

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 1
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
NORTH CHELMSFORD, MASSACHUSETTS 01863-2431

MEMORANDUM

DATE: April 23, 2009

SUBJECT: St. John's Cemetery, Monroe, CT - PCB Field Analytical Results

FROM: Scott Clifford, Chemist *SC 5/4/09*

TO: Cathy Young, OSC

THRU: Dan Boudreau, Chemistry Team Leader *DB 5/5/09*

PROJECT NUMBER: 09040024

DATE OF ANALYSIS: 04/13/09 - 04/17/09

ANALYTICAL PROCEDURE:

Soils were analyzed for PCBs using EPA Region I SOP for PCBs Field Testing for Soils and Sediment samples (EIA-FLDPCB2.SOP). Approximately 1 gram of sample was weighed into a 4 ml vial. To this was added 200 μ L water, 800 μ L methanol and 1000 μ L hexane. The sample mix was vortexed for approximately one minute and then centrifuged. A portion of the hexane extract was analyzed on a Shimadzu gas chromatograph equipped with an electron-capture detector and 30 meter, 0.53mm ID MXT-5 column. Concentrations of PCBs in soil were calculated using the external standard technique.

TARGET COMPOUNDS:

PCB A1254, A1262 and A1268

Discussion:

Analysis on the Shimadzu Model GC is used for tentative identification and semi-quantitation of PCBs in soil, oil and sediment samples. This field technique is not meant to substitute for the CLP PCBs in soil protocol. This analysis technique can, however save costly analysis time when full protocol is not required.

File: K:\CHEMISTRY\REPORTS\FIELD\09040024fdpcb.xls

Results:			
Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.			
St. John's Cemetery, Monroe, CT - PCB Field Analytical Results			
04/13/09 - 04/17/09			
PCB Aroclor Results			
Wet Weight			
ppm			
Sample #	Aroclor 1254	Aroclor 1268	Aroclor 1262
L-0_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L-0_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L3_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L3_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L3_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L3_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L3_P360D_DUP	ND(0.3)	ND(0.2)	ND(0.2)
L3_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L3_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L3_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L3_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L3_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L3_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L3_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L3_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L3_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L3_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L3_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L3_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L6_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L6_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L6_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L6_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L6_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L6_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L6_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L6_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L6_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L6_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L6_P330C	ND(0.3)	ND(0.2)	ND(0.2)

Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.			
St. John's Cemetery, Monroe, CT - PCB Field Analytical Results			
04/13/09 - 04/17/09			
PCB Aroclor Results			
Wet Weight			
ppm			
Sample #	Aroclor 1254	Aroclor 1268	Aroclor 1262
L6_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L6_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L6_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L6_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L6_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L9_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L9_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L9_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L9_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L9_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L9_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L9_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L9_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L9_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L9_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L9_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L9_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L9_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L9_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L9_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L9_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P270A_DUP	ND(0.3)	ND(0.2)	ND(0.2)
L12_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L15_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P300A_DUP	ND(0.3)	ND(0.2)	ND(0.2)
L15_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P300C	ND(0.3)	ND(0.2)	ND(0.2)

Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.

St. John's Cemetery, Monroe, CT - PCB Field Analytical Results

04/13/09 - 04/17/09

PCB Aroclor Results

Wet Weight

ppm

Sample #	Aroclor 1254	Aroclor 1268	Aroclor 1262
L15_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L15_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L15_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P240A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P240B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P240C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P300C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P240A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P240B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P300A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P300B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P300C	ND(0.3)	ND(0.2)	ND(0.2)

Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.

St. John's Cemetery, Monroe, CT - PCB Field Analytical Results

04/13/09 - 04/17/09

PCB Aroclor Results

Wet Weight

ppm

Sample #	Aroclor 1254	Aroclor 1268	Aroclor 1262
L24_P300D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P330A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P330B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P330C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P330D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P360A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P360B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P360C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P360D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P210A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P210B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P210C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P210A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P210A_DUP	ND(0.3)	ND(0.2)	ND(0.2)
L21_P210B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P210C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P210D	ND(0.3)	ND(0.2)	ND(0.2)
L27_P210A	ND(0.3)	ND(0.2)	ND(0.2)
L27_P210B	ND(0.3)	ND(0.2)	ND(0.2)
L27_P210C	ND(0.3)	ND(0.2)	ND(0.2)
L27_P210D	ND(0.3)	ND(0.2)	ND(0.2)
L27_P240A	ND(0.3)	ND(0.2)	ND(0.2)
L27_P240B	ND(0.3)	ND(0.2)	ND(0.2)
L27_P240C	ND(0.3)	ND(0.2)	ND(0.2)
L27_P240D	ND(0.3)	ND(0.2)	ND(0.2)
L27_P270A	ND(0.3)	ND(0.2)	ND(0.2)
L27_P270B	ND(0.3)	ND(0.2)	ND(0.2)
L27_P270C	ND(0.3)	ND(0.2)	ND(0.2)
L27_P270D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P240A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P240B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P240C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P240D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P150A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P150B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P150C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P150D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P120A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P120B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P120C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P120D	ND(0.3)	ND(0.2)	ND(0.2)
L18.5_P60A	ND(0.3)	ND(0.2)	ND(0.2)

Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.

St. John's Cemetery, Monroe, CT - PCB Field Analytical Results

04/13/09 - 04/17/09

PCB Aroclor Results

Wet Weight

ppm

Sample #	Aroclor 1254	Aroclor 1268	Aroclor 1262
L18.5_P60B	ND(0.3)	ND(0.2)	ND(0.2)
L18.5_P60C	ND(0.3)	ND(0.2)	ND(0.2)
L18.5_P60D	ND(0.3)	ND(0.2)	ND(0.2)
L18_P090A	ND(0.3)	ND(0.2)	ND(0.2)
L18_P090B	ND(0.3)	ND(0.2)	ND(0.2)
L18_P090C	ND(0.3)	ND(0.2)	ND(0.2)
L18_P090D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P090D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P030A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P030B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P030C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P030D	ND(0.3)	ND(0.2)	ND(0.2)
L12_P060A	ND(0.3)	ND(0.2)	ND(0.2)
L12_P060B	ND(0.3)	ND(0.2)	ND(0.2)
L12_P060C	ND(0.3)	ND(0.2)	ND(0.2)
L12_P060D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P060A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P060B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P060C	ND(0.3)	ND(0.2)	ND(0.2)
L15_P060D	ND(0.3)	ND(0.2)	ND(0.2)
L15_P090A	ND(0.3)	ND(0.2)	ND(0.2)
L15_P090B	ND(0.3)	ND(0.2)	ND(0.2)
L15_P090C	ND(0.3)	ND(0.2)	ND(0.2)
L15_P090D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P120A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P120B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P120C	ND(0.3)	ND(0.2)	ND(0.2)
L21_P120D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P150A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P150B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P150C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P150D	ND(0.3)	ND(0.2)	ND(0.2)
L24_P180A	ND(0.3)	ND(0.2)	ND(0.2)
L24_P180B	ND(0.3)	ND(0.2)	ND(0.2)
L24_P180C	ND(0.3)	ND(0.2)	ND(0.2)
L24_P180D	ND(0.3)	ND(0.2)	ND(0.2)
L21_P180A	ND(0.3)	ND(0.2)	ND(0.2)
L21_P180B	ND(0.3)	ND(0.2)	ND(0.2)
L21_P180C	ND(0.3)	ND(0.2)	ND(0.2)

Results are in columns below. ND() is not detected with the reporting level in parenthesis. Soil PCB results are based on sample wet weight.			

St. John's Cemetery, Monroe, CT - PCB Field Analytical Results

	04/13/09 - 04/17/09	
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	PCB Aroclor Results	

	Wet Weight	
	mm	

		ppm	
	Aroclor	Aroclor	Aroclor

[illegible]