RETURN TO 1998 ROD AR INDEX

~~4.6.1~~

4.2.7

U.S. Army Corps of Engineers

ENVIRONMENTAL LABORATORY

Hubbardston MA 01452

Superfund Records Center
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Analytical Data Report

NEW BEDFORD - WELLS (3/11/92)

U.S. Army Corps of Engineers
New England Division
Environmental Laboratory
Hubbardston, MA 01452

Date: April 29, 1992

Brian J. Condike
Chief, Environmental Laboratory

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1. Case Summary

NEW BEDFORD - WELLS (3/11/92)

1. Environmental Laboratory personnel collected six water samples for the above subject project on 11 March 1992. These samples were received at the laboratory on 11 March 1992. Standard USEPA methods were employed for sampling and sample preservation. Copies of the chain-of-custody records are enclosed for reference, along with a list of the samples collected.

2. The following analyses were performed in-house:

Analysis	**EPA Method**
Water samples:	
PCBs (Filtered Water)	3510/8080
PCBs (Non-Dissolved)	3540/8080
Lead (Total)	3015/7421
Lead (Dissolved)	3015/7421
ICAP Metals (Total (Cd,Cr,Cu)	3015/6010
ICAP Metals (Dissolved) (Cd,Cr,Cu)	3015/6010

2. Field Notes

PROJECT: NEW BEDFORD - WELLS (3/11/92)

DATE: 10 MARCH 1992 THRU 11 MARCH 1992

COLLECTORS: AMIDON, MILLER D.

EVACUATION TABLE

EVAC. DATE	10 MAR 92	10 MAR 92	10 MAR 92	10 MAR 92	10 MAR 92	10 MAR 92	10 MAR 92
EVAC. TIME	NOT ABLE	1410	1435	1500	1520	1615	1640
WELL #	4	5	6	1	7	2	3
FLUID DEPTH	12.4 FT.	10 FT.	6.1 FT.	8.4 FT.	6.2 FT.	8.4 FT.	4.5 FT.
WELL DEPTH	22 FT.	19 FT.	17.4 FT.	19.2 FT.	17.2 FT.	18.4 FT.	14.2 FT.
ATTEMPTED EVAC. VOLUME	7 GAL.	6 GAL.	3 1/2 + GAL.	4 1/2 GAL.	3 3/4 GAL.	4 1/2 GAL.	2 3/4 GAL.

COMMENTS:

WELL #4 HAS RESTRICTION 4.6 FEET FROM BOTTOM - UNABLE TO BALE ADEQUATELY - REMOVED 1 1/2 GALLONS.

WELL #5 - EVACUATED 3+ GAL. TO DRYNESS BY HAND.

WELL #6 - EVACUATED 3 1/2 GAL. OF ORANGE BROWN COLORED WATER BY HAND. WATER WAS EXTREMELY TURBID.

WELL #1 - EVACUATED 4 3/4 GAL. SLIGHTLY TURBID WATER - GREY PARTICULATE PRESENT.

WELL #7 - EVACUATED 3 3/4 GAL. - SLIGHTLY GREY TURBID WATER.

WELL #2 - EVACUATED 4 1/2 GAL. VERY TURBID WATER - BLACK SILTY MATERIAL IS PRESENT IN LARGE QUANTITIES.

WELL #3 - NO CAPS ARE PRESENT ON THIS WELL AND VEGETATIVE MATERIAL HAS GOTTEN INTO THE CASING - EVACUATED 2 3/4 GAL. OF WATER WITH VERY LITTLE SEDIMENT.

WELL #4 - HAD ONLY 250 ML OF WATER ABOVE THE RESTRICTION 18 HOURS AFTER ATTEMPTED EVACUATION. UNABLE TO SAMPLE.

THE WEATHER ON THE SAMPLE DATE WAS WINDY (20-30 MPH WITH 40 MPH GUSTS) AND MODERATE TO HEAVY RAINS. TEMPERATURE - 40'S.

	REMOVE FOR X 3 EVAC. =
1/2 FEET = 1 GAL.	.3 GALLONS
1 FOOT = .2 GAL.	.6 GALLONS
5 FEET = 1 GAL.	3 GALLONS
10 FEET = 376.8 CU. IN. = 2 GAL.	6 GALLONS
15 FEET = 3 GAL.	9 GALLONS
20 FEET = 4 GAL.	12 GALLONS

?

PROJECT: NEW BEDFORD - WELLS (3/11/92)

DATE: MARCH 11, 1992

COLLECTORS: AMIDON, MILLER

HEIGHT OF WELL FROM BOTTOM OF WELL TO TOP OF CASING			
FIELD DESCRIPTION	1988-89	1990	1991
WELL #7	16 1/2 FEET	17.35 FEET	17.2 FEET
WELL #1	18 1/2 FEET	19.4 FEET	19.2 FEET
WELL #6	16 1/2 FEET	17.6 FEET	17.4 FEET
WELL #4	28 1/2 FEET	22.3 FEET	22 FEET
WELL #5	18 1/2 FEET	19.1 FEET	19 FEET
WELL #2	17 1/2 FEET	18.6 FEET	18.4 FEET
WELL #3	14 1/2 FEET	14.4 FEET	14.2 FEET

PROJECT: NEW BEDFORD - WELLS (3/11/92)

DATE: 10 MARCH 1992 THRU 11 MARCH 1992

COLLECTORS: AMIDON, MILLER D.

WELL NUMBER	4	5	6	1	7	2	3
SAMPLE DATE SAMPLE TIME	11 MAR 92 0820	11 MAR 92 00835	11 MAR 92 0905	11 MAR 92 0930	11 MAR 92 0950	11 MAR 92 1100	11 MAR 92 1110
PCBS (2 LITERS)	NO SAMPLE	✓	✓	✓	✓	✓	✓
TM PRES. DATE/TIME	NA	11 MAR 92 0840	11 MAR 92 0910	11 MAR 92 0940	11 MAR 92 0955	11 MAR 92 1125	11 MAR 92 1130
TOTAL METALS (2 X 500)	NO SAMPLE	✓	✓	✓	✓	✓	✓
pH	NA	< 2	< 2	< 2	< 2	< 2	< 2

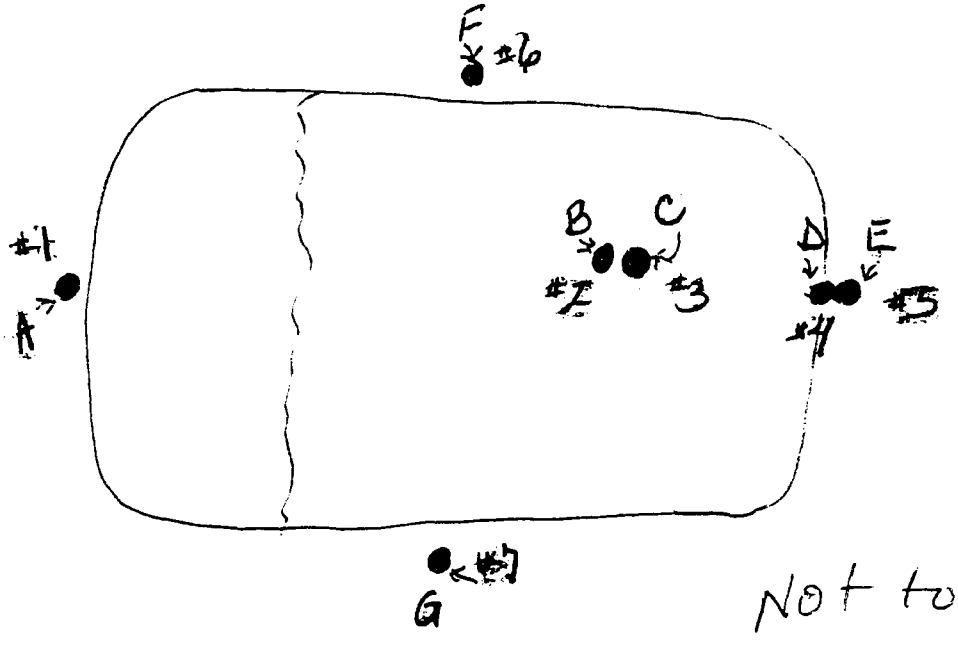
COMMENTS:

PCB - Cool to 4 degrees C; 1 sample to be filtered at lab. One trace metal for lab filtration.

One TM to be preserved immediately to pH of 2 with concentrated nitric acid.

USACOE NE
Environmental
Laboratory
508-928-4711

Well #'s



Not to scale

3. Sample Listing

NEW BEDFORD - WELLS (3/11/92)

SAMPLE LISTING

ENV NO.	FIELD DESCRIPTION	SAMPLE DATE	MATRIX
16116	WELL #5	3/11/92	WATER
16117	WELL #6	3/11/92	WATER
16118	WELL #1	3/11/92	WATER
16119	WELL #7	3/11/92	WATER
16120	WELL #2	3/11/92	WATER
16121	WELL #3	3/11/92	WATER

4. Laboratory Data

NEW BEDFORD - WELLS (3/11/92)
DATA SUMMARY

WELL NUMBER	SAMPLE NUMBER	DISSOLVED PCBS (1) (ppb)	NON-DISSOLVED PCBS (2) (ppb)	TOTAL PCBS (3) (ppb)	
1 A	16118	< 0.053	0.082	0.082	
2 B	16120	< 0.051	0.41	0.41	
3 C	16121	< 0.051	1.0	1.0	highest
4 D	#	#	#	#	
5 E	16116	< 0.056	< 0.056	< 0.056	
6 F	16117	< 0.052	< 0.052	< 0.052	
7 G	16119	< 0.052	< 0.052	< 0.052	

(1) From Analysis of filtered water.

(2) From Analysis of Suspended particulate matter.

(3) Total of suspended and dissolved fractions.

- No sample - insufficient volume.

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NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/21/92
13:13

NEW BEDFORD - WELLS (3/11/92)
PCBs (ppb)

(Filtered Water)

PARAMETER	16116 WELL #5 WATER	16117 WELL #6 WATER	16118 WELL #1 WATER	16119 WELL #7 WATER	16120 WELL #2 WATER	16121 WELL #3 WATER
Total PCBs	< 0.056	< 0.052	< 0.053	< 0.052	< 0.051	< 0.051
Surrogate Recovery (%)						
TCMX (17-125)	65	80	87	87	83	83

SAMPLE DATE:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE RECEIVED:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE EXTRACTED:	3/26/92	3/26/92	3/26/92	3/26/92	3/26/92	3/26/92
DATE ANALYZED:	4/14/92	4/14/92	4/14/92	4/14/92	4/14/92	4/14/92

biased low??
or w/in QC

U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/20/92
13:51

NEW BEDFORD - WELLS (3/11/92)
PCBs (ppb)

(Filtered Water)

PARAMETER	METHOD BLANK WATER
Total PCBs	< 0.050
Surrogate Recovery (%)	
TCMX (17-125)	96

SAMPLE DATE:
DATE RECEIVED:
DATE EXTRACTED: 3/26/92
DATE ANALYZED: 4/14/92

U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/21/92
13:13

NEW BEDFORD - WELLS (3/11/92)
PCBs (ppb)

(Non-Dissolved)

PARAMETER	16116 WELL #5 WATER	16117 WELL #6 WATER	16118 WELL #1 WATER	16119 WELL #7 WATER	16120 WELL #2 WATER	16121 WELL #3 WATER
Total PCBs	< 0.056	< 0.052	0.082	< 0.052	0.41	1.0
Surrogate Recovery (%)						
TCMX (17-125)	96	91	93	93	88	91

SAMPLE DATE:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE RECEIVED:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE EXTRACTED:	3/26/92	3/26/92	3/26/92	3/26/92	3/26/92	3/26/92
DATE ANALYZED:	4/14/92	4/14/92	4/14/92	4/14/92	4/14/92	4/14/92

U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/21/92
13:13

NEW BEDFORD - WELLS (3/11/92)
PCBs (ppb)

(Non-Dissolved)

PARAMETER	METHOD BLANK WATER
Total PCBs	< 0.050
Surrogate Recovery (%)	
TCMX (17-125)	87

SAMPLE DATE:
DATE RECEIVED:
DATE EXTRACTED: 3/26/92
DATE ANALYZED: 4/14/92

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NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/23/92
12:34

NEW BEDFORD - WELLS (3/11/92)

TRACE METAL RESULTS - WATER (ppm)*
*(TOTAL)

PARAMETER	16116 WELL #5	16117 WELL #6	16118 WELL #1	16119 WELL #7	16120 WELL #2
Cadmium	< 0.0091	< 0.0091	< 0.0091	< 0.0091	< 0.0091
Chromium	< 0.012	< 0.012	< 0.012	J 0.015	J 0.018
Copper	< 0.025	< 0.025	< 0.025	J 0.027	0.048
Lead	< 0.0050	0.022	0.016	0.0085	0.013
SAMPLE DATE:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE DIGESTED:	4/21/92	4/21/92	4/21/92	4/21/92	4/21/92
DATE ANALYZED:	4/22/92	4/22/92	4/22/92	4/22/92	4/22/92

NOTES:

J - Estimated value; analyte detected < the practical quantitation limit.

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PRODUCED ON 04/23/92
12:34

NEW BEDFORD - WELLS (3/11/92)

TRACE METAL RESULTS - WATER (ppm)*
*(TOTAL)

PARAMETER	16121 WELL #3	METHOD BLANK
Cadmium	< 0.0091	< 0.0091
Chromium	0.043	< 0.012
Copper	0.084	< 0.025
Lead	0.028	< 0.0050

SAMPLE DATE:	3/11/92	
DATE DIGESTED:	4/21/92	4/21/92
DATE ANALYZED:	4/22/92	4/22/92

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NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/23/92
12:34

NEW BEDFORD - WELLS (3/11/92)

TRACE METAL RESULTS - WATER (ppm)*
*(DISSOLVED)

PARAMETER	16116 WELL #5	16117 WELL #6	16118 WELL #1	16119 WELL #7	16120 WELL #2
Cadmium	< 0.0091	< 0.0091	< 0.0091	< 0.0091	< 0.0091
Chromium	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
Copper	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
SAMPLE DATE:	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
DATE DIGESTED:	4/21/92	4/21/92	4/21/92	4/21/92	4/21/92
DATE ANALYZED:	4/22/92	4/22/92	4/22/92	4/22/92	4/22/92

U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION, ENVIRONMENTAL LABORATORY

PRODUCED ON 04/23/92
12:34

NEW BEDFORD - WELLS (3/11/92)

TRACE METAL RESULTS - WATER (ppm)*
*(DISSOLVED)

PARAMETER	16121 WELL #3	METHOD BLANK
Cadmium	< 0.0091	< 0.0091
Chromium	< 0.012	< 0.012
Copper	< 0.025	< 0.025
Lead	< 0.0050	< 0.0050

SAMPLE DATE:	3/11/92	
DATE DIGESTED:	4/21/92	4/21/92
DATE ANALYZED:	4/22/92	4/22/92

5. Quality Assurance Data

PCB BLANK SPIKE-BLANK SPIKE DUPLICATE
WATER
PRECISION

(Filtered Water)

COMPOUND	BLANK SPIKE RECOVERY (%)	BLANK SPIKE DUPLICATE RECOVERY (%)	RELATIVE PERCENT DEVIATION (RPD)	MAXIMUM ACCEPTABLE RPD	IN OR OUT OF QC LIMITS
Extraction Date: 3/26/92					
Total PCBs	89	91	3	14	IN

ACCURACY

SPIKING COMPOUND	BLANK SPIKE RECOVERY (%)	ACCEPTABLE RANGE	IN OR OUT OF QC LIMITS
Total PCBs	89	61 - 145	IN

PCB BLANK SPIKE-BLANK SPIKE DUPLICATE
WATER
PRECISION

(Non-Dissolved)

COMPOUND Extraction Date: 3/26/92	BLANK SPIKE RECOVERY (%)	BLANK SPIKE DUPLICATE RECOVERY (%)	RELATIVE PERCENT DEVIATION (RPD)	MAXIMUM ACCEPTABLE RPD	IN OR OUT OF QC LIMITS
Total PCBs	98	102	4	14	IN

ACCURACY

SPIKING COMPOUND	BLANK SPIKE RECOVERY (%)	ACCEPTABLE RANGE	IN OR OUT OF QC LIMITS
Total PCBs	98	61 - 145	IN

TRACE METAL ANALYSIS
BLANK SPIKE/BLANK SPIKE DUPLICATE
WATER
PRECISION

PARAMETER 4/21/92	BLANK SPIKE RECOVERY (%)	BLANK SPIKE DUPLICATE RECOVERY (%)	RELATIVE PERCENT DEVIATION (RPD)	RPD MAXIMUM	IN OR OUT OF QC LIMITS
Cadmium	104	116	11	30	IN
Chromium	110	120	9	30	IN
Copper	104	114	9	30	IN
Lead	90	98	9	30	IN

ACCURACY

PARAMETER 4/21/92	BLANK SPIKE RESULT	BLANK RESULT	SPIKE ADDED	SPIKE RECOVERY %	CONTROL LIMITS REC	IN OR OUT OF QC LIMITS
Cadmium	0.52	< 0.0091	0.5	104	75 - 125	IN
Chromium	1.1	< 0.012	1	110	75 - 125	IN
Copper	0.52	< 0.025	1	104	75 - 125	IN
Lead	0.045	< 0.0050	0.1	90	75 - 125	IN

6. Chain of Custody

U.S. ARMY CORPS OF ENGINEERS

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME: New Bedford - Wells
SAMPLERS: (Signature)	Nancy L. Amidon, Delia Miller

ENV. ~~STA.~~ NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB-filter - A	PCB-unfiltered B	TM-filtered C	TM-unfiltered D	Temp blank		REMARKS
	11mar92	0820		✓	Well #4	~~NLA~~ 4 Ø	✓	✓	✓	✓			No Sample - insufficient vol.
16116	↓	0835		↓	Well #5	4	↓	↓	↓	↓			
16117	↓	0905		↓	Well #6	4	↓	↓	↓	↓			
16118	↓	0930		↓	Well #1	4	↓	↓	↓	↓			
16119	↓	0950		↓	Well #7	4	↓	↓	↓	↓			
16120	↓	1100		↓	Well #2	4	↓	↓	↓	↓			
16121	↓	1110		↓	Well #3	4	↓	↓	↓	↓			
					Temp blank	1	NA				✓		Samples to be filtered
					Temp blank	1	NA				✓		were not preserved in
					Last entry								field.
													Samples to be analyzed un-
													filtered are marked with green
													dots, Samples to be filtered
							green	red	green	red			then analyzed are marked
													with red dots

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Delia Miller	11 MAR 92 1525	Sheila E. Snyder			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy 1 to Sample Custodian; Copy 2 to Coordinator Field Files

7. Cooler Receipt Form

COOLER RECEIPT FORM

PROJECT: NEW BEDFORD - WELLS

Cooler received on 3/11/92 and opened on 3/12/92 by SHEILA SNYDER

(signature)

1) Were custody seals on outside of cooler? Yes (No)
   If Yes, how many and location(s) HAND DELIVERED

2) Were date and signature on seal(s) correct? Yes (No)

3) Were custody papers taped to lid inside cooler? Yes (No)

4) Were custody papers properly filled out (ink, signed, etc.) (Yes) No

5) Did you sign custody papers in appropriate place? (Yes) No

6) Did you attach shipper's packing form to this form? Yes (No)

7) What kind of packing material was used? ICE, BUBBLE WRAP

8) Was sufficient ice used? (Yes) No

9) Were all bottles sealed in separate plastic bags? Yes (No)

10) Did all bottles arrive in good condition? (Yes) No

11) Were all bottle labels complete? (Yes) No
    (No., date, analysis, preservative, sign., etc.)

12) Did all bottle labels agree with custody papers? (Yes) No

13) Were correct bottles used for tests indicated? (Yes) No

14) Were VOA vials checked for absence if air/headspace and noted if found? (N/A) Yes No

15) Was sufficient amount of sample sent in each bottle? (Yes) No

16) Were air volumes noted for air samples? (N/A) Yes No

17) Were initial weights noted for pre-weighed filters? (N/A) Yes No

Explain any discrepancies: _____

_____ was contacted on _____ by _____
to resolve discrepancies.

8. Quality Assurance Review

Quality Assurance Review

Project: New Bedford Wells

Date: June 29,1992

A. Sample Handling:

The samples were collected by NED personnel using standardized procedures. Appropriate sample containers and preservation techniques were used. Proper chain of custody procedures were followed.

B. Laboratory analysis:

1. The maximum holding time between sample collection and analysis was met for the metals. The seven day maximum holding time between sample collection and extraction was exceeded by eight days for the PCBs(filtered and non-dissolved). Because of the persistent nature of the PCBs and that the samples were properly preserved, this is not significant. The maximum holding time between extraction and analysis was met for all PCB analyses.

2. The method blanks for all metals and PCBs were free from contamination.

3. Standard EPA methodology was employed both for metals and PCBs.

4. The PCB surrogate recoveries were all in control.

5. The blank spikes and blank spike duplicates for the metals and PCBs were all in control for both precision and accuracy.

6. The data all appear reasonable and internally consistent.

Forrest E. Knowles, Jr.
Quality Assurance Officer
Laboratory Testing Operations

Keyed by F. Knowles