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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6-2-92

SUBJECT: Split-Sample Analysis for Lead in Drinking Water NLI Industries, IL / ATSDR Study.

FROM: David A Payne, Chief
LS Section, CRL

TO: Brad Bradley, Environmental Engineer
IL / IN Remedial Response Branch
Office of Superfund

The CRL/ESAT tested lead in drinking water for comparative analysis with the CLP lab for 67 samples collected by E & E in Granite City, IL from residential water supplies. The split sample analyses were done using unused aliquots provided by the CLP lab.

Conclusions:

1. 3 samples (E-557, 639, 806) are field blanks from E & E. E & E did an excellent job for this audit.
2. Two field duplicate sets were checked (E 507/508 & 517/518). Differences in field duplicates are real and not a lab artefact. This is expected for "1st draw" sample which are not the same sample aliquot.
3. An excellent correspondence is noted between CRL/ESAT and CLP lab for 64 of 67 split samples. CRL obtained values generally higher (0 to 5 µg/l larger).
4. 3 samples (E-543, 726, 914) have significant differences. CRL will retest these 3 samples before we proceed further. These split-samples are part of evidence file at CRL. Do you have any additional thoughts. We should correct 3 sample results if differences real.

EPA FORM 1320-6 (REV. 3-76)

5. A listing is also provided for "blind" field duplicates (obtained from E & E summary) ~~for~~ tested by CLP lab – These results are supportive of appropriate laboratory analyses in that you and ATSDR will not draw different conclusions from different field duplicate results.

c.c. J. Thakkar, CRL – Attn: D. Miller ESAT
P. Churilla, CRL
D. May, CRL
C.T. Elly, CRL
J. Morris, CRL

When we finalize the results this will be sent in typed format.

SAS6864E - Comparison by Prep. + Analysis Dates to CRL

H_2O

PKG	SAMPLE	PREP'D	ANALYZED	CLP (ug/l)	CRL (ESAT)
1	507	12-3-91	12-3-91	14.5 F.D.	15.6 F.D.
	508	12-3-91	12-3-91	2.9	3.63
6	517	12-6-91	12-6-91	9.5 F.D.	5.97 F.D
	518	12-6-91	12-6-91	13.5	9.12
	521	12-6-91	12-6-91	1 U	2 U
5	543	12-7-91	12-7-91	8.7 x	2 U x
	544	12-7-91	12-7-91	1 U	2 U
	548	12-7-91	12-7-91	7.1	7.51
4	551	12-8-91	12-8-91	15.9	17.47
	553	12-8-91	12-8-91	1.1 B	2 U
	557	12-8-91	12-8-91	1 U (B)	2 U (B)
18	600	12-13-91	12-13 (1st)	1.0 B	2 U
	603	12-13-91	12-13 (1st)	29.0	34.02
	625	12-13-91	12-13 (1st)	3.9	6.73
12	629	12-13-91	12-13 (2nd)	8.0	14.61
	639	12-13-91	12-13 (2nd)	1 U (B)	2 U (B)
	671	12-13-91	12-13 (2nd)	1 U	2 U
13	685	12-13-91	12-13 (3rd)	1 U	2 U
	706	12-13-91	12-13 (3rd)	3.4	3.39
	711	12-13-91	12-13 (3rd)	1 U	2 U
16	721	12-13-91	12-13 (4th)	4.5	5.49
	797	12-13-91	12-13 (4th)	1 U	2 U
	800	12-13-91	12-13 (4th)	15.4	21.14
13	806	12-13-91	12-13 (5th)	1 U (B)	2 U (B)
	808	12-13-91	12-13 (5th)	95.5	111.6
26	564	12-19-91	12-19 (1st)	1.6 B	2.94
	570	12-19-91	12-19 (1st)	9.2	10.01
	571	12-19-91	12-19 (1st)	1 U	2 U
24	584	12-19-91	12-19 (2nd)	1 U	2 U
	589	12-99-91	12-19 (2nd)	1.0 B	2 U

5-28-92; prepared by D.M. May

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H_2O

PKG	SAMPLE	PREP'D	ANALYZED	CLP	CRL (ESA
24	609	12-19-91	12-19 (2nd)	3.0	5.31
25	618	12-19-91	12-19 (3rd)	7.2	9.4
	622	12-19-91	12-19 (3rd)	1 U	2 U
	643	12-19-91	12-19 (3rd)	11.1	12.4
23	662	12-19-91	12-19 (4th)	23.3	32.67
	663	12-19-91	12-19 (4th)	5.2	7.88
	665	12-19-91	12-19 (4th)	1 U	2 U
28	726	12-21-91	12-21 (1st)	16.8 x	42.03 x
	727	12-21-91	12-21 (1st)	1 U	2 U
	729	12-21-91	12-21 (1st)	4.8	6.56
34	773	12-21-91	12-21 (2nd)	2.2	2.58
	782	12-21-91	12-21 (2nd)	3.3	5.85
	786	12-21-91	12-21 (2nd)	1 U	2 U
29	734	12-27-91	12-27 (1st)	1 U (B)	2 U (B)
	740	12-27-91	12-27 (1st)	10.0	11.72
	750	12-27-91	12-27 (1st)	1 U	2 U
41	851	12-27-91	12-27 (3rd)	17.0	18.84
	854	12-27-91	12-27 (3rd)	12.9	16.98
	866	12-27-91	12-27 (3rd)	1.1 B	2 U
38	819	12-27-91	12-27 (4th)	7.4	7.95
	821	12-27-91	12-27 (4th)	1.5 B	2 U
	826	12-27-91	12-27 (4th)	1 U	2 U
33	829	12-30-91	12-30 (1st)	1 U	2 U
	842	12-30-91	12-30 (1st)	5.2	7.15
	843	12-30-91	12-30 (1st)	1.2 B	2 U
40	871	12-30-91	12-30 (2nd)	1.9 B	2 U
	880	12-30-91	12-30 (2nd)	8.4	12.26
	887	12-30-91	12-30 (2nd)	1.1 B	2 U
37	914	12-30-91	12-30 (3rd)	7.6 x	2 U x
	924	12-30-91	12-30 (3rd)	63.8	71.18

5-28-92; prepd. by D. M. May

SAS6864E - Comparison by Prep. + Analysis Dates to CRL
H_2O

PKG	SAMPLE	PREP'D	ANALYZED	CLP	CRL(ESAT)
42	891	12-31-91	12-31 (1st)	4.8	8.0
	899	12-31-91	12-31 (1st)	9.7	10.5
	904	12-31-91	12-31 (1st)	2.8	2.54
45	928	12-31-91	12-31 (2nd)	8.2	7.50
	929	12-31-91	12-31 (2nd)	7.8	6.98

Sample returned to ESAT at CRL, not included on list

28	703	12-21-91	12-21 (1st)	6.6	10.45

5-28-92; prepared by D. M. May

SAS 6864 Field Duplicates - H_2O

Sample #'s	mg/l		
E 507/508	14.5	2.9	
E 505/506	1.4 B	1.4 B	
E 540/541	1.0 B	1.0 B	
E 522/523	2.1	2.5	
E 531/532	3.7	1.7 B	
E 571/572	1.0 U	1.0 U	
E 610/611	1.0 U	1.0 U	
E 556/560	2.2	1.3 B	
E 517/518	9.5	13.5	
E 595/596	1.0 U	1.4 B	
E 601/602	1.7 B	1.0 U	
E 636/637	2.2	1.1 B	#12 signed by J. Thakker
E 670/674	1.0 U	1.0 U	#12 signed by J. Thakker
E 705/706	1.5 B	3.4	
E 710/711	1.0 U	1.0 U	
E 796/797	1.0 U	1.0 U	
E 864/805	~~2.0~~ 2.2	~~2.0~~ 2.0	#13 signed by J. Thakker
E 889/890	5.1	5.0	
E 649/650	1.0 B	1.0 U	
E 658/659	1.0 U	1.0 U	
E 692/693	1.0 U	1.0 U	
E 724/725	1.0 U	1.0 B	
E 742/743	1.5 B	2.7	
E 735/736	1.0 U	1.0 U	baseline correction by CLP + CCV 2 after E738
E 748/749	1.3 B	1.7 B	
E 778/779	3.7	1.7 B	
E 759/760	2.1	7.7	} poly #32 signed by Jay Thakker
E 767/768	1.0 U	1.0 U	
E 827/828	2.5	1.2 B	poly #38 (E827) + #33 (E828)
E 836/837	1.0 U	1.0 U	

(OVER)

E848/849	1.3B	1.8B
E857/858	1.1B	2.0
E870/871	1.0U	1.9B
E881/882	3.2	2.2

5-29-92; prep'd. by D.M. May

Field Duplicates (cont.)
D. Payne 6-2-92