CHEMICALS NIAGARA FALLS PLANT, P.O. BOX 748, NIAGARA FALLS, NY 14302

October 24, 1989

RECEIVED

OCT 2 7 1989

Bureau of Hazardous Waste Facility Permitting Division of Hazardous Substances Regulation

Mr. Bijan Rostami New York State Department of Environmental Conservation 600 Delaware Avenue Buffalo, NY 14202

Mr. Jean DuBois
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233

Dear Mr. Rostami and Mr. DuBois:

Olin has completed all decontamination actions outlined in our Brine Mud Tank and Waste Pile Closure Plan as approved by Mr. Paul Counterman in correspondence dated October 10, 1989. Concrete core and subsurface soil sample EP mercury concentration results have been completed by Advanced Environmental Services, Inc. as per the attached reports. All EP mercury concentration results have been determined to be well below the RCRA hazardous limits outlined in the approved Closure Plan.

Your approval is requested before Olin proceeds with final closure activities.

Kindly contact our Mr. Allan F. Kapteina at 716-278-6584 should you have any questions.

Very truly yours,

OLIN CORPORATION

J. L. McIntosh Plant Manager

AFK/JLM/dmh

54543

cc: Mr. Paul Counterman NYSDEC

OLIN NIAGARA FALLS PLANT BRINE MUD TANK CLOSURE PROJECT # CAR 981 J640

EP Mercury (ppm)

<u>ID #</u>	Location	Concrete Core	Subsurface Soils
B-1	North Tank (slope end) North Tank (bottom) South Tank (slope end) South Tank (bottom) Waste Pile Area (NW) Waste Pile Area (NE) Waste Pile Area (SW) Waste Pile Area (SE) Brine Process Sump	BQL	0.015
B-2		0.003	0.028
B-3		0.001	0.034
B-4		BQL	0.004
B-5		0.001	BQL
B-6		0.004	BQL
B-7		0.003	BQL
B-8		0.008	BQL
B-9		BQL	0.013

BQL = Below Quantifiable Limits (ie 0.001 ppm)



ANALYSIS OF SITE CLOSURE

Report Prepared For

OLIN CORPORATION

Donovan L. Klaaren Project Manager

Paul T. McMahon

Technical Evaluation

October 19, 1989 AES Report EKA

COMMITMENT TO HONESTY - QUALITY - SERVICE

EXTRACTION PROCEDURE (E.P.) TOXICITY - METALS ADVANCED ENVIRONMENTAL SERVICES, INC. LABORATORY REPORT

Type of Analysis: Metals

A.E.S. Job Code EKA Client: OLIN

(All results are in mg/l)

12986 12987 12988 A.E.S. Lab No.- 12985 B3 B4 B2 Sample ID - B1

Analysis	Method No.	Ref No.	Allowable Conc. (mg/l)	Ouant.	Analysis Date	10/13/89	10/13/89	10/13/89	10/13/89	
Mercury	7471	5	0.2	0.001	10/16/89	BQL *	0.003	0.001	BQL	

^{*} Below Quantifiable Limits.

EXTRACTION PROCEDURE (E.P.) TOXICITY - METALS ADVANCED ENVIRONMENTAL SERVICES, INC. LABORATORY REPORT

				Type of Client:	Analysis: OLIN	Metals A.	E.S. Job Code EK	A .	
					(All	results are	e in mg/l)		
				A.E.S. Sam	Lab No	12995 B5	12996 B6	12997 B7	12998 B8
Analysis			Allowable Conc. (mg/l)		Analysis Date	10/13/89	10/13/89	10/13/89	10/13/89
Mercury	7471	5	0.2	0.001	10/16/89	0.001	0.004	0.003	0.008

CUSTOMER: OLIN JOB CODE: EKA UNITS: MILLIGRAMS/LITER, OR PPM

Jobb. Dia.						
ELEMENT	0/ABS.	1 SPK/1 ABS	2 SPK/2 ABS	3 SPK/3 ABS	FIN CONC	r*
Mercury **	2.0	0.00125/8.0	0.0025/15.0	0.005/28.0	BQL ***	.999
"	8.0	0.00125/15.0	0.0025/22.0	0.005/37.0	0.003	.999
11	5.5	0.00125/13.0	0.0025/20.5	0.005/42.0	0.001	.995
"	2.0	0.00125/7.0	0.0025/11.0	0.005/24.0	BQL	.995
"	2.0	0.00125/8.0	0.0025/13.0	0.005/22.0	0.001	.998
11	11.0	0.00125/18.0	0.0025/27.0	0.005/39.0	0.004	.997
11	7.0	0.00125/14.0	0.0025/18.0	0.005/31.0	0.003	.997
11	16.5	0.00125/22.5	0.0025/29.0	0.005/38.5	0.008	.997
i						
	Mercury ** ""	Mercury ** 2.0 " 8.0 " 5.5 " 2.0 " 2.0 " 11.0 " 7.0	Mercury ** 2.0	Mercury ** 2.0	Mercury ** 2.0	Mercury ** 2.0 0.00125/8.0 0.0025/15.0 0.005/28.0 BQL *** " 8.0 0.00125/15.0 0.0025/22.0 0.005/37.0 0.003 " 5.5 0.00125/13.0 0.0025/20.5 0.005/42.0 0.001 " 2.0 0.00125/7.0 0.0025/11.0 0.005/24.0 BQL " 2.0 0.00125/8.0 0.0025/13.0 0.005/22.0 0.001 " 11.0 0.00125/18.0 0.0025/27.0 0.005/39.0 0.004 " 7.0 0.00125/14.0 0.0025/18.0 0.005/31.0 0.003

^{*&}quot;r" is the correlation coefficient.
The correlation coefficient control window is .995

^{**} Mercury measured in peak height

^{***} Below Quantifiable Limits

ADVANCED ENVIRONMENTAL SERVICES, INC. PARAMETER TRACEABILITY REPORT ATOMIC SPECTROSCOPY DEPARTMENT

AES JOB CODE EKA

ANALYST	ANALYTICAL METHOD	SAMPLE CODE	DATE OF ANALYSIS	TIME OF ANALYSIS
f. mc mala	74.71	12985-88,12975-98	8 _ 10 -16 -89	1230-1700
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ANALYSIS OF SITE CLOSURE - 1 CONCRETE CORE

Report Prepared For

OLIN CORPORATION

OCT 2 4 1989

BY A.F. KAPTEIN

Donovan L. Klaaren Project Manager

Paul T. McMahon

Technical Evaluation

October 23, 1989 AES Report EKA

COMMITMENT TO HONESTY - QUALITY - SERVICE

EXTRACTION PROCEDURE (E.P.) TOXICITY - METALS ADVANCED ENVIRONMENTAL SERVICES, INC. LABORATORY REPORT

Type of Analysis: Metals

Client: OLIN. A.E.S. Job Code EKA

(All results are in mg/l)

A.E.S. Lab No.-13124

Sample ID -

B-9

GRAB

Allowable

Analysis Method Ref Conc. No. No. (mg/l) Quant. Analysis

Limits Date

10/11/89

Mercury 7471 5 0.2 0.001 10/20/89

BQL *

CUSTOMER: OLIN JOB CODE: EKA UNITS: MILLIGRAMS/LITER, OR PPM

JOB (CODE: EKA						
S.#	ELEMENT	0/ABS.	1 SPK/1 ABS	2 SPK/2 ABS	3 SPK/3 ABS	FIN CONC	r*
124	Mercury	3.0 **	0.00125/10.0	0.0025/20.0	0.005/38.0	BQL ***	.999
		.					
			M.				

^{*&}quot;r" is the correlation coefficient.
The correlation coefficient control window is .995

^{**} Mercury in peak height

^{***}Below Quantifiable Limits

ADVANCED ENVIRONMENTAL SERVICES, INC. PARAMETER TRACEABILITY REPORT ATOMIC SPECTROSCOPY DEPARTMENT

AES JOB CODE EKA

ANALYST	ANALYTICAL METHOD	SAMPLE CODE	DATE OF ANALYSIS	TIME OF ANALYSIS
P. Br make	7471	13124	10-20-89	1030-1530
s <u></u>				
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RECRA ENVIRONMENTAL, INC.

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B-510	Yoka	4:00	A		ll	2	1	-	_				4
B-6/4	1/2/4	4:15)	u			2							
3-76				V	1/	2			_				и
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RECRA ENVIRONMENTAL, INC.

OJECT NO	SITE NAME OLIN CHEMICALS			///	/ /	
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TATION DATE TIME COMP GRAB	STATION LOCATION			1-1-	N 1/	h U
B-1	9P16131	2			3-7 and	17'-9" 5"-9" 17.5'-9"
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ANALYSIS FOR SITE CLOSURE - SOIL SAMPLES

Report Prepared For

OLIN CORPORATION



Donovan L. Klaaren

Project Manager

Technical Evaluation

October 23, 1989 AES Report EKA

COMMITMENT TO HONESTY - QUALITY - SERVICE

EXTRACTION PROCEDURE (E.P.) TOXICITY - METALS ADVANCED ENVIRONMENTAL SERVICES, INC. LABORATORY REPORT

			Type of Client:	Analysis: OLIN	Metals A.	E.S. Job Code	e EKA		
				(All	results are	e in mg/l)			
			A.E.S.	Lab No	13137 9P16131 B-1	13138 9P16132 B-2	13139 9P16133 B-3	13140 P17 B-4	
Analysis Method	Ref	Allowable Conc. (mg/l)	Quant. Limits	Analysis Date	GRAB	GRAB 10/17/89	GRAB 10/17/89	GRAB 10/17/89	

0.015

0.001 10/20/89

0.2

7471

Mercury

Paul I mi morton for

0.034

0.028

0.004

EXTRACTION PROCEDURE (E.P.) TOXICITY - METALS ADVANCED ENVIRONMENTAL SERVICES, INC. LABORATORY REPORT

Type of	Analysis:	Metals		900 SM07			
Client:			A. F	E.S.	Job	Code	EKA.
	(A]]	results	are	in	mg/1))	

Analysis	Method	Ref	Allowable Conc. (mg/l)	Sam	Lab No ple ID - Analysis Date	13141 P-17 B-5 GRAB 10/17/89	13142 P-17 B-6 GRAB 10/17/89	13143 P-17 B-7 GRAB 10/17/89	13144 P-17 B-8 GRAB 10/17/89	13145 P-17 B-9 GRAB 10/17/89
Mercury	7471	5	0.2		10/20/89	BQL *	BQL	BQL	BQL	0.013

land I morning for

^{*} Below Quantifable Limits

ADVANCED ENVIRONMENTAL SERVICES STANDARD ADDITIONS DATA SHEET

CUSTOMER: OLIN JOB CODE: EKA

UNITS: MILLIGRAMS/LITER, OR PPM

S.#	ELEMENT	0/ABS.	1 SPK/1 ABS	2 SPK/2 ABS	3 SPK/3 ABS	FIN CONC	r*
137	Mercury	6.0 **	0.00125/12.0	0.0025/19.0	0.005/37.0	0.0015***	.996
138		6.0	0.00125/10.5	0.0025/15.5	0.005/26.0	0.0028***	.999
139	"	10.5	0.00125/16.5	0.0025/25.5	0.005/39.5.	0.0034***	.998
140	11 -	15.0	0.00125/24.0	0.0025/34.0	0.005/50.0	0.004	.999
141		2.0	0.00125/10.0	0.0025/19.0	0.005/35.0	BQL ****	.999
142	11	2.0	0.00125/10.0	0.0025/20.0	0.005/37.0	BQL	.999
143		0.0	0.00125/8.0	0.0025/17.0	0.005/33.0	BQL	.999
144	"	2.0	0.00125/10.0	0.0025/19.0	0.005/34.0	BQL	.999
145		12.0	0.00125/21.0	0.0025/29.0	0.005/53.0	0.0026***	.996
1		1 0			•		

*"r" is the correlation coefficient.

The correlation coefficient control window is .995

Mercury in peak height

Standard additions performed on a sample dilution factor of ten

**** Below Quantifiable Limits

**** Standard additions performed on a sample dilution factor of five

ADVANCED ENVIRONMENTAL SERVICES, INC. PARAMETER TRACEABILITY REPORT ATOMIC SPECTROSCOPY DEPARTMENT

AES JOB CODE EKA

ANALYST	ANALYTICAL METHOD	SAMPLE CODE	DATE OF ANALYSIS	TIME OF ANALYSIS
A. mc notor	747/	13137-45	10-20-89	1030-1530
	ALLE SANCE LAND			



2186 LIBERTY DRIVE NIAGARA FALLS, NY 14304 (716) 283-3120

/IAH	N OF	CUS ORD	TODY	JOB CODE EKA	PROJE	CTNAME.	U_						
SAMPLER'S SIGNATURE							AB.	1P			OF.	ALCO !	
MPLE	SEQ. NO.	DATE	TIME	9 P 13		ı	GRAB	COMP	SAMPL	E TYPE	ON THE	8	REMARKS
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OLIN NIAGARA FALLS PLANT BRINE MUD TANK CLOSURE PROJECT # CAR 981 J640

EP Mercury (ppm)

Location	Concrete Core	Subsurface Soils
North Tank (slope end) North Tank (bottom) South Tank (slope end) South Tank (bottom) Waste Pile Area (NW) Waste Pile Area (SE) Waste Pile Area (SE) Brine Process Sump	BQL 0.003 0.001 BQL 0.001 0.004 0.003 0.008 BQL	0.015 0.028 0.034 0.004 BQL BQL BQL BQL 0.013
	North Tank (slope end) North Tank (bottom) South Tank (slope end) South Tank (bottom) Waste Pile Area (NW) Waste Pile Area (NE) Waste Pile Area (SW)	North Tank (slope end) North Tank (bottom) South Tank (slope end) South Tank (slope end) South Tank (bottom) Waste Pile Area (NW) Waste Pile Area (NE) Waste Pile Area (SW) Waste Pile Area (SE) Waste Pile Area (SE)

BQL = Below Quantifiable Limits (\underline{ie} 0.001 ppm)