

Table 4-5 - Comparison of PCBs in Water
First MNR Report
Palos Verdes Shelf (OU 5 of the Montrose Chemical Corp. Superfund Site)
Los Angeles County, California

Nominal sample depth (m)		Near-surface (-5 m)		Mid-column (~1/2 total depth)			Near-bottom (+5 m)				Bottom (+2 m)		Bottom (+1 m)
Sample type		PED	Grab	Pump	PED	Grab	Pump	PED	Grab		Pump	Grab	Pump
Location	Total Depth (m)	2013	2015	1997	2013	2015	1997	2010	2013	2015	1997	2015	1997
BA1C	60	13	23		46	46		47	140	48		46	
BA3C	60	20	13 (19)		50	52		NA	93	28		28	310
BA4C	60	17	24		38	33		100	310	50		170	
BA5C	60	18	19		69	24		69	140	76		110 (140)	360
BA5DC	40	23	20		39	14		66	85	53		120 (110)	
BA6B	150		18			22				50			260
BA6C	60		43	110		65	445			94	455		550
BA6DC	40		19			15				140			
BA6D	30												410
BA7C	60	13	92		36	190		NA	130	27		5.2	420
BA7DC	40	15	11		24	58		51	62	100		88 (87)*	
BA8C	60	NA	3.8		31	24		49	27	63		39 (25)	
BA8DC	40	10	16		13	110		45	72	80		74	
BA9C	60	NA	12		13	41		21	32	25		31	160
BA9DC	40	12	42		13	70		31	24	49		7.4 (8.6)	
W1	60	4.6	6.5		16	29			26	16		11	
OC	60												170
W2	200	4.4	25		7.3	40			30	57		48	
W3	200	5.8	27		8.3	36			52	120		150	
W4	200	4.1	41		8.5	29			38	78		5.1	
W5	60	NA	5.0		NA	13			NA	3.9 (3.9)		15	
T11	60	1.5	1.3		1.0	6.8		4.0	2.1	0.52		0.51	

Abbreviations

AWQC - Ambient Water Quality Criteria
IROD - Interim Record of Decision
m - meters
MNR - monitored natural recovery
NA - not available
o,p - ortho or para position of chlorine on phenyl groups
PCB - polychlorinated biphenyl
PED - polyethylene device
pg/L - picograms per liter
PRC - performance reference compound
SPME - solid-phase microextraction

Notes

- Analytical results for PCBs are in **picograms per liter (pg/L)**, parts per quadrillion).
- Concentrations of PCBs are summations of various congener lists (see Note 5).
- Results in parentheses (140) are replicate sample results. Parentheses with an asterisk (87)* are the higher of two triplicate results.
- Shaded cells show Total PCBs greater than the IROD AWQC (human health) of 0.064 nanograms per liter (ng/L) = 64 pg/L. The protectiveness of the 2009 IROD PCBs limits may be re-evaluated at the next 5-year review.
- In calculating summations of Total PCBs, **non-detects were assumed to have a value of zero**.
PED results include 44 PCB congeners (not including PCB 31, 195, 203; including PCB 200), and were PRC adjusted.
Grab results include 46 PCB congeners (not including PCB 200), adjusted with labeled isotopic standards.
Pump results include 27 PCB congeners; XAD-II resin column spiked by lab with labeled surrogates.
- Pumped samples were collected via tubing from selected depths; minimum sample volumes were 1,100 liters; samples were filtered; results were derived for both the dissolved-phase (filtrate) and the filter residue.

Sampling Events

1997 - Average of dissolved winter and summer sampling results from *In Situ Measurements of Chlorinated Hydrocarbons in the Water Column off the Palos Verdes Peninsula, California* (Zeng, 1999).
2010 - *Passive sampling to measure background dissolved persistent organic pollutant concentrations in the water column of the Palos Verdes Shelf Superfund Site* (Fernandez et al., 2012). Results were recalculated using updated PED-water partitioning coefficients (K_{pew}) derived in the 2013 study (Appendix D of this report).
2013 - *Palos Verdes Shelf Water Column Passive Samplers Deployment: Data Summary* (Appendix D of this report).
2015 - High resolution grab sampling