et al., 2010).

The pathways for transporting the air toxics to Puget Sound waters ranged from direct deposition on the water surface to deposition on the landscape and subsequent mobilization during runoff events. In 2006, a Washington State statute declared that one of the objectives for ensuring the health and recovery of Puget Sound was to significantly reduce toxics entering Puget Sound marine waters. The Washington Department of Ecology (Ecology) began a phased approach to understanding and quantifying the loads of toxics entering Puget Sound from permitted point sources (e.g., industrial and municipal wastewater), surface runoff, atmospheric deposition, combined sewer overflow, and direct spills. This information supported the Puget Sound Partnership, Ecology, and other agencies in the development of decision trees targeting how and where to target toxics reduction efforts to provide the most benefit for Puget Sound. Ecology's phased approach includes three phases. In the Phase 1 an inventory of current mass loadings of various toxic chemicals entering Puget Sound from different sources were estimated

through literature review, compiled available data from the Pacific Northwest (PNW), and national studies (Hart Crowser, Inc. 2007). The Phase 1 report suggested that surface run-off and atmospheric deposition (directly to marine waters) were the two most important routes of entry for toxics reaching Puget Sound (Hart Crowser, Inc. 2007). The Phase 2 reports and their addendums further refined the surface runoff estimates with more recent land use data and alternate runoff coefficients (EnviroVision Corporation and Herrera Environmental Consultants, Inc. 2008; Herrera Environmental Consultants, Inc. 2010). Finally, the Phase 3 reports focused on collecting new data in Puget Sound such as the atmospheric deposition data of selected air toxics, including mercury, trace elements, PAHs, and PBDEs to provide better estimates of their mass loads to the waters of Puget Sound (Brandenberger et al., 2010). The objective of the Phase 3 report was to answer the question of, "What is the loading of toxics from atmospheric deposition directly to the waters of the Puget Sound?"

This appendix supplements the report by Brandenberger et al. (2010) by providing the atmospheric deposition fluxes for PCBs quantified from the same samples collected and previously reported for PBDEs and PAHs. Those data were collected from August 2008 through October 2009. The extracts from that study were archived frozen and then analyzed for the National Oceanic and Atmospheric Adminstartion (NOAA) Status and Trends program list of 21 PCB congeners including PCB-8, 18, 28, 44, 52, 66, 77, 101, 105, 118, 126, 128, 138, 153, 170, 180, 187, 195, 200, 206, and 209 (O'Connor 2002). The atmospheric deposition fluxes and annual loads of PCBs are reported herein.

Study Area

Sampling Locations

Seven sampling locations were selected around Puget Sound to represent a range of geographic regions, precipitation patterns, and potential air pollution sources. Atmospheric deposition collectors were deployed to represent deposition directly on the waters of Puget Sound within specific regions of Ecology's box model (Figure 1 – Red markers; Pelletier and Mohamedali 2009). Table 1 lists the station numbers, identification codes, and coordinates. Figure 1 illustrates the 11 regions in the box model including: South Sound, Main basin, North Hood Canal, South Hood Canal, Whidbey, The Tacoma Narrows, Elliott Bay, Sinclair/Dyes Inlet, Commencement Bay, Admiralty Inlet, and the Straits of Juan de Fuca and Georgia (SJF/SOG). Generally, there is a flux station located in each of the boxes with the exception of Admiralty Inlet, Whidbey Basin, South Hood Canal, Elliott Bay, and The Tacoma Narrows. The stations were grouped into rural/sub-urban, rural/industrial, and industrial/urban based on the dominant LULC in the coastal region around the station. Rural and sub-urban stations were located on Sequim Bay (SB) at the Pacific Northwest National Laboratory, Marine Sciences Laboratory (MSL), Rich Passage in Port Orchard (PO) at the EPA, Ecology, and NOAA Manchester Environmental Laboratories, Hood Canal (HC) at the University of Washington Big Beef Creek Fisheries Research Station, and the Nisqually River delta (NR) at the Nisqually

Reach Nature Center. The rural/industrial station was located on Padilla Bay (PB) at the Padilla Bay National Estuarine Research Reserve. Finally, the industrial/urban stations were West Point (WP), located on the beach property of the METRO King County wastewater treatment plant, and Tacoma Commencement Bay station (TCB), located on the University of Washington, Tacoma campus near 21st Street and Jefferson Avenue on the roof of the West-Side Grocery Building. An eighth location, also an additional industrial/urban station, was added on the shores of Commencement Bay (Tyee Marina [TM]–see Figure 1, yellow marker–which is directly across the waters of Commencement Bay from the station TCB). Samples were collected from the TM station during events #14-19 in May/June and then from July through October 2009 (see Methods Section). The TM station was added to better understand the area of influence for the TCB station. Brandenberger et al. (2010) provided detail descriptions and pictures of all study stations, metereology, and environmental data.

Generally, the PNW is characterized by few days of no measurable precipitation and relatively short average antecedent dry periods. The average annual cumulative precipitation near the sampling locations ranged from less than 20 inches in Sequim to over 50 inches near PO and HC stations. The typical precipitation patterns in the PNW are characterized by a very distinct wet season from November through April and a dry season from May through October; therefore, the sampling periods were collected to represent both seasonal patterns. More discussion on the precipitation/seasonal pattern can be seen in Brandenberger et al. (2010).

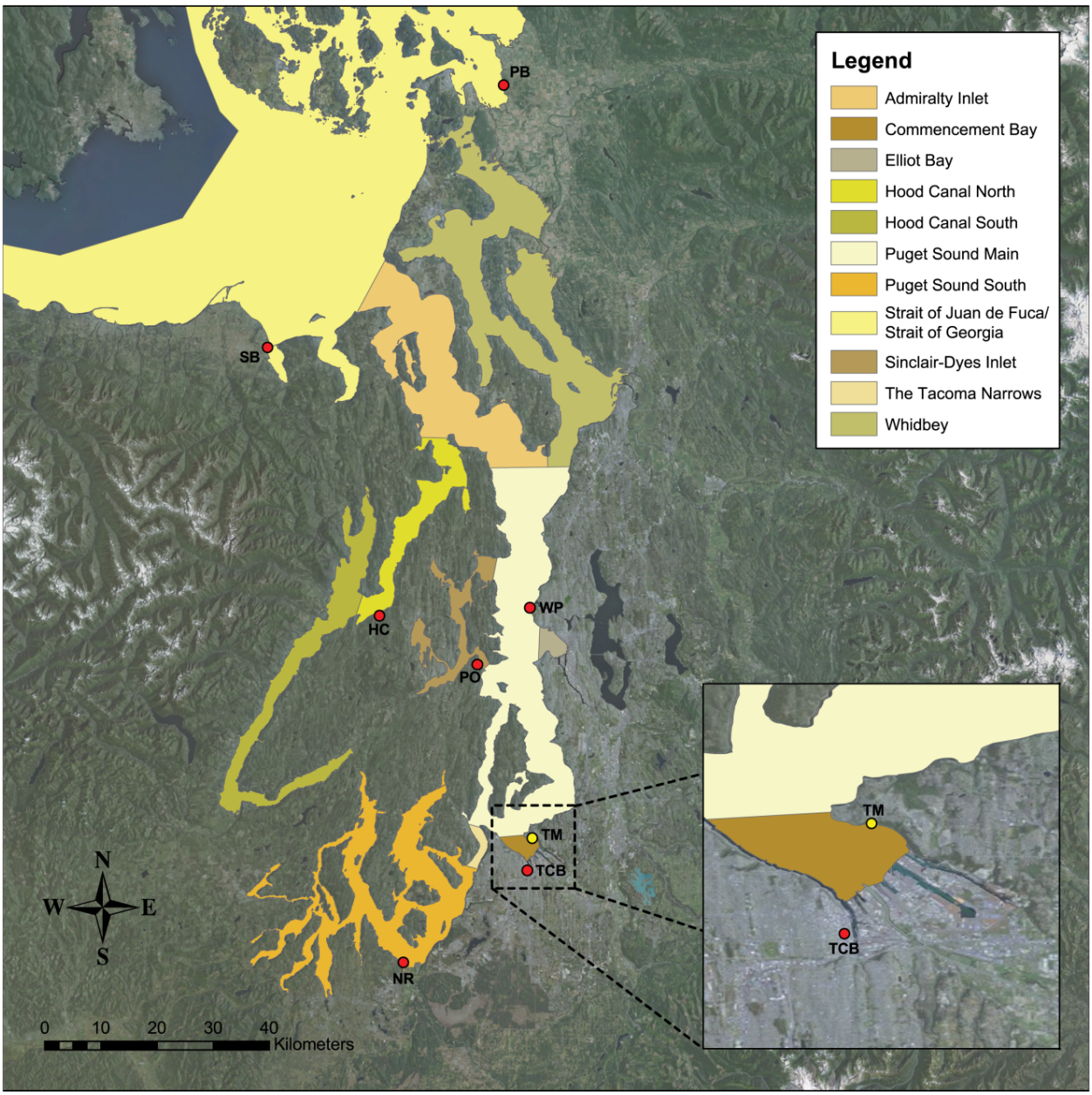

Figure 1. Seven primary stations (red) and the Tyee Marina (TM) station (yellow). Primary stations were Padilla Bay (PB), Sequim Bay (SB), West Point (WP), Port Orchard (PO), Hood Canal (HC), Tacoma Commencement Bay (TCB), and Nisqually River (NR). The 11 compartments in the Puget Sound box model (Pelletier and Mohamedali 2009) are illustrated.

Table 1. Atmospheric deposition station number, identification code, name, and coordinates.

Station Num.	Station ID	Name	Coordinates (degrees, minutes, seconds)	
1	PB	Padilla Bay	48° 29'39.40" N	122° 28'44.87" W
2	SB	Sequim Bay	48° 04'42.29" N	123° 02'41.17" W
3	WP	West Point, Seattle	47° 39'50.34" N	122° 25'34.20" W
4	PO	Port Orchard, Manchester	47° 34'26.03" N	122° 33'04.27" W
5	HC	Hood Canal, Seabeck	47° 39'07.13"N	122° 46'51.16" W
6	TCB	Tacoma Commencement Bay	47° 14'45.59" N	122° 26'13.95" W
7	NR	Nisqually River Delta	47° 06'02.39" N	122° 43'37.16" W
8	TM	Tyee Marina	47° 17'51.52" N	122° 25'27.70" W

Methods

Collection Methods

Bulk atmospheric deposition samples were sequentially collected from August 28 to December 11, 2008; February 25 to June 9, 2009; and July 29 to October 8, 2009 at seven stations on or close to the Puget Sound shore. A duplicate station was placed at different stations for the first 12 sampling events to assess field variability, and an eighth station was added in May 2009 (Events # 14-19) at TM to evaluate the spatial influence of the fluxes measured at TCB. The duplicate was deployed for at least two events at the SB, PO, HC, TCB, and NR stations. The event numbers, collection dates, the number of days the collector was deployed, and average temperature and precipitation for each sampling event are summarized in Table 2.

The field equipment was designed to passively collect bulk atmospheric deposition for approximately two weeks without requiring electrical power. Deposition collectors were placed approximately 6 feet off the ground on a framework constructed from untreated wood in a tripod design. The framework held separate sample collectors for organics (including the PCBs), trace metals, and mercury speciation (Figure 2). Atmospheric deposition samples for PAHs, anhydrosugars, PCBs, and PBDEs were collected using a stainless steel funnel with a diameter of 45 cm and surface area of 0.159 m^2. Wet deposition and dry deposition (rinsed from the funnel by deionized water) was gravity feed down a length of Teflon® tubing into a Teflon® filter cartridge capsule housed inside a wooden box. The samples were shielded from light exposure to prevent photo-oxidation. The transfer tubing was equipped with a vent line made of Teflon® and fitted with a Teflon® screen at the height of the funnel top. The deposition water was *extracted* onsite at a rate of ~ 3 mL per minute through a series of three glass fiber filters (GFF) separating two different types of Empore® solid phase extraction disks (SPE) with different sorbent materials. The first disk was an Empore® SDB-RPS disk, which is a poly(styrenedivinylbenzene) copolymer that has been modified with sulfonic acid groups to make it hydrophilic. The second

disk was an Empore® C18, which has an octadecyl functional group bonded to a silica surface to make it hydrophobic and provide nonpolar interaction sites.

Large wooden *skewers* jutted up from the sampling frame to deter birds from landing on the sampling apparatus. One side of this *crown of thorns* was designed to be removed during sample recovery allowing access to the funnel for washing of dry deposition into the capsule before recovery. A natural hair paint brush pre-cleaned with methanol before each recovery was use to scrub particles from the inside of the funnel. The funnel surface was washed with deionized water (DI) using a pre-cleaned Teflon® squirt bottle and the brush. The outlet of the extraction capsule was fitted with another piece of Teflon® tubing that drained into a calibrated reservoir to provide a volume of water extracted. When recovering the capsule, the Teflon® tubing was used to create a closed system to prevent further extraction of air during transit back to the laboratory. A Teflon® plug was used to seal the vent tubing connector, and the entire capsule was bagged and stored in a cooler at 4±2 °C.

A chain of custody (COC) was filled out and held on file at MSL for each event. The COC contained, at a minimum, the station ID, unique sample ID for each container (i.e., capsule for organics, metals, etc.), parameters requested, date of deployment and recovery, volume of rinse water for the metals, volume of water extracted by the organics extraction capsule, field anomalies, or unusual weather conditions over the sampling period. Samples were transported to MSL where the capsules were opened, all GFF and extract disks were removed using stainless steel tweezers, and samples were stored in a pre-cleaned, 2 oz. glass jar at -80±1 °C.

Figure 2. Bulk atmospheric deposition collector with stainless steel funnel in the center draining down into the wood box for organic parameters, clear Teflon® 1L bottles for trace elements (left arm), and opaque Teflon® 1L bottles for mercury speciation (right arm).

Table 2. Sampling dates for each of the nineteen events with days deployed, rain collected at the station, field duplicate locations, and average ambient temperature.

Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Avg. Temp. (°F)	Cum. Precip. (inches)
HC	1		9/3/08	9/17/08	14	59.9	0.00
HC	2		9/17/08	10/6/08	19	55.8	1.97
HC	3		10/6/08	10/16/08	10	47.9	0.80
HC	4		10/16/08	10/29/08	13	47.3	0.16
HC	5	x	10/29/08	11/8/08	10	49.6	5.07*
HC	6	x	11/8/08	11/20/08	12	48.2	1.69
HC	7	x	11/20/08	12/11/08	21	43.7	0.98
HC	8		2/26/09	3/12/09	14	38.5	1.38
HC	9		3/12/09	3/25/09	13	40.9	2.53
HC	10		3/25/09	4/8/09	14	43.6	0.91
HC	11		4/8/09	4/22/09	14	47.7	1.77
HC	12		4/22/09	5/5/09	13	49.0	2.70
HC	13		5/5/09	5/20/09	15	50.9	2.39
HC	14		5/20/09	6/5/09	16	60.7	0.00
HC	15		7/30/09	8/14/09	15	64.1	0.55
HC	16		8/14/09	8/26/09	12	62.6	0.03
HC	17		8/26/09	9/11/09	16	60.9	1.71
HC	18		9/11/09	9/25/09	14	61.0	0.40
HC	19		9/25/09	10/14/09	19	49.8	1.39
NR	**1**		**8/29/08**	**9/12/08**	**14**	**59.6**	**0.00**
NR	**2**		**9/12/08**	**9/24/08**	**12**	**57.9**	**0.30**
NR	**3**		**9/24/08**	**10/15/08**	**21**	**52.5**	**2.29**
NR	**4**		**10/15/08**	**10/30/08**	**15**	**47.8**	**0.54**
NR	**5**		**10/30/08**	**11/12/08**	**13**	**50.8**	**9.50***
NR	**6**		**11/12/08**	**11/24/08**	**12**	**44.7**	**0.79**
NR	**7**		**11/24/08**	**12/11/08**	**17**	**43.7**	**0.32**
NR	**8**		**2/25/09**	**3/12/09**	**15**	**38.8**	**1.33**
NR	**9**		**3/12/09**	**3/25/09**	**13**	**41.0**	**2.98**
NR	**10**	**x**	**3/25/09**	**4/8/09**	**14**	**44.3**	**1.44**
NR	**11**	**x**	**4/8/09**	**4/22/09**	**14**	**48.6**	**1.77**
NR	**12**	**x**	**4/22/09**	**5/7/09**	**15**	**49.0**	**3.60**
NR	**13**		**5/7/09**	**5/21/09**	**14**	**51.9**	**1.42**
NR	**14**		**5/21/09**	**6/4/09**	**14**	**61.8**	**0.00**
NR	**15**		**7/30/09**	**8/12/09**	**13**	**65.2**	**0.92**
NR	**16**		**8/12/09**	**8/27/09**	**15**	**63.1**	**0.24**
NR	**17**		**8/27/09**	**9/8/09**	**12**	**60.7**	**2.16**
NR	**18**		**9/8/09**	**9/24/09**	**16**	**61.5**	**0.33**
NR	**19**		**9/24/09**	**10/7/09**	**13**	**51.8**	**0.20**
PB	1		8/28/08	9/12/08	15		0.23
PB	2		9/12/08	9/25/08	13		0.70
PB	3		9/25/08	10/15/08	20		0.89
PB	4		10/15/08	10/29/08	14		0.28
PB	5		10/29/08	11/13/08	15		4.99*

Table 2. Sampling dates for each of the nineteen events with days deployed, rain collected at the station, field duplicate locations, and average ambient temperature.

Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Avg. Temp. (°F)	Cum. Precip. (inches)
PB	6		11/13/08	11/25/08	12		0.28
PB	7		11/25/08	12/11/08	16		1.55
PB	8		2/26/09	3/11/09	13		0.47
PB	9		3/11/09	3/25/09	14		1.17
PB	10		3/25/09	4/8/09	14		1.49
PB	11		4/8/09	4/23/09	15		0.99
PB	12		4/23/09	5/6/09	13		0.62
PB	13		5/6/09	5/21/09	15		2.31
PB	14		5/21/09	6/3/09	13		0.11
PB	15		7/29/09	8/12/09	14		0.67
PB	16		8/12/09	8/26/09	14		0.01
PB	17		8/26/09	9/9/09	14		0.34
PB	18		9/9/09	9/24/09	15		0.60
PB	19		9/24/09	10/7/09	13		0.33
PO	**1**		**9/3/08**	**9/17/08**	**14**	**59.9**	**0.00**
PO	**2**		**9/17/08**	**10/6/08**	**19**	**55.8**	**1.51**
PO	**3**	**x**	**10/6/08**	**10/16/08**	**10**	**47.9**	**0.35**
PO	**4**	**x**	**10/16/08**	**10/29/08**	**13**	**47.3**	**0.15**
PO	**5**		**10/29/08**	**11/7/08**	**9**	**49.6**	**5.90***
PO	**6**		**11/7/08**	**11/20/08**	**12**	**48.2**	**1.19**
PO	**7**		**11/20/08**	**12/11/08**	**21**	**43.7**	**0.49**
PO	**8**		**2/26/09**	**3/12/09**	**14**	**38.5**	**1.02**
PO	**9**		**3/12/09**	**3/25/09**	**13**	**40.9**	**1.92**
PO	**10**		**3/25/09**	**4/8/09**	**14**	**43.6**	**1.52**
PO	**11**		**4/8/09**	**4/22/09**	**14**	**47.7**	**1.27**
PO	**12**		**4/22/09**	**5/5/09**	**13**	**49.0**	**2.85**
PO	**13**		**5/5/09**	**5/20/09**	**15**	**50.9**	**2.22**
PO	**14**		**5/20/09**	**6/5/09**	**16**	**60.7**	**0.00**
PO	**15**		**7/30/09**	**8/14/09**	**15**	**64.1**	**0.49**
PO	**16**		**8/14/09**	**8/26/09**	**12**	**62.6**	**0.00**
PO	**17**		**8/26/09**	**9/11/09**	**16**	**60.9**	**1.31**
PO	**18**		**9/11/09**	**9/25/09**	**14**	**61.0**	**0.28**
PO	**19**		**9/25/09**	**10/14/09**	**19**	**49.8**	**0.80**
SB	1	x	9/2/08	9/18/08	16		0.01
SB	2	x	9/18/08	10/2/08	14		0.32
SB	3		10/2/08	10/15/08	13		0.27
SB	4		10/15/08	10/30/08	15		0.35
SB	5		10/30/08	11/10/08	11		2.29
SB	6		11/10/08	11/25/08	12		0.70
SB	7		11/25/08	12/11/08	16		0.37
SB	8		2/25/09	3/12/09	15		1.06
SB	9		3/12/09	3/29/09	17		1.40
SB	10		3/29/09	4/13/09	15		0.83

Table 2. Sampling dates for each of the nineteen events with days deployed, rain collected at the station, field duplicate locations, and average ambient temperature.

Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Avg. Temp. (°F)	Cum. Precip. (inches)
SB	11		4/13/09	4/28/09	15		0.20
SB	12		4/28/09	5/11/09	13		0.51
SB	13		5/11/09	5/27/09	16		1.66
SB	14		5/27/09	6/8/09	12		0.00
SB	15		8/3/09	8/18/09	15		0.34
SB	16		8/15/09	8/29/09	11		0.00
SB	17		8/29/09	9/11/09	13		0.30
SB	18		9/11/09	9/25/09	14		0.22
SB	19		9/25/09	10/13/09	18		0.25
TCB	**1**		**8/29/08**	**9/12/08**	**14**	**59.0**	**0.00**
TCB	**2**		**9/12/08**	**9/24/08**	**12**	**58.0**	**0.29**
TCB	**3**		**9/24/08**	**10/15/08**	**21**	**53.0**	**1.37**
TCB	**4**		**10/15/08**	**10/30/08**	**15**	**49.0**	**0.69**
TCB	**5**		**10/30/08**	**11/12/08**	**13**	**51.0**	**7.81***
TCB	**6**		**11/12/08**	**11/24/08**	**12**	**46.0**	**0.58**
TCB	**7**		**11/12/08**	**11/24/08**	**17**	**45.0**	**0.37**
TCB	**8**	**x**	**11/24/08**	**12/11/08**	**15**	**39.0**	**1.35**
TCB	**9**	**x**	**2/25/09**	**3/12/09**	**13**	**42.0**	**2.73**
TCB	**10**		**3/12/09**	**3/25/09**	**14**	**45.0**	**1.65**
TCB	**11**		**4/8/09**	**4/22/09**	**14**	**48.0**	**1.81**
TCB	**12**		**4/22/09**	**5/7/09**	**15**	**49.0**	**3.21**
TCB	**13**		**5/7/09**	**5/21/09**	**14**	**51.0**	**1.21**
TCB	**14**		**5/21/09**	**6/4/09**	**14**	**61.0**	**0.00**
TCB	**15**		**7/30/09**	**8/12/09**	**13**		**0.43**
TCB	**16**		**8/12/09**	**8/27/09**	**15**		**0.07**
TCB	**17**		**8/27/09**	**9/8/09**	**12**		**2.07**
TCB	**18**		**9/8/09**	**9/24/09**	**16**		**0.24**
TCB	**19**		**9/24/09**	**10/7/09**	**13**		**0.44**
WP	1		8/28/08	9/12/08	15	63.8	0.00
WP	2		9/12/08	9/25/08	13	61.4	0.59
WP	3		9/25/08	10/14/08	19	57.2	1.28
WP	4		10/14/08	10/29/08	15	52.2	0.31
WP	5		10/29/08	11/13/08	15	53.5	4.16*
WP	6		11/13/08	11/25/08	12	49.5	0.30
WP	7		11/25/08	12/11/08	16	48.0	0.56
WP	8		2/26/09	3/11/09	13	42.1	1.12
WP	9		3/11/09	3/25/09	14	44.2	1.92
WP	10		3/25/09	4/8/09	14	47.3	1.53
WP	11		4/8/09	4/23/09	15	51.1	0.98
WP	12		4/23/09	5/6/09	13	53.3	2.79
WP	13		5/6/09	5/21/09	15	54.7	2.03
WP	14		5/21/09	6/3/09	13	65.0	0.00
WP	15		7/29/09	8/12/09	14	69.2	0.34

Table 2. Sampling dates for each of the nineteen events with days deployed, rain collected at the station, field duplicate locations, and average ambient temperature.

Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Avg. Temp. (°F)	Cum. Precip. (inches)
WP	16		8/12/09	8/26/09	14	66.1	0.34
WP	17		8/26/09	9/9/09	14	64.6	1.16
WP	18		9/9/09	9/24/09	15	66.2	0.44
WP	19		9/24/09	10/7/09	13	56.8	0.80
TM	**14**		**5/20/09**	**6/4/09**	**15**		**0.00**
TM	**15**		**7/30/09**	**8/12/09**	**13**		**0.39**
TM	**16**		**8/12/09**	**8/27/09**	**15**		**0.06**
TM	**17**		**8/27/09**	**9/8/09**	**12**		**1.83**
TM	**18**		**9/8/09**	**9/24/09**	**16**		**0.21**
TM	**19**		**9/24/09**	**10/7/09**	**13**		**0.21**

* Station rain collector overflowed and precipitation was reported from the Community Collaborative Rain, Hail, and Snow Network, NOAA, http://www.cocorahs.org

Analytical Methods

The extraction for all organics was conducted at Texas A&M University, Galveston, TX and College Station, TX. Splits of each extract were shipped to MSL for PCBs analyses. The GFF and SPE disks recovered from the field capsules were lyophilized before extraction. This process was conducted at both Texas A&M University and MSL and is discussed in detail in Brandenberger et al. (2010). The lyophilized samples were spiked with a mixture of chlorinated and brominated surrogates (PCB 103, PCB 198, hexabromobiphenyl). The two SPE disks and three GFF's in each sample were extracted via pressurized fluid extraction (PFE) with an accelerated solvent extractor (ASE) (Dionex ASE-200) at 10.3 MPa and 100°C. The samples were then processed sequentially, first with dichloromethane (DCM) to extract hydrophobic constituents (PAHs, PCBs and PBDE) and then using a more polar solvent mixture (DCM:MeOH: 9:1, v/v) to extract anhydrosugars.

The dichloromethane extracts were reduced in volume to 1-2 mL and solvent exchanged to hexane using a water bath. The concentrated extracts were cleaned up by using aluminum oxide columns. The eluent was then concentrated to 1 mL, split 500 µL and shipped to MSL for PCBs analyses. These splits were further cleaned up using sulfuric acid. Equal amounts of the extract and concentrated sulfuric acid were added to a GC vial, agitated for about 30 seconds, and sit for 10-20 minutes before centrifugation to separate hexane and sulfuric acid. The hexane fraction was transferred to another GC vial for analysis. The internal standards used for assessing the recovery in PCB analyses were octachlroronaphthalene (OCN) and tetrachlorometaxylene (TCMX). The PCB congeners measured in this study were PCB-8, 18, 28, 44, 52, 66, 77, 101, 105, 118, 126, 128, 138, 153, 170, 180, 187, 195, 200, 206, and 209.

The PCBs analyses were performed using a GC-Electron Capture Detector (GC/ECD) with an Agilent 6890 GC, micro ECD system fitted with two fused silica columns (J&W DB-5HT and J&W DB-17HT) for dual column confirmation. Each sample was injected, under splitless mode. Helium was used as the carrier gas (~1.0 mL/min). The GC oven was programmed from 50°C (2 min isothermal) to 240°C at 4.5°C/min, from 240°C to 280°C at 1°C/min and finally isothermal for 5 min. The GC injector was maintained at 250°C and the detectors at 300 and 250°C for DB-5HT and DB-17HT, respectively. Compound identification was performed using GC retention times and compared to the calibration standards. Quantification was performed using a quadratic calibration equation for each compound. Dual column confirmation for each PCB congener was conducted on all samples. For most congeners, data were reported from J&W DB-5HT column. Some congeners were reported from J&W DB-17HT column because there was co-elution or significant interferences for these congeners.

The average recoveries for surrogates HBB, PCB-103, and PCB-198 spiked in the field samples were 95±17%, 85±23%, 98±19%, respectively. The average relative percentage difference (RPD) determined from repeat analyses ranged from 2% to 11%. The method detection limits (MDL) for each congener was determined as three times the average mass of the congener detected in the blank SPE-GFF assemblies (eluted with DI water and lyophilized at Texas A&M University). This is the most conservative approach to determining an MDL as apposed to using the lowest calibration standard, which does not account for preparation and sample matrices. The MDL, converted into flux units, ranged from 0.002 to 3.4 ng/m^2/d. The values from procedural blanks associated with each extraction series were generally below the MDL. Some blank SPE-GFF assemblies lypophilized at MSL showed highly variable values for some PCB congeners. This may link to the potential contamination issue during the lypophilization at MSL (Brandenberger et al., 2010). Thus we flagged data of events #7-10 with E (estimated) since those samples were lypophilized at MSL. Finally, a field extraction efficiency test was conducted using rainwater passed through a GFF filter, spiked with a known mass of a PCB mixture (each congener spiked at 20.0 ng), and poured into a field deployed collector. The spiked rainwater was allowed to passively drip through the capsule simulating a field collection event. The average recovery of this test was 30% and ranged from 18% for PCB-8 to 43% for PCB-77. We further tested the potential loss of target compounds due to adsorption on the walls of the glass container used to prepare the spiked rainwater. The results suggested that an appreciable amount of higher chlorinated PCBs did adsorb on the walls of the container (ranged from 3% for PCB-153 to 18% for PCB-209). After correcting for this effect, the recoveries of the target PCB congeners ranged from 18% to 45%. Overall, this test shows that the obtained PCB fluxes in this study may be underestimated compared to the true fluxes.

Field Precision

The average RPDs of the field duplicates was 15% (ranged from 2% to 41%). A majority of the PCB congeners were not detected in the duplicate samples. For congeners with values >MDL, the average RPD of PCB-28 was 18% (ranged from 5% to 41%); the average RPD of

PCB-66 was 11% (ranged from 10% to 12%); the average RPD of PCB-195 was 14% (ranged from 2% to 38%). Overall, the relatively low intra-station variability suggested that each sampling event was indicative of flux conditions at the site during the sampling period. This also demonstrated that field reproducibility was not a significant source of error in the flux measurements. In addition, the collection equipment demonstrated bulk fluxes could be consistently reproduced at a wide variety of sampling locations ranging from rural areas to industrial regions.

Results: Atmospheric Deposition Fluxes for PCBs

The daily fluxes for the PCBs were calculated for each sample. The fluxes for the PCB were calculated as the mass of each compound divided by the surface area of the stainless steel funnel (0.159 m^2) and the number of days deployed. This provided mass fluxes in units of ng/ m^2/day. The reported total PCB flux was the sum of 21 PCB congeners. The fluxes for PCBs below the MDL were substituted with zero. For samples which none of the congeners were detectable, one-half of the highest MDL among all congeners was used for the total PCBs value. The median PCB flux across all stations and events was 0.51 ng/m^2/d (range: 0.03-7.01 ng/m^2/d). In this study, many PCB congeners were <MDL. Figure 3 shows the percentage of detectable congeners.

As shown in Table 3 and Figure 4, similar total PCB fluxes were observed in most sampling stations throughout the entire sampling period while higher values were observed at the TCB site. The median fluxes have a very narrow range across all stations (from 0.24 to 1.81 ng/m^2/d). The median bulk atmospheric fluxes from the present study were comparable to the wet deposition fluxes in three background sites in New Jersey (0.82 ng/m^2/d) during 1999-2000 (Van Ry et al., 2002); but were lower than the total flux (wet+dry) in Chesapeake Bay (9.0±1.6 ng/m^2/d) between 1990-1991 (Leister and Baker, 1994) and also the wet deposition flux in Jersey City, NJ (10.7±1.97 ng/m^2/d) sampled in 1999 (Van Ry et al., 2002). Compared to other waterbodies in the world, the median bulk fluxes in Puget Sound were slightly lower than the wet deposition fluxes in Baltic Sea (1.2-5.6 ng/m^2/d) during 1990-1993 (Agrell et al., 2002), in Eastern Mediterranean background sites (2.25 ng/m^2/d) during 2000-2001 (Mandalakis and Stephanou, 2004), and a rural site in sub-alpine northern Italy (2.74 ng/m^2/d) during 2005-2006 (Castro-Jiménez et al., 2009).

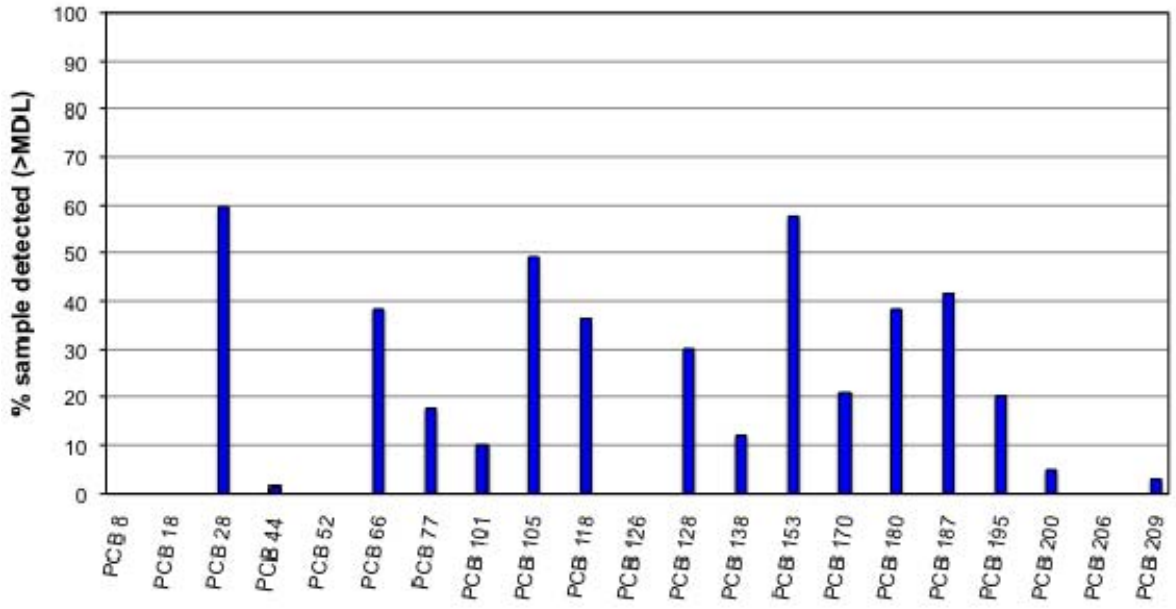

Figure 3. Percentage of the PCB congeners in 149 samples that were detected above the sample MDL.

Table 3. Daily atmospheric deposition fluxes (ng/m^2/d) of total PCBs at the eight stations around the Puget Sound.

Station	Mean	Median	75th	25th	Min	Max
Total PCB (ng/m^2/d)						
HC	0.76	0.24	0.99	0.16	0.04	4.52
NR	0.87	0.64	1.46	0.28	0.05	1.72
PB	1.05	0.40	1.72	0.24	0.12	4.52
PO	0.75	0.39	0.94	0.28	0.05	2.67
SB	0.78	0.32	1.41	0.24	0.03	2.18
TCB	2.54	1.81	2.82	1.22	0.23	7.01
TM	0.85	0.45	1.30	0.30	0.05	2.33
WP	1.02	0.57	1.01	0.17	0.05	4.59

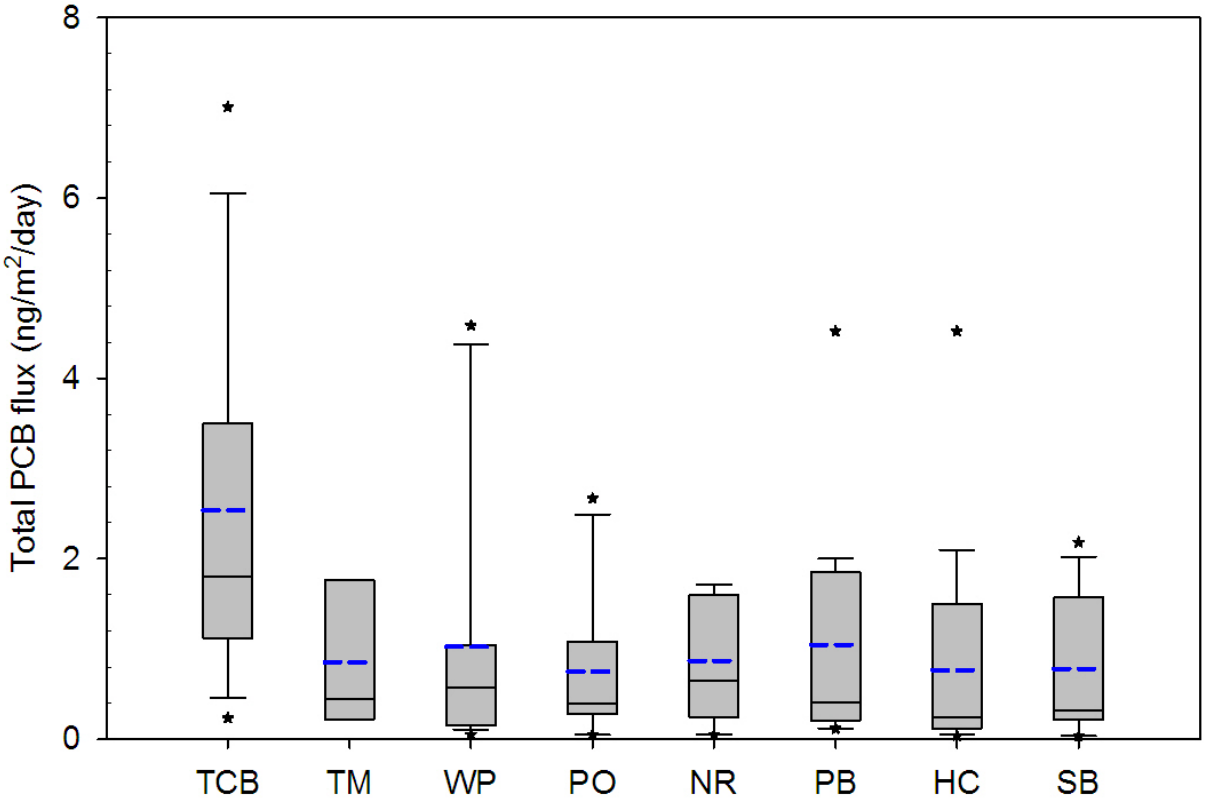

Figure 4. Box plot of total PCB fluxes (ng/m^2/day) for eight stations. The box boundaries are the 25th and 75th percentile, with the median in the box, dashed blue line is the mean, whiskers are the 10th and 90th percentiles, and the asterisks are outliers.

Mass Loading of Air Toxics

Annual Mass Loading Scenarios

The daily fluxes measured in this study were used to estimate the annual mass loading of PCBs in Puget Sound. Detailed discussions of mass loadings for carcinogenic PAHs, pyrogenic PAHs, PBDEs, trace elements, and mercury were reported by Brandenberger et al. (2010). Daily fluxes were calculated from sample-derived data. The daily fluxes were then extrapolated to represent an annual load using three different scenarios that test the sensitivity of the data set to three factors: surface area of Puget Sound, season, and spatial data collected. The data set collected has a statistically defined dry season identified as sampling conducted in May, July, August, and September and wet season October, November, February, March, and April. The statistical difference between the wet and dry season was representative of the precipitation patterns in the PNW (Brandenberger et al., 2010). To calculate an annual load to Puget Sound based on only one year of data, the assumption that the months not sampled are represented in

the sampled data sets is valid as the precipitation patterns "typical" of the PNW were captured within the sampled data set. Therefore, the annual mass loading of PCBs to the waters of Puget Sound via atmospheric deposition was calculated using three separate scenarios to test the sensitivity of the mass loads to the spatial and temporal variability within the data set.

The three scenarios were detailed in our previous report (Brandenberger et al., 2010). Briefly, Scenario 1 used the median, 25^{th}, and 75^{th} percentile daily fluxes of all stations and seasons and the total surface area of the waters of Puget Sound, 7285 Km^2, as defined by Pelletier and Mohamedali (2009) for Ecology's Phase 2: Development of Simple Numerical Models. The surface area calculations were derived from the 1992 Puget Sound Atlas Geographic Information System (GIS) Database as referenced by Pelletier and Mohamedali (2009). The Scenario 2 spatially delineates the Puget Sound surface area and daily fluxes determined in this study into the Puget Sound boxes created for circulation models by Babson et al. (2006) and further refined into 11 boxes to delineate the urban bays (Figure 1; Pelletier and Mohamedali 2009). Sampling stations in the present study were selected for each box n the model. The PB and HC stations were pooled to represent the Straits of Juan de Fuca and Georgia and Admiralty Inlet boxes as PB compared to SB and HC provided an additional rural/low residential landscape station. The PB station was used to represent the Whidbey Basin, and the urban/industrial TCB station was used to represent the Elliott Bay box. Finally, TCB and TM (only for Scenario 3 Dry Season) were used to present The Tacoma Narrows Box. The Scenario 3 takes the spatial delineation in Scenario 2 and couples this with the data set divided into seasonal fluxes, as discussed above. As some of the chemicals of concern illustrated statistically significant differences between the seasonal fluxes and/or a relationship with the precipitation patterns (e.g. mercury), this provided a more detailed annual loading scenario. The flux data were divided into October through April for the wet season (212 days) and May through September for the dry season (153 days). The precipitation patterns in the PNW do not generally provide for an extended period with no measurable precipitation compared to other studies in more arid regions. Therefore, the perception of a *dry season* should be approached with caution. Although statistically the precipitation collected during this study was significantly different between seasons ($p<0.0001$) and did not appear anomalous relative to the historical data of annual precipitation (Brandenberger et al., 2010), there were significant rain events during the dry season. Nevertheless, we found statistically different distribution medians for precipitation during the two seasons (Brandenberger et al., 2010). Table 4 provides the surface areas and flux stations used for each of the loading scenarios.

Table 4. The atmospheric flux stations and surfaces areas of the waters of Puget Sound used to calculate annual mass loads for each chemical of concern using the three scenarios to delineate the data based on spatial and temporal factors.

	Scenario 1		Scenario 2		Scenario 3 Wet		Scenario 3 Dry	
Region	**Flux Station**	**Surface Area[1] (Km^2)**	**Flux Station**	**Surface Area[1] (Km^2)**	**Flux Station**	**Surface Area[1] (Km^2)**	**Flux Station**	**Surface Area[1] (Km^2)**
South Sound	Median HC, NR, WP, PO, TCB	7285	NR	424.7	NR	424.7	NR	424.7
Main Basin			WP, PO	585.0	WP, PO	585.0	WP, PO	585.0
North Hood Canal			HC	138.6	HC	138.6	HC	138.6
South Hood Canal			HC	243.3	HC	243.3	HC	243.3
Whidbey Basin			PB	615.5	PB	615.5	PB	615.5
The Narrows			TCB	12.9	TCB	12.9	TCB, TM	12.9
Elliott Bay			TCB	20.9	TCB	20.9	TCB, TM	20.9
Sinclair/Dyes Inlet			PO	91.3	PO	91.3	PO	91.3
Commencement Bay			TCB	20.7	TCB	20.7	TCB, TM	20.7
Admiralty Inlet			HC, PB	411.2	HC, PB	411.2	HC, PB	411.2
SJF/SOG			HC, PB	4720.8	HC, PB	4720.8	HC, PB	4720.8

[1]Surface areas provided as GIS files by Pelletier (2009).

Mass Loading Estimates for PCBs

Atmospheric PCB loadings to the Puget Sound Basin were estimated via three scenarios and compared to the probability of exceedence estimates for atmospheric and surface runoff loadings reported by Hart Crowser, Inc. (2007) and Herrera Environmental Consultants, Inc. (2010), respectively. The results are shown in Figure 5 and Table 5. The atmospheric PCB loadings from the three scenarios were statistically undistinguishable (median values = 0.96-1.36 Kg/yr), which was similar to what we observed in PAHs and PBDE fluxes (Brandenberger et al., 2010).

The estimated median atmospheric PCB loadings in the present study were about five times lower than the 50th probability of exceedence (POE) estimate (6.2 Kg/yr) reported by Hart Crowser, Inc. (2007) in the Phase 1 report and were close to the 75th POE (1.6 Kg/yr) (Table 5). The loadings were slightly lower than the estimation for Strait of Georgia (3.5±0.7 Kg/yr, Noël et al., 2009). On the other hand, the loadings in the present study were lower than the value of Baltic Sea (6 Kg/yr, Ter Schure et al., 2004) and much lower than the reported values for Chesapeake Bay (38±7 Kg/yr, Leister and Baker, 1994). The range of atmospheric PCB loadings

was lower than the POE range for the estimated surface runoff loadings (Herrera Environmental Consultants, Inc. 2010).

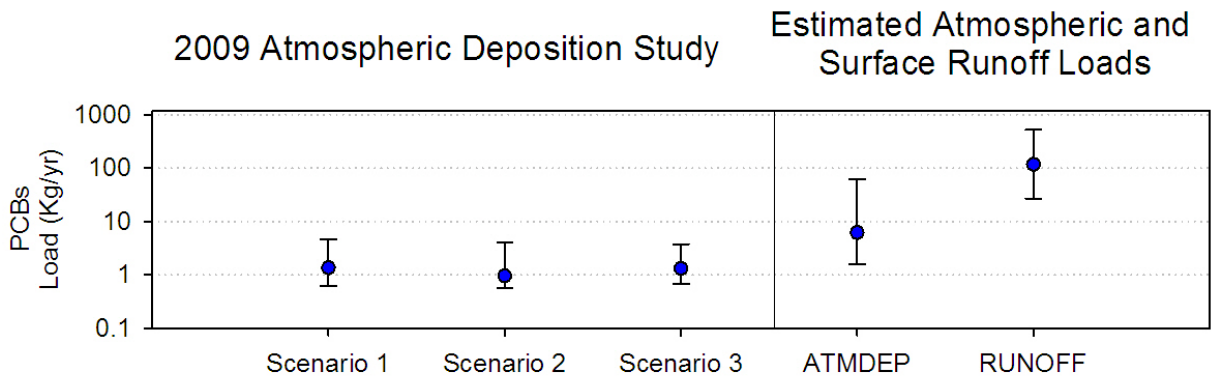

Figure 5. Estimates of atmospheric loadings of PCBs (Kg/yr) to the surface of Puget Sound using three scenarios described above. The median, 25th, and 75th percentile atmospheric loading estimates are compared to 50th, 75th, and 25th probability of exceedance (POE) ranges for atmospheric (ATMDEP) and surface runoff (RUNOFF) loading estimates (Hart Crowser, Inc. 2007; Herrera Environmental Consulting, Inc. 2010, respectively).

Table 5. Estimates of atmospheric loadings (Kg/yr) of total PCBs to the surface of the Puget Sound using three scenarios including no seasonal or spatial differentiation (Scenario 1), a spatial differentiation of sub-basins (Scenario 2), and spatiotemporal differentiation of fluxes in sub-basins (Scenario 3). The atmospheric loading estimates are compared to 25th, 50th, and 75th probability of exceedance (POE) ranges for atmospheric (ATMDEP) and surface runoff (RUNOFF) loading estimates (Hart Crowser, Inc. 2007; Herrera Environmental Consultants, Inc. 2010, respectively).

	Scenario 1	Scenario 2	Scenario 3	POE	ATMDEP	RUNOFF
Total PCBs (Kg/yr)						
Median	1.36	0.96	1.32	**50**	**6.2**	**118**
25th	0.61	0.57	0.68	**75**	**1.6**	**27.1**
75th	4.57	4.05	3.76	**25**	**62**	**525**

Conclusions

Samples representing bulk atmospheric deposition were collected in 2008 and 2009 at seven stations (eighth station TM was sampled during 2009) around Puget Sound spanning from Padilla Bay south to Nisqually River including Hood Canal and the Straits of Juan de Fuca. Wet deposition is a significant process for atmospheric deposition in the PNW, and the total precipitation during the study period at each station was generally within the precipitation ranges for the last several decades.

For most samples in the present study, many PCB congeners were below the method specific MDL. The estimated median atmospheric deposition flux of total PCB (0.51 ng/m^2/d) was slightly lower than that of the estimated 50th POE value (2.0 ng/m^2/d) in Hart Crowser, Inc. (2007). We further used the PCB fluxes, under three calculation scenarios, to estimate the mass loading of total PCB in Puget Sound. The median mass loadings ranged from 0.96-1.36 Kg/yr and were not statistically different between the scenarios. However, it should be noted that the PCB daily fluxes were not significantly different between wet and dry seasons and therefore Scenario 3 would not actually apply to the PCB data set (compared to other parameters such as mercury that contained statistically different seasonal fluxes). The lack of a seasonal flux may be attributed to the collection of only one year of data and/or the presence of rain events during the defined dry season. Additional data are needed to truly define a seasonal variation in the PCB fluxes.

The estimated mass loadings from this study were lower than the 50th POE value (6.2 Kg/yr) but were close to the 75th POE value (1.6 Kg/yr) for the atmospheric deposition estimates reported by Hart Crowser, Inc. (2007). Therefore the revised estimated generally fell within the estimated range derived in 2007, but were still lower than the mass loadings estimated for surface runoff to Puget Sound (118 Kg/yr, 50th POE; Herrera Environmental Consultants, Inc. 2010).

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Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Funnel Surface Area (m2)	ΣPCB	PCB 8
							Unit	ng/m2/day	ng/m2/day
2941-177	HC	1		9/3/08	9/17/2008	14	0.159	0.04	0.00 U
2941-184	HC	2		9/17/08	10/6/2008	19	0.159	0.21	0.00 U
2941-194	HC	3		10/6/08	10/16/2008	10	0.159	0.24	0.00 U
2941-208	HC	4		10/16/08	10/29/2008	13	0.159	3.70 <	0.00 U
2941-214	HC	5	x	10/29/08	11/8/2008	10	0.159	0.32	0.00 U
2941-220	HC	6	x	11/8/08	11/20/2008	12	0.159	0.09	0.00 U
2941-210	HC	7	x	11/20/08	12/11/08	21	0.159	2.10	0.00 U
2941-238	HC	8		2/26/09	3/12/09	14	0.159	4.52	0.00 U
2941-250	HC	9		3/12/09	3/25/09	13	0.159	0.26	0.00 U
2941-262	HC	10		3/25/09	4/8/09	14	0.159	0.48	0.00 U
2941-269	HC	11		4/8/09	4/22/09	14	0.159	3.43 <	0.00 U
2941-276	HC	12		4/22/09	5/5/09	13	0.159	0.12	0.00 U
2941-280	HC	13		5/5/09	5/20/09	15	0.159	0.07	0.00 U
2941-294	HC	14		5/20/09	6/5/09	16	0.159	3.00 <	0.00 U
2941-306	HC	15		7/30/09	8/14/09	15	0.159	0.05	0.00 U
2941-314	HC	16		8/14/09	8/26/09	12	0.159	0.22	0.00 U
2941-322	HC	17		8/26/09	9/11/09	16	0.159	0.21	0.00 U
2947-328	HC	18		9/11/09	9/25/09	14	0.159	0.30	0.00 U
2941-338	HC	19		9/25/09	10/14/09	19	0.159	0.19	0.00 U
2941-175	NR	1		8/29/08	9/12/08	14	0.159	3.43 <	0.00 U
2941-180	NR	2		9/12/08	9/24/08	12	0.159	0.05	0.00 U
2941-189	NR	3		9/24/08	10/15/08	21	0.159	0.24	0.00 U
2941-202	NR	4		10/15/08	10/30/08	15	0.159	3.20 <	0.00 U
2941-211	NR	5		10/30/08	11/12/08	13	0.159	0.22	0.00 U
2941-223	NR	6		11/12/08	11/24/08	12	0.159	0.35	0.00 U
2941-228	NR	7		11/24/08	12/11/08	17	0.159	1.30	0.00 U
2941-242	NR	8		2/25/09	3/12/09	15	0.159	1.32	0.00 U
2941-249	NR	9		3/12/09	3/25/09	13	0.159	0.64	0.00 U
2941-255	NR	10	x	3/25/09	4/8/09	14	0.159	0.23	0.00 U
2941-265	NR	11	x	4/8/09	4/22/09	14	0.159	3.43 <	0.00 U
2941-275	NR	12	x	4/22/09	5/7/09	15	0.159	0.05	0.00 U
2941-285	NR	13		5/7/09	5/21/09	14	0.159	3.43 <	0.00 U
2941-287	NR	14		5/21/09	6/4/09	14	0.159	3.43 <	0.00 U
2941-299	NR	15		7/30/09	8/12/09	13	0.159	0.64	0.00 U
2941-310	NR	16		8/12/09	8/27/09	15	0.159	0.31	0.00 U
2941-319	NR	17		8/27/09	9/8/09	12	0.159	1.30	0.00 U
2941-324	NR	18		9/8/09	9/24/09	16	0.159	0.35	0.00 U
2941-335	NR	19		9/24/09	10/7/09	13	0.159	1.01	0.00 U
2941-173	PB	1		8/28/08	9/12/08	15	0.159	3.20 <	0.00 U
2941-182	PB	2		9/12/08	9/25/08	13	0.159	0.12	0.00 U
2941-191	PB	3		9/25/08	10/15/08	20	0.159	0.32	0.00 U
2941-204	PB	4		10/15/08	10/29/08	14	0.159	0.21	0.00 U
2941-209	PB	5		10/29/08	11/13/08	15	0.159	0.12	0.00 U
2941-224	PB	6		11/13/08	11/25/08	12	0.159	4.00 <	0.00 U
2941-231	PB	7		11/25/08	12/11/08	16	0.159	4.52	0.00 U
2941-241	PB	8		2/26/09	3/11/09	13	0.159	1.94	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Funnel Surface Area (m2)	ΣPCB	PCB 8
							Unit	ng/m2/day	ng/m2/day
2941-248	PB	9		3/11/09	3/25/09	14	0.159	1.89	0.00 U
2941-259	PB	10		3/25/09	4/8/09	14	0.159	0.40	0.00 U
2941-263	PB	11		4/8/09	4/23/09	15	0.159	3.20 <	0.00 U
2941-271	PB	12		4/23/09	5/6/09	13	0.159	0.12	0.00 U
2941-283	PB	13		5/6/09	5/21/09	15	0.159	3.20 <	0.00 U
2941-290	PB	14		5/21/09	6/3/09	13	0.159	3.70 <	0.00 U
2941-305	PB	15		7/29/09	8/12/09	14	0.159	0.30	0.00 U
2941-307	PB	16		8/12/09	8/26/09	14	0.159	0.20	0.00 U
2941-317	PB	17		8/26/09	9/9/09	14	0.159	0.42	0.00 U
2941-323	PB	18		9/9/09	9/24/09	15	0.159	0.27	0.00 U
2941-334	PB	19		9/24/09	10/7/09	13	0.159	0.37	0.00 U
2941-176	PO	1		9/3/08	9/17/08	14	0.159	3.43 <	0.00 U
2941-185	PO	2		9/17/08	10/6/08	19	0.159	0.05	0.00 U
2941-193	PO	3	x	10/6/08	10/16/08	10	0.159	0.33	0.00 U
2941-206	PO	4	x	10/16/08	10/29/08	13	0.159	0.28	0.00 U
2941-213	PO	5		10/29/08	11/7/08	9	0.159	5.34 <	0.00 U
2941-217	PO	6		11/7/08	11/20/08	12	0.159	0.28	0.00 U
2941-233	PO	7		11/20/08	12/11/08	21	0.159	1.20	0.00 U
2941-237	PO	8		2/26/09	3/12/09	14	0.159	2.49	0.00 U
2941-251	PO	9		3/12/09	3/25/09	13	0.159	1.08	0.00 U
2941-261	PO	10		3/25/09	4/8/09	14	0.159	0.69	0.00 U
2941-270	PO	11		4/8/09	4/22/09	14	0.159	0.39	0.00 U
2941-277	PO	12		4/22/09	5/5/09	13	0.159	0.16	0.00 U
2941-279	PO	13		5/5/09	5/20/09	15	0.159	0.23	0.00 U
2941-292	PO	14		5/20/09	6/5/09	16	0.159	0.37	0.00 U
2941-300	PO	15		7/30/09	8/14/09	15	0.159	0.05	0.00 U
2941-311	PO	16		8/14/09	8/26/09	12	0.159	0.51	0.00 U
2941-321	PO	17		8/26/09	9/11/09	16	0.159	0.61	0.00 U
2941-330	PO	18		9/11/09	9/25/09	14	0.159	0.38	0.00 U
2941-337	PO	19		9/25/09	10/14/09	19	0.159	0.80	0.00 U
2941-179	SB	1	x	9/2/08	9/18/08	16	0.159	0.04	0.00 U
2941-186	SB	2	x	9/18/08	10/2/08	14	0.159	0.28	0.00 U
2941-195	SB	3		10/2/08	10/15/08	13	0.159	0.28	0.00 U
2941-205	SB	4		10/15/08	10/30/08	15	0.159	0.31	0.00 U
2941-216	SB	5		10/30/08	11/10/08	11	0.159	4.37 <	0.00 U
2941-218	SB	6		11/10/08	11/25/08	12	0.159	4.00 <	0.00 U
2941-219	SB	7		11/25/08	12/11/08	16	0.159	1.15	0.00 U
2941-245	SB	8		2/25/09	3/12/09	15	0.159	1.77	0.00 U
2941-252	SB	9		3/12/09	3/29/09	17	0.159	0.42	0.00 U
2941-260	SB	10		3/29/09	4/13/09	15	0.159	0.90	0.00 U
2941-268	SB	11		4/13/09	4/28/09	15	0.159	0.03	0.00 U
2941-278	SB	12		4/28/09	5/11/09	13	0.159	0.11	0.00 U
2941-281	SB	13		5/11/09	5/27/09	16	0.159	3.00 <	0.00 U
2941-286	SB	14		5/27/09	6/8/09	12	0.159	4.00 <	0.00 U
2941-313	SB	16		8/15/09	8/29/09	11	0.159	0.20	0.00 U
2941-320	SB	17		8/29/09	9/11/09	13	0.159	0.33	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	Date Deployed	Date Recovered	Days Deployed	Funnel Surface Area (m2)	ΣPCB	PCB 8
							Unit	ng/m2/day	ng/m2/day
2941-329	SB	18		9/11/09	9/25/09	14	0.159	0.27	0.00 U
2941-336	SB	19		9/25/09	10/13/09	18	0.159	0.23	0.00 U
2941-174	TCB	1		8/29/08	9/12/08	14	0.159	0.48	0.00 U
2941-181	TCB	2		9/12/08	9/24/08	12	0.159	1.74	0.00 U
2941-188	TCB	3		9/24/08	10/15/08	21	0.159	5.35	0.00 U
2941-203	TCB	4		10/15/08	10/30/08	15	0.159	2.90	0.00 U
2941-212	TCB	5		10/30/08	11/12/08	13	0.159	2.58	0.00 U
2941-229	TCB	7		11/12/08	11/24/08	17	0.159	2.49	0.00 U
2941-240	TCB	8	x	2/25/09	3/12/09	15	0.159	7.01	0.00 U
2941-245b	TCB	9	x	3/12/09	3/25/09	13	0.159	1.32	0.00 U
2941-256	TCB	10		3/25/09	4/8/09	14	0.159	1.75	0.00 U
2941-267	TCB	11		4/8/09	4/22/09	14	0.159	1.18	0.00 U
2941-274	TCB	12		4/22/09	5/7/09	15	0.159	0.23	0.00 U
2941-282	TCB	13		5/7/09	5/21/09	14	0.159	1.87	0.00 U
2941-288	TCB	14		5/21/09	6/4/09	14	0.159	1.60	0.00 U
2941-301	TCB	15		7/30/09	8/12/09	13	0.159	0.82	0.00 U
2941-309	TCB	16		8/12/09	8/27/09	15	0.159	0.93	0.00 U
2941-316	TCB	17		8/27/09	9/8/09	12	0.159	5.28	0.00 U
2941-326	TCB	18		9/8/09	9/24/09	16	0.159	2.20	0.00 U
2941-331	TCB	19		9/24/09	10/7/09	13	0.159	5.94	0.00 U
2941-172	WP	1		8/28/08	9/12/08	15	0.159	0.05	0.00 U
2941-183	WP	2		9/12/08	9/25/08	13	0.159	0.65	0.00 U
2941-190	WP	3		9/25/08	10/14/08	19	0.159	0.78	0.00 U
2941-201	WP	4		10/14/08	10/29/08	15	0.159	0.19	0.00 U
2941-200	WP	5		10/29/08	11/13/08	15	0.159	1.04	0.00 U
2941-225	WP	6		11/13/08	11/25/08	12	0.159	4.00 <	0.00 U
2941-230	WP	7		11/25/08	12/11/08	16	0.159	4.59	0.00 U
2941-244	WP	8		2/26/09	3/11/09	13	0.159	4.38	0.00 U
2941-246	WP	9		3/11/09	3/25/09	14	0.159	0.21	0.00 U
2941-258	WP	10		3/25/09	4/8/09	14	0.159	0.97	0.00 U
2941-264	WP	11		4/8/09	4/23/09	15	0.159	0.15	0.00 U
2941-272	WP	12		4/23/09	5/6/09	13	0.159	0.15	0.00 U
2941-284	WP	13		5/6/09	5/21/09	15	0.159	3.20 <	0.00 U
2941-289	WP	14		5/21/09	6/3/09	13	0.159	0.11	0.00 U
2941-302	WP	15		7/29/09	8/12/09	14	0.159	0.11	0.00 U
2941-308	WP	16		8/12/09	8/26/09	14	0.159	0.40	0.00 U
2941-315	WP	17		8/26/09	9/9/09	14	0.159	0.57	0.00 U
2941-327	WP	18		9/9/09	9/24/09	15	0.159	0.53	0.00 U
2941-332	WP	19		9/24/09	10/7/09	13	0.159	0.95	0.00 U
2941-293	TM	14		5/20/2009	6/4/2009	15	0.159	0.05	0.00 U
2941-304	TM	15		7/30/2009	8/12/2009	13	0.159	0.27	0.00 U
2941-312	TM	16		8/12/2009	8/27/2009	15	0.159	0.41	0.00 U
2941-318	TM	17		8/27/2009	9/8/2009	12	0.159	1.57	0.00 U
2941-325	TM	18		9/8/2009	9/24/2009	16	0.159	0.48	0.00 U
2941-333	TM	19		9/24/2009	10/7/2009	13	0.159	2.33	0.00 U

Sample ID	Station ID	Event No.	Field Dup	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-177	HC	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-184	HC	2		0.00 U	0.07	0.00 U	0.00 U	0.09
2941-194	HC	3		0.00 U	0.00 U	0.00 U	0.00 U	0.14
2941-208	HC	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-214	HC	5	x	0.00 U	0.12	0.00 U	0.00 U	0.00 U
2941-220	HC	6	x	0.00 U	0.04	0.00 U	0.00 U	0.00 U
2941-210	HC	7	x	0.00 U	0.18 E	0.00 U	0.00 U	0.21 E
2941-238	HC	8		0.00 U	0.33 E	0.00 U	0.00 U	0.39 E
2941-250	HC	9		0.00 U	0.14 E	0.00 U	0.00 U	0.00 U
2941-262	HC	10		0.00 U	0.12 E	0.00 U	0.00 U	0.09 E
2941-269	HC	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-276	HC	12		0.00 U	0.00 U	0.00 U	0.00 U	0.12
2941-280	HC	13		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-294	HC	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-306	HC	15		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-314	HC	16		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-322	HC	17		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2947-328	HC	18		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-338	HC	19		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-175	NR	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-180	NR	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-189	NR	3		0.00 U	0.04	0.00 U	0.00 U	0.07
2941-202	NR	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-211	NR	5		0.00 U	0.10	0.00 U	0.00 U	0.12
2941-223	NR	6		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-228	NR	7		0.00 U	0.15 E	0.00 U	0.00 U	0.12 E
2941-242	NR	8		0.00 U	0.14 E	0.00 U	0.00 U	0.12 E
2941-249	NR	9		0.00 U	0.14 E	0.00 U	0.00 U	0.10 E
2941-255	NR	10	x	0.00 U	0.10 E	0.00 U	0.00 U	0.00 U
2941-265	NR	11	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	x	0.00 U	0.00 U	0.00 U	0.00 U	0.05
2941-285	NR	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-287	NR	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-299	NR	15		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-310	NR	16		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-319	NR	17		0.00 U	0.07	0.00 U	0.00 U	0.15
2941-324	NR	18		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-335	NR	19		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-173	PB	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-182	PB	2		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-191	PB	3		0.00 U	0.27	0.00 U	0.00 U	0.00 U
2941-204	PB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.10
2941-209	PB	5		0.00 U	0.12	0.00 U	0.00 U	0.00 U
2941-224	PB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-231	PB	7		0.00 U	0.37 E	0.00 U	0.00 U	0.45 E
2941-241	PB	8		0.00 U	0.24 E	0.00 U	0.00 U	0.23 E

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-248	PB	9		0.00 U	0.26 E	0.00 U	0.00 U	0.22 E
2941-259	PB	10		0.00 U	0.13 E	0.00 U	0.00 U	0.00 U
2941-263	PB	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-271	PB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.12
2941-283	PB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-290	PB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-305	PB	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-307	PB	16		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-317	PB	17		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-323	PB	18		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-334	PB	19		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-176	PO	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-185	PO	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-193	PO	3	x	0.00 U	0.09	0.00 U	0.00 U	0.16
2941-206	PO	4	x	0.00 U	0.04 U	0.00 U	0.00 U	0.07
2941-213	PO	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-217	PO	6		0.00 U	0.08	0.00 U	0.00 U	0.00 U
2941-233	PO	7		0.00 U	0.15 E	0.00 U	0.00 U	0.16 E
2941-237	PO	8		0.00 U	0.29 E	0.00 U	0.00 U	0.20 E
2941-251	PO	9		0.00 U	0.12 E	0.00 U	0.00 U	0.00 U
2941-261	PO	10		0.00 U	0.13 E	0.00 U	0.00 U	0.13 E
2941-270	PO	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-277	PO	12		0.00 U	0.00 U	0.00 U	0.00 U	0.12
2941-279	PO	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-292	PO	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-300	PO	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-311	PO	16		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-321	PO	17		0.00 U	0.06	0.00 U	0.00 U	0.00 U
2941-330	PO	18		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-337	PO	19		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-179	SB	1	x	0.00 U	0.02	0.00 U	0.00 U	0.00 U
2941-186	SB	2	x	0.00 U	0.07	0.00 U	0.00 U	0.12
2941-195	SB	3		0.00 U	0.00 U	0.00 U	0.00 U	0.12
2941-205	SB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.11
2941-216	SB	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-218	SB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-219	SB	7		0.00 U	0.15 E	0.00 U	0.00 U	0.14 E
2941-245	SB	8		0.00 U	0.23 E	0.00 U	0.00 U	0.20 E
2941-252	SB	9		0.00 U	0.12 E	0.00 U	0.00 U	0.00 U
2941-260	SB	10		0.00 U	0.13 E	0.00 U	0.00 U	0.11 E
2941-268	SB	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-278	SB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.11
2941-281	SB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-286	SB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-313	SB	16		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-320	SB	17		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-329	SB	18		0.00 U	0.04	0.00 U	0.00 U	0.00 U
2941-336	SB	19		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-174	TCB	1		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-181	TCB	2		0.00 U	0.08	0.00 U	0.00 U	0.00 U
2941-188	TCB	3		0.00 U	0.18	0.34	0.00 U	0.27
2941-203	TCB	4		0.00 U	0.12	0.00 U	0.00 U	0.25
2941-212	TCB	5		0.00 U	0.19	0.00 U	0.00 U	0.21
2941-229	TCB	7		0.00 U	0.17 E	0.00 U	0.00 U	0.18 E
2941-240	TCB	8	x	0.00 U	0.42 E	0.22 E	0.00 U	0.70 E
2941-245b	TCB	9	x	0.00 U	0.16 E	0.00 U	0.00 U	0.06 E
2941-256	TCB	10		0.00 U	0.24 E	0.00 U	0.00 U	0.14 E
2941-267	TCB	11		0.00 U	0.06	0.00 U	0.00 U	0.00 U
2941-274	TCB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.14
2941-282	TCB	13		0.00 U	0.11	0.00 U	0.00 U	0.00 U
2941-288	TCB	14		0.00 U	0.09	0.00 U	0.00 U	0.11
2941-301	TCB	15		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-309	TCB	16		0.00 U	0.07	0.00 U	0.00 U	0.00 U
2941-316	TCB	17		0.00 U	0.13	0.00 U	0.00 U	0.30
2941-326	TCB	18		0.00 U	0.10	0.00 U	0.00 U	0.11
2941-331	TCB	19		0.00 U	0.14	0.00 U	0.00 U	0.22
2941-172	WP	1		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-183	WP	2		0.00 U	0.08	0.00 U	0.00 U	0.12
2941-190	WP	3		0.00 U	0.33	0.00 U	0.00 U	0.00 U
2941-201	WP	4		0.00 U	0.10	0.00 U	0.00 U	0.09
2941-200	WP	5		0.00 U	0.13	0.00 U	0.00 U	0.16
2941-225	WP	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-230	WP	7		0.00 U	0.34 E	0.00 U	0.00 U	0.47 E
2941-244	WP	8		0.00 U	0.31 E	0.00 U	0.00 U	0.36 E
2941-246	WP	9		0.00 U	0.08 E	0.00 U	0.00 U	0.00 U
2941-258	WP	10		0.00 U	0.17 E	0.00 U	0.00 U	0.10 E
2941-264	WP	11		0.00 U	0.04	0.00 U	0.00 U	0.00 U
2941-272	WP	12		0.00 U	0.00 U	0.00 U	0.00 U	0.15
2941-284	WP	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-289	WP	14		0.00 U	0.06	0.00 U	0.00 U	0.00 U
2941-302	WP	15		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-308	WP	16		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-315	WP	17		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-327	WP	18		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-332	WP	19		0.00 U	0.10	0.00 U	0.00 U	0.11
2941-293	TM	14		0.00 U	0.05	0.00 U	0.00 U	0.00 U
2941-304	TM	15		0.00 U	0.09	0.00 U	0.00 U	0.00 U
2941-312	TM	16		0.00 U	0.08	0.00 U	0.00 U	0.00 U
2941-318	TM	17		0.00 U	0.11	0.00 U	0.00 U	0.12
2941-325	TM	18		0.00 U	0.06	0.00 U	0.00 U	0.00 U
2941-333	TM	19		0.00 U	0.13	0.00 U	0.00 U	0.13

Sample ID	Station ID	Event No.	Field Dup	PCB 77	PCB 101	PCB 105	PCB 118	PCB 126
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-177	HC	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-184	HC	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-194	HC	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-208	HC	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-214	HC	5	x	0.00 U	0.00 U	0.05 U	0.00 U	0.00 U
2941-220	HC	6	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-210	HC	7	x	0.56 E	0.20 U	0.05 U	0.21 E	0.00 U
2941-238	HC	8		1.18 E	0.62 E	0.11 E	0.40 E	0.00 U
2941-250	HC	9		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-262	HC	10		0.00 U	0.00 U	0.00 U	0.07 E	0.00 U
2941-269	HC	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-276	HC	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-280	HC	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-294	HC	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-306	HC	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-314	HC	16		0.00 U	0.00 U	0.07	0.00 U	0.00 U
2941-322	HC	17		0.00 U	0.00 U	0.04	0.08	0.00 U
2947-328	HC	18		0.00 U	0.00 U	0.06	0.12	0.00 U
2941-338	HC	19		0.00 U	0.00 U	0.07	0.00 U	0.00 U
2941-175	NR	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-180	NR	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-189	NR	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-202	NR	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-211	NR	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-223	NR	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-228	NR	7		0.42 E	0.00 U	0.04 E	0.18 E	0.00 U
2941-242	NR	8		0.45 E	0.00 U	0.04 E	0.15 E	0.00 U
2941-249	NR	9		0.00 U	0.00 U	0.04 E	0.08 E	0.00 U
2941-255	NR	10	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-265	NR	11	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-285	NR	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-287	NR	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-299	NR	15		0.24	0.00 U	0.05	0.00 U	0.00 U
2941-310	NR	16		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-319	NR	17		0.23	0.00 U	0.05	0.09	0.00 U
2941-324	NR	18		0.00 U	0.00 U	0.04	0.09	0.00 U
2941-335	NR	19		0.00 U	0.00 U	0.13	0.22	0.00 U
2941-173	PB	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-182	PB	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-191	PB	3		0.00 U	0.00 U	0.05	0.00 U	0.00 U
2941-204	PB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-209	PB	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-224	PB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-231	PB	7		1.09 E	0.63 E	0.11 E	0.42 E	0.00 U
2941-241	PB	8		0.65 E	0.00 U	0.05 E	0.23 E	0.00 U

Sample ID	Station ID	Event No.	Field Dup	PCB 77	PCB 101	PCB 105	PCB 118	PCB 126
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-248	PB	9		0.46 E	0.00 U	0.05 E	0.18 E	0.00 U
2941-259	PB	10		0.00 U	0.00 U	0.00 U	0.07 E	0.00 U
2941-263	PB	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-271	PB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-283	PB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-290	PB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-305	PB	15		0.00 U	0.00 U	0.06	0.00 U	0.00 U
2941-307	PB	16		0.00 U	0.00 U	0.03	0.00 U	0.00 U
2941-317	PB	17		0.00 U	0.00 U	0.07	0.10	0.00 U
2941-323	PB	18		0.00 U	0.00 U	0.04	0.09	0.00 U
2941-334	PB	19		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-176	PO	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-185	PO	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-193	PO	3	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-206	PO	4	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-213	PO	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-217	PO	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-233	PO	7		0.38 E	0.00 U	0.04 E	0.14 E	0.00 U
2941-237	PO	8		0.63 E	0.44 E	0.06 E	0.22 E	0.00 U
2941-251	PO	9		0.00 U	0.00 U	0.07 E	0.00 U	0.00 U
2941-261	PO	10		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-270	PO	11		0.00 U	0.00 U	0.04	0.00 U	0.00 U
2941-277	PO	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-279	PO	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-292	PO	14		0.00 U	0.00 U	0.03	0.00 U	0.00 U
2941-300	PO	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-311	PO	16		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-321	PO	17		0.00 U	0.00 U	0.09	0.13	0.00 U
2941-330	PO	18		0.00 U	0.00 U	0.05	0.11	0.00 U
2941-337	PO	19		0.00 U	0.00 U	0.08	0.18	0.00 U
2941-179	SB	1	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-186	SB	2	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-195	SB	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-205	SB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-216	SB	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-218	SB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-219	SB	7		0.39 E	0.00 U	0.04 E	0.13 E	0.00 U
2941-245	SB	8		0.55 E	0.00 U	0.06 E	0.24 E	0.00 U
2941-252	SB	9		0.00 U	0.00 U	0.08 E	0.00 U	0.00 U
2941-260	SB	10		0.25 E	0.00 U	0.00 U	0.10 E	0.00 U
2941-268	SB	11		0.00 U	0.00 U	0.03	0.00 U	0.00 U
2941-278	SB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-281	SB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-286	SB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-313	SB	16		0.00 U	0.00 U	0.04	0.00 U	0.00 U
2941-320	SB	17		0.00 U	0.00 U	0.06	0.00 U	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	PCB 77	PCB 101	PCB 105	PCB 118	PCB 126
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-329	SB	18		0.00 U	0.00 U	0.05	0.09	0.00 U
2941-336	SB	19		0.00 U	0.00 U	0.06	0.00 U	0.00 U
2941-174	TCB	1		0.00 U	0.00 U	0.06	0.00 U	0.00 U
2941-181	TCB	2		0.00 U	0.00 U	0.15	0.31	0.00 U
2941-188	TCB	3		0.29	0.78	0.34	0.59	0.00 U
2941-203	TCB	4		0.00 U	0.49	0.23	0.38	0.00 U
2941-212	TCB	5		0.00 U	0.00 U	0.21	0.52	0.00 U
2941-229	TCB	7		0.42 E	0.38 E	0.11 E	0.30 E	0.00 U
2941-240	TCB	8	x	1.83 E	0.51 E	0.23 E	0.91 E	0.00 U
2941-245b	TCB	9	x	0.00 U	0.00 U	0.14 E	0.17 E	0.00 U
2941-256	TCB	10		0.36 E	0.00 U	0.09 E	0.20 E	0.00 U
2941-267	TCB	11		0.00 U	0.00 U	0.11	0.26	0.00 U
2941-274	TCB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-282	TCB	13		0.00 U	0.00 U	0.10	0.18	0.00 U
2941-288	TCB	14		0.00 U	0.00 U	0.13	0.24	0.00 U
2941-301	TCB	15		0.00 U	0.00 U	0.06	0.13	0.00 U
2941-309	TCB	16		0.00 U	0.00 U	0.09	0.19	0.00 U
2941-316	TCB	17		0.31	0.96	0.35	0.58	0.00 U
2941-326	TCB	18		0.00 U	0.45	0.13	0.23	0.00 U
2941-331	TCB	19		0.00 U	0.87	0.38	0.74	0.00 U
2941-172	WP	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-183	WP	2		0.33	0.00 U	0.00 U	0.00 U	0.00 U
2941-190	WP	3		0.00 U	0.00 U	0.04	0.00 U	0.00 U
2941-201	WP	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-200	WP	5		0.67	0.00 U	0.00 U	0.00 U	0.00 U
2941-225	WP	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-230	WP	7		1.13 E	0.50 E	0.15 E	0.45 E	0.00 U
2941-244	WP	8		1.17 E	0.50 E	0.09 E	0.48 E	0.00 U
2941-246	WP	9		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-258	WP	10		0.25 E	0.00 U	0.03 E	0.11 E	0.00 U
2941-264	WP	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-272	WP	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-284	WP	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-289	WP	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-302	WP	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-308	WP	16		0.00 U	0.00 U	0.06	0.10	0.00 U
2941-315	WP	17		0.00 U	0.00 U	0.09	0.14	0.00 U
2941-327	WP	18		0.00 U	0.00 U	0.08	0.14	0.00 U
2941-332	WP	19		0.00 U	0.00 U	0.11	0.00 U	0.00 U
2941-293	TM	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-304	TM	15		0.00 U	0.00 U	0.05	0.00 U	0.00 U
2941-312	TM	16		0.00 U	0.00 U	0.07	0.00 U	0.00 U
2941-318	TM	17		0.00 U	0.53	0.12	0.18	0.00 U
2941-325	TM	18		0.00 U	0.00 U	0.06	0.15	0.00 U
2941-333	TM	19		0.00 U	0.49	0.15	0.29	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	PCB 128	PCB 138	PCB 153	PCB 170	PCB 180
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-177	HC	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-184	HC	2		0.00 U	0.00 U	0.00 U	0.05	0.00 U
2941-194	HC	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-208	HC	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-214	HC	5	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-220	HC	6	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-210	HC	7	x	0.03 U	0.17 U	0.37 E	0.00 U	0.00 U
2941-238	HC	8		0.07 E	0.44 E	0.79 E	0.00 U	0.04 E
2941-250	HC	9		0.00 U	0.00 U	0.12 E	0.00 U	0.00 U
2941-262	HC	10		0.00 U	0.00 U	0.19 E	0.00 U	0.00 U
2941-269	HC	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-276	HC	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-280	HC	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-294	HC	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-306	HC	15		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-314	HC	16		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-322	HC	17		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2947-328	HC	18		0.00 U	0.00 U	0.13	0.00 U	0.00 U
2941-338	HC	19		0.00 U	0.00 U	0.12	0.00 U	0.00 U
2941-175	NR	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-180	NR	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-189	NR	3		0.00 U	0.00 U	0.06	0.08	0.00 U
2941-202	NR	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-211	NR	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-223	NR	6		0.00 U	0.00 U	0.20	0.00 U	0.00 U
2941-228	NR	7		0.00 U	0.00 U	0.31 E	0.00 U	0.00 U
2941-242	NR	8		0.00 U	0.00 U	0.31 E	0.00 U	0.04 E
2941-249	NR	9		0.00 U	0.00 U	0.20 E	0.00 U	0.03 E
2941-255	NR	10	x	0.00 U	0.00 U	0.12 E	0.00 U	0.01 U
2941-265	NR	11	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-285	NR	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-287	NR	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-299	NR	15		0.20	0.00 U	0.09	0.00 U	0.00 U
2941-310	NR	16		0.00 U	0.00 U	0.22	0.00 U	0.00 U
2941-319	NR	17		0.03	0.43	0.16	0.00 U	0.03
2941-324	NR	18		0.00 U	0.00 U	0.10	0.00 U	0.03
2941-335	NR	19		0.05	0.00 U	0.25	0.00 U	0.07
2941-173	PB	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-182	PB	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-191	PB	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-204	PB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-209	PB	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-224	PB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-231	PB	7		0.07 E	0.43 E	0.74 E	0.04 E	0.00 U
2941-241	PB	8		0.03 E	0.00 U	0.37 E	0.00 U	0.04 E

Sample ID	Station ID	Event No.	Field Dup	PCB 128	PCB 138	PCB 153	PCB 170	PCB 180
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-248	PB	9		0.03 E	0.00 U	0.40 E	0.07 E	0.10 E
2941-259	PB	10		0.00 U	0.00 U	0.16 E	0.00 U	0.00 U
2941-263	PB	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-271	PB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-283	PB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-290	PB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-305	PB	15		0.00 U	0.00 U	0.10	0.00 U	0.07
2941-307	PB	16		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-317	PB	17		0.04	0.00 U	0.14	0.00 U	0.05
2941-323	PB	18		0.00 U	0.00 U	0.10	0.00 U	0.00 U
2941-334	PB	19		0.04	0.00 U	0.17	0.00 U	0.07
2941-176	PO	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-185	PO	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-193	PO	3	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-206	PO	4	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-213	PO	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-217	PO	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-233	PO	7		0.02 E	0.00 U	0.25 E	0.00 U	0.00 U
2941-237	PO	8		0.04 E	0.00 U	0.47 E	0.00 U	0.06 E
2941-251	PO	9		0.11 E	0.00 U	0.32 E	0.11 E	0.23 E
2941-261	PO	10		0.00 U	0.00 U	0.23 E	0.04 E	0.09 E
2941-270	PO	11		0.00 U	0.00 U	0.12	0.04	0.10
2941-277	PO	12		0.00 U	0.00 U	0.00 U	0.00 U	0.03
2941-279	PO	13		0.00 U	0.00 U	0.13	0.00 U	0.10
2941-292	PO	14		0.00 U	0.00 U	0.10	0.05	0.06
2941-300	PO	15		0.00 U	0.00 U	0.05	0.00 U	0.00 U
2941-311	PO	16		0.00 U	0.00 U	0.12	0.00 U	0.00 U
2941-321	PO	17		0.05	0.00 U	0.15	0.03	0.06
2941-330	PO	18		0.03	0.00 U	0.12	0.00 U	0.03
2941-337	PO	19		0.04	0.00 U	0.19	0.00 U	0.08
2941-179	SB	1	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-186	SB	2	x	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-195	SB	3		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-205	SB	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-216	SB	5		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-218	SB	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-219	SB	7		0.00 U	0.00 U	0.25 E	0.00 U	0.00 U
2941-245	SB	8		0.03 E	0.00 U	0.34 E	0.00 U	0.04 E
2941-252	SB	9		0.00 U	0.00 U	0.19 E	0.00 U	0.03 E
2941-260	SB	10		0.00 U	0.00 U	0.23 E	0.00 U	0.04 E
2941-268	SB	11		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-278	SB	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-281	SB	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-286	SB	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-313	SB	16		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-320	SB	17		0.15	0.00 U	0.12	0.00 U	0.00 U

Sample ID	Station ID	Event No.	Field Dup	PCB 128	PCB 138	PCB 153	PCB 170	PCB 180
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-329	SB	18		0.00 U	0.00 U	0.09	0.00 U	0.00 U
2941-336	SB	19		0.04	0.00 U	0.13	0.00 U	0.00 U
2941-174	TCB	1		0.04	0.00 U	0.12	0.00 U	0.06
2941-181	TCB	2		0.09	0.51	0.30	0.09	0.12
2941-188	TCB	3		0.22	0.92	0.63	0.16	0.27
2941-203	TCB	4		0.12	0.59	0.38	0.09	0.14
2941-212	TCB	5		0.10	0.57	0.41	0.10	0.00 U
2941-229	TCB	7		0.06 E	0.33 E	0.38 E	0.05 E	0.00 U
2941-240	TCB	8	x	0.14 E	0.53 E	1.11 E	0.07 E	0.11 E
2941-245b	TCB	9	x	0.06 E	0.00 U	0.30 E	0.10 E	0.15 E
2941-256	TCB	10		0.05 E	0.00 U	0.40 E	0.05 E	0.10 E
2941-267	TCB	11		0.05	0.00 U	0.28	0.07	0.18
2941-274	TCB	12		0.00 U	0.00 U	0.06	0.00 U	0.04
2941-282	TCB	13		0.07	0.44	0.32	0.12	0.15
2941-288	TCB	14		0.07	0.40	0.27	0.08	0.12
2941-301	TCB	15		0.05	0.00 U	0.21	0.06	0.13
2941-309	TCB	16		0.05	0.00 U	0.25	0.07	0.12
2941-316	TCB	17		0.21	0.95	0.68	0.19	0.30
2941-326	TCB	18		0.06	0.38	0.29	0.11	0.14
2941-331	TCB	19		0.25	1.10	0.80	0.26	0.50
2941-172	WP	1		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-183	WP	2		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-190	WP	3		0.00 U	0.00 U	0.04	0.05	0.05
2941-201	WP	4		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-200	WP	5		0.00 U	0.00 U	0.00 U	0.08	0.00 U
2941-225	WP	6		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-230	WP	7		0.06 E	0.47 E	0.79 E	0.00 U	0.06 E
2941-244	WP	8		0.07 E	0.43 E	0.74 E	0.00 U	0.06 E
2941-246	WP	9		0.00 U	0.00 U	0.12 E	0.00 U	0.00 U
2941-258	WP	10		0.00 U	0.00 U	0.23 E	0.00 U	0.03 E
2941-264	WP	11		0.00 U	0.00 U	0.03	0.00 U	0.03
2941-272	WP	12		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-284	WP	13		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-289	WP	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-302	WP	15		0.00 U	0.00 U	0.05	0.00 U	0.00 U
2941-308	WP	16		0.00 U	0.00 U	0.12	0.00 U	0.03
2941-315	WP	17		0.05	0.00 U	0.18	0.00 U	0.05
2941-327	WP	18		0.03	0.00 U	0.16	0.00 U	0.03
2941-332	WP	19		0.05	0.00 U	0.21	0.00 U	0.07
2941-293	TM	14		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-304	TM	15		0.00 U	0.00 U	0.09	0.00 U	0.04
2941-312	TM	16		0.00 U	0.00 U	0.13	0.04	0.05
2941-318	TM	17		0.06	0.00 U	0.22	0.00 U	0.06
2941-325	TM	18		0.00 U	0.00 U	0.13	0.00 U	0.04
2941-333	TM	19		0.07	0.43	0.29	0.08	0.13

Sample ID	Station ID	Event No.	Field Dup	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-177	HC	1		0.00 U	0.040	0.00 U	0.00 U	0.00 U
2941-184	HC	2		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-194	HC	3		0.00 U	0.099	0.00 U	0.00 U	0.00 U
2941-208	HC	4		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-214	HC	5	x	0.00 U	0.155	0.00 U	0.00 U	0.00 U
2941-220	HC	6	x	0.00 U	0.051	0.00 U	0.00 U	0.00 U
2941-210	HC	7	x	0.08 E	0.035 E	0.00 U	0.00 U	0.00 U
2941-238	HC	8		0.16 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-250	HC	9		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-262	HC	10		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-269	HC	11		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-276	HC	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-280	HC	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-294	HC	14		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-306	HC	15		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-314	HC	16		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-322	HC	17		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2947-328	HC	18		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-338	HC	19		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-175	NR	1		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-180	NR	2		0.00 U	0.046	0.00 U	0.00 U	0.00 U
2941-189	NR	3		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-202	NR	4		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-211	NR	5		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-223	NR	6		0.08	0.000 U	0.00 U	0.00 U	0.00 U
2941-228	NR	7		0.07 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-242	NR	8		0.06 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-249	NR	9		0.04 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-255	NR	10	x	0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-265	NR	11	x	0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	x	0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-285	NR	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-287	NR	14		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-299	NR	15		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-310	NR	16		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-319	NR	17		0.06	0.000 U	0.00 U	0.00 U	0.00 U
2941-324	NR	18		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-335	NR	19		0.07	0.000 U	0.23	0.00 U	0.00 U
2941-173	PB	1		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-182	PB	2		0.00 U	0.053	0.00 U	0.00 U	0.00 U
2941-191	PB	3		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-204	PB	4		0.00 U	0.113	0.00 U	0.00 U	0.00 U
2941-209	PB	5		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-224	PB	6		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-231	PB	7		0.17 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-241	PB	8		0.08 E	0.000 U	0.00 U	0.00 U	0.00 U

Sample ID	Station ID	Event No.	Field Dup	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-248	PB	9		0.12 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-259	PB	10		0.04 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-263	PB	11		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-271	PB	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-283	PB	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-290	PB	14		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-305	PB	15		0.08	0.000 U	0.00 U	0.00 U	0.00 U
2941-307	PB	16		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-317	PB	17		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-323	PB	18		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-334	PB	19		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-176	PO	1		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-185	PO	2		0.00 U	0.048	0.00 U	0.00 U	0.00 U
2941-193	PO	3	x	0.00 U	0.079	0.00 U	0.00 U	0.00 U
2941-206	PO	4	x	0.00 U	0.161	0.00 U	0.00 U	0.00 U
2941-213	PO	5		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-217	PO	6		0.00 U	0.195	0.00 U	0.00 U	0.00 U
2941-233	PO	7		0.06 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-237	PO	8		0.09 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-251	PO	9		0.12 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-261	PO	10		0.07 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-270	PO	11		0.06	0.028	0.00 U	0.00 U	0.00 U
2941-277	PO	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-279	PO	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-292	PO	14		0.07	0.060	0.00 U	0.00 U	0.00 U
2941-300	PO	15		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-311	PO	16		0.00 U	0.000 U	0.30	0.00 U	0.00 U
2941-321	PO	17		0.05	0.000 U	0.00 U	0.00 U	0.00 U
2941-330	PO	18		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-337	PO	19		0.07	0.000 U	0.16	0.00 U	0.00 U
2941-179	SB	1	x	0.00 U	0.013	0.00 U	0.00 U	0.00 U
2941-186	SB	2	x	0.00 U	0.089	0.00 U	0.00 U	0.00 U
2941-195	SB	3		0.00 U	0.104	0.00 U	0.00 U	0.06
2941-205	SB	4		0.00 U	0.195	0.00 U	0.00 U	0.00 U
2941-216	SB	5		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-218	SB	6		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-219	SB	7		0.05 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-245	SB	8		0.09 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-252	SB	9		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-260	SB	10		0.04 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-268	SB	11		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-278	SB	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-281	SB	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-286	SB	14		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-313	SB	16		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-320	SB	17		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U

Appendix G Field Results

Sample ID	Station ID	Event No.	Field Dup	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
				ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day	ng/m2/day
2941-329	SB	18		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-336	SB	19		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-174	TCB	1		0.05	0.087	0.00 U	0.00 U	0.00 U
2941-181	TCB	2		0.09	0.000 U	0.00 U	0.00 U	0.00 U
2941-188	TCB	3		0.20	0.000 U	0.17	0.00 U	0.00 U
2941-203	TCB	4		0.11	0.000 U	0.00 U	0.00 U	0.00 U
2941-212	TCB	5		0.21	0.000 U	0.00 U	0.00 U	0.05
2941-229	TCB	7		0.11 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-240	TCB	8	x	0.22 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-245b	TCB	9	x	0.14 E	0.037 E	0.00 E	0.00 U	0.00 U
2941-256	TCB	10		0.12 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-267	TCB	11		0.18	0.000 U	0.00 U	0.00 U	0.00 U
2941-274	TCB	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-282	TCB	13		0.17	0.000 U	0.21	0.00 U	0.00 U
2941-288	TCB	14		0.11	0.000 U	0.00 U	0.00 U	0.00 U
2941-301	TCB	15		0.11	0.000 U	0.00 U	0.00 U	0.00 U
2941-309	TCB	16		0.10	0.000 U	0.00 U	0.00 U	0.00 U
2941-316	TCB	17		0.22	0.099	0.00 U	0.00 U	0.00 U
2941-326	TCB	18		0.15	0.044	0.00 U	0.00 U	0.00 U
2941-331	TCB	19		0.36	0.000 U	0.32	0.00 U	0.00 U
2941-172	WP	1		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-183	WP	2		0.00 U	0.113	0.00 U	0.00 U	0.00 U
2941-190	WP	3		0.05	0.028	0.00 U	0.00 U	0.18
2941-201	WP	4		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-200	WP	5		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-225	WP	6		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-230	WP	7		0.15 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-244	WP	8		0.16 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-246	WP	9		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-258	WP	10		0.05 E	0.000 U	0.00 U	0.00 U	0.00 U
2941-264	WP	11		0.03	0.028	0.00 U	0.00 U	0.00 U
2941-272	WP	12		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-284	WP	13		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-289	WP	14		0.06	0.000 U	0.00 U	0.00 U	0.00 U
2941-302	WP	15		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-308	WP	16		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-315	WP	17		0.05	0.000 U	0.00 U	0.00 U	0.00 U
2941-327	WP	18		0.04	0.000 U	0.00 U	0.00 U	0.00 U
2941-332	WP	19		0.07	0.000 U	0.23	0.00 U	0.00 U
2941-293	TM	14		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-304	TM	15		0.00 U	0.000 U	0.00 U	0.00 U	0.00 U
2941-312	TM	16		0.05	0.000 U	0.00 U	0.00 U	0.00 U
2941-318	TM	17		0.07	0.000 U	0.00 U	0.00 U	0.09
2941-325	TM	18		0.05	0.000 U	0.00 U	0.00 U	0.00 U
2941-333	TM	19		0.11	0.040	0.00 U	0.00 U	0.00 U

Appendix G Field Results — Surrogates

Sample ID	Station ID	Event No.	Field Dup	HBB	PCB 103	PCB 198
				%	%	%
2941-177	HC	1		129%	130%	138%
2941-184	HC	2		106%	123%	111%
2941-194	HC	3		77%	78%	78%
2941-208	HC	4		130%	136%	137%
2941-214	HC	5	x	112%	114%	107%
2941-220	HC	6	x	89%	89%	94%
2941-210	HC	7	x	87%	73%	81%
2941-238	HC	8		106%	72%	92%
2941-250	HC	9		92%	69%	87%
2941-262	HC	10		83%	66%	86%
2941-269	HC	11		101%	91%	103%
2941-276	HC	12		100%	99%	100%
2941-280	HC	13		94%	92%	106%
2941-294	HC	14		105%	90%	120%
2941-306	HC	15		92%	75%	106%
2941-314	HC	16		83%	79%	103%
2941-322	HC	17		109%	84%	126%
2947-328	HC	18		82%	65%	94%
2941-338	HC	19		27%	20%	27%
2941-175	NR	1		125%	120%	127%
2941-180	NR	2		109%	111%	117%
2941-189	NR	3		88%	93%	92%
2941-202	NR	4		85%	94%	83%
2941-211	NR	5		92%	118%	99%
2941-223	NR	6		119%	132%	129%
2941-228	NR	7		74%	62%	68%
2941-242	NR	8		90%	68%	82%
2941-249	NR	9		86%	64%	82%
2941-255	NR	10	x	75%	61%	75%
2941-265	NR	11	x	93%	88%	95%
2941-275	NR	12	x	98%	93%	96%
2941-285	NR	13		77%	70%	85%
2941-287	NR	14		96%	87%	107%
2941-299	NR	15		99%	77%	117%
2941-310	NR	16		35%	27%	38%
2941-319	NR	17		95%	69%	109%
2941-324	NR	18		111%	87%	123%
2941-335	NR	19		70%	45%	65%
2941-173	PB	1		111%	90%	111%
2941-182	PB	2		114%	117%	119%
2941-191	PB	3		122%	118%	119%
2941-204	PB	4		105%	104%	106%
2941-209	PB	5		86%	103%	90%
2941-224	PB	6		86%	83%	85%
2941-231	PB	7		105%	83%	94%
2941-241	PB	8		100%	77%	90%

Appendix G Field Results Surrogates

Sample ID	Station ID	Event No.	Field Dup	HBB	PCB 103	PCB 198
				%	%	%
2941-248	PB	9		92%	63%	83%
2941-259	PB	10		61%	48%	63%
2941-263	PB	11		100%	93%	99%
2941-271	PB	12		107%	103%	102%
2941-283	PB	13		102%	85%	112%
2941-290	PB	14		80%	69%	83%
2941-305	PB	15		111%	92%	122%
2941-307	PB	16		84%	75%	99%
2941-317	PB	17		94%	74%	108%
2941-323	PB	18		94%	73%	103%
2941-334	PB	19		105%	76%	104%
2941-176	PO	1		104%	102%	106%
2941-185	PO	2		119%	128%	121%
2941-193	PO	3	x	107%	105%	112%
2941-206	PO	4	x	104%	110%	108%
2941-213	PO	5		103%	108%	103%
2941-217	PO	6		87%	92%	88%
2941-233	PO	7		91%	77%	86%
2941-237	PO	8		89%	62%	79%
2941-251	PO	9		92%	66%	86%
2941-261	PO	10		84%	68%	87%
2941-270	PO	11		109%	101%	110%
2941-277	PO	12		108%	102%	108%
2941-279	PO	13		72%	66%	73%
2941-292	PO	14		100%	85%	109%
2941-300	PO	15		85%	61%	95%
2941-311	PO	16		54%	50%	64%
2941-321	PO	17		101%	87%	121%
2941-330	PO	18		84%	70%	97%
2941-337	PO	19		66%	45%	64%
2941-179	SB	1	x	118%	114%	124%
2941-186	SB	2	x	112%	123%	115%
2941-195	SB	3		111%	119%	121%
2941-205	SB	4		104%	109%	109%
2941-216	SB	5		107%	111%	106%
2941-218	SB	6		98%	102%	99%
2941-219	SB	7		91%	78%	87%
2941-245	SB	8		91%	69%	82%
2941-252	SB	9		88%	69%	88%
2941-260	SB	10		98%	75%	99%
2941-268	SB	11		89%	77%	88%
2941-278	SB	12		110%	104%	109%
2941-281	SB	13		99%	87%	113%
2941-286	SB	14		91%	78%	100%
2941-313	SB	16		96%	88%	126%
2941-320	SB	17		97%	77%	114%

Sample ID	Station ID	Event No.	Field Dup	HBB	PCB 103	PCB 198
				%	%	%
2941-329	SB	18		117%	100%	142%
2941-336	SB	19		66%	42%	61%
2941-174	TCB	1		114%	111%	119%
2941-181	TCB	2		107%	106%	113%
2941-188	TCB	3		102%	100%	98%
2941-203	TCB	4		108%	109%	108%
2941-212	TCB	5		119%	117%	118%
2941-229	TCB	7		90%	75%	83%
2941-240	TCB	8	x	107%	74%	89%
2941-245b	TCB	9	x	102%	73%	91%
2941-256	TCB	10		88%	67%	86%
2941-267	TCB	11		106%	92%	101%
2941-274	TCB	12		103%	97%	100%
2941-282	TCB	13		72%	61%	80%
2941-288	TCB	14		90%	75%	95%
2941-301	TCB	15		80%	59%	88%
2941-309	TCB	16		76%	54%	83%
2941-316	TCB	17		87%	72%	103%
2941-326	TCB	18		112%	89%	124%
2941-331	TCB	19		60%	40%	56%
2941-172	WP	1		119%	108%	123%
2941-183	WP	2		122%	126%	125%
2941-190	WP	3		104%	103%	106%
2941-201	WP	4		83%	97%	83%
2941-200	WP	5		101%	113%	100%
2941-225	WP	6		83%	88%	86%
2941-230	WP	7		79%	64%	70%
2941-244	WP	8		93%	65%	80%
2941-246	WP	9		94%	75%	91%
2941-258	WP	10		86%	68%	90%
2941-264	WP	11		95%	81%	94%
2941-272	WP	12		105%	102%	102%
2941-284	WP	13		86%	75%	97%
2941-289	WP	14		86%	68%	93%
2941-302	WP	15		109%	80%	121%
2941-308	WP	16		65%	50%	77%
2941-315	WP	17		82%	65%	95%
2941-327	WP	18		89%	66%	99%
2941-332	WP	19		62%	41%	58%
2941-293	TM	14		92%	76%	103%
2941-304	TM	15		87%	65%	97%
2941-312	TM	16		82%	70%	102%
2941-318	TM	17		94%	71%	102%
2941-325	TM	18		87%	70%	99%
2941-333	TM	19		67%	49%	66%

Appendix G Quality Control Results - PCBs

FIELD DUPLICATES (ng/m2/day)		Event No.	Date Deployed	Date Recovered	Days	Funnel Surface Area (m2)	PCB 8	PCB 18	PCB 28	PCB 44	PCB 52
2941-214	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.11	0.00 U	0.00 U
2941-215	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.12	0.00 U	0.00 U
RPD							-	-	**8%**	-	-
2941-220	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.08	0.00 U	0.00 U
2941-221	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-
2941-265	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-266	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-
2941-273	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-
2941-193	PO	3	10/6/08	10/16/08	10	0.159	0.00 U	0.00 U	0.11	0.00 U	0.00 U
2941-199	PO	3	10/6/08	10/16/08	10	0.159	0.00 U	0.00 U	0.07	0.00 U	0.00 U
RPD							-	-	**41%**	-	-
2941-206	PO	4	10/16/08	10/29/08	13	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-207	PO	4	10/16/08	10/29/08	13	0.159	0.00 U	0.00 U	0.08	0.00 U	0.00 U
RPD							-	-	-	-	-
2941-178	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-179	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.05	0.00 U	0.00 U
RPD							-	-	-	-	-
2941-186	SB	2	9/18/08	10/2/08	14	0.159	0.00 U	0.00 U	0.07	0.00 U	0.00 U
2941-187	SB	2	9/18/08	10/2/08	14	0.159	0.00 U	0.00 U	0.08	0.00 U	0.00 U
RPD							-	-	**5%**	-	-

U Not detected above MDL, zero used in value field

E Estimated due to potential contamination

RPD Relative Percent Difference

< Sum reported as 1/2 of the highest MDL of the individual PCB congeners

Appendix G Quality Control Results - PCBs

FIELD DUPLICATES (ng/m2/day)		Event No.	Date Deployed	Date Recovered	Days	Funnel Surface Area (m2)	PCB 66	PCB 77	PCB 101	PCB 105	PCB 118	PCB 126
2941-214	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-215	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.00 U	0.10	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-220	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-221	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-265	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-266	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-273	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	4/22/09	5/7/09	15	0.159	0.11	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-193	PO	3	10/6/08	10/16/08	10	0.159	0.16	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-199	PO	3	10/6/08	10/16/08	10	0.159	0.17	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							**10%**	-	-	-	-	-
2941-206	PO	4	10/16/08	10/29/08	13	0.159	0.15	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-207	PO	4	10/16/08	10/29/08	13	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-178	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-179	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-186	SB	2	9/18/08	10/2/08	14	0.159	0.13	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-187	SB	2	9/18/08	10/2/08	14	0.159	0.11	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							**12%**	-	-	-	-	-

U Not detected above MDL, zero used in value field

E Estimated due to potential contamination

RPD Relative Percent Difference

< Sum reported as 1/2 of the highest MDL of the individual PCB

Appendix G Quality Control Results - PCBs

FIELD DUPLICATES (ng/m2/day)		Event No.	Date Deployed	Date Recovered	Days	Funnel Surface Area (m2)	**PCB 128**	**PCB 138**	**PCB 153**	**PCB 170**	**PCB 180**	**PCB 187**
2941-214	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-215	HC	5	10/29/08	11/8/08	10	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-220	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-221	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-265	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-266	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-273	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-193	PO	3	10/6/08	10/16/08	10	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-199	PO	3	10/6/08	10/16/08	10	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-206	PO	4	10/16/08	10/29/08	13	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-207	PO	4	10/16/08	10/29/08	13	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-178	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-179	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-
2941-186	SB	2	9/18/08	10/2/08	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2941-187	SB	2	9/18/08	10/2/08	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-	-	-

U Not detected above MDL, zero used in value field

E Estimated due to potential contamination

RPD Relative Percent Difference

< Sum reported as 1/2 of the highest MDL of the individual PCB

Appendix G Quality Control Results - PCBs

FIELD DUPLICATES (ng/m2/day)		Event No.	Date Deployed	Date Recovered	Days	Funnel Surface Area (m2)	PCB 195	PCB 200	PCB 206	PCB 209
2941-214	HC	5	10/29/08	11/8/08	10	0.159	0.15	0.00 U	0.00 U	0.00 U
2941-215	HC	5	10/29/08	11/8/08	10	0.159	0.16	0.00 U	0.00 U	0.00 U
RPD							**2%**	-	-	-
2941-220	HC	6	11/8/08	11/20/08	12	0.159	0.10	0.00 U	0.00 U	0.00 U
2941-221	HC	6	11/8/08	11/20/08	12	0.159	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-
2941-265	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U
2941-266	NR	11	4/8/09	4/22/09	14	0.159	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-
2941-273	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U
2941-275	NR	12	4/22/09	5/7/09	15	0.159	0.00 U	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-
2941-193	PO	3	10/6/08	10/16/08	10	0.159	0.08	0.00 U	0.00 U	0.00 U
2941-199	PO	3	10/6/08	10/16/08	10	0.159	0.08	0.00 U	0.00 U	0.00 U
RPD							**3%**	-	-	-
2941-206	PO	4	10/16/08	10/29/08	13	0.159	0.19	0.00 U	0.00 U	0.00 U
2941-207	PO	4	10/16/08	10/29/08	13	0.159	0.13	0.00 U	0.00 U	0.00 U
RPD							**38%**	-	-	-
2941-178	SB	1	9/2/08	9/18/08	16	0.159	0.00 U	0.00 U	0.00 U	0.00 U
2941-179	SB	1	9/2/08	9/18/08	16	0.159	0.03	0.00 U	0.00 U	0.00 U
RPD								-	-	-
2941-186	SB	2	9/18/08	10/2/08	14	0.159	0.11	0.00 U	0.00 U	0.00 U
2941-187	SB	2	9/18/08	10/2/08	14	0.159	0.07	0.00 U	0.00 U	0.00 U
RPD							-	-	-	-

U Not detected above MDL, zero used in value field

E Estimated due to potential contamination

RPD Relative Percent Difference

< Sum reported as 1/2 of the highest MDL of the individual PCB

Extraction Date	Sample ID	Batch ID	PCB 8	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66	PCB 77
	MDL (ng)		*1.07*	*5.32*	*0.01*	*1.01*	*1.80*	*0.21*	*0.01*
Procedural Blanks (ng)									
01/26/09	WA_BLK0126		0.00 U	0.00 U	1.16	0.00 U	0.00 U	0.21	0.00 U
02/04/09	WA_BLK0204		0.00 U	0.00 U	1.10	0.00 U	0.00 U	0.21	0.00 U
02/09/09	WA_BLK0209		0.00 U	0.00 U	1.20	0.00 U	0.00 U	0.23	0.00 U
02/12/09	WA_BLK0212		0.00 U	0.00 U	1.00	0.00 U	0.00 U	0.21	0.00 U
02/19/09	WA_BLK0219		0.00 U	0.00 U	1.22	0.00 U	0.00 U	0.25	0.00 U
05/16/09	WA_BLK0516		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/23/09	WA_BLK0523		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA_BLK0531		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA_BLK0603		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.25	0.00 U
06/26/09	WA_BLK0626		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
07/03/09	WA_BLK0703		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
09/16/09	WA_BLK0916		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
09/22/09	WA_BLK0922		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
10/12/09	WA_BLK1012		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
10/27/09	WA_BLK1027		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
11/03/09	WA_BLK1103		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
5/26/2010	BLK052610		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.23	0.00 U
SRM 1649 Results (ng/g)									
01/26/09	WA_UD0126		10.16	32.71	10.21	16.64	22.88	34.58	11.77
02/04/09	WA_UD0204		8.95	28.51	10.37	16.61	23.70	38.01	10.32
02/09/09	WA_UD0209		11.10	31.88	11.88	17.41	25.21	40.43	14.31
02/12/09	WA_UD0212		6.69	20.98	8.88	13.47	18.49	34.86	0.00 U
02/19/09	WA_UD0219		8.13	22.41	10.55	15.36	22.72	37.82	15.23
04/08/09	WA_UD0408		7.60	22.29	9.71	14.39	21.57	37.20	10.78
04/15/09	WA_UD0415		8.71	20.61	9.15	13.64	19.36	36.41	11.38
05/23/09	WA_UD0523		5.48	13.74	8.29	11.33	16.94	9.68	0.00 U
05/31/09	WA_UD0531		6.07	15.06	9.96	11.74	18.25	15.23	0.00 U
06/03/09	WA_UD0603		5.84	17.31	9.18	13.49	18.84	11.36	0.00 U
06/26/09	WA_UD0626		0.00 U	19.98	11.37	15.24	22.97	43.01	0.00 U
07/03/09	WA_UD0703		0.00 U	19.76	9.56	15.37	24.95	7.86	0.00 U
09/16/09	WA_UD0916		13.83	12.18	8.18	11.15	18.02	11.25	0.00 U
09/22/09	WA_UD0922		0.00 U	17.06	12.32	14.85	29.63	15.52	0.00 U
10/12/09	WA_UD1012		7.91	16.59	10.87	16.42	28.00	9.57	0.00 U
10/27/09	WA_UD1027		6.74	13.33	10.21	14.86	27.03	13.17	13.71
11/03/09	WA_UD1103		10.18	18.11	15.06	20.60	37.84	10.50	0.00 U
Field GFF+SPE Blank (QC) (ng/filter)									
04/08/09	WA232		0.00 U	0.00 U	1.01	0.00 U	0.00 U	1.08	2.87
04/15/09	WA235		0.00 U	0.00 U	0.62	0.00 U	0.00 U	0.41	1.20
04/15/09	WA239		0.00 U	0.00 U	0.34	0.00 U	0.00 U	0.30	0.92
06/03/09	WA295		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA296		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA297		0.00 U	0.00 U	0.37	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA298		0.00 U	0.00 U	0.60	0.00 U	0.00 U	0.39	0.00 U

Extraction Date	Sample ID	Batch ID	PCB 8	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66	PCB 77
	MDL (ng)		*1.07*	*5.32*	*0.01*	*1.01*	*1.80*	*0.21*	*0.01*
Field Efficiency Test Using Rain Water (ng/filter)									
5/26/2010	WA346_BLK (no spike)		1.83	0.00 U	2.09	1.91	3.72	0.43	0.00 U
5/26/2010	WA340_SPK		5.52	5.96	6.55	7.01	8.33	7.45	8.65
	Spike Amount		20.00	20.00	20.00	20.00	20.00	20.00	20.00
	Recovery		**18%**	**30%**	**22%**	**25%**	**23%**	**35%**	**43%**
5/28/2010	WA_Jar Wash		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
	Recovery		**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
	Corrected Recovery		18%	30%	22%	25%	23%	35%	43%
Duplicate analysis (selected samples) (ng/filter)									
1/26/2009	WA181	WA181	0.00 U	0.00 U	0.16	0.00 U	0.00 U	0.00 U	0.00 U
1/26/2009	WA181	WA181b	0.00 U	0.00 U	0.16	0.00 U	0.00 U	0.33	0.00 U
		RPD			**5%**				
2/4/2009	WA183	WA183	0.00 U	0.00 U	0.16	0.00 U	0.00 U	0.26	0.69
2/4/2009	WA183	WA183b	0.00 U	0.00 U	0.14	0.00 U	0.00 U	0.24	0.73
		RPD			**13%**			**5%**	**6%**
5/23/2009	WA256	WA256	0.00 U	0.00 U	0.52	0.00 U	0.00 U	0.31	0.79
5/23/2009	WA256	WA256b	0.00 U	0.00 U	0.50	0.00 U	0.00 U	0.32	0.78
		RPD			**4%**			**3%**	**2%**
4/15/2009	WA243	WA243	0.00 U	0.00 U	0.49	0.00 U	0.00 U	0.38	1.15
4/15/2009	WA243	WA243b	0.00 U	0.00 U	0.52	0.00 U	0.00 U	0.40	1.16
		RPD			**7%**			**4%**	**1%**
11/3/2009	WA331	WA331	0.00 U	0.00 U	0.29	0.00 U	0.00 U	0.46	0.00 U
11/3/2009	WA331	WA331b	0.00 U	0.00 U	0.31	0.00 U	0.00 U	0.41	0.00 U
		RPD			**7%**			**12%**	
10/27/2009	WA326	WA326	0.00 U	0.00 U	0.25	0.00 U	0.00 U	0.27	0.00 U
10/27/2009	WA326	WA326b	0.00 U	0.00 U	0.20	0.00 U	0.00 U	0.28	0.00 U
		RPD			**20%**			**4%**	
10/12/2009	WA316	WA316	0.00 U	0.00 U	0.24	0.00 U	0.00 U	0.57	0.58
10/12/2009	WA316	WA316b	0.00 U	0.00 U	0.22	0.00 U	0.00 U	0.39	0.57
		RPD			**11%**			**37%**	**2%**
9/22/2009	WA309	WA309	0.00 U	0.00 U	0.18	0.00 U	0.00 U	0.00 U	0.00 U
9/22/2009	WA309	WA309b	0.00 U	0.00 U	0.17	0.00 U	0.00 U	0.00 U	0.00 U
		RPD			**6%**				
9/16/2009	WA301	WA301	0.00 U	0.00 U	0.14	0.00 U	0.00 U	0.00 U	0.00 U
9/16/2009	WA301	WA301b	0.00 U	0.00 U	0.11	0.00 U	0.00 U	0.00 U	0.00 U
		RPD			**25%**				
5/26/2010	WA340	WA340	5.52	5.96	6.55	7.01	8.33	7.45	8.65
5/26/2010	WA340	WA340b	5.35	5.63	6.15	6.93	7.62	7.33	8.48
		RPD	**3%**	**6%**	**6%**	**1%**	**9%**	**2%**	**2%**
5/28/2010	WA_Jar Wash	WA_Jar Wash	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.15 U	0.00 U
5/28/2010	WA_Jar Wash	WA_Jar Washb	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.13 U	0.00 U
		RPD							
7/3/2009	WA288	WA288	0.00 U	0.00 U	0.19	0.00 U	0.00 U	0.24	0.00 U
7/3/2009	WA288	WA288b	0.00 U	0.00 U	0.14	0.00 U	0.00 U	0.26	0.00 U
		RPD			**35%**			**8%**	
6/26/2009	WA282	WA282	0.00 U	0.00 U	0.24	0.00 U	0.00 U	0.00 U	0.00 U
6/26/2009	WA282	WA282b	0.00 U	0.00 U	0.23	0.00 U	0.00 U	0.25	0.00 U

Extraction Date	Sample ID	Batch ID	PCB 8	PCB 18	PCB 28	PCB 44	PCB 52	PCB 66	PCB 77
	MDL (ng)		*1.07*	*5.32*	*0.01*	*1.01*	*1.80*	*0.21*	*0.01*
		RPD			**4%**				
6/3/2009	WA274	WA274	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.32	0.00 U
6/3/2009	WA274	WA274b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.31	0.00 U
		RPD						**6%**	
2/12/2009	WA_UD0212	WA_UD0212	0.00 U	0.00 U	0.52	0.00 U	0.00 U	2.04	0.00 U
2/12/2009	WA_UD0212	WA_UD0212b	0.00 U	0.00 U	0.53	0.00 U	0.00 U	2.08	0.42
		RPD			**2%**			**2%**	
4/15/2009	WA240	WA240	0.00 U	0.00 U	1.51	1.07	0.00 U	2.93	7.58
4/15/2009	WA240	WA240b	0.00 U	0.00 U	1.39	1.16	0.00 U	2.53	7.30
		RPD			**9%**	**8%**		**15%**	**4%**
4/8/2009	WA229	WA229	0.00 U	0.00 U	0.45	0.00 U	0.00 U	0.48	1.15
4/8/2009	WA229	WA229b	0.00 U	0.00 U	0.41	0.00 U	0.00 U	0.53	1.17
		RPD			**9%**			**9%**	**2%**
5/31/2009	WA267	WA267	0.00 U	0.00 U	0.13	0.00 U	0.00 U	0.00 U	0.00 U
5/31/2009	WA267	WA267b	0.00 U	0.00 U	0.12	0.00 U	0.00 U	0.00 U	0.00 U
		RPD			**5%**				
2/19/2009	WA225	WA225	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2/19/2009	WA225	WA225b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
		RPD							
2/12/2009	WA212	WA212	0.00 U	0.00 U	0.39	0.00 U	0.00 U	0.44	0.00 U
2/12/2009	WA212	WA212b	0.00 U	0.00 U	0.38	0.00 U	0.00 U	0.31	0.00 U
		RPD			**3%**			**33%**	
2/9/2009	WA203	WA203	0.00 U	0.00 U	0.28	0.00 U	0.00 U	0.60	0.00 U
2/9/2009	WA203	WA203b	0.00 U	0.00 U	0.21	0.00 U	0.00 U	0.72	0.00 U
		RPD			**29%**			**18%**	

Extraction Date	Sample ID	Batch ID	PCB 101	PCB 105	PCB 118	PCB 126	PCB 128	PCB 138	PCB 153
	MDL (ng)		*0.95*	*0.01*	*0.01*	*7.64*	*0.01*	*0.79*	*0.01*
Procedural Blanks (ng)									
01/26/09	WA_BLK0126		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/04/09	WA_BLK0204		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/09/09	WA_BLK0209		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/12/09	WA_BLK0212		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/19/09	WA_BLK0219		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/16/09	WA_BLK0516		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/23/09	WA_BLK0523		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA_BLK0531		0.00 U	0.00 U	0.00 U	0.00 U	0.09	0.00 U	0.00 U
06/03/09	WA_BLK0603		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/26/09	WA_BLK0626		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
07/03/09	WA_BLK0703		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
09/16/09	WA_BLK0916		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.09
09/22/09	WA_BLK0922		0.00 U	0.10	0.00 U	0.00 U	0.00 U	0.00 U	0.20
10/12/09	WA_BLK1012		0.00 U	0.12 U	0.22	0.00 U	0.12 U	0.00 U	0.28
10/27/09	WA_BLK1027		0.00 U	0.13	0.00 U	0.00 U	0.00 U	0.00 U	0.24
11/03/09	WA_BLK1103		0.00 U	0.20	0.00 U	0.00 U	0.00 U	0.00 U	0.35
5/26/2010	BLK052610		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
SRM 1649 Results (ng/g)									
01/26/09	WA_UD0126		34.43	30.87	13.58	36.70	11.62	53.34	47.82
02/04/09	WA_UD0204		40.18	28.96	14.69	44.01	12.92	58.27	55.61
02/09/09	WA_UD0209		40.76	28.39	14.04	38.83	11.47	58.73	54.94
02/12/09	WA_UD0212		33.89	26.97	13.49	26.51	11.73	49.38	46.46
02/19/09	WA_UD0219		41.06	20.45	16.59	31.69	12.08	54.90	51.76
04/08/09	WA_UD0408		36.99	19.57	14.06	33.83	12.18	53.23	50.13
04/15/09	WA_UD0415		37.12	12.70	13.82	31.95	12.03	51.67	48.41
05/23/09	WA_UD0523		34.61	18.02	11.78	29.71	11.43	49.99	50.06
05/31/09	WA_UD0531		36.28	16.07	15.43	35.05	11.06	54.34	52.01
06/03/09	WA_UD0603		42.37	22.70	13.28	42.46	11.48	55.28	54.68
06/26/09	WA_UD0626		48.34	9.15	14.43	59.74	12.44	64.93	65.67
07/03/09	WA_UD0703		47.36	9.46	14.93	61.44	12.05	62.03	61.50
09/16/09	WA_UD0916		35.49	10.07	15.64	34.19	12.06	53.27	54.85
09/22/09	WA_UD0922		45.06	18.70	16.73	49.20	14.65	60.30	58.10
10/12/09	WA_UD1012		49.29	21.23	19.05	43.70	13.00	59.32	57.16
10/27/09	WA_UD1027		46.33	16.53	17.91	45.75	15.15	58.17	56.99
11/03/09	WA_UD1103		68.21	26.08	29.56	54.81	21.07	92.72	89.57
Field GFF+SPE Blank (QC) (ng/filter)									
04/08/09	WA232		1.70	0.32	1.05	0.00 U	0.15	1.22	2.06
04/15/09	WA235		0.00 U	0.18	0.46	0.00 U	0.08	0.00 U	0.92
04/15/09	WA239		0.00 U	0.11	0.38	0.00 U	0.00 U	0.00 U	0.59
06/03/09	WA295		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA296		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA297		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.20
05/31/09	WA298		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.36

Extraction Date	Sample ID	Batch ID	PCB 101	PCB 105	PCB 118	PCB 126	PCB 128	PCB 138	PCB 153
	MDL (ng)		*0.95*	*0.01*	*0.01*	*7.64*	*0.01*	*0.79*	*0.01*
Field Efficiency Test Using Rain Water (ng/filte									
5/26/2010	WA346_BLK (no spike)		0.00 U	0.12	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
5/26/2010	WA340_SPK		6.02	7.02	6.35	8.41	6.30	7.64	5.94
	Spike Amount		20.00	20.00	20.00	20.00	20.00	20.00	20.00
	Recovery		**30%**	**35%**	**32%**	**42%**	**31%**	**38%**	**30%**
5/28/2010	WA_Jar Wash		0.00 U	0.57	0.21	0.00 U	1.34	1.05	0.69
	Recovery		**0%**	**3%**	**1%**	**0%**	**7%**	**5%**	**3%**
	Corrected Recovery		30%	36%	32%	42%	34%	40%	31%
Duplicate analysis (selected samples) (ng/filter)									
1/26/2009	WA181	WA181	0.00 U	0.29	0.59	0.00 U	0.17	0.98	0.57
1/26/2009	WA181	WA181b	0.00 U	0.29	0.76	0.00 U	0.17	0.98	0.56
		RPD		**0%**	**24%**		**1%**	**0%**	**0%**
2/4/2009	WA183	WA183	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2/4/2009	WA183	WA183b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
		RPD							
5/23/2009	WA256	WA256	0.00 U	0.20	0.45	0.00 U	0.11	0.00 U	0.88
5/23/2009	WA256	WA256b	0.00 U	0.19	0.44	0.00 U	0.10	0.00 U	0.82
		RPD		**6%**	**1%**		**17%**		**7%**
4/15/2009	WA243	WA243	0.00 U	0.31	0.54	0.00 U	0.15	0.00 U	0.92
4/15/2009	WA243	WA243b	0.00 U	0.25	0.55	0.00 U	0.14	0.00 U	0.89
		RPD		**22%**	**1%**		**4%**		**3%**
11/3/2009	WA331	WA331	1.79	0.79	1.52	0.00 U	0.52	2.28	1.66
11/3/2009	WA331	WA331b	1.77	0.77	1.66	0.00 U	0.46	2.26	1.67
		RPD	**1%**	**3%**	**9%**		**14%**	**1%**	**0%**
10/27/2009	WA326	WA326	1.15	0.34	0.59	0.00 U	0.15	0.96	0.75
10/27/2009	WA326	WA326b	1.08	0.30	0.60	0.00 U	0.15	0.92	0.69
		RPD	**6%**	**13%**	**1%**		**4%**	**5%**	**8%**
10/12/2009	WA316	WA316	1.82	0.66	1.11	0.00 U	0.39	1.82	1.31
10/12/2009	WA316	WA316b	1.73	0.60	1.28	0.00 U	0.35	1.71	1.23
		RPD	**5%**	**10%**	**14%**		**12%**	**6%**	**6%**
9/22/2009	WA309	WA309	0.00 U	0.22	0.44	0.00 U	0.11	0.00 U	0.59
9/22/2009	WA309	WA309b	0.00 U	0.21	0.48	0.00 U	0.11	0.00 U	0.57
		RPD		**6%**	**8%**		**2%**		**3%**
9/16/2009	WA301	WA301	0.00 U	0.12	0.27	0.00 U	0.10	0.00 U	0.44
9/16/2009	WA301	WA301b	0.00 U	0.13	0.28	0.00 U	0.09	0.00 U	0.41
		RPD		**3%**	**5%**		**11%**		**7%**
5/26/2010	WA340	WA340	6.02	7.02	6.35	8.41	6.30	7.64	5.94
5/26/2010	WA340	WA340b	5.76	6.95	6.21	8.26	6.06	7.52	5.86
		RPD	**5%**	**1%**	**2%**	**2%**	**4%**	**2%**	**1%**
5/28/2010	WA_Jar Wash	WA_Jar Wash	0.00 U	0.57	0.21	0.00 U	1.34	1.05	0.69
5/28/2010	WA_Jar Wash	WA_Jar Washb	0.00 U	0.56	0.19	0.00 U	1.33	1.05	0.72
		RPD		**1%**	**8%**		**1%**	**0%**	**5%**
7/3/2009	WA288	WA288	0.00 U	0.28	0.53	0.00 U	0.17	0.88	0.61
7/3/2009	WA288	WA288b	0.00 U	0.28	0.52	0.00 U	0.15	0.84	0.58
		RPD		**1%**	**1%**		**9%**	**5%**	**4%**
6/26/2009	WA282	WA282	0.00 U	0.23	0.40	0.00 U	0.16	0.97	0.72
6/26/2009	WA282	WA282b	0.00 U	0.21	0.39	0.00 U	0.16	0.85	0.70

Extraction Date	Sample ID	Batch ID	PCB 101	PCB 105	PCB 118	PCB 126	PCB 128	PCB 138	PCB 153
		MDL (ng)	*0.95*	*0.01*	*0.01*	*7.64*	*0.01*	*0.79*	*0.01*
		RPD		**12%**	**4%**		**1%**	**14%**	**2%**
6/3/2009	WA274	WA274	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.13
6/3/2009	WA274	WA274b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.12
		RPD							**6%**
2/12/2009	WA_UD0212	WA_UD0212	1.98	1.58	0.79	0.00 U	0.69	2.89	2.72
2/12/2009	WA_UD0212	WA_UD0212b	2.05	1.56	0.79	0.00 U	0.69	2.92	2.74
		RPD	**3%**	**1%**	**0%**		**1%**	**1%**	**1%**
4/15/2009	WA240	WA240	2.45	0.79	3.78	0.00 U	0.52	2.55	4.39
4/15/2009	WA240	WA240b	2.37	0.81	3.68	0.00 U	0.58	2.64	4.22
		RPD	**3%**	**3%**	**3%**		**12%**	**4%**	**4%**
4/8/2009	WA229	WA229	1.01	0.31	0.81	0.00 U	0.16	0.89	1.03
4/8/2009	WA229	WA229b	0.95	0.28	0.64	0.00 U	0.13	0.90	1.00
		RPD	**6%**	**11%**	**23%**		**21%**	**1%**	**3%**
5/31/2009	WA267	WA267	0.00 U	0.23	0.59	0.00 U	0.11	0.00 U	0.61
5/31/2009	WA267	WA267b	0.00 U	0.21	0.48	0.00 U	0.11	0.00 U	0.63
		RPD		**13%**	**20%**		**1%**		**2%**
2/19/2009	WA225	WA225	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2/19/2009	WA225	WA225b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
		RPD							
2/12/2009	WA212	WA212	0.00 U	0.44	1.08	0.00 U	0.21	1.17	0.84
2/12/2009	WA212	WA212b	0.00 U	0.44	1.02	0.00 U	0.22	1.19	0.92
		RPD		**0%**	**6%**		**1%**	**1%**	**8%**
2/9/2009	WA203	WA203	1.17	0.55	0.90	0.00 U	0.28	1.42	0.91
2/9/2009	WA203	WA203b	1.19	0.56	0.96	0.00 U	0.29	1.41	0.91
		RPD	**1%**	**2%**	**7%**		**4%**	**1%**	**0%**

Extraction Date	Sample ID	Batch ID	PCB 170	PCB 180	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
	MDL (ng)		*0.01*	*0.01*	*0.01*	*0.01*	*0.46*	*0.01*	*0.01*
Procedural Blanks (ng)									
01/26/09	WA_BLK0126		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/04/09	WA_BLK0204		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/09/09	WA_BLK0209		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/12/09	WA_BLK0212		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
02/19/09	WA_BLK0219		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/16/09	WA_BLK0516		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/23/09	WA_BLK0523		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA_BLK0531		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA_BLK0603		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/26/09	WA_BLK0626		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
07/03/09	WA_BLK0703		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
09/16/09	WA_BLK0916		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
09/22/09	WA_BLK0922		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
10/12/09	WA_BLK1012		0.00 U	0.08	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
10/27/09	WA_BLK1027		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
11/03/09	WA_BLK1103		0.00 U	0.00 U	0.00 U	0.00 U	0.61	0.00 U	0.00 U
5/26/2010	BLK052610		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
SRM 1649 Results (ng/g)									
01/26/09	WA_UD0126		25.37	45.59	30.17	10.57	19.32	16.05	7.54
02/04/09	WA_UD0204		28.95	53.98	35.89	10.19	21.25	17.84	8.09
02/09/09	WA_UD0209		27.27	50.44	33.25	9.45	19.69	15.75	8.18
02/12/09	WA_UD0212		24.90	43.81	28.49	8.72	16.00	14.84	9.16
02/19/09	WA_UD0219		26.66	45.09	30.04	8.41	17.96	14.49	8.68
04/08/09	WA_UD0408		24.50	46.00	30.33	8.36	18.53	15.30	7.95
04/15/09	WA_UD0415		24.26	45.47	30.12	8.94	18.09	15.80	9.03
05/23/09	WA_UD0523		26.62	46.19	30.28	9.155	20.48	13.73	8.40
05/31/09	WA_UD0531		27.41	48.25	31.00	8.61	19.05	13.12	7.85
06/03/09	WA_UD0603		24.76	46.97	32.58	9.08	19.37	13.59	9.18
06/26/09	WA_UD0626		29.41	58.01	40.58	10.83	23.10	15.17	11.16
07/03/09	WA_UD0703		28.15	52.90	36.93	10.93	21.00	14.51	10.55
09/16/09	WA_UD0916		28.44	53.55	31.40	8.63	20.48	12.27	12.06
09/22/09	WA_UD0922		26.36	55.59	38.28	9.93	27.51	13.85	9.35
10/12/09	WA_UD1012		26.90	49.22	33.03	9.20	24.82	13.68	8.53
10/27/09	WA_UD1027		25.60	50.45	34.99	9.75	20.98	13.50	10.75
11/03/09	WA_UD1103		43.09	82.35	49.81	14.86	33.99	23.40	14.34
Field GFF+SPE Blank (QC) (ng/filter)									
04/08/09	WA232		0.00 U	0.16	0.38	0.00 U	0.00 U	0.00 U	0.00 U
04/15/09	WA235		0.00 U	0.00 U	0.18	0.00 U	0.00 U	0.00 U	0.00 U
04/15/09	WA239		0.00 U	0.06	0.17	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA295		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
06/03/09	WA296		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA297		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
05/31/09	WA298		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U

Extraction Date	Sample ID	Batch ID	PCB 170	PCB 180	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
	MDL (ng)		*0.01*	*0.01*	*0.01*	*0.01*	*0.46*	*0.01*	*0.01*
Field Efficiency Test Using Rain Water (ng/filte									
5/26/2010	WA346_BLK (no spike)		0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
5/26/2010	WA340_SPK		6.13	6.11	5.33	6.66	5.68	7.42	7.01
	Spike Amount		20.00	20.00	20.00	20.00	20.00	20.00	20.00
	Recovery		**31%**	**31%**	**27%**	**33%**	**28%**	**37%**	**35%**
5/28/2010	WA_Jar Wash		2.20	1.69	1.61	3.25	2.83	3.62	3.69
	Recovery		**11%**	**8%**	**8%**	**16%**	**14%**	**18%**	**18%**
	Corrected Recovery		34%	33%	29%	40%	33%	45%	43%
Duplicate analysis (selected samples) (ng/filter)									
1/26/2009	WA181	WA181	0.17	0.24	0.17	0.00 U	0.00 U	0.00 U	0.00 U
1/26/2009	WA181	WA181b	0.18	0.24	0.17	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**5%**	**3%**	**3%**				
2/4/2009	WA183	WA183	0.00 U	0.00 U	0.00 U	0.23	0.00 U	0.00 U	0.00 U
2/4/2009	WA183	WA183b	0.00 U	0.00 U	0.00 U	0.26	0.00 U	0.00 U	0.00 U
		RPD				**11%**			
5/23/2009	WA256	WA256	0.10	0.23	0.28	0.00 U	0.00 U	0.00 U	0.00 U
5/23/2009	WA256	WA256b	0.13	0.22	0.27	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**19%**	**5%**	**2%**				
4/15/2009	WA243	WA243	0.13	0.14	0.28	0.00 U	0.00 U	0.00 U	0.00 U
4/15/2009	WA243	WA243b	0.11	0.20	0.27	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**22%**	**34%**	**4%**				
11/3/2009	WA331	WA331	0.54	1.03	0.74	0.00 U	0.66	0.00 U	0.00 U
11/3/2009	WA331	WA331b	0.54	1.02	0.74	0.00 U	0.70	0.00 U	0.00 U
		RPD	**1%**	**2%**	**0%**		**7%**		
10/27/2009	WA326	WA326	0.28	0.36	0.38	0.11	0.00	0.00 U	0.00 U
10/27/2009	WA326	WA326b	0.24	0.35	0.36	0.13	0.00	0.00 U	0.00 U
		RPD	**15%**	**3%**	**6%**	**11%**			
10/12/2009	WA316	WA316	0.37	0.58	0.43	0.19	0.00 U	0.00 U	0.00 U
10/12/2009	WA316	WA316b	0.29	0.56	0.42	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**23%**	**4%**	**2%**				
9/22/2009	WA309	WA309	0.17	0.28	0.23	0.00 U	0.00 U	0.00 U	0.00 U
9/22/2009	WA309	WA309b	0.14	0.26	0.21	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**20%**	**4%**	**8%**				
9/16/2009	WA301	WA301	0.13	0.27	0.22	0.00 U	0.00 U	0.00 U	0.00 U
9/16/2009	WA301	WA301b	0.12	0.25	0.19	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**6%**	**8%**	**14%**				
5/26/2010	WA340	WA340	6.13	6.11	5.33	6.66	5.68	7.42	7.01
5/26/2010	WA340	WA340b	6.11	6.17	5.28	6.64	5.55	7.48	7.18
		RPD	**0%**	**1%**	**1%**	**0%**	**2%**	**1%**	**2%**
5/28/2010	WA_Jar Wash	WA_Jar Wash	2.20	1.69	1.61	3.25	2.83	3.62	3.69
5/28/2010	WA_Jar Wash	WA_Jar Washb	2.20	1.68	1.61	3.27	2.87	3.66	3.76
		RPD	**0%**	**1%**	**0%**	**1%**	**1%**	**1%**	**2%**
7/3/2009	WA288	WA288	0.19	0.26	0.24	0.00 U	0.00 U	0.00 U	0.00 U
7/3/2009	WA288	WA288b	0.21	0.25	0.23	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**12%**	**2%**	**5%**				
6/26/2009	WA282	WA282	0.26	0.34	0.38	0.00 U	0.46	0.00 U	0.00 U
6/26/2009	WA282	WA282b	0.27	0.36	0.36	0.00 U	0.38 U	0.00 U	0.00 U

Extraction Date	Sample ID	Batch ID	PCB 170	PCB 180	PCB 187	PCB 195	PCB 200	PCB 206	PCB 209
	MDL (ng)		*0.01*	*0.01*	*0.01*	*0.01*	*0.46*	*0.01*	*0.01*
		RPD	**4%**	**6%**	**4%**				
6/3/2009	WA274	WA274	0.00 U	0.10	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
6/3/2009	WA274	WA274b	0.00 U	0.10	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
		RPD		**7%**					
2/12/2009	WA_UD0212	WA_UD0212	1.46	2.56	1.67	0.51	0.94	0.87	0.54
2/12/2009	WA_UD0212	WA_UD0212b	1.44	2.53	1.71	0.49	0.92	0.88	0.42
		RPD	**1%**	**1%**	**3%**	**4%**	**2%**	**2%**	**24%**
4/15/2009	WA240	WA240	0.21	0.40	0.77	0.00 U	0.00 U	0.00 U	0.00 U
4/15/2009	WA240	WA240b	0.18	0.28	0.86	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**18%**	**34%**	**11%**				
4/8/2009	WA229	WA229	0.14	0.00 U	0.30	0.00 U	0.00 U	0.00 U	0.00 U
4/8/2009	WA229	WA229b	0.12	0.00 U	0.29	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**11%**		**3%**				
5/31/2009	WA267	WA267	0.15	0.40	0.41	0.00 U	0.00 U	0.00 U	0.00 U
5/31/2009	WA267	WA267b	0.18	0.41	0.42	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**18%**	**3%**	**2%**				
2/19/2009	WA225	WA225	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
2/19/2009	WA225	WA225b	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U	0.00 U
		RPD							
2/12/2009	WA212	WA212	0.22	0.00 U	0.44	0.00 U	0.00 U	0.00 U	0.10
2/12/2009	WA212	WA212b	0.20	0.00 U	0.43	0.00 U	0.00 U	0.00 U	0.11
		RPD	**7%**		**0%**				**6%**
2/9/2009	WA203	WA203	0.23	0.33	0.26	0.00 U	0.00 U	0.00 U	0.00 U
2/9/2009	WA203	WA203b	0.22	0.31	0.22	0.00 U	0.00 U	0.00 U	0.00 U
		RPD	**1%**	**9%**	**15%**				

Extraction Date	Sample ID	Batch ID	HBB	PCB 103	PCB 198
	MDL (ng)		*%*	*%*	*%*
Procedural Blanks (ng)					
01/26/09	WA_BLK0126		141%	103%	130%
02/04/09	WA_BLK0204		107%	78%	97%
02/09/09	WA_BLK0209		131%	97%	118%
02/12/09	WA_BLK0212		114%	88%	104%
02/19/09	WA_BLK0219		101%	72%	92%
05/16/09	WA_BLK0516		108%	91%	113%
05/23/09	WA_BLK0523		98%	87%	114%
05/31/09	WA_BLK0531		127%	117%	139%
06/03/09	WA_BLK0603		128%	141%	132%
06/26/09	WA_BLK0626		89%	83%	108%
07/03/09	WA_BLK0703		108%	99%	131%
09/16/09	WA_BLK0916		112%	100%	142%
09/22/09	WA_BLK0922		103%	84%	124%
10/12/09	WA_BLK1012		98%	83%	120%
10/27/09	WA_BLK1027		96%	81%	113%
11/03/09	WA_BLK1103		65%	47%	66%
5/26/2010	BLK052610		92%	61%	92%
SRM 1649 Results (ng/g)					
01/26/09	WA_UD0126		91%	87%	91%
02/04/09	WA_UD0204		110%	116%	110%
02/09/09	WA_UD0209		87%	97%	85%
02/12/09	WA_UD0212		114%	118%	120%
02/19/09	WA_UD0219		90%	98%	91%
04/08/09	WA_UD0408		95%	98%	98%
04/15/09	WA_UD0415		104%	112%	109%
05/23/09	WA_UD0523		50%	47%	54%
05/31/09	WA_UD0531		96%	86%	91%
06/03/09	WA_UD0603		121%	110%	115%
06/26/09	WA_UD0626		83%	72%	87%
07/03/09	WA_UD0703		78%	65%	79%
09/16/09	WA_UD0916		94%	75%	108%
09/22/09	WA_UD0922		54%	47%	62%
10/12/09	WA_UD1012		87%	70%	95%
10/27/09	WA_UD1027		96%	80%	107%
11/03/09	WA_UD1103		69%	47%	63%
Field GFF+SPE Blank (QC) (ng/filter)					
04/08/09	WA232		71%	42%	54%
04/15/09	WA235		92%	59%	72%
04/15/09	WA239		79%	64%	80%
06/03/09	WA295		107%	79%	97%
06/03/09	WA296		112%	78%	99%
05/31/09	WA297		104%	68%	83%
05/31/09	WA298		100%	64%	77%

Extraction Date	Sample ID	Batch ID	HBB	PCB 103	PCB 198
	MDL (ng)		*%*	*%*	*%*
Field Efficiency Test Using Rain Water (ng/filte					
5/26/2010	WA346_BLK (no spike)		88%	55%	87%
5/26/2010	WA340_SPK		88%	59%	91%
	Spike Amount				
	Recovery				
5/28/2010	WA_Jar Wash		81%	48%	94%
	Recovery				
	Corrected Recovery				
Duplicate analysis (selected samples) (ng/filter)					
1/26/2009	WA181	WA181	107%	106%	113%
1/26/2009	WA181	WA181b	107%	109%	112%
		RPD			
2/4/2009	WA183	WA183	122%	126%	125%
2/4/2009	WA183	WA183b	116%	123%	123%
		RPD			
5/23/2009	WA256	WA256	88%	67%	86%
5/23/2009	WA256	WA256b	87%	68%	88%
		RPD			
4/15/2009	WA243	WA243	79%	54%	71%
4/15/2009	WA243	WA243b	78%	58%	75%
		RPD			
11/3/2009	WA331	WA331	60%	40%	56%
11/3/2009	WA331	WA331b	60%	39%	56%
		RPD			
10/27/2009	WA326	WA326	112%	89%	124%
10/27/2009	WA326	WA326b	113%	83%	119%
		RPD			
10/12/2009	WA316	WA316	87%	72%	103%
10/12/2009	WA316	WA316b	85%	59%	91%
		RPD			
9/22/2009	WA309	WA309	76%	54%	83%
9/22/2009	WA309	WA309b	75%	64%	92%
		RPD			
9/16/2009	WA301	WA301	80%	59%	88%
9/16/2009	WA301	WA301b	76%	62%	91%
		RPD			
5/26/2010	WA340	WA340	88%	59%	91%
5/26/2010	WA340	WA340b	86%	54%	87%
		RPD			
5/28/2010	WA_Jar Wash	WA_Jar Wash	81%	48%	94%
5/28/2010	WA_Jar Wash	WA_Jar Washb	80%	47%	93%
		RPD			
7/3/2009	WA288	WA288	90%	75%	95%
7/3/2009	WA288	WA288b	89%	72%	96%
		RPD			
6/26/2009	WA282	WA282	72%	61%	80%
6/26/2009	WA282	WA282b	72%	56%	76%

Extraction Date	Sample ID	Batch ID	HBB	PCB 103	PCB 198
	MDL (ng)		*%*	*%*	*%*
		RPD			
6/3/2009	WA274	WA274	103%	97%	100%
6/3/2009	WA274	WA274b	103%	98%	102%
		RPD			
2/12/2009	WA_UD0212	WA_UD0212	114%	118%	120%
2/12/2009	WA_UD0212	WA_UD0212b	112%	113%	116%
		RPD			
4/15/2009	WA240	WA240	107%	74%	89%
4/15/2009	WA240	WA240b	107%	74%	92%
		RPD			
4/8/2009	WA229	WA229	90%	75%	83%
4/8/2009	WA229	WA229b	90%	75%	85%
		RPD			
5/31/2009	WA267	WA267	106%	92%	101%
5/31/2009	WA267	WA267b	106%	90%	101%
		RPD			
2/19/2009	WA225	WA225	83%	88%	86%
2/19/2009	WA225	WA225b	83%	87%	86%
		RPD			
2/12/2009	WA212	WA212	119%	117%	118%
2/12/2009	WA212	WA212b	117%	112%	115%
		RPD			
2/9/2009	WA203	WA203	108%	109%	108%
2/9/2009	WA203	WA203b	108%	112%	109%
		RPD			