

**SAMPLE RECEIPT FORM / CHEMICAL ANALYSIS FORM**

FILE #: PR222212

CLIENT: Liberty Lake Sewer and Water Dist.  
22510 E. Mission Avenue  
Liberty Lake, WA 99019  
USA

Phone: (509) 370-1453  
Email: gsattler@libertylake.org

RECEIVED BY: C. Lier  
CONDITION: Okay, 12.4°C

DATE/TIME: July 20, 2022 (11:30 a.m.)

# of Containers	Sample Type	Sample (Client Codes)	Lab Codes	Test Requested
1	Water	EFFLUENT	PR222212	209 PCB, PBDE
1	Water	INFLUENT	PR222213	PBDE

STORAGE: Stored at 4°C.

ANALYTES: HRGC/HRMS analysis for polychlorinated biphenyls (209 congener PCB), and polybrominated diphenylethers (PBDE).

SPECIAL INSTRUCTIONS: None.

**METHODOLOGY**

Reference Method: PCB: SOP LAB02; EPA Method 1668C  
PBDE: SOP LAB06; EPA Method 1614

Data summarized in Data Report attached.

Report sent to: Greg Sattler

Date: August 23, 2022

Comments: Results relate only to samples as received.

The following flags or qualifiers have been used with this data set:

B: sample concentration is &lt;5x concentration found in the blank

U: not detected at the concentration listed

J: sample concentration is less than lowest point on calibration curve

N: not detected due to incorrect ion ratio. Concentration report is EMPC.

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David Hope P.Chem., CEO

# DATA REPORT

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** EFFLUENT  
**PRL ID:** PR222212

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112205

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
2-MoCB	PCB-001	2051-60-7	0.3	0.3	UJ	12.5
3-MoCB	PCB-002	2051-61-8	0.3	0.3	UJ	12.5
4-MoCB	PCB-003	2051-62-9	24.5	0.3		12.5
2,6-DiCB	PCB-010	33146-45-1	2.1	2.1	UJ	12.5
2,2'-DiCB	PCB-004	13029-08-8	2.9	2.9	UJ	12.5
2,5-DiCB	PCB-009	34883-39-1	2	2	UJ	12.5
2,4-DiCB	PCB-007	33284-50-3	1.8	1.8	UJ	12.5
2,3'-DiCB	PCB-006	25569-80-6	2	2	UJ	12.5
2,3/2,4'-DiCB	PCB-005/008		1.9	1.9	UJ	12.5
3,5-DiCB	PCB-014	34883-41-5	2	2	UJ	12.5
3,3'-DiCB	PCB-011	2050-67-1	50.6	2		12.5
3,4/3,4'-DiCB	PCB-012/013		1.9	1.9	UJ	12.5
4,4'-DiCB	PCB-015	2050-68-2	1.7	1.7	UJ	12.5
2,2',6-TrCB	PCB-019	38444-73-4	1.2	1.2	UJ	12.5
2,4,6-TrCB	PCB-030	35693-92-6	0.8	0.8	UJ	12.5
2,2',5-TrCB	PCB-018	37680-65-2	1.7	1.7	UJ	12.5
2,2',4-TrCB	PCB-017	37680-66-3	1.2	1.2	UJ	12.5
2,3,6-TrCB	PCB-024	55702-45-9	0.8	0.8	UJ	12.5
2,3',6-TrCB	PCB-027	38444-76-7	1.2	1.2	UJ	12.5
2,4',6-TrCB	PCB-032	38444-77-8	0.3	0.3	UJ	12.5
2,2',3-TrCB	PCB-016	38444-78-9	0.3	0.3	UJ	12.5
2,3,5-TrCB	PCB-023	55720-44-0	0.2	0.2	UJ	12.5
2,3',5'-TrCB	PCB-034	37680-68-5	0.2	0.2	UJ	12.5
2,4,5-TrCB	PCB-029	15862-07-4	0.2	0.2	UJ	12.5
2,3',5-TrCB	PCB-026	38444-81-4	1.92	0.2	NJ	12.5
2,3',4-TrCB	PCB-025	55712-37-3	0.2	0.2	UJ	12.5
2,4',5-TrCB	PCB-031	16606-02-3	4.42	0.2	NJ	12.5
2,4,4'-TrCB	PCB-028	7012-37-5	0.1	0.1	UJ	12.5
2,3,4-TrCB	PCB-021	55702-46-0	0.2	0.2	UJ	12.5
	PCB-020/033		0.2	0.2	UJ	12.5
2,3,4'-TrCB	PCB-022	38444-85-8	0.1	0.1	UJ	12.5
3,3',5-TrCB	PCB-036	38444-87-0	0.2	0.2	UJ	12.5
3,4',5-TrCB	PCB-039	38444-88-1	0.1	0.1	UJ	12.5
3,4,5-TrCB	PCB-038	53555-66-1	0.2	0.2	UJ	12.5
3,3',4-TrCB	PCB-035	37680-69-6	0.2	0.2	UJ	12.5
3,4,4'-TrCB	PCB-037	38444-90-5	0.2	0.2	UJ	12.5
2,2',6,6'-TeCB	PCB-054	15968-05-5	0.1	0.1	UJ	12.5
2,2',4,6'-TeCB	PCB-050	62796-65-0	0.1	0.1	UJ	12.5
2,2',5,6'-TeCB	PCB-053	41464-41-9	0.1	0.1	UJ	12.5
2,2',4,6'-TeCB	PCB-051	68194-04-7	0.1	0.1	UJ	12.5
2,2',3,6'-TeCB	PCB-045	70362-45-7	0.1	0.1	UJ	12.5
2,2',3,6'-TeCB	PCB-046	41464-47-5	0.1	0.1	UJ	12.5
	PCB-052/069		1.61	0.1	NJ	12.5
2,3',5',6'-TeCB	PCB-073	74338-23-1	0.1	0.1	UJ	12.5
	PCB-043/049		0.1	0.1	UJ	12.5
	PCB-065/075		0.1	0.1	UJ	12.5
	PCB-047/048		0.84	0.1	NJ	12.5
2,3,4,6'-TeCB	PCB-062	54230-22-7	0.1	0.1	UJ	12.5
2,2',3,5'-TeCB	PCB-044	41464-39-5	0.1	0.1	UJ	12.5
2,3,3',6'-TeCB	PCB-059	74472-33-6	0.1	0.1	UJ	12.5
2,2',3,4'-TeCB	PCB-042	36559-22-5	0.1	0.1	UJ	12.5
2,3',5,5'-TeCB	PCB-072	41464-42-0	0.1	0.1	UJ	12.5

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IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
	PCB-064/071		0.1	0.1	UJ	12.5
2,2',3,4-TeCB	PCB-041	52663-59-9	0.1	0.1	UJ	12.5
2,3',4,5'-TeCB	PCB-068	73575-52-7	0.1	0.1	UJ	12.5
2,2',3,3'-TeCB	PCB-040	38444-93-8	0.1	0.1	UJ	12.5
2,3,3',5-TeCB	PCB-057	70424-67-8	0.1	0.1	UJ	12.5
2,3',4,5-TeCB	PCB-067	73575-53-8	0.1	0.1	UJ	12.5
2,3,4',5-TeCB	PCB-058/063	74472-34-7	0.1	0.1	UJ	12.5
2,3,4,5-TeCB	PCB-061	33284-53-6	0.1	0.1	UJ	12.5
2,4,4',5-TeCB	PCB-074	32690-93-0	0.1	0.1	UJ	12.5
2,3',4',5-TeCB	PCB-070	32598-11-1	6.35	0.1	J	12.5
2,3,3',4-TeCB	PCB-055	74338-24-2	0.1	0.1	UJ	12.5
	PCB-066/080		0.1	0.1	UJ	12.5
2,3',4',5'-TeCB	PCB-076	70362-48-0	0.1	0.1	UJ	12.5
2,3,4,4'-TeCB	PCB-060	33025-41-1	0.1	0.1	UJ	12.5
2,3,3',4'-TeCB	PCB-056	41464-43-1	0.1	0.1	UJ	12.5
3,3',4,5'-TeCB	PCB-079	41464-48-6	0.1	0.1	UJ	12.5
3,3',4,5-TeCB	PCB-078	70362-49-1	0.1	0.1	UJ	12.5
3,4,4',5-TeCB	PCB-081	70362-50-4	0.1	0.1	UJ	12.5
3,3',4,4'-TeCB	PCB-077	32598-13-3	0.1	0.1	UJ	12.5
2,2',4,6,6'-PeCB	PCB-104	56558-16-8	0.6	0.6	UJ	12.5
2,2',3,6,6'-PeCB	PCB-096	73575-54-9	0.8	0.8	UJ	12.5
2,2',4,5',6-PeCB	PCB-103	60145-21-3	0.9	0.9	UJ	12.5
2,2',4,4',6-PeCB	PCB-100	39485-83-1	0.7	0.7	UJ	12.5
2,2',3,5,6'-PeCB	PCB-094	73575-55-0	0.9	0.9	UJ	12.5
	PCB-093/095/098/102		0.9	0.9	UJ	12.5
2,2',3,4,6-PeCB	PCB-088	55215-17-3	1.1	1.1	UJ	12.5
2,2',3,4',6-PeCB	PCB-091	68194-05-8	0.8	0.8	UJ	12.5
2,3',4,5',6-PeCB	PCB-121	56558-18-0	0.6	0.6	UJ	12.5
	PCB-084/092		1	1	UJ	12.5
2,2',3,4,6'-PeCB	PCB-089	73575-57-2	1.1	1.1	UJ	12.5
2,2',3,4',5-PeCB	PCB-090	68194-07-0	0.8	0.8	UJ	12.5
2,2',4,5,5'-PeCB	PCB-101	37680-73-2	0.7	0.7	UJ	12.5
2,3,3',5',6-PeCB	PCB-113	68194-10-5	0.8	0.8	UJ	12.5
2,2',4,4',5-PeCB	PCB-099	38380-01-7	0.7	0.7	UJ	12.5
	PCB-112/119		0.7	0.7	UJ	12.5
2,2',3,3',5-PeCB	PCB-083	60145-20-2	1.1	1.1	UJ	12.5
2,3,3',4,6-PeCB	PCB-109	74472-35-8	0.7	0.7	UJ	12.5
	PCB-086-097/117		0.8	0.8	UJ	12.5
	PCB-116/125		0.6	0.6	UJ	12.5
	PCB-087/115		0.8	0.8	UJ	12.5
2,3,3',5,5'-PeCB	PCB-111	39635-32-0	0.6	0.6	UJ	12.5
2,2',3,4,4'-PeCB	PCB-085	65510-45-4	1	1	UJ	12.5
	PCB-110/120		0.7	0.7	UJ	12.5
2,2',3,3',4-PeCB	PCB-082	52663-62-4	1.1	1.1	UJ	12.5
2,3',4',5,5'-PeCB	PCB-124	70424-70-3	0.2	0.2	UJ	12.5
	PCB-107/108		0.2	0.2	UJ	12.5
2,3',4,4',5'-PeCB	PCB-123	65510-44-3	0.2	0.2	UJ	12.5
2,3,3',4,5-PeCB	PCB-106	70424-69-0	0.2	0.2	UJ	12.5
2,3',4,4',5-PeCB	PCB-118	31508-00-6	0.2	0.2	UJ	12.5
2,3,4,4',5-PeCB	PCB-114	74472-37-0	0.2	0.2	UJ	12.5
2,3,3',4',5'-PeCB	PCB-122	76842-07-4	0.3	0.3	UJ	12.5
2,3,3',4,4'-PeCB	PCB-105	32598-14-4	0.2	0.2	UJ	12.5

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IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
3,3',4,5,5'-PeCB	PCB-127	39635-33-1	0.2	0.2	UJ	12.5
3,3',4,4',5'-PeCB	PCB-126	57465-28-8	0.2	0.2	UJ	12.5
2,2',4,4',6,6'-HxCB	PCB-155	33979-03-2	0.1	0.1	UJ	12.5
2,2',3,4',6,6'-HxCB	PCB-150	68194-08-1	0.1	0.1	UJ	12.5
2,2',3,5,6,6'-HxCB	PCB-152	68194-09-2	0.1	0.1	UJ	12.5
2,2',3,4,6,6'-HxCB	PCB-145	74472-40-5	0.1	0.1	UJ	12.5
2,2',3,3',6,6'-HxCB	PCB-136	38411-22-2	0.1	0.1	UJ	12.5
2,2',3,4',5,6'-HxCB	PCB-148	74472-41-6	0.1	0.1	UJ	12.5
2,2',4,4',5,6'-HxCB	PCB-154	60145-22-4	0.1	0.1	UJ	12.5
2,2',3,5,5',6'-HxCB	PCB-151	52663-63-5	0.1	0.1	UJ	12.5
2,2',3,3',5,6'-HxCB	PCB-135	52744-13-5	0.1	0.1	UJ	12.5
2,2',3,4,5',6'-HxCB	PCB-144	68194-14-9	0.1	0.1	UJ	12.5
2,2',3,4',5,6'-HxCB	PCB-147	68194-13-8	0.1	0.1	UJ	12.5
	PCB-139/149		0.1	0.1	UJ	12.5
2,2',3,4,4',6'-HxCB	PCB-140	59291-64-4	0.1	0.1	UJ	12.5
2,2',3,4,5,6'-HxCB	PCB-143	68194-15-0	0.1	0.1	UJ	12.5
2,2',3,3',5,6'-HxCB	PCB-134	52704-70-8	0.1	0.1	UJ	12.5
2,2',3,4,5,6'-HxCB	PCB-142	41411-61-4	0.1	0.1	UJ	12.5
2,2',3,3',5,5'-HxCB	PCB-133	35694-04-3	0.1	0.1	UJ	12.5
2,2',3,3',4,6'-HxCB	PCB-131	61798-70-7	0.1	0.1	UJ	12.5
2,3,3',5,5',6'-HxCB	PCB-165	74472-46-1	0.1	0.1	UJ	12.5
	PCB-132/146		0.1	0.1	UJ	12.5
2,3,3',4,5',6'-HxCB	PCB-161	74472-43-8	0.1	0.1	UJ	12.5
2,2',4,4',5,5'-HxCB	PCB-153	35065-27-1	0.1	0.1	UJ	12.5
2,3',4,4',5',6'-HxCB	PCB-168	59291-65-5	0.1	0.1	UJ	12.5
2,2',3,4,5,5'-HxCB	PCB-141	52712-04-6	0.1	0.1	UJ	12.5
2,2',3,4,4',5'-HxCB	PCB-137	35694-06-5	0.1	0.1	UJ	12.5
2,2',3,3',4,5'-HxCB	PCB-130	52663-66-8	0.1	0.1	UJ	12.5
	PCB-163/164		0.1	0.1	UJ	12.5
2,2',3,4,4',5'-HxCB	PCB-138	35065-28-2	0.1	0.1	UJ	12.5
2,3,3',4,5,6'-HxCB	PCB-160	41411-62-5	0.1	0.1	UJ	12.5
2,3,3',4,4',6'-HxCB	PCB-158	74472-42-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5'-HxCB	PCB-129	55215-18-4	0.1	0.1	UJ	12.5
2,3,4,4',5,6'-HxCB	PCB-166	41411-63-6	0.1	0.1	UJ	12.5
2,3,3',4,5,5'-HxCB	PCB-159	39635-35-3	0.1	0.1	UJ	12.5
2,2',3,3',4,4'-HxCB	PCB-128	38380-07-3	0.1	0.1	UJ	12.5
2,3,3',4',5,5'-HxCB	PCB-162	39635-34-2	0.1	0.1	UJ	12.5
2,3',4,4',5,5'-HxCB	PCB-167	52663-72-6	0.1	0.1	UJ	12.5
2,3,3',4,4',5'-HxCB	PCB-156	38380-08-4	0.1	0.1	UJ	12.5
2,3,3',4,4',5'-HxCB	PCB-157	69782-90-7	0.1	0.1	UJ	12.5
3,3',4,4',5,5'-HxCB	PCB-169	32774-16-6	0.1	0.1	UJ	12.5
2,2',3,4',5,6,6'-HpCB	PCB-188	74487-85-7	0.1	0.1	UJ	12.5
2,2',3,4,4',6,6'-HpCB	PCB-184	74472-48-3	0.1	0.1	UJ	12.5
2,2',3,3',5,6,6'-HpCB	PCB-179	52663-64-6	0.1	0.1	UJ	12.5
2,2',3,3',4,6,6'-HpCB	PCB-176	52663-65-7	0.1	0.1	UJ	12.5
2,2',3,4,5,6,6'-HpCB	PCB-186	74472-49-4	0.1	0.1	UJ	12.5
2,2',3,3',5,5',6'-HpCB	PCB-178	52663-67-9	0.1	0.1	UJ	12.5
2,2',3,3',4,5',6'-HpCB	PCB-175	40186-70-7	0.1	0.1	UJ	12.5
	PCB-182/187		0.1	0.1	UJ	12.5
2,2',3,4,4',5',6'-HpCB	PCB-183	52663-69-1	0.1	0.1	UJ	12.5
2,2',3,4,5,5',6'-HpCB	PCB-185	52712-05-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6'-HpCB	PCB-174	38411-25-5	0.1	0.1	UJ	12.5

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IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
2,2',3,4,4',5,6-HpCB	PCB-181	74472-47-2	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6'-HpCB	PCB-177	52663-70-4	0.1	0.1	UJ	12.5
2,2',3,3',4,4',6-HpCB	PCB-171	52663-71-5	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6-HpCB	PCB-173	68194-16-1	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6-HpCB	PCB-172	52663-74-8	0.1	0.1	UJ	12.5
2,3,3',4,5,5',6-HpCB	PCB-192	74472-51-8	0.1	0.1	UJ	12.5
2,2',3,4,4',5,5',6-HpCB	PCB-180	35065-29-3	0.1	0.1	UJ	12.5
2,3,3',4',5,5',6-HpCB	PCB-193	69782-91-8	0.1	0.1	UJ	12.5
2,3,3',4,4',5',6-HpCB	PCB-191	74472-50-7	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5-HpCB	PCB-170	35065-30-6	0.1	0.1	UJ	12.5
2,3,3',4,4',5,6-HpCB	PCB-190	41411-64-7	0.1	0.1	UJ	12.5
2,3,3',4,4',5,5',6-HpCB	PCB-189	39635-31-9	0.1	0.1	UJ	12.5
2,2',3,3',5,5',6,6'-OoCB	PCB-202	2136-99-4	0.1	0.1	UJ	12.5
2,2',3,3',4,5',6,6'-OoCB	PCB-201	40186-71-8	0.1	0.1	UJ	12.5
2,2',3,4,4',5,6,6'-OoCB	PCB-204	74472-52-9	0.1	0.1	UJ	12.5
2,2',3,3',4,4',6,6'-OoCB	PCB-197	33091-17-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6,6'-OoCB	PCB-200	52663-73-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6-OoCB	PCB-198	68194-17-2	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6'-OoCB	PCB-199	52663-75-9	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6'-OoCB	PCB-196	42740-50-1	0.1	0.1	UJ	12.5
2,2',3,4,4',5,5',6-OoCB	PCB-203	52663-76-0	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6-OoCB	PCB-195	52663-78-2	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,5'-OoCB	PCB-194	35694-08-7	0.1	0.1	UJ	12.5
2,3,3',4,4',5,5',6-OoCB	PCB-205	74472-53-0	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6,6'-NoCB	PCB-208	52663-77-1	1.5	1.5	UJ	12.5
2,2',3,3',4,4',5,6,6'-NoCB	PCB-207	52663-79-3	1.4	1.4	UJ	12.5
2,2',3,3',4,4',5,5',6-NoCB	PCB-206	40186-72-9	1.7	1.7	UJ	12.5
2,2',3,3',4,4',5,5',6,6'-DeCB	PCB-209	2051-24-3	0.1	0.1	UJ	12.5

Homologs	# of Congeners			
Monochlorobiphenyls	3	24.5	0.3	
Dichlorobiphenyls	12	50.6	1.7	
Trichlorobiphenyls	24	0.1	0.1	UJ
Tetrachlorobiphenyls	42	6.35	0.1	J
Pentachlorobiphenyls	46	0.2	0.2	UJ
Hexachlorobiphenyls	42	0.1	0.1	UJ
Heptachlorobiphenyls	24	0.1	0.1	UJ
Octachlorobiphenyls	12	0.1	0.1	UJ
Nonachlorobiphenyls	3	1.4	1.4	UJ
Decachlorobiphenyl	1	0.1	0.1	UJ
<b>Total PCB</b>		<b>81.5</b>	<b>0.1</b>	

# DATA REPORT

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** EFFLUENT  
**PRL ID:** PR222212

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112205

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
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Surrogate Recoveries			Acceptance	
Chemical Name	IUPAC #	%	Min	Max
<sup>13</sup> C <sub>12</sub> -2-MoCB	1L	40	5	145
<sup>13</sup> C <sub>12</sub> -4-MoCB	3L	50	5	145
<sup>13</sup> C <sub>12</sub> -2,2'-DiCB	4L	38	5	145
<sup>13</sup> C <sub>12</sub> -4,4'-DiCB	15L	56	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6'-TrCB	19L	47	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4'-TrCB	37L	68	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6,6'-TeCB	54L	45	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4',5'-TeCB	81L	68	5	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeCB	77L	75	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,6,6'-PeCB	104L	50	10	145
<sup>13</sup> C <sub>12</sub> -2',3,4,4',5'-PeCB	123L	67	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5'-PeCB	118L	61	10	145
<sup>13</sup> C <sub>12</sub> -2,3,4,4',5'-PeCB	114L	65	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4'-PeCB	105L	76	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5'-PeCB	126L	86	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6,6'-HxCB	155L	52	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5,5'-HxCB	167L	66	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	156L	80	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	157L	79	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxCB	169L	87	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,4',5,6,6'-HpCB	188L	52	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5'-HpCB	189L	77	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6,6'-OoCB	202L	63	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6'-OoCB	205L	73	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4',5,5',6,6'-NoCB	208L	75	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,5',6'-NoCB	206L	72	10	145
<sup>13</sup> C <sub>12</sub> -DeCB	209L	69	10	145
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrCB	28L	66	5	145
<sup>13</sup> C <sub>12</sub> -2,3,3',5,5'-PeCB	111L	61	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6'-HpCB	178L	75	10	145

# QC REPORT - BLANK

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** BLANK  
**PRL ID:** PC220561B

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112204

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
2-MoCB	PCB-001	2051-60-7	0.5	0.5	UJ	12.5
3-MoCB	PCB-002	2051-61-8	0.4	0.4	UJ	12.5
4-MoCB	PCB-003	2051-62-9	0.3	0.3	UJ	12.5
2,6-DiCB	PCB-010	33146-45-1	2.7	2.7	UJ	12.5
2,2'-DiCB	PCB-004	13029-08-8	3.8	3.8	UJ	12.5
2,5-DiCB	PCB-009	34883-39-1	2.7	2.7	UJ	12.5
2,4-DiCB	PCB-007	33284-50-3	2.4	2.4	UJ	12.5
2,3'-DiCB	PCB-006	25569-80-6	2.7	2.7	UJ	12.5
2,3/2,4'-DiCB	PCB-005/008		2.5	2.5	UJ	12.5
3,5-DiCB	PCB-014	34883-41-5	2.7	2.7	UJ	12.5
3,3'-DiCB	PCB-011	2050-67-1	2.7	2.7	UJ	12.5
3,4/3,4'-DiCB	PCB-012/013		2.6	2.6	UJ	12.5
4,4'-DiCB	PCB-015	2050-68-2	2.3	2.3	UJ	12.5
2,2',6-TrCB	PCB-019	38444-73-4	1.2	1.2	UJ	12.5
2,4,6-TrCB	PCB-030	35693-92-6	0.9	0.9	UJ	12.5
2,2',5-TrCB	PCB-018	37680-65-2	1.7	1.7	UJ	12.5
2,2',4-TrCB	PCB-017	37680-66-3	1.3	1.3	UJ	12.5
2,3,6-TrCB	PCB-024	55702-45-9	0.9	0.9	UJ	12.5
2,3',6-TrCB	PCB-027	38444-76-7	1.2	1.2	UJ	12.5
2,4',6-TrCB	PCB-032	38444-77-8	0.3	0.3	UJ	12.5
2,2',3-TrCB	PCB-016	38444-78-9	0.3	0.3	UJ	12.5
2,3,5-TrCB	PCB-023	55720-44-0	0.2	0.2	UJ	12.5
2,3',5'-TrCB	PCB-034	37680-68-5	0.2	0.2	UJ	12.5
2,4,5-TrCB	PCB-029	15862-07-4	0.2	0.2	UJ	12.5
2,3',5-TrCB	PCB-026	38444-81-4	0.2	0.2	UJ	12.5
2,3',4-TrCB	PCB-025	55712-37-3	0.2	0.2	UJ	12.5
2,4',5-TrCB	PCB-031	16606-02-3	0.2	0.2	UJ	12.5
2,4,4'-TrCB	PCB-028	7012-37-5	0.1	0.1	UJ	12.5
2,3,4-TrCB	PCB-021	55702-46-0	0.2	0.2	UJ	12.5
	PCB-020/033		0.2	0.2	UJ	12.5
2,3,4'-TrCB	PCB-022	38444-85-8	0.2	0.2	UJ	12.5
3,3',5-TrCB	PCB-036	38444-87-0	0.2	0.2	UJ	12.5
3,4',5-TrCB	PCB-039	38444-88-1	0.1	0.1	UJ	12.5
3,4,5-TrCB	PCB-038	53555-66-1	0.2	0.2	UJ	12.5
3,3',4-TrCB	PCB-035	37680-69-6	0.2	0.2	UJ	12.5
3,4,4'-TrCB	PCB-037	38444-90-5	0.2	0.2	UJ	12.5
2,2',6,6'-TeCB	PCB-054	15968-05-5	0.1	0.1	UJ	12.5
2,2',4,6'-TeCB	PCB-050	62796-65-0	0.1	0.1	UJ	12.5
2,2',5,6'-TeCB	PCB-053	41464-41-9	0.1	0.1	UJ	12.5
2,2',4,6'-TeCB	PCB-051	68194-04-7	0.1	0.1	UJ	12.5
2,2',3,6'-TeCB	PCB-045	70362-45-7	0.1	0.1	UJ	12.5
2,2',3,6'-TeCB	PCB-046	41464-47-5	0.1	0.1	UJ	12.5
	PCB-052/069		0.1	0.1	UJ	12.5
2,3',5',6'-TeCB	PCB-073	74338-23-1	0.1	0.1	UJ	12.5
	PCB-043/049		0.1	0.1	UJ	12.5
	PCB-065/075		0.1	0.1	UJ	12.5
	PCB-047/048		0.1	0.1	UJ	12.5
2,3,4,6'-TeCB	PCB-062	54230-22-7	0.1	0.1	UJ	12.5
2,2',3,5'-TeCB	PCB-044	41464-39-5	0.1	0.1	UJ	12.5
2,3,3',6'-TeCB	PCB-059	74472-33-6	0.1	0.1	UJ	12.5
2,2',3,4'-TeCB	PCB-042	36559-22-5	0.1	0.1	UJ	12.5
2,3',5,5'-TeCB	PCB-072	41464-42-0	0.1	0.1	UJ	12.5

# QC REPORT - BLANK

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** BLANK  
**PRL ID:** PC220561B

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112204

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
	PCB-064/071		0.1	0.1	UJ	12.5
2,2',3,4-TeCB	PCB-041	52663-59-9	0.1	0.1	UJ	12.5
2,3',4,5'-TeCB	PCB-068	73575-52-7	0.1	0.1	UJ	12.5
2,2',3,3'-TeCB	PCB-040	38444-93-8	0.1	0.1	UJ	12.5
2,3,3',5-TeCB	PCB-057	70424-67-8	0.1	0.1	UJ	12.5
2,3',4,5-TeCB	PCB-067	73575-53-8	0.1	0.1	UJ	12.5
2,3,4',5-TeCB	PCB-058/063	74472-34-7	0.1	0.1	UJ	12.5
2,3,4,5-TeCB	PCB-061	33284-53-6	0.1	0.1	UJ	12.5
2,4,4',5-TeCB	PCB-074	32690-93-0	0.1	0.1	UJ	12.5
2,3',4',5-TeCB	PCB-070	32598-11-1	0.1	0.1	UJ	12.5
2,3,3',4-TeCB	PCB-055	74338-24-2	0.1	0.1	UJ	12.5
	PCB-066/080		0.1	0.1	UJ	12.5
2,3',4',5'-TeCB	PCB-076	70362-48-0	0.1	0.1	UJ	12.5
2,3,4,4'-TeCB	PCB-060	33025-41-1	0.1	0.1	UJ	12.5
2,3,3',4'-TeCB	PCB-056	41464-43-1	0.1	0.1	UJ	12.5
3,3',4,5'-TeCB	PCB-079	41464-48-6	0.1	0.1	UJ	12.5
3,3',4,5-TeCB	PCB-078	70362-49-1	0.1	0.1	UJ	12.5
3,4,4',5-TeCB	PCB-081	70362-50-4	0.1	0.1	UJ	12.5
3,3',4,4'-TeCB	PCB-077	32598-13-3	0.1	0.1	UJ	12.5
2,2',4,6,6'-PeCB	PCB-104	56558-16-8	0.7	0.7	UJ	12.5
2,2',3,6,6'-PeCB	PCB-096	73575-54-9	1	1	UJ	12.5
2,2',4,5',6-PeCB	PCB-103	60145-21-3	1	1	UJ	12.5
2,2',4,4',6-PeCB	PCB-100	39485-83-1	0.9	0.9	UJ	12.5
2,2',3,5,6'-PeCB	PCB-094	73575-55-0	1	1	UJ	12.5
	PCB-093/095/098/102		1.1	1.1	UJ	12.5
2,2',3,4,6-PeCB	PCB-088	55215-17-3	1.3	1.3	UJ	12.5
2,2',3,4',6-PeCB	PCB-091	68194-05-8	0.9	0.9	UJ	12.5
2,3',4,5',6-PeCB	PCB-121	56558-18-0	0.7	0.7	UJ	12.5
	PCB-084/092		1.2	1.2	UJ	12.5
2,2',3,4,6'-PeCB	PCB-089	73575-57-2	1.3	1.3	UJ	12.5
2,2',3,4',5-PeCB	PCB-090	68194-07-0	0.9	0.9	UJ	12.5
2,2',4,5,5'-PeCB	PCB-101	37680-73-2	0.9	0.9	UJ	12.5
2,3,3',5',6-PeCB	PCB-113	68194-10-5	0.9	0.9	UJ	12.5
2,2',4,4',5-PeCB	PCB-099	38380-01-7	0.8	0.8	UJ	12.5
	PCB-112/119		0.8	0.8	UJ	12.5
2,2',3,3',5-PeCB	PCB-083	60145-20-2	1.3	1.3	UJ	12.5
2,3,3',4,6-PeCB	PCB-109	74472-35-8	0.9	0.9	UJ	12.5
	PCB-086-097/117		1	1	UJ	12.5
	PCB-116/125		0.8	0.8	UJ	12.5
	PCB-087/115		0.9	0.9	UJ	12.5
2,3,3',5,5'-PeCB	PCB-111	39635-32-0	0.7	0.7	UJ	12.5
2,2',3,4,4'-PeCB	PCB-085	65510-45-4	1.2	1.2	UJ	12.5
	PCB-110/120		0.8	0.8	UJ	12.5
2,2',3,3',4-PeCB	PCB-082	52663-62-4	1.3	1.3	UJ	12.5
2,3',4',5,5'-PeCB	PCB-124	70424-70-3	0.2	0.2	UJ	12.5
	PCB-107/108		0.2	0.2	UJ	12.5
2,3',4,4',5'-PeCB	PCB-123	65510-44-3	0.2	0.2	UJ	12.5
2,3,3',4,5-PeCB	PCB-106	70424-69-0	0.3	0.3	UJ	12.5
2,3',4,4',5-PeCB	PCB-118	31508-00-6	0.2	0.2	UJ	12.5
2,3,4,4',5-PeCB	PCB-114	74472-37-0	0.2	0.2	UJ	12.5
2,3,3',4',5'-PeCB	PCB-122	76842-07-4	0.3	0.3	UJ	12.5
2,3,3',4,4'-PeCB	PCB-105	32598-14-4	0.2	0.2	UJ	12.5



# QC REPORT - BLANK

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** BLANK  
**PRL ID:** PC220561B

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112204

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
3,3',4,5,5'-PeCB	PCB-127	39635-33-1	0.3	0.3	UJ	12.5
3,3',4,4',5'-PeCB	PCB-126	57465-28-8	0.2	0.2	UJ	12.5
2,2',4,4',6,6'-HxCB	PCB-155	33979-03-2	0.1	0.1	UJ	12.5
2,2',3,4',6,6'-HxCB	PCB-150	68194-08-1	0.1	0.1	UJ	12.5
2,2',3,5,6,6'-HxCB	PCB-152	68194-09-2	0.1	0.1	UJ	12.5
2,2',3,4,6,6'-HxCB	PCB-145	74472-40-5	0.1	0.1	UJ	12.5
2,2',3,3',6,6'-HxCB	PCB-136	38411-22-2	0.1	0.1	UJ	12.5
2,2',3,4',5,6'-HxCB	PCB-148	74472-41-6	0.1	0.1	UJ	12.5
2,2',4,4',5,6'-HxCB	PCB-154	60145-22-4	0.1	0.1	UJ	12.5
2,2',3,5,5',6'-HxCB	PCB-151	52663-63-5	0.1	0.1	UJ	12.5
2,2',3,3',5,6'-HxCB	PCB-135	52744-13-5	0.1	0.1	UJ	12.5
2,2',3,4,5',6'-HxCB	PCB-144	68194-14-9	0.1	0.1	UJ	12.5
2,2',3,4',5,6'-HxCB	PCB-147	68194-13-8	0.1	0.1	UJ	12.5
	PCB-139/149		0.1	0.1	UJ	12.5
2,2',3,4,4',6'-HxCB	PCB-140	59291-64-4	0.1	0.1	UJ	12.5
2,2',3,4,5,6'-HxCB	PCB-143	68194-15-0	0.1	0.1	UJ	12.5
2,2',3,3',5,6'-HxCB	PCB-134	52704-70-8	0.1	0.1	UJ	12.5
2,2',3,4,5,6'-HxCB	PCB-142	41411-61-4	0.1	0.1	UJ	12.5
2,2',3,3',5,5'-HxCB	PCB-133	35694-04-3	0.1	0.1	UJ	12.5
2,2',3,3',4,6'-HxCB	PCB-131	61798-70-7	0.1	0.1	UJ	12.5
2,3,3',5,5',6'-HxCB	PCB-165	74472-46-1	0.1	0.1	UJ	12.5
	PCB-132/146		0.1	0.1	UJ	12.5
2,3,3',4,5',6'-HxCB	PCB-161	74472-43-8	0.1	0.1	UJ	12.5
2,2',4,4',5,5'-HxCB	PCB-153	35065-27-1	0.1	0.1	UJ	12.5
2,3',4,4',5',6'-HxCB	PCB-168	59291-65-5	0.1	0.1	UJ	12.5
2,2',3,4,5,5'-HxCB	PCB-141	52712-04-6	0.1	0.1	UJ	12.5
2,2',3,4,4',5'-HxCB	PCB-137	35694-06-5	0.1	0.1	UJ	12.5
2,2',3,3',4,5'-HxCB	PCB-130	52663-66-8	0.1	0.1	UJ	12.5
	PCB-163/164		0.1	0.1	UJ	12.5
2,2',3,4,4',5'-HxCB	PCB-138	35065-28-2	0.1	0.1	UJ	12.5
2,3,3',4,5,6'-HxCB	PCB-160	41411-62-5	0.1	0.1	UJ	12.5
2,3,3',4,4',6'-HxCB	PCB-158	74472-42-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5'-HxCB	PCB-129	55215-18-4	0.1	0.1	UJ	12.5
2,3,4,4',5,6'-HxCB	PCB-166	41411-63-6	0.1	0.1	UJ	12.5
2,3,3',4,5,5'-HxCB	PCB-159	39635-35-3	0.1	0.1	UJ	12.5
2,2',3,3',4,4'-HxCB	PCB-128	38380-07-3	0.1	0.1	UJ	12.5
2,3,3',4',5,5'-HxCB	PCB-162	39635-34-2	0.1	0.1	UJ	12.5
2,3',4,4',5,5'-HxCB	PCB-167	52663-72-6	0.1	0.1	UJ	12.5
2,3,3',4,4',5'-HxCB	PCB-156	38380-08-4	0.1	0.1	UJ	12.5
2,3,3',4,4',5'-HxCB	PCB-157	69782-90-7	0.1	0.1	UJ	12.5
3,3',4,4',5,5'-HxCB	PCB-169	32774-16-6	0.1	0.1	UJ	12.5
2,2',3,4',5,6,6'-HpCB	PCB-188	74487-85-7	0.1	0.1	UJ	12.5
2,2',3,4,4',6,6'-HpCB	PCB-184	74472-48-3	0.1	0.1	UJ	12.5
2,2',3,3',5,6,6'-HpCB	PCB-179	52663-64-6	0.1	0.1	UJ	12.5
2,2',3,3',4,6,6'-HpCB	PCB-176	52663-65-7	0.1	0.1	UJ	12.5
2,2',3,4,5,6,6'-HpCB	PCB-186	74472-49-4	0.1	0.1	UJ	12.5
2,2',3,3',5,5',6'-HpCB	PCB-178	52663-67-9	0.1	0.1	UJ	12.5
2,2',3,3',4,5',6'-HpCB	PCB-175	40186-70-7	0.1	0.1	UJ	12.5
	PCB-182/187		0.1	0.1	UJ	12.5
2,2',3,4,4',5',6'-HpCB	PCB-183	52663-69-1	0.1	0.1	UJ	12.5
2,2',3,4,5,5',6'-HpCB	PCB-185	52712-05-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6'-HpCB	PCB-174	38411-25-5	0.1	0.1	UJ	12.5

# QC REPORT - BLANK

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** BLANK  
**PRL ID:** PC220561B

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112204

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
2,2',3,4,4',5,6-HpCB	PCB-181	74472-47-2	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6'-HpCB	PCB-177	52663-70-4	0.1	0.1	UJ	12.5
2,2',3,3',4,4',6-HpCB	PCB-171	52663-71-5	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6-HpCB	PCB-173	68194-16-1	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6-HpCB	PCB-172	52663-74-8	0.1	0.1	UJ	12.5
2,3,3',4,5,5',6-HpCB	PCB-192	74472-51-8	0.1	0.1	UJ	12.5
2,2',3,4,4',5,5',6-HpCB	PCB-180	35065-29-3	0.1	0.1	UJ	12.5
2,3,3',4',5,5',6-HpCB	PCB-193	69782-91-8	0.1	0.1	UJ	12.5
2,3,3',4,4',5',6-HpCB	PCB-191	74472-50-7	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5-HpCB	PCB-170	35065-30-6	0.1	0.1	UJ	12.5
2,3,3',4,4',5,6-HpCB	PCB-190	41411-64-7	0.1	0.1	UJ	12.5
2,3,3',4,4',5,5',6-HpCB	PCB-189	39635-31-9	0.1	0.1	UJ	12.5
2,2',3,3',5,5',6,6'-OoCB	PCB-202	2136-99-4	0.1	0.1	UJ	12.5
2,2',3,3',4,5',6,6'-OoCB	PCB-201	40186-71-8	0.1	0.1	UJ	12.5
2,2',3,4,4',5,6,6'-OoCB	PCB-204	74472-52-9	0.1	0.1	UJ	12.5
2,2',3,3',4,4',6,6'-OoCB	PCB-197	33091-17-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,6,6'-OoCB	PCB-200	52663-73-7	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6-OoCB	PCB-198	68194-17-2	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6'-OoCB	PCB-199	52663-75-9	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6'-OoCB	PCB-196	42740-50-1	0.1	0.1	UJ	12.5
2,2',3,4,4',5,5',6-OoCB	PCB-203	52663-76-0	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,6-OoCB	PCB-195	52663-78-2	0.1	0.1	UJ	12.5
2,2',3,3',4,4',5,5'-OoCB	PCB-194	35694-08-7	0.1	0.1	UJ	12.5
2,3,3',4,4',5,5',6-OoCB	PCB-205	74472-53-0	0.1	0.1	UJ	12.5
2,2',3,3',4,5,5',6,6'-NoCB	PCB-208	52663-77-1	2.4	2.4	UJ	12.5
2,2',3,3',4,4',5,6,6'-NoCB	PCB-207	52663-79-3	2.3	2.3	UJ	12.5
2,2',3,3',4,4',5,5',6-NoCB	PCB-206	40186-72-9	2.9	2.9	UJ	12.5
2,2',3,3',4,4',5,5',6,6'-DeCB	PCB-209	2051-24-3	0.1	0.1	UJ	12.5

Homologs	# of Congeners			
Monochlorobiphenyls	3	0.3	0.3	UJ
Dichlorobiphenyls	12	2.3	2.3	UJ
Trichlorobiphenyls	24	0.1	0.1	UJ
Tetrachlorobiphenyls	42	0.1	0.1	UJ
Pentachlorobiphenyls	46	0.2	0.2	UJ
Hexachlorobiphenyls	42	0.1	0.1	UJ
Heptachlorobiphenyls	24	0.1	0.1	UJ
Octachlorobiphenyls	12	0.1	0.1	UJ
Nonachlorobiphenyls	3	2.3	2.3	UJ
Decachlorobiphenyl	1	0.1	0.1	UJ
<b>Total PCB</b>		0.1	0.1	UJ

# QC REPORT - BLANK

**Client:** Liberty Lake Sewer and Water  
**Client ID:** Dist.  
**Field ID:** BLANK  
**PRL ID:** PC220561B

**Contact:** Dan Grogg  
**Date Extracted:** 7/29/2022  
**Date Analysed:** 8/11/2022  
**HRMS File:** FS08112204

IUPAC Name	PCB #	CAS #	Conc. pg/L	DL pg/L	Flag	EQL pg/L
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Surrogate Recoveries			Acceptance	
Chemical Name	IUPAC #	%	Min	Max
<sup>13</sup> C <sub>12</sub> -2-MoCB	1L	33	5	145
<sup>13</sup> C <sub>12</sub> -4-MoCB	3L	51	5	145
<sup>13</sup> C <sub>12</sub> -2,2'-DiCB	4L	41	5	145
<sup>13</sup> C <sub>12</sub> -4,4'-DiCB	15L	58	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6'-TrCB	19L	57	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4'-TrCB	37L	69	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6,6'-TeCB	54L	45	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4',5'-TeCB	81L	69	5	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeCB	77L	74	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,6,6'-PeCB	104L	52	10	145
<sup>13</sup> C <sub>12</sub> -2',3,4,4',5'-PeCB	123L	75	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5'-PeCB	118L	68	10	145
<sup>13</sup> C <sub>12</sub> -2,3,4,4',5'-PeCB	114L	69	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4'-PeCB	105L	81	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5'-PeCB	126L	91	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6,6'-HxCB	155L	56	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5,5'-HxCB	167L	71	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	156L	81	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	157L	81	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxCB	169L	88	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,4',5,6,6'-HpCB	188L	63	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5'-HpCB	189L	86	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6,6'-OoCB	202L	68	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6'-OoCB	205L	85	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4',5,5',6,6'-NoCB	208L	82	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,5',6'-NoCB	206L	78	10	145
<sup>13</sup> C <sub>12</sub> -DeCB	209L	81	10	145
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrCB	28L	66	5	145
<sup>13</sup> C <sub>12</sub> -2,3,3',5,5'-PeCB	111L	70	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6'-HpCB	178L	78	10	145

# QC REPORT - SPIKE

Client: Liberty Lake Sewer and Water Dist.  
 Client ID: SPIKE  
 Field ID:  
 PRL ID: PC220562S

Contact: Dan Grogg  
 Date Extracted: 7/29/2022  
 Date Analysed: 8/11/2022  
 HRMS File: FS08112202

Polychlorinated Biphenyls				Accept. Recovery		Pass/Fail	Surrogate Recoveries
Chemical Name	IUPAC #	CAS No.	LOF pg/L	Recovery %	Min %	Max %	%
2-MoCB	PCB-001	2051-60-7	1000	106.6	60	135	Pass
4-MoCB	PCB-003	2051-62-9	1000	92.6	60	135	Pass
2,6-DiCB	PCB-010	33146-45-1	1000	68.7			-
2,2'-DiCB	PCB-004	13029-08-8	1000	102.8	60	135	Pass
	PCB-005/008		1000	102.7			-
4,4'-DiCB	PCB-015	2050-68-2	1000	94.1	60	135	Pass
2,2',6-TrCB	PCB-019	38444-73-4	1000	83.6	60	135	Pass
2,2',5-TrCB	PCB-018	37680-65-2	1000	92.7			-
2,4,4'-TrCB	PCB-028	7012-37-5	1000	61.7			-
	PCB-020/033		1000	79.2			-
2,3,4'-TrCB	PCB-022	38444-85-8	1000	82.4			-
3,4,4'-TrCB	PCB-037	38444-90-5	1000	88.2	60	135	Pass
2,2',6,6'-TeCB	PCB-054	15968-05-5	1000	93.8	60	135	Pass
	PCB-052/069		1000	84.1			-
	PCB-043/049		1000	106.3			-
2,2',3,5'-TeCB	PCB-044	41464-39-5	1000	120.7			-
2,2',3,4-TeCB	PCB-041	52663-59-9	1000	87.8			-
2,2',3,3'-TeCB	PCB-040	38444-93-8	1000	113.4			-
2,4,4',5-TeCB	PCB-061/074	32690-93-0	1000	114.5			-
2,3',4',5-TeCB	PCB-070	32598-11-1	1000	101.4			-
2,3',4,4'-TeCB	PCB-066	32598-10-0	1000	120.4			-
2,3,4,4'-TeCB	PCB-060	33025-41-1	1000	96.5			-
3,4,4',5-TeCB	PCB-081	70362-50-4	1000	97.5	60	135	Pass
3,3',4,4'-TeCB	PCB-077	32598-13-3	1000	100.2	60	135	Pass
2,2',4,6,6'-PeCB	PCB-104	56558-16-8	1000	95.9	60	135	Pass
	PCB-093/095/098/102		1000	97.4			-
2,2',3,4',5-PeCB	PCB-090	68194-07-0	1000	99.4			-
2,2',4,5,5'-PeCB	PCB-101	37680-73-2	1000	86.0			-
2,2',4,4',5-PeCB	PCB-099	38380-01-7	1000	90.7			-
	PCB-112/119		1000	98.5			-
	PCB-087/115		1000	78.8			-
2,3,3',4',6-PeCB	PCB-110	38380-03-9	1000	126.9			-
2,3',4,4',5-PeCB	PCB-123	65510-44-3	1000	98.6	60	135	Pass
2,3',4,4',5-PeCB	PCB-118	31508-00-6	1000	94.4	60	135	Pass
2,3,4,4',5-PeCB	PCB-114	74472-37-0	1000	92.0	60	135	Pass
2,3,3',4,4'-PeCB	PCB-105	32598-14-4	1000	89.7	60	135	Pass
3,3',4,4',5-PeCB	PCB-126	57465-28-8	1000	85.6	60	135	Pass
2,2',4,4',6,6'-HxCB	PCB-155	33979-03-2	1000	85.0	60	135	Pass
2,2',3,5,5',6-HxCB	PCB-151	52663-63-5	1000	84.2			-
	PCB-139/149		1000	97.9			-
2,2',4,4',5,5'-HxCB	PCB-153	35065-27-1	1000	76.7			-
2,3',4,4',5,6-HxCB	PCB-168	59291-65-5	1000	109.1			-
2,2',3,4,5,5'-HxCB	PCB-141	52712-04-6	1000	109.9			-
2,2',3,4,4',5-HxCB	PCB-137	35694-06-5	1000	97.6			-
2,2',3,4,4',5'-HxCB	PCB-138	35065-28-2	1000	111.7			-
2,3,3',4,4',6-HxCB	PCB-158	74472-42-7	1000	89.4			-
2,2',3,3',4,5-HxCB	PCB-129	55215-18-4	1000	100.1			-
	PCB-128/162		1000	103.1			-
2,3',4,4',5,5'-HxCB	PCB-167	52663-72-6	1000	96.3	60	135	Pass
2,3,3',4,4',5-HxCB	PCB-156	38380-08-4	1000	98.3	60	135	Pass
2,3,3',4,4',5'-HxCB	PCB-157	69782-90-7	1000	97.0	60	135	Pass

# QC REPORT - SPIKE

Client: Liberty Lake Sewer and Water Dist.  
 Client ID: SPIKE  
 Field ID:  
 PRL ID: PC220562S

Contact: Dan Grogg  
 Date Extracted: 7/29/2022  
 Date Analysed: 8/11/2022  
 HRMS File: FS08112202

Polychlorinated Biphenyls				Accept. Recovery		Pass/Fail	Surrogate Recoveries
Chemical Name	IUPAC #	CAS No.	LOF pg/L	Recovery %	Min %	Max %	%
3,3',4,4',5,5'-HxCB	PCB-169	32774-16-6	1000	93.1	60	135	Pass
2,2',3,4',5,6,6'-HpCB	PCB-188	74487-85-7	1000	101.7	60	135	Pass
2,2',3,3',5,5',6-HpCB	PCB-178	52663-67-9	1000	88.8			-
	PCB-182/187		1000	83.8			-
2,2',3,4,4',5',6-HpCB	PCB-183	52663-69-1	1000	92.7			-
2,2',3,3',4,5',6'-HpCB	PCB-177	52663-70-4	1000	104.9			-
2,2',3,3',4,4',6-HpCB	PCB-171	52663-71-5	1000	89.3			-
2,2',3,4,4',5,5'-HpCB	PCB-180	35065-29-3	1000	65.6			-
2,3,3',4',5,5',6-HpCB	PCB-193	69782-91-8	1000	115.6			-
2,3,3',4,4',5,6-HpCB	PCB-191	74472-50-7	1000	96.1			-
2,2',3,3',4,4',5-HpCB	PCB-170	35065-30-6	1000	93.9			-
2,3,3',4,4',5,5'-HpCB	PCB-189	39635-31-9	1000	94.9	60	135	Pass
2,2',3,3',5,5',6,6'-OxCB	PCB-202	2136-99-4	1000	113.0	60	135	Pass
2,2',3,3',4,5',6,6'-OxCB	PCB-201	40186-71-8	1000	81.3			-
2,2',3,3',4,5,5',6'-OxCB	PCB-199	52663-75-9	1000	93.4			-
2,2',3,4,4',5,5',6-OxCB	PCB-203	52663-76-0	1000	112.8			-
2,2',3,3',4,4',5,5'-OxCB	PCB-194	35694-08-7	1000	94.3			-
2,3,3',4,4',5,5',6-OxCB	PCB-205	74472-53-0	1000	109.1	60	135	Pass
2,2',3,3',4,5,5',6,6'-NoCB	PCB-208	52663-77-1	1000	85.1	60	135	Pass
2,2',3,3',4,4',5,5',6-NoCB	PCB-206	40186-72-9	1000	101.8	60	135	Pass
2,2',3,3',4,4',5,5',6,6'-DeCB	PCB-209	2051-24-3	1000	83.1	60	135	Pass

LOF - level of fortification

# DATA REPORT

Client:  
Client ID:  
Field ID:  
PRL ID:

Liberty Lake Sewer and Water

Dist.

EFFLUENT

PR222212

Contact: Greg Sattler

Date Extracted: 7/27/2022

Date Analysed: 8/22/2022

HRMS File: FS08222203

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
2,6-DiBDE	BDE010		0.7	0.7	UJ	0.7
2,4-DiBDE	BDE007		5.13	0.6	J	0.6
4,4'-DiBDE	BDE015	2050-47-7	2.3	0.4	J	0.4
2,4,6-TrBDE	BDE030		0.6	0.6	UJ	0.6
2,2',4-TrBDE	BDE017	147217-75-2	25.1	0.4	J	0.4
2,4,4'-TrBDE	BDE028	41318-75-6	13	0.4	J	0.4
2,2',4,5'-TeBDE	BDE049	243982-82-3	2.52	0.4	J	0.4
2,3',4',6-TeBDE	BDE071	189084-62-6	9.69	0.6	J	0.6
2,2',4,4'-TeBDE	BDE047	5436-43-1	210	0.4		0.4
2,3',4,4'-TeBDE	BDE066	189084-61-5	3.81	0.7	J	0.7
3,3',4,4'-TeBDE	BDE077	93703-48-1	0.4	0.4	UJ	0.4
2,2',4,4',6-PeBDE	BDE100	189084-64-8	14.8	0.3	J	0.3
2,3',4,4',6-PeBDE	BDE119	189084-66-0	0.5	0.5	UJ	0.5
2,2',4,4',5-PeBDE	BDE099	60348-60-9	65.9	0.4		0.4
2,2',3,4,4'-PeBDE	BDE085	182346-21-0	3.74	0.5	J	0.5
3,3',4,4',5-PeBDE	BDE126	366791-32-4	0.3	0.3	UJ	0.3
2,2',4,4',5,6'-HxBDE	BDE154	207122-15-4	0.8	0.8	UJ	0.8
2,2',4,4',5,5'-HxBDE	BDE153	68631-49-2	0.9	0.9	UJ	0.9
2,2',3,4,4',6-HxBDE	BDE139		3.32	1	J	1
2,2',3,4,4',6'-HxBDE	BDE140	243982-83-4	1	1	UJ	1
2,2',3,4,4',5'-HxBDE	BDE138	182677-30-1	1.3	1.3	UJ	1.3
	BDE156/169		1.4	1.4	UJ	1.4
2,2',3,4,4',6,6'-HpBDE	BDE184		0.6	0.6	UJ	0.6
2,2',3,4,4',5',6-HpBDE	BDE183	207122-16-5	5.51	0.7	J	0.7
2,3,3',4,4',5',6-HpBDE	BDE191		1.2	1.2	J	1.2
2,2',3,4,4',5,5'-HpBDE	BDE180		1.1	1.1	UJ	1.1
2,2',3,3',4,4',6-HpBDE	BDE171		1	1	UJ	1
2,2',3,3',4,5',6,6'-OcBDE	BDE201		0.9	0.9	UJ	0.9
	BDE197/204		0.7	0.7	UJ	0.7
2,2',3,4,4',5,5',6-OcBDE	BDE203	337513-72-1	3.05	0.9	NJ	0.9
2,2',3,3',4,4',5,6'-OcBDE	BDE196		0.9	0.9	UJ	0.9
2,3,3',4,4',5,5',6-OcBDE	BDE205	446255-56-7	1.7	1.7	UJ	1.7
2,2',3,3',4,5,5',6,6'-NoBDE	BDE208		15.4	1.3	J	1.3
2,2',3,3',4,4',5,6,6'-NoBDE	BDE207	437701-79-6	25.6	1.2	J	1.2
2,2',3,3',4,4',5,5',6-NoBDE	BDE206	63387-28-0	24.7	1.4	J	1.4
2,2',3,3',4,4',5,5',6,6'-DeBDE	BDE209	1163-19-5	732	1.1		1.1

# DATA REPORT

Client: Liberty Lake Sewer and Water  
 Client ID: Dist.  
 Field ID: EFFLUENT  
 PRL ID: PR222212

Contact: Greg Sattler  
 Date Extracted: 7/27/2022  
 Date Analysed: 8/22/2022  
 HRMS File: FS08222203

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
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Standard Recoveries		
Chemical Name	IUPAC #	%
<sup>13</sup> C <sub>12</sub> -4,4'-DiBDE	15L	35
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrBDE	28L	56
<sup>13</sup> C <sub>12</sub> -2,2',4,4'-TeBDE	47L	73
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeBDE	77L	78
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6-PeBDE	100L	85
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5-PeBDE	99L	81
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5-PeBDE	126L	89
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,6'-HxBDE	154L	72
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,5'-HxBDE	153L	75
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxBDE	169L	63
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5',6-HpBDE	183L	80
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',6,6'-OcBDE	197L	79
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6-OcBDE	205L	68
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,6,6'-NoBD	207L	79
<sup>13</sup> C <sub>12</sub> -DeBDE	209L	53
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5'-HxBDE	138L	82

# DATA REPORT

Client:  
Client ID:  
Field ID:  
PRL ID:

Liberty Lake Sewer and Water

Dist.

INFLUENT

PR222213

Contact: Greg Sattler

Date Extracted: 7/27/2022

Date Analysed: 8/22/2022

HRMS File: FS08222204

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
2,6-DiBDE	BDE010		0.7	0.7	UJ	0.7
2,4-DiBDE	BDE007		0.6	0.6	UJ	0.6
4,4'-DiBDE	BDE015	2050-47-7	30.2	0.3		0.3
2,4,6-TrBDE	BDE030		1.3	1.3	UJ	1.3
2,2',4-TrBDE	BDE017	147217-75-2	154	1		1
2,4,4'-TrBDE	BDE028	41318-75-6	466	0.9		0.9
2,2',4,5'-TeBDE	BDE049	243982-82-3	455	2.2		2.2
2,3',4',6'-TeBDE	BDE071	189084-62-6	1300	3		3
2,2',4,4'-TeBDE	BDE047	5436-43-1	31700	2		2
2,3',4,4'-TeBDE	BDE066	189084-61-5	552	3.7		3.7
3,3',4,4'-TeBDE	BDE077	93703-48-1	4.62	2.3	J	2.3
2,2',4,4',6-PeBDE	BDE100	189084-64-8	5210	1.2		1.2
2,3',4,4',6-PeBDE	BDE119	189084-66-0	302	2.3		2.3
2,2',4,4',5-PeBDE	BDE099	60348-60-9	27800	1.7		1.7
2,2',3,4,4'-PeBDE	BDE085	182346-21-0	2.3	2.3	UJ	2.3
3,3',4,4',5-PeBDE	BDE126	366791-32-4	1.8	1.8	UJ	1.8
2,2',4,4',5,6'-HxBDE	BDE154	207122-15-4	1870	1.2		1.2
2,2',4,4',5,5'-HxBDE	BDE153	68631-49-2	1620	1.5		1.5
2,2',3,4,4',6-HxBDE	BDE139		224	1.4		1.4
2,2',3,4,4',6'-HxBDE	BDE140	243982-83-4	58.1	1.4		1.4
2,2',3,4,4',5'-HxBDE	BDE138	182677-30-1	209	1.7		1.7
	BDE156/169		1.5	1.5	UJ	1.5
2,2',3,4,4',6,6'-HpBDE	BDE184		17	0.9	J	0.9
2,2',3,4,4',5',6'-HpBDE	BDE183	207122-16-5	210	1.1		1.1
2,3,3',4,4',5',6'-HpBDE	BDE191		5.61	2		2
2,2',3,4,4',5,5'-HpBDE	BDE180		24.4	1.8	J	1.8
2,2',3,3',4,4',6-HpBDE	BDE171		1.7	1.7	J	1.7
2,2',3,3',4,5',6,6'-OcBDE	BDE201		46.8	1.3	UJ	1.3
	BDE197/204		102	1	J	1
2,2',3,4,4',5,5',6-OcBDE	BDE203	337513-72-1	116	1.3		1.3
2,2',3,3',4,4',5,6'-OcBDE	BDE196		128	1.3		1.3
2,3,3',4,4',5,5',6-OcBDE	BDE205	446255-56-7	3.44	2.1	J	2.1
2,2',3,3',4,5,5',6,6'-NoBDE	BDE208		288	1.5		1.5
2,2',3,3',4,4',5,6,6'-NoBDE	BDE207	437701-79-6	548	1.4		1.4
2,2',3,3',4,4',5,5',6-NoBDE	BDE206	63387-28-0	830	1.6		1.6
2,2',3,3',4,4',5,5',6,6'-DeBDE	BDE209	1163-19-5	14900	0.9		0.9



# DATA REPORT

Client: Liberty Lake Sewer and Water  
 Client ID: Dist.  
 Field ID: INFLUENT  
 PRL ID: PR222213

Contact: Greg Sattler  
 Date Extracted: 7/27/2022  
 Date Analysed: 8/22/2022  
 HRMS File: FS08222204

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
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Standard Recoveries		
Chemical Name	IUPAC #	%
<sup>13</sup> C <sub>12</sub> -4,4'-DiBDE	15L	47
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrBDE	28L	52
<sup>13</sup> C <sub>12</sub> -2,2',4,4'-TeBDE	47L	69
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeBDE	77L	70
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6-PeBDE	100L	78
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5-PeBDE	99L	78
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5-PeBDE	126L	85
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,6'-HxBDE	154L	57
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,5'-HxBDE	153L	64
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxBDE	169L	66
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5',6-HpBDE	183L	70
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',6,6'-OcBDE	197L	91
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6-OcBDE	205L	92
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,6,6'-NoBD	207L	80
<sup>13</sup> C <sub>12</sub> -DeBDE	209L	81
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5'-HxBDE	138L	84

# QC REPORT - BLANK

Client:  
Client ID:  
Field ID:  
PRL ID:

Liberty Lake Sewer and Water  
Dist.

BLANK

BDE220551B

Contact: Greg Sattler

Date Extracted: 7/27/2022

Date Analysed: 8/19/2022

HRMS File: FS08192204

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
2,6-DiBDE	BDE010		0.6	0.6	UJ	0.6
2,4-DiBDE	BDE007		0.58	0.5	NJ	0.5
4,4'-DiBDE	BDE015	2050-47-7	0.74	0.3	NJ	0.3
2,4,6-TrBDE	BDE030		0.3	0.3	UJ	0.3
2,2',4-TrBDE	BDE017	147217-75-2	0.61	0.2	NJ	0.2
2,4,4'-TrBDE	BDE028	41318-75-6	0.96	0.2	NJ	0.2
2,2',4,5'-TeBDE	BDE049	243982-82-3	0.52	0.2	NJ	0.2
2,3',4',6-TeBDE	BDE071	189084-62-6	1.62	0.3	NJ	0.3
2,2',4,4'-TeBDE	BDE047	5436-43-1	17	0.2	J	0.2
2,3',4,4'-TeBDE	BDE066	189084-61-5	0.63	0.3	NJ	0.3
3,3',4,4'-TeBDE	BDE077	93703-48-1	0.34	0.2	NJ	0.2
2,2',4,4',6-PeBDE	BDE100	189084-64-8	1.36	0.2	NJ	0.2
2,3',4,4',6-PeBDE	BDE119	189084-66-0	0.62	0.3	NJ	0.3
2,2',4,4',5-PeBDE	BDE099	60348-60-9	11.5	0.3	J	0.3
2,2',3,4,4'-PeBDE	BDE085	182346-21-0	0.4	0.3	NJ	0.3
3,3',4,4',5-PeBDE	BDE126	366791-32-4	0.22	0.2	NJ	0.2
2,2',4,4',5,6'-HxBDE	BDE154	207122-15-4	77.6	0.6	N	0.6
2,2',4,4',5,5'-HxBDE	BDE153	68631-49-2	1.6	0.7	NJ	0.7
2,2',3,4,4',6-HxBDE	BDE139		0.7	0.7	UJ	0.7
2,2',3,4,4',6'-HxBDE	BDE140	243982-83-4	0.7	0.7	UJ	0.7
2,2',3,4,4',5'-HxBDE	BDE138	182677-30-1	0.9	0.9	UJ	0.9
	BDE156/169		1.18	0.8	NJ	0.8
2,2',3,4,4',6,6'-HpBDE	BDE184		1.08	0.4	NJ	0.4
2,2',3,4,4',5',6-HpBDE	BDE183	207122-16-5	1.64	0.5	NJ	0.5
2,3,3',4,4',5',6-HpBDE	BDE191		1.91	0.8	NJ	0.8
2,2',3,4,4',5,5'-HpBDE	BDE180		2.31	0.7	NJ	0.7
2,2',3,3',4,4',6-HpBDE	BDE171		0.7	0.7	UJ	0.7
2,2',3,3',4,5',6,6'-OcBDE	BDE201		0.7	0.7	UJ	0.7
	BDE197/204		1.49	0.5	NJ	0.5
2,2',3,4,4',5,5',6-OcBDE	BDE203	337513-72-1	1.68	0.7	NJ	0.7
2,2',3,3',4,4',5,6'-OcBDE	BDE196		0.6	0.6	UJ	0.6
2,3,3',4,4',5,5',6-OcBDE	BDE205	446255-56-7	1.1	1.1	UJ	1.1
2,2',3,3',4,5,5',6,6'-NoBDE	BDE208		1.89	0.8	NJ	0.8
2,2',3,3',4,4',5,6,6'-NoBDE	BDE207	437701-79-6	8.87	0.7	NJ	0.7
2,2',3,3',4,4',5,5',6-NoBDE	BDE206	63387-28-0	8.06	0.8	NJ	0.8
2,2',3,3',4,4',5,5',6,6'-DeBDE	BDE209	1163-19-5	50.3	0.6	J	0.6

# QC REPORT - BLANK

Client: Liberty Lake Sewer and Water  
 Client ID: BLANK  
 Field ID:  
 PRL ID: BDE220551B

Contact: Greg Sattler  
 Date Extracted: 7/27/2022  
 Date Analysed: 8/19/2022  
 HRMS File: FS08192204

IUPAC Name	PBDE #	CAS #	Conc. pg/L	DL pg/L	Flag	SDL 2.5x SN
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Standard Recoveries		
Chemical Name	IUPAC #	%
<sup>13</sup> C <sub>12</sub> -4,4'-DiBDE	15L	42
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrBDE	28L	53
<sup>13</sup> C <sub>12</sub> -2,2',4,4'-TeBDE	47L	66
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeBDE	77L	79
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6-PeBDE	100L	75
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5-PeBDE	99L	85
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5-PeBDE	126L	105
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,6'-HxBDE	154L	60
<sup>13</sup> C <sub>12</sub> -2,2',4,4',5,5'-HxBDE	153L	71
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxBDE	169L	72
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5',6-HpBDE	183L	68
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',6,6'-OcBDE	197L	67
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6-OcBDE	205L	66
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,6,6'-NoBD	207L	67
<sup>13</sup> C <sub>12</sub> -DeBDE	209L	52
<sup>13</sup> C <sub>12</sub> -2,2',3,4,4',5'-HxBDE	138L	92

# QC REPORT - SPIKE

Client: Liberty Lake Sewer and Water Dist.  
 Client ID: SPIKE (LCS)  
 Field ID:  
 PRL ID: BDE220552S

Contact: Greg Sattler  
 Date Extracted: 7/27/2022  
 Date Analysed: 8/18/2022  
 HRMS File: FS08172209

Polybrominated Diphenyl Ethers					Accept. Recovery		Pass/Fail	Surrogate Recoveries
Chemical Name	IUPAC #	CAS No.	LOF pg/L	Recovery %	Min %	Max %		%
2,6-DiBDE	BDE010		1000	22				
2,4-DiBDE	BDE007		1000	50				
4,4'-DiBDE	BDE015	2050-47-7	1000	97	50	150	Pass	68
2,4,6-TrBDE	BDE-030		1000	71				-
2,2',4-TrBDE	BDE-017	147217-75-2	1000	89				-
2,4,4'-TrBDE	BDE-028	41318-75-6	1000	100	50	150	Pass	83
2,2',4,5'-TeBDE	BDE-049	243982-82-3	2000	89				-
2,3',4',6-TeBDE	BDE-071	189084-62-6	2000	94				-
2,2',4,4'-TeBDE	BDE-047	5436-43-1	2000	101	50	150	Pass	96
2,3',4,4'-TeBDE	BDE-066	189084-61-5	2000	101				-
3,3',4,4'-TeBDE	BDE-077	93703-48-1	2000	96	50	150	Pass	87
2,2',4,4',6-PeBDE	BDE-100	189084-64-8	2000	109	50	150	Pass	96
2,3',4,4',6-PeBDE	BDE-119	189084-66-0	2000	89				-
2,2',4,4',5-PeBDE	BDE-099	60348-60-9	2000	103	50	150	Pass	130
2,2',3,4,4'-PeBDE	BDE-085	182346-21-0	2000	116				-
3,3',4,4',5-PeBDE	BDE-126	366791-32-4	2000	99	50	150	Pass	67
2,2',4,4',5,6'-HxBDE	BDE-154	207122-15-4	2000	116	50	150	Pass	84
2,2',4,4',5,5'-HxBDE	BDE-153	68631-49-2	2000	95	50	150	Pass	93
2,2',3,4,4',6-HxBDE	BDE-139		2000	110				-
2,2',3,4,4',6'-HxBDE	BDE-140	243982-83-4	2000	107				-
2,2',3,4,4',5'-HxBDE	BDE-138	182677-30-1	2000	106				-
2,3,3',4,4',5/3,3',4,4',5,5'-HxBDE	BDE-156/169		4000	102	50	150	Pass	80
2,2',3,4,4',6,6'-HpBDE	BDE-184		4000	120				-
2,2',3,4,4',5',6-HpBDE	BDE-183	207122-16-5	4000	120	50	150	Pass	78
2,3,3',4,4',5',6-HpBDE	BDE-191		4000	115				-
2,2',3,4,4',5,5'-HpBDE	BDE-180		4000	114				-
2,2',3,3',4,4',6-HpBDE	BDE-171		4000	115				-
2,2',3,3',4,5',6,6'-OcBDE	BDE-201		4000	118				-
2,2',3,3',4,4',6,6'-OcBDE/2,2',3,4,4',5,5',6-OcBDE	BDE197/204		8000	104	50	150	Pass	78
2,2',3,4,4',5,5',6-OcBDE	BDE-203	337513-72-1	4000	113				-
2,2',3,3',4,4',5,6'-OcBDE	BDE-196		4000	126				-
2,3,3',4,4',5,5',6-OcBDE	BDE-205	446255-56-7	4000	98	50	150	Pass	88
2,2',3,3',4,5,5',6,6'-NoBDE	BDE-208		10000	82				-
2,2',3,3',4,4',5,6,6'-NoBDE	BDE-207	437701-79-6	10000	114	50	150	Pass	135
2,2',3,3',4,4',5,5',6-NoBDE	BDE-206	63387-28-0	10000	70				-
2,2',3,3',4,4',5,5',6,6'-DeBDE	BDE-209	1163-19-5	10000	120	50	150	Pass	84

LOF - level of fortification

**Acronyms used in reporting Polychlorinated Biphenyls (PCBs)**

MoCB = Monochlorobiphenyl

DiCB = Dichlorobiphenyl

TrCB = Trichlorobiphenyl

TeCB = Tetrachlorobiphenyl

PeCB = Pentachlorobiphenyl

HxCB = Hexachlorobiphenyl

HpCB = Heptachlorobiphenyl

OcCB = Octachlorobiphenyl

NoCB = Nonachlorobiphenyl

DeCB = Decachlorobiphenyl

**Acceptable recoveries for PCB Internal Standards - EPA 1668C**

Chemical Name	IUPAC #	Min	Max
<sup>13</sup> C <sub>12</sub> -2-MoCB	1L	5	145
<sup>13</sup> C <sub>12</sub> -4-MoCB	3L	5	145
<sup>13</sup> C <sub>12</sub> -2,2'-DiCB	4L	5	145
<sup>13</sup> C <sub>12</sub> -4,4'-DiCB	15L	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6'-TrCB	19L	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4'-TrCB	37L	5	145
<sup>13</sup> C <sub>12</sub> -2,2',6,6'-TeCB	54L	5	145
<sup>13</sup> C <sub>12</sub> -3,4,4',5'-TeCB	81L	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4'-TeCB	77L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,6,6'-PeCB	104L	10	145
<sup>13</sup> C <sub>12</sub> -2',3,4,4',5'-PeCB	123L	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5'-PeCB	118L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,4,4',5'-PeCB	114L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4'-PeCB	105L	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5'-PeCB	126L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',4,4',6,6'-HxCB	155L	10	145
<sup>13</sup> C <sub>12</sub> -2,3',4,4',5,5'-HxCB	167L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	156L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5'-HxCB	157L	10	145
<sup>13</sup> C <sub>12</sub> -3,3',4,4',5,5'-HxCB	169L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,4',5,6,6'-HpCB	188L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5'-HpCB	189L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6,6'-OcCB	202L	10	145
<sup>13</sup> C <sub>12</sub> -2,3,3',4,4',5,5',6'-OcCB	205L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4',5,5',6,6'-NoCB	208L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',4,4',5,5',6'-NoCB	206L	10	145
<sup>13</sup> C <sub>12</sub> -DeCB	209L	10	145
<sup>13</sup> C <sub>12</sub> -2,4,4'-TrCB	28L	5	145
<sup>13</sup> C <sub>12</sub> -2,3,3',5,5'-PeCB	111L	10	145
<sup>13</sup> C <sub>12</sub> -2,2',3,3',5,5',6'-HpCB	178L	10	145

**Acronyms used in reporting Polybrominated Diphenylethers (PBDEs)**

MoBDE = Monobromodiphenylether

DiBDE = Dibromodiphenylether

TrBDE = Tribromodiphenylether

TeBDE = Tetrabromodiphenylether

PeBDE = Pentabromodiphenylether

HxBDE = Hexabromodiphenylether

HpBDE = Heptabromodiphenylether

OcBDE = Octabromodiphenylether

NoBDE = Nonabromodiphenylether

DeBDE = Decabromodiphenylether

**Acceptable recoveries for PBDE Internal Standards**

	<b>Min (%)</b>	<b>Max (%)</b>
<sup>13</sup> C <sub>12</sub> -TriBDE-NoBDE	25%	150%
<sup>13</sup> C <sub>12</sub> -DeBDE	10%	200%



**PACIFIC RIM**  
LABORATORIES INC

# CHAIN OF CUSTODY RECORD / ANALYSIS REQUEST

Page 23 of 23

Pacific Rim Laboratories Inc. #103, 19575 - 55A Avenue, Surrey, BC V3S 8P8 Canada Tel: 604-532-8711 Fax: 604-532-8712

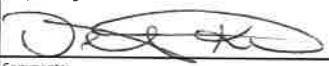
COMPANY: Liberty Lake Sewer and Water District PHONE: 509-368-4593 or 509-922-5443

ADDRESS: 22510 E. Mission Ave EMAIL: gsattler@libertylake.org  
Liberty Lake, WA 99019

DATE: 07.07.2022 PO #: \_\_\_\_\_

CONTACT: Greg Sattler PROJECT: JULY 2022 PCB- PBD2 SAMPLE

SAMPLE ID	PRL ID	DATE SAMPLED	SAMPLE MATRIX											COMMENTS
				NUMBER OF CONTAINERS	DIOXIN/FURAN	PCB - dioxin-like & homolog	PCB - 209 congener	PAH	PBDE	TBT	Nonylphenol	TCLP	Date Requested	
EFFLUENT	PR22 2212	07.06.2022	WW	1		Y			X					COMP SAMPLE ← rec'd 2 bottles
INFLUENT	2213	07.07.2022	WW	1					X					COMP SAMPLE

Sampler's Signature 	Relinquished by: <u>DERICK KAY</u>	Company <u>LLSWD</u>	Date <u>07.19.2022</u>	Time <u>9:30</u>	Received by:	
	Method of Shipment <u>FedEx</u>	Waybill No.:	Rec'd for PRL:		Date <u>20 JUL 22</u>	Time <u>11:30 AM</u>
Comments:	Shipment Condition	Temp.:	Cooler Opened By: <u>CL 12.4°C</u>			