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POLYCHLORINATED BIPHENYL CONFIRMATION SAMPLE RESULTS FOR SITE 15 AND SITE 16 WITH TRANSMITTAL NAVAL ACTIVITY PUERTO RICO
2/25/1994
METCALF AND EDDY, INC.

Metcalf & Eddy

February 25, 1994

Mr. Jim Szykman
Department of Navy
Atlantic Division
Naval Facilities Engineering Command
Environmental Quality Division Code 18
Norfolk, Virginia 23511

Reference: Contract No. N47408-92-D-3042, Delivery Order No. 0031

Subject: PCBs Confirmation Sample Results for Sites 15 and 16 at the Naval Station, Roosevelt Roads, Puerto Rico

Dear Mr. Szykman:

Enclosed please find one (1) copy of the PCBs confirmation sample results. A total of 39 samples were sent to the laboratory for PCBs confirmation analysis. Summary tables of the field screening results compared to the laboratory confirmation results are included. Of the 39 samples analyzed by the laboratory, 32 agreed with the field screening results, 5 had false positive field screening results, and 2 had false negative field screening results. The two sample locations where false negatives were obtained will require additional excavation.

If you have any questions, please contact me at (404) 881-8010.

Sincerely,

METCALF & EDDY, INC.

Robert R. MacPherson
Project Manager

cc: Ivan Rosado - ROICC, Naval Station Roosevelt Roads
Barry Van Wagner - OHM
Chuck Katz - M&E/Redwood City
Steve Alvanas - M&E/PR
Daniel Howard - M&E/Atl

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Affiliates of Air & Water Technologies Corporation

Naval Station, Roosevelt Roads
Site 15
Sample Screening and Laboratory Results
for Total PCBs

Grid Map Sample No. Locations	Area Map Sample No. Locations (Dwg C-15)	Screening Results (ppm)	Lab Confirmation Results (mg/kg=ppm)
I-6-15	--	< 10	3.30
P-6-15	B-6	> 10	17.0
P-4-15	C-1	> 10	18.0
Q-6-15	B-7	< 10	9.7
M-6-15	B-3	< 10	1.40
O-6-15 (7.5L)	B-5 (7.5L)	> 10	20.0
P-4-15 (7.5L)	C-1 (7.5L)	> 10	440
P-4-15 (7.5L)-D	C-1 (7.5L)-D	> 10	390
P-4-15 7.5R	C-1 (7.5R)	< 10**	14.0

** False negative field screening result
-D Duplicate sample
( ) Distance from original sample location in feet and direction (R-right, L-left, U-up, D-down)

Naval Station, Roosevelt Roads Site 16 Sample Screening and Laboratory Results for Total PCBs			
Grid Map Sample No. Locations	Area Map Sample No. Locations (Dwg. C-16)	Screening Results (ppm)	Lab Confirmation Results (mg/kg=ppm)
T-10	D-12	< 10	0.110
T-10-D	D-12-D	< 10	0.095J
U-10	D-15	< 10	0.057J
T-8	D-10	< 10	0.370
S-10	D-9	> 10*	0.130
L-16	E-16	< 10	U
J-16	B-24	> 10	42.0
I-16	B-22	> 10	39.0
F-16	B-8	> 10*	8.00
C-15	A-8	< 10	U
D-15	A-13	> 10	28.0
J-16 (7.5D)	B-24 (7.5D)	< 10	2.50
H-15	B-17	< 10	8.00
F-15 (7.5R)	B-7 (7.5R)	> 10*	5.60
F-16 (7.5R)	B-8 (7.5R)	> 10	58.0
F-16 (7.5L)	B-8 (7.5L)	> 10	10.0
F-17	B-9	< 10	0.240
G-15	B-12	> 10	13.0
J-15	B-23	> 10	160
L-15-D	E-15-D	< 10	2.20
L-15	E-15	< 10	1.60
0-3	C-3	< 10	8.50
L-9	E-9	> 10	16.0

Continued...

Naval Station, Roosevelt Roads Site 16 (Continued) Sample Screening and Laboratory Results for Total PCBs			
Grid Map Sample No. Locations	**Area Map Sample No. Locations (Dwg. C-16)**	**Screening Results (ppm)**	**Lab Confirmation Results (mg/kg=ppm)**
P-5	C-11	> 10	160
Q-4	C-15	< 10	0.240
Q-4-D	C-15-D	< 10	0.220
K-14	E-7	> 10*	5.50
P-3 (7.5U)	C-9 (7.5U)	> 10*	8.70
G-15 (7.5R)	B-12 (7.5R)	< 10**	11.0

* False positive field screening result
** False negative field screening result
-D Duplicate sample
( ) Distance from original sample location in feet and direction (R-right, L-left, U-up, D-down)

Data for PCB RISc™ Soil Test

Operator: RADNER Date: 1/10/94 Location: Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
F-6	J-1	-0.05	0.45	<10	Karen
F-7	K-Ø	↓	-0.27	>10	↓
F-8	K- -2	↓	0.76	<10	↓
F-9	K- -3	↓	0.80	<10	↓
F-1	A -12	-0.01	0.85	<10	Daniel
F-3	A-4	↓	0.67	<10	↓
F-2	A-8	↓	0.82	<10	↓
F-4	B-1	↓	0.24	<10	↓
F-5	G-1	↓	0.57	<10	↓

Data for PCB RISc™ Soil Test

Operator: D. HOWARD Date: 1/11/94 Location: Site #16

	Sample ID	ΔOD standards -0.03	OD sample ___ ppm	Interpretation	Notes
D-19	W-8		0.08	<10	
D-21	X-8		0.57	<10	
D-17	V-9		0.60	<10	
D-20	W-9		0.56	<10	
D-18	V-10		-0.43	>10	
D-15	U-10		0.53	<10	
D-14	U-9		0.70	<10	
D-16	V-8		0.65	<10	
D-12	T-10		0.72	<10	
D-12	T-10 Dup.		0.32	<10	

Data for PCB RISc™ Soil Test

Operator: Daniel Howard | Date: 1-12-94 | Location: RRNS Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
D-13	U-8	-0.14	0.93	<10	
D-11	T-9		0.79	<10	
D-10	T-8		1.04	<10	
D-9	S-10		0.04	>10	
D-8	S-9		0.82	<10	
D-7	S-8		0.86	<10	
D-~~8~~ JH 7	S-8D		1.05	<10	
D-~~7~~ JH 6	R-10		0.94	<10	
D-5	R-9		0.44	<10	
D-4	R-8		0.80	<10	

Data for PCB RISc™ Soil Test

Operator: Daniel Howard | Date: 1-13-94 | Location: RRNS Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
E-16	L-16	-0.25	0.68	<10	
B-26	K-16		0.74	<10	
B-24	J-16		-0.81	>10	very little color change
B-22	I-16		-0.81	>10	very little color change
B-18	H-16		0.41	<10	
B-13	G-16		0.59	<10	
B-8	F-16		-0.33	>10	
B-2	E-16		0.27	<10	
A-14	D-16		0.64	<10	
A-9	C-16		0.72	<10	
A-13	D-15	-0.12	-0.40	>10	
A-8	C-15		0.81	<10	
A-5	B-16		0.75	<10	
A-2	A-16		0.69	<10	
A-4	B-15		0.62	<10	
A-4	B-15D		0.76	<10	
A-1	A-15		0.79	<10	
B-7	F-15		-0.33	>10	
B-1	E-15		0.59	<10	
B-1	E-15D		0.68	<10	

Data for PCB RISc™ Soil Test

Operator: DAN Howard | Date: 1/14/94 | Location: Sites 15 & 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
	H-6-15	-0.04	0.73	<10	
	I-6-15		0.24	<10	
	W-5-15		0.77	<10	
B-24R	J-16 7.5R		0.61	<10	
B-24D	J-16 7.5D		0.38	<10	
B-22D	I-16 7.5D		0.55	<10	
B-22L	I-16 7.5L		0.77	<10	
B-22L	I-16 Dup 7.5L		0.68	<10	

Data for PCB RISc™ Soil Test

Operator: Howard / RADNOR Date: 1/15/94 Location: Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
B-12 ✓	G-15	-0.05	-0.13	>10 ppm	*
B-14	G-17	↓	0.87	<10	
B-17 ✓	H-15		0.12	<10	*
B-20	H-18		0.49	<10	
D-9-U	S-10 (U)		0.54	<10	
D-9-L	S-10 (L)		0.64	<10	
D-9-R	S-10 (R)		0.65	<10	
D-18-U	V-10 (U)		0.20	<10	
D-18-L	V-10 (L)		0.66	<10	
	BS-~~2~~ UH 1₂	↓	-0.11	>10	

Data for PCB RISc™ Soil Test

Operator: HOWARD / RHONEY Date: 1/15/94 Location: Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
		-0.03			
A-3	A-17		0.67	<10ppm	
A-6	B-17		0.53	<10	
A-7	B-18		0.63	<10	
A-10	C-17		0.45	<10	
A-11	C-18		0.34	<10	
A-13-D	D-15 7.5 Down		0.59	<10	
A-13-L	D-15 7.5 Left		0.83	<10	
B-19	H-17		0.51	<10	
B-19	H-17 Dup.		0.65	<10	
	Blank Spike -BS-1		-0.26	≅10ppm	✓
A-13 ~~D~~-~~15~~-R DH DH	D-15-7.5R	-0.24	0.62	<10	
A-15	D-17		0.76	<10	
A-16	D-18		0.61	<10	
B-3	E-17		0.61	<10	
B-7-L	F-15-7.5L		0.42	<10	
B-7-R ✓	F-15-7.5R		-0.16	>10	*
B-8-R ✓	F-16-7.5R		-1.16	>10	* very slight color change
B-8-L ✓	F-16-7.5L		-0.36	>10	*
B-9 ✓	F-17		0.2~~3~~2 DH	<10	*
B-10	F-18		0.44	<10	

Data for PCB RISc™ Soil Test

Operator: Howard / Adner Date: 1/17/94 Location: Site 16

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
		-0.07			
	BS-(3)		-0.19	>10ppm	
A-12	C-19		0.79	<10	
A-17	D-19		0.86	<10	
B-5	E-19		0.66	<10	
A-18	D-20		0.57	<10	
B-6	E-20		0.81	<10	
	F-16		0.52	<10	
	F-16 Dup.		0.56	<10	
B-21	I-15		0.43	<10	
B-23 *	J-15		-0.77	>10	* No color change
B-25 *	K-15		-0.35	>10	*
E-15 →	L-15		0.64	<10	
E-15D →	L-15 Dup.		0.65	<10	

Data for PCB RISc™ Soil Test

Operator: Howard / Radner Date: 1/17/96 Location: Site 10

	Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
		-0.09	—	—	
B-11	F-19		0.89	<10ppm ✓	
B-16	G-19		0.64	<10	
E-8	L-8		0.04	<10	
E-9 *	L-9		-0.51	>10	*
E-14	L-14		0.63	<10	
F-8	M-1		0.49	<10	
F-8D	M-1 (Dup.)		0.38	<10	
C-1	O-1		0.23	<10	
C-2	O-2		0.53	<10	
C-3 →	O-3		0.06	<10	* Borderline ✓
C-4 *	O-4		-0.48	>10	*
C-5 *	O-5		-0.54	>10	*
C-8	P-2		0.90	<10	
C-9 *	P-3		-0.34	>10	*
C-10 *	P-4		-0.91	>10	*
C-11 → *	P-5		-0.92	>10	*

Data for PCB RISc™ Soil Test

Operator: Howard / Radner Date: 1/18/94 Location: Site 15 & Site 16

Sample ID	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
Grid / Area				
E-18 / B-4	-0.07	0.62	<10ppm	
G-18 / B-15		0.74	<10	
K-9 / E-2		0.48	<10	
* K-14 / E-7		-0.28	>10 → *	
M-14 / E-23		0.45	<10	
N-14 / E-30		0.55	<10	
O-14 / E-37		0.52	<10	
Q-3 / C-14		0.61	<10	
Q-3D / C-14D		0.68	<10	
Q-5 / C-16		0.74	<10	
R-6-15 / B-8		0.70	<10	
S-6-15 / B-9		0.90	<10	
T-6-15 / B-10		0.64	<10	

Data for PCB RISc™ Soil Test

Operator: Howard Padmen | Date: 1/19/94 | Location: Site 15 & 16

	Sample ID		ΔOD	OD sample	Interpretation	Notes
	Grid	Area	standards	10 ppm		
			-0.38			
Site 16	BS-14			-0.12	>10 ppm	✓
	Q-4	C-15		0.45	<10	✓
	Q-4 ap	C-15D		0.26	<10	✓
Site 15	Q-6-15	B-7	-0.38	-0.24	>10ppm	* ✓
	M-6-15	B-3		-0.36	>10ppm	*
	N-6-15	B-4		0.60	<10ppm	
	O-6-15	B-5		-0.73	>10	*
	P-3-15	C-2		-1.19	>10	*
	P-4-15	C-1		-1.19	>10	*
	P-6-15	B-6		-1.19	>10	*
	L-6-15	B-2		0.52	<10	
	T-3-15	C-13		0.63	<10	
	T-3-15 ap	C-13D		0.70	<10	

Data for PCB RISc™ Soil Test

Operator: Howard Ladner | Date: 1/19/94 | Location: Site 15 & 16

Sample ID Grid	Sample ID Area	ΔOD standards	OD sample 10 ppm	Interpretation	Notes
Q-4-RA	C-15	-0.05	0.51	<10ppm	
Q-4-Dup-RA	C-15D		0.73	<10ppm	
Q-6-15-RA	B-7		0.06	<10ppm	Borderline *
M-6-15-RA	B-3		0.65	<10ppm	*
T-2-15	C-14		0.53	<10	
T-4-15	C~~B~~ or-12		0.59	<10	
T-5-15	B-11		0.69	<10	
T-5-15 Dup	B-11D		0.60	<10	
U-2-15	C-16		0.85	<10	
U-3-15	C-15		0.80	<10	
U-4-15	B-13		0.52	<10	
U-5-15	B-12		0.19	<10	*
V-4-15	B-15		0.97	<10	
V-5-15	B-14		0.63	<10	

site 16

site 15

RA: reanalyzed

Data for PCB RISc™ Soil Test

Operator: Howard / Palmer Date: 1/20/94 Location: Site 15

Sample ID		ΔOD	OD sample	Interpretation	Notes
Grid	Area	standards	10 ppm		
		-0.03		~~10~~	
BS-2			-0.00	=10 ✓	
0-6-15U	B-5-U		0.82	<10 ppm	
0-6-15D	B-5-D		0.85	<10	
→ * 0-6-15-7.5 L	B-5-L		-0.16	>10	*
P-3-15-7.5 L	C-2-L		0.38	<10	
→ * P-4-15-7.5 L	C-1-L		-1.15	>10	*
→ P-4-15-7.5L Dup.	C-1-L-D		-1.15	>10	*
→ P-4-15-7.5R	C-1-R		0.03	<10	→ * BORDERLINE
P-4-15 7.5 Rdup	C-1-R-D		0.16	<10	
* P-5-15	C-0		-1.14	>10	*
* P-6-15-U	B-6-U		-0.77	>10	*
* P-6-15-7.5 R	B-6-R		-0.35	>10	*

Data for PCB RISc™ Soil Test

Operator: Howard Ledner | Date: 1/21/94 | Location: Site 16

Sample ID		ΔOD	OD sample	Interpretation	Notes
Grid	Area	standards	10 ppm		
		-0.20			
* F-16-7.5D	B-8-D		-0.66	>10ppm	*
G-15-7.5R	B-12-R		0.11	<10ppm	✓
K-14-R	E-7-R		0.52	<10	
K-15-7.5R	B-25-R		0.66	<10	
K-Ø-7.5Up	F-7-U		0.56	<10	
K-Ø-7.5D	F-7-D		0.39	<10	
* O-4-7.5Up	DH ~~G~~ C-4-U		-1.01	>10ppm	*
P-3-7.5L	C-~~8~~9-L		0.64	<10	
* P-3-7.5Up	C-9-U		-0.25	>10ppm	* ✓
P-3-7.5R	C-9-R		0.37	<10	
P-3-7.5R Dup.	C-9-~~R~~R-D		0.62	<10	
* P-4-7.5R	C-10-R		-1.16	>10ppm	*
P-5-R7.5	C-11-R		0.58	<10ppm	
		-0.07	DH ~~-0.07~~		
BS-3			DH 0.05 ~~0.05~~	Borderline	10ppm
* G-15-7.5D	B-12-D		-0.47	>10ppm	*
I-16-7.5U	B-22-U		1.23	<10 ppm	
* L-9-7.5U	E-9-U		-0.85	>10ppm	*
* L-9-7.5U(Dup.)	E-9-U-D		-0.88	>10ppm	*