



RECEIVED
MAR 10 1993
ENGINEERING

Date: 03/09/93

OLIN CORPORATION
RAVAENNA ARSENAL
8451 STATE ROUTE 5
RAVENNA, OH 44266-9297
ATTN: WAYNE A. CARKIDO

Dear Customer,

In order to comply with our permit requirements, we must recertify the information on waste materials profiles on an annual basis. We have enclosed a "WASTE MATERIAL PROFILE SHEET ANNUAL RE-CERTIFICATION FORM". Attached is a list of profiles that are scheduled to expire on 06/01/93 and require re-certification. Please complete a form for each profile listed and return them to:

Clean Harbors Analytical Services, Inc.
213 Burlington Road
Bedford, MA 01730
Attn: Profile Re-certification

If you have any questions or require assistance in completing the form, please call our Customer Service Dept. at 216-429-2401.

Very truly yours,
CLEAN HARBORS, INC.

Customer Service Department

RECEIVED
MAR 18 1993
ENGINEERING



APPROVE ONLY THOSE PROFILES THAT ARE APPLICABLE AND REMAIN IN USE.

GENERATOR NAME	PROFILE NUMBER	DESCRIPTION	CLHB CODE
OLIN CORPORATION APPROVED AT : BA,BR.	S46002	OILY SLUDGE SEMI-SOLID	CNOS
OLIN CORPORATION APPROVED AT : BA,BR.	S46003	OILY WATER	B26



CLEAN HARBORS, INC.
WASTE MATERIAL PROFILE SHEET ANNUAL RE-CERTIFICATION FORM

Profile#: S46003

Please complete the following for the above listed profile:

Generator Olin Corporation

Address Ravenna Arsenal, Inc., 8451 State Route 5, Ravenna, Ohio 44266-9297

Contact Name Susan McCauslin

Waste Description Oily Water

1. Do you wish to recertify this waste stream ? Yes X No
If No, skip the following questions. (We would appreciate the return of this form to help us purge our records.)
2. Has the process generating the waste changed ? Yes No X
3. Have any of the characteristics to the waste changed ? Yes No X
Such as a change in physical state, addition or deletion of EPA waste codes. (If Yes, attach MSDSs or analysis if available)

If Yes was checked for questions 2 or 3, please explain below.
Also utilize this space to indicate any changes or updates.

Changes in the process of generation or characteristics may necessitate submission of a new profile and sample for the waste stream.

This form should be completed and returned thirty days before the expiration date listed above.

I hereby certify that all the information submitted in this and attached documents is correct to the best of my knowledge.

Signature *Susan McCauslin*

Title Environmental Engineer

Printed Name Susan McCauslin

Date 03/22/93



CLEAN HARBORS, INC.
WASTE MATERIAL PROFILE SHEET ANNUAL RE-CERTIFICATION FORM

Profile#: S46002

Please complete the following for the above listed profile:

Generator Olin Corporation
Address Ravenna Arsenal, Inc., 8451 State Route 5, Ravenna, Ohio 44266-9297
Contact Name Susan McCauslin
Waste Description Oily Sludge Semi-Solid

1. Do you wish to recertify this waste stream ? Yes X No
If No, skip the following questions. (We would appreciate the return of this form to help us purge our records.)
2. Has the process generating the waste changed ? Yes No X
3. Have any of the characteristics to the waste changed ? Yes No X
Such as a change in physical state, addition or deletion of EPA waste codes. (If Yes, attach MSDSs or analysis if available)

If Yes was checked for questions 2 or 3, please explain below.
Also utilize this space to indicate any changes or updates.

Changes in the process of generation or characteristics may necessitate submission of a new profile and sample for the waste stream.

This form should be completed and returned thirty days before the expiration date listed above.

I hereby certify that all the information submitted in this and attached documents is correct to the best of my knowledge.

Signature *Susan McCauslin* Title Environmental Engineer
Printed Name Susan McCauslin Date 03/22/93



ANALYTICAL SERVICES, INC.

BEDFORD DIVISION

213 BURLINGTON ROAD, BEDFORD, MA 01730

(617) 275-6111

B.J. JENKINS

JUN 02 1992

REPORT OF ANALYSIS

C: Susan McCauslin
Wayne Calisher

Clean Harbors of Kingston, Inc.
Cleveland Field Services
1200 E. 55th Street
Cleveland, OH 44103

Project: Olin Ordnance
P.O. #: OH5152

Date Received: 04/28/92
CHAS Lab #: 92X04146

Attn: Mr. Dan Morrison

Enclosed are the results for the sample(s) delivered to our laboratory on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Analytical Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work, the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me at the number above.

Please note that samples will be held for a period not to exceed 30 days from date of final report.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date:

Richard Ravenelle 5/13/92

Richard Ravenelle
Laboratory Manager



Client: Clean Harbors of Kingston, Inc.

Sample I.D.: Drain L S46003

Sample Type: Liquid

CHAS Lab #: 92X04146-01

Date Received: 04/28/92

TCLP Wastes

Waste Code	Description	Regulatory Level*	MDL*	Conc.*
D004	Arsenic	5.0	0.50	ND
D005	Barium	100.0	1.0	2.3
D018	Benzene	0.5	0.10	ND
D006	Cadmium	1.0	0.030	ND
D019	Carbon Tetrachloride	0.5	0.10	ND
D020	Chlordane	0.03	-- Not requested --	
D021	Chlorobenzene	100.0	0.10	ND
D022	Chloroform	6.0	0.10	ND
D007	Chromium	5.0	0.040	ND
D026	Total Cresol	200.0	-- Not requested --	
D016	2,4-D	10.0	-- Not requested --	
D027	1,4-Dichlorobenzene	7.5	-- Not requested --	
D028	1,2-Dichloroethane	0.5	0.10	ND
D029	1,1-Dichloroethylene	0.7	0.10	ND
D030	2,4-Dinitrotoluene	0.13	-- Not requested --	
D012	Endrin	0.02	-- Not requested --	
D031	Heptachlor (and its Epoxide)	0.008	-- Not requested --	
D032	Hexachlorobenzene	0.13	-- Not requested --	
D033	Hexachlorobutadiene	0.5	-- Not requested --	
D034	Hexachloroethane	3.0	-- Not requested --	
D008	Lead	5.0	0.50	0.89
D013	Lindane	0.4	-- Not requested --	
D009	Mercury	0.2	0.0020	ND
D014	Methoxychlor	10.0	-- Not requested --	
D035	Methyl Ethyl Ketone	200.0	0.40	ND
D036	Nitrobenzene	2.0	-- Not requested --	
D037	Pentachlorophenol	100.0	-- Not requested --	
D038	Pyridine	5.0	-- Not requested --	
D010	Selenium	1.0	0.60	ND
D011	Silver	5.0	0.20	ND
D039	Tetrachloroethylene	0.7	0.10	ND
D015	Toxaphene	0.5	-- Not requested --	
D040	Trichloroethylene	0.5	0.10	ND
D041	2,4,5-Trichlorophenol	400.0	-- Not requested --	
D042	2,4,6-Trichlorophenol	2.0	-- Not requested --	
D017	2,4,5-TP (Silvex)	1.0	-- Not requested --	
D043	Vinyl Chloride	0.2	0.10	ND

Notes: ND - Below minimum detectable level (MDL)

TR - Trace amount present but below MDL

* - mg/l

TCLP - Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described in the Federal Register, Volume 55, No. 126.

This is a summary report. Please see the following pages for full results.



Client: Clean Harbors of Kingston, Inc.
Sample I.D.: Drain L S46003
Sample Type: Liquid

CHAS Lab #: 92X04146-01A
Date Received: 04/28/92
Internal Code: VS30

Volatile Organics - System D
Toxicity Characteristic Leaching Procedure (TCLP)
by EPA Method 8260 (ref. c)

Zero Headspace Extraction Date: 05/05/92

Analysis Date: 05/07/92

Parameter	MDL*	Conc.*	Parameter	MDL*	Conc.*
Benzene	0.10	ND	1,1-Dichloroethylene	0.10	ND
Carbon Tetrachloride	0.10	ND	Methyl Ethyl Ketone	0.40	ND
Chlorobenzene	0.10	ND	Tetrachloroethylene	0.10	ND
Chloroform	0.10	ND	Trichloroethylene	0.10	ND
1,2-Dichloroethane	0.10	ND	Vinyl Chloride	0.10	ND

Notes

ND - Below minimum detectable level (MDL)

TR - Trace amount present but below MDL

* = mg/l

TCLP - Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described
in the Federal Register, Volume 55, No. 126.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 97 %
Toluene-d8: 99 %
p-BFB: 107 %

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%



Client: Clean Harbors of Kingston, Inc.
Sample I.D.: Drain L S46003
Sample Type: Liquid

CHAS Lab #: 92X04146-01M
Date Received: 04/28/92

Parameter	MDL	Result	Units	Analysis Date	Method Number and Reference
Cyanide, Reactive	0.96	ND	mg/kg	04/29/92	7.3.3.2(c)
Flashpoint	--	>200	deg F	05/04/92	1010(c)
pH	--	7.9	--	04/29/92	150.1(a)
Sulfide, Reactive	16	55	mg/kg	04/29/92	7.3.4.2(c)

Notes: ND = Below minimum detectable level (MDL)



Client: Clean Harbors of Kingston, Inc.
Sample I.D.: Drain L S46003
Sample Type: Liquid

CHAS Lab #: 92X04146-01M
Date Received: 04/28/92

Parameter	MDL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - TCLP	0.50	ND	05/06/92	05/07/92	3010/6010(c)
Barium - TCLP	1.0	2.3	05/06/92	05/07/92	3010/6010(c)
Cadmium - TCLP	0.030	ND	05/06/92	05/07/92	3010/6010(c)
Chromium - TCLP	0.040	ND	05/06/92	05/07/92	3010/6010(c)
Lead - TCLP	0.50	0.89	05/06/92	05/07/92	3010/6010(c)
Mercury - TCLP	0.0020	ND	05/07/92	05/08/92	7470(c)
Selenium - TCLP	0.60	ND	05/06/92	05/07/92	3010/6010(c)
Silver - TCLP	0.20	ND	05/06/92	05/07/92	3005/6010(c)

Sample extracted on 05/04/92.

Notes: ND = Below minimum detectable level (MDL)
* = mg/l
All metal results are blank corrected.

TCLP - Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described
in the Federal Register, Volume 55, No. 126.



Client: Clean Harbors of Kingston, Inc.
 Sample I.D.: Drain S S46002
 Sample Type: Solid

CHAS Lab #: 92X04146-02
 Date Received: 04/28/92

TCLP Wastes

Waste Code	Description	Regulatory Level*	MDL*	Conc.*
D004	Arsenic	5.0	0.50	ND
D005	Barium	100.0	1.0	1.4
D018	Benzene	0.5	0.10	ND
D006	Cadmium	1.0	0.030	ND
D019	Carbon Tetrachloride	0.5	0.10	ND
D020	Chlordane	0.03	-- Not requested --	
D021	Chlorobenzene	100.0	0.10	ND
D022	Chloroform	6.0	0.10	ND
D007	Chromium	5.0	0.040	ND
D026	Total Cresol	200.0	-- Not requested --	
D016	2,4-D	10.0	-- Not requested --	
D027	1,4-Dichlorobenzene	7.5	-- Not requested --	
D028	1,2-Dichloroethane	0.5	0.10	ND
D029	1,1-Dichloroethylene	0.7	0.10	ND
D030	2,4-Dinitrotoluene	0.13	-- Not requested --	
D012	Endrin	0.02	-- Not requested --	
D031	Heptachlor (and its Epoxide)	0.008	-- Not requested --	
D032	Hexachlorobenzene	0.13	-- Not requested --	
D033	Hexachlorobutadiene	0.5	-- Not requested --	
D034	Hexachloroethane	3.0	-- Not requested --	
D008	Lead	5.0	0.50	ND
D013	Lindane	0.4	-- Not requested --	
D009	Mercury	0.2	0.0020	ND
D014	Methoxychlor	10.0	-- Not requested --	
D035	Methyl Ethyl Ketone	200.0	0.40	ND
D036	Nitrobenzene	2.0	-- Not requested --	
D037	Pentachlorophenol	100.0	-- Not requested --	
D038	Pyridine	5.0	-- Not requested --	
D010	Selenium	1.0	0.60	ND
D011	Silver	5.0	0.20	ND
D039	Tetrachloroethylene	0.7	0.10	ND
D015	Toxaphene	0.5	-- Not requested --	
D040	Trichloroethylene	0.5	0.10	ND
D041	2,4,5-Trichlorophenol	400.0	-- Not requested --	
D042	2,4,6-Trichlorophenol	2.0	-- Not requested --	
D017	2,4,5-TP (Silvex)	1.0	-- Not requested --	
D043	Vinyl Chloride	0.2	0.10	ND

Notes: ND - Below minimum detectable level (MDL)

TR - Trace amount present but below MDL

* - mg/l

TCLP - Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described in the Federal Register, Volume 55, No. 126.

This is a summary report. Please see the following pages for full results.



Client: Clean Harbors of Kingston, Inc.
Sample I.D.: Drain S S46002
Sample Type: Solid

CHAS Lab #: 92X04146-02A
Date Received: 04/28/92
Internal Code: VS30

Volatile Organics - System D
Toxicity Characteristic Leaching Procedure (TCLP)
by EPA Method 8260 (ref. c)

Zero Headspace Extraction Date: 05/05/92

Analysis Date: 05/06/92

Parameter	MDL*	Conc.*	Parameter	MDL*	Conc.*
Benzene	0.10	ND	1,1-Dichloroethylene	0.10	ND
Carbon Tetrachloride	0.10	ND	Methyl Ethyl Ketone	0.40	ND
Chlorobenzene	0.10	ND	Tetrachloroethylene	0.10	ND
Chloroform	0.10	ND	Trichloroethylene	0.10	ND
1,2-Dichloroethane	0.10	ND	Vinyl Chloride	0.10	ND

Notes

ND = Below minimum detectable level (MDL)

TR = Trace amount present but below MDL

* = mg/l

TCLP = Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described
in the Federal Register, Volume 55, No. 126.

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 100 %
Toluene-d8: 95 %
p-BFB: 97 %

Acceptance Criteria:

<u>Water</u>	<u>Soil</u>
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%



Client: Clean Harbors of Kingston, Inc.
Sample I.D.: Drain S S46002
Sample Type: Solid

CHAS Lab #: 92X04146-02M
Date Received: 04/28/92

Parameter	MDL*	Result*	Digestion Date	Analysis Date	Method Number and Reference
Arsenic - TCLP	0.50	ND	05/06/92	05/07/92	3010/6010(c)
Barium - TCLP	1.0	1.4	05/06/92	05/07/92	3010/6010(c)
Cadmium - TCLP	0.030	ND	05/06/92	04/07/92	3010/6010(c)
Chromium - TCLP	0.040	ND	05/06/92	05/07/92	3010/6010(c)
Lead - TCLP	0.50	ND	05/06/92	05/07/92	3010/6010(c)
Mercury - TCLP	0.0020	ND	05/07/92	05/08/92	7470(c)
Selenium - TCLP	0.60	ND	05/06/92	05/07/92	3010/6010(c)
Silver - TCLP	0.20	ND	05/06/92	05/07/92	3005/6010(c)

Sample extracted on 04/29/92.

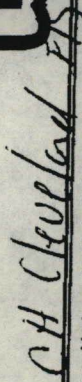
Notes: ND = Below minimum detectable level (MDL)

* - mg/l

All metal results are blank corrected.

Soil/solid samples based on sample dry weight.

TCLP = Toxicity Characteristic Leaching Procedure, EPA Method 1311 as described
in the Federal Register, Volume 55, No. 126.



Page	of
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Turnaround: 24 Hrs 48 Hrs 1 Week 2 Weeks Other: _____
 Sun Charge: _____

REMARKS: (Sample storage, nonstandard sample bottles,
special instructions)

PLEASE FORWARD REMAINING
SAMPLE TO CENTRAL
PROFILING FOR SAMPLE
APPROVAL

Location of samples: RI R3K

Turnaround: 24 Hrs 48 Hrs 1 Week 2 Weeks Other:



WASTE MATERIAL PROFILE SHEET

S 46002

Profile Number

A. GENERAL INFORMATION

GENERATOR

BILL TO:

FACILITY ADDRESS

BILL TO ADDRESS

SIC NUMBER IF KNOWN

CLEAN HARBORS CONTACT PERSON

GENERATOR U.S. EPA ID #

SAMPLE APPROVAL P.O. #

GENERATOR STATE ID #

CUSTOMER CONTACT

TECHNICAL CONTACT

CUSTOMER CONTACT PHONE

TECHNICAL CONTACTS PHONE

B. WASTE DESCRIPTION

COMMON NAME FOR THE WASTE

PROCESS GENERATING THE WASTE

C. PROPERTIES

PH _____ % ORGANIC NITROGEN _____ % SULFUR _____ % ORGANIC HALOGEN _____ BTU's/POUND _____ % ASH _____

COLOR _____ ODOR _____ % T.O.C. _____

FLASH POINT (°F)

☐ < 100 ☐ 100-140 ☐ 140-200 ☐ > 200 ☐ NO FLASH

PHYSICAL STATE

☐ THICK VISCOUS LIQUID☐ SOLID WITHOUT FREE LIQUIDS☐ WASTE WATER☐ LIQUID WITH NO SOLIDS☐ POWDER☐ NON-WASTE WATER☒ LIQUID/SOLID MIXTURE

% DISSOLVED SOLIDS _____

% SUSPENDED SOLIDS _____

% SETTLED SOLIDS _____

D. COMPOSITION

OIL _____ %
GREASE _____ %
WATER _____ %
SOLID _____ %
DUST _____ %
SALT _____ %
100%

E. METALS ☐ TOTAL (PPM) ☐ TCLP (PPM)

ARSENIC	NICKEL
BARIUM	SELENIUM
CADMIUM	SILVER
CHROMIUM	THALLIUM
CHROMIUM Cr + 6	TIN
COPPER	ZINC
LEAD	OTHER
IRON	BERYLLIUM
MERCURY	OTHER

F. OTHER COMPONENTS

AMMONIA	HEPTACHLOR (AND ITS HYDROXIDES)
BENZENE	HEXACHLOROETHANE
CHLORDANE	HEXACHLOROETHANE
CHLOROBENZENE	LINDANE
CHLOROFORM	METHOXYCHLOR
o-CRESOL	METHYL ETHYL KETONE
m-CRESOL	NITROBENZENE
p-CRESOL	PENTACHLOROPHENOL
CRESOL	PCB'S
CYANIDES	PYRIDINE
2,4-DICHLORO-PHENOXYACETIC ACID	SULFIDES
1,4-DICHLOROETHYLENE	TETRACHLOROETHYLENE
1,1-DICHLOROETHYLENE	TOXAPHENE
2,4-DINITROTOLUENE	TRICHLOROETHYLENE
ENDRIN	2,4,5-TRICHLOROPHENOL
F001-F005 SOLVENTS	2,4,6-TRICHLOROPHENOL
LIST	2,4,5-TRICHLOROPHENOXYPROPIONIC ACID
	VINYL CHLORIDE

G. DEPARTMENT OF TRANSPORTATION INFORMATION

D.O.T. HAZARDOUS MATERIAL ☐ YES ☐ NO

D.O.T. SHIPPING NAME

D.O.T. HAZARD CLASS

UN/NA # _____ REPORTABLE QUANTITY VALUE _____

H. SHIPMENT METHOD

☐ BULK LIQUID ☐ BULK SOLID ☒ DRUM (SIZE) 55 GALLON☐ OTHER (SPECIFY) _____

I. ANTICIPATED VOLUME

6-10 ☐ GALS. ☒ DRUMS ☐ CUBIC YDS.FREQUENCY: ☐ ONE TIME ☐ QUARTER ☐ YEAR

J. WASTE DISPOSAL STATUS

U.S. EPA HAZARDOUS WASTE ☐ YES ☐ NO

U.S. EPA HAZARDOUS WASTE NUMBER(S) _____

STATE HAZARDOUS WASTE ☐ YES ☐ NO

STATE HAZARDOUS WASTE NUMBER(S) _____

K. OTHER HAZARDS

	YES	NO
PYROPHORIC	<input type="checkbox"/>	<input type="checkbox"/>
WATER REACTIVE	<input type="checkbox"/>	<input type="checkbox"/>
EXPLOSIVE	<input type="checkbox"/>	<input type="checkbox"/>
RADIOACTIVE	<input type="checkbox"/>	<input type="checkbox"/>
SHOCK SENSITIVE	<input type="checkbox"/>	<input type="checkbox"/>
PESTICIDE	<input type="checkbox"/>	<input type="checkbox"/>
DIOXIN	<input type="checkbox"/>	<input type="checkbox"/>
IS THIS AN ELECTROPLATING WASTE	<input type="checkbox"/>	<input type="checkbox"/>

L. SAMPLE STATUS

A REPRESENTATIVE SAMPLE HAS ☒ HAS NOT ☐ BEEN SUPPLIED.

FOR CLEAN HARBORS USE ONLY

M. SPECIFIC GENERATOR REQUEST FOR DISPOSAL

OTHER GENERATOR COMMENTS _____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

H. R. Cooper
AUTHORIZED SIGNATURE

CHI 102

NAME (PRINT)

DATE

CUSTOMER COPY



WASTE MATERIAL PROFILE SHEET

S 46003

Profile Number

A. GENERAL INFORMATION

GENERATOR OLIN ORDNANCE MAINTENANCE BILL TO: SAFME

FACILITY ADDRESS SUB. 5 BILL TO ADDRESS _____
MAVENNA OHIO

SIC NUMBER IF KNOWN _____ CLEAN HARBORS CONTACT PERSON DAVID MORRISON

GENERATOR U.S. EPA ID # _____ SAMPLE APPROVAL P.O. # _____

GENERATOR STATE ID # _____ CUSTOMER CONTACT BILL JENKINS

TECHNICAL CONTACT _____ CUSTOMER CONTACT PHONE _____

TECHNICAL CONTACTS PHONE _____

B. WASTE DESCRIPTION

COMMON NAME FOR THE WASTE ONLY WATER

PROCESS GENERATING THE WASTE PRESSURE TESTING HOLES IN GARAGE

C. PROPERTIES

PH _____ % ORGANIC NITROGEN _____ % SULFUR _____ % ORGANIC HALOGEN _____ BTU's/POUND _____ % ASH _____

COLOR _____ ODOR _____ % T.O.C. _____

FLASH POINT (°F)
☐ < 100 ☐ 100-140 ☐ 140-200 ☐ > 200 ☐ NO FLASH

PHYSICAL STATE
☐ THICK VISCOUS LIQUID ☐ SOLID WITHOUT FREE LIQUIDS ☐ WASTE WATER
☒ LIQUID WITH NO SOLIDS ☐ POWDER ☐ NON-WASTE WATER
☐ LIQUID/SOLID MIXTURE

% DISSOLVED SOLIDS _____ % SUSPENDED SOLIDS _____ % SETTLED SOLIDS _____

D. COMPOSITION

ONLY _____ %
WATER 300% _____ %
GASOLINE _____ %
_____ %
_____ %
_____ %
_____ %
_____ %
_____ %

E. METALS ☐ TOTAL (PPM) ☐ TCLP (PPM)

ARSENIC	_____	NICKEL	_____
BARIUM	_____	SELENIUM	_____
CADMIUM	_____	SILVER	_____
CHROMIUM	_____	THALLIUM	_____
CHROMIUM Cr + 6	_____	TIN	_____
COPPER	_____	ZINC	_____
LEAD	_____	OTHER	_____
IRON	_____	BERYLLIUM	_____
MERCURY	_____	OTHER	_____

F. OTHER COMPONENTS

AMMONIA	_____	HEPTACHLOR (AND ITS HYDROXIDES)	_____
BENZENE	_____	HEXACHLOROBENZENE	_____
CHLORDANE	_____	HEXACHLOROETHANE	_____
CHLOROBENZENE	_____	LINDANE	_____
CHLOROFORM	_____	METHOXYCHLOR	_____
o-CRESOL	_____	METHYL ETHYL KETONE	_____
m-CRESOL	_____	NITROBENZENE	_____
p-CRESOL	_____	PENTACHLOROPHENOL	_____
CRESOL	_____	PCB'S	_____
CYANIDES	_____	PYRIDINE	_____
2,4-DICHLORO-	_____	SULFIDES	_____
PHENOXYACETIC ACID	_____	TETRACHLOROETHYLENE	_____
1,4-DICHLOROBENZENE	_____	TOXAPHENE	_____
1,1-DICHLOROETHYLENE	_____	TRICHLOROETHYLENE	_____
2,4-DINITROTOLUENE	_____	2,4,5-TRICHLOROPHENOL	_____
ENDRIN	_____	2,4,6-TRICHLOROPHENOL	_____
F001-F005 SOLVENTS	_____	2,4,5-TRICHLOROPHENOXYPROPIONIC ACID	_____
LIST	_____	VINYL CHLORIDE	_____

G. DEPARTMENT OF TRANSPORTATION INFORMATION

D.O.T. HAZARDOUS MATERIAL ☐ YES ☒ NO

D.O.T. SHIPPING NAME ONLY WATER

D.O.T. HAZARD CLASS _____

UN/NA # _____ REPORTABLE QUANTITY VALUE _____

H. SHIPMENT METHOD

☐ BULK LIQUID ☐ BULK SOLID ☒ DRUM (SIZE) 55 GALLON

☐ OTHER (SPECIFY) _____

I. ANTICIPATED VOLUME

2-6 Drums ☐ GALS. ☐ DRUMS ☐ CUBIC YDS.

FREQUENCY: ☐ ONE TIME ☐ QUARTER ☐ YEAR

J. WASTE DISPOSAL STATUS

U.S. EPA HAZARDOUS WASTE ☐ YES ☒ NO

U.S. EPA HAZARDOUS WASTE NUMBER(S) _____

STATE HAZARDOUS WASTE ☐ YES ☒ NO

STATE HAZARDOUS WASTE NUMBER(S) _____

K. OTHER HAZARDS

	YES	NO
PYROPHORIC	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER REACTIVE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
EXPLOSIVE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RADIOACTIVE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SHOCK SENSITIVE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PESTICIDE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DIOXIN	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IS THIS AN ELECTROPLATING WASTE	<input type="checkbox"/>	<input checked="" type="checkbox"/>

L. SAMPLE STATUS

A REPRESENTATIVE SAMPLE HAS ☒ HAS NOT ☐ BEEN SUPPLIED.

FOR CLEAN HARBORS USE ONLY

M. SPECIFIC GENERATOR REQUEST FOR DISPOSAL

OTHER GENERATOR COMMENTS _____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

H. R. Cooper

AUTHORIZED SIGNATURE

H R Cooper

NAME (PRINT)

4/21/92

DATE



Method References

- (a) "Methods for Chemical Analysis of Water and Wastes." Publication EPA-600/4-79-020. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.
- (b) "Standard Methods for the Examination of Water and Wastewater." 16th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1983.
- (c) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods." 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982.
- (d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils." Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1981.
- (e) "EPA-CLP Organic Analyses of Low and Medium Hazardous Waste Sample (Water and Soil) Procedures Revision." U.S. Environmental Protection Agency, July 1983.
- (f) "Test Procedures for Analyses of Organic Pollutants." Code of Federal Regulations, Appendix A, Part 136, July 1, 1983.
- (g) "Measurement of Purgeable Organic Compounds in Drinking Water by Gas Chromatography/Mass Spectrometry." Method 524, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.
- (h) "Prescribed Procedures for Measurement of Radioactivity in Drinking Water." Publication EPA-600/4-80-032, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, August 1980.
- (i) "Clean Harbors Radiological Environmental Analytical Procedures." Clean Harbors Analytical Services, Braintree, MA, October 1983.
- (j) "Methods for Chlorinated Phenoxy Acid Herbicides in Industrial Effluents." MDOALL, Cincinnati, November 23, 1973.
- (k) "Annual Book of Standards." Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing and Materials, Philadelphia, 1983, 1984, 1985.
- (l) "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater." U.S. Environmental Protection Agency, September 1978.
- (m) "Methods for Organochlorine Pesticides in Industrial Effluents." MDOALL, Environmental Protection Agency, Cincinnati, November 28, 1973.
- (n) "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments." Techniques of Water-Resources Investigation of the U.S. Geological Survey, Book 5, Chapter A-1, U.S. Department of the Interior, 1979.
- (o) "Measurement of Trihalomethanes in Drinking Water by Gas Chromatography/Mass Spectrometry and Selected Ion Monitoring." Method 301.3, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.
- (p) "The Analysis of Trihalomethanes in Finished Waters by the Purge and Trap Method." U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.
- (q) "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction." U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.
- (r) "Official Methods of Analysis." Association of Official Analytical Chemists, 14th ed., 1984.
- (s) "Eich Handbook of Water Analysis," Eich Chemical Company, Cleveland, OH, 1979.
- (t) H.M. Prichard and T.P. Gosell. "Rapid Measurements of Ra-222 Concentrations in Water with a Commercial Liquid Scintillation Counter." Health Physics, Vol. 33, 1977, pp. 577-581.
- (u) "Petroleum Products and Lubricants (I): D56-D1640." Annual Book of ASTM Standards, Volume 3.01, American Society for Testing and Materials, Philadelphia, 1983.
- (v) "Petroleum Products and Lubricants (III): D1291-D1292: Catalysts." Annual Book of ASTM Standards, Volume 3.03, American Society for Testing and Materials, Philadelphia, 1983.

Clean Harbors

ENVIRONMENTAL SERVICES COMPANIES

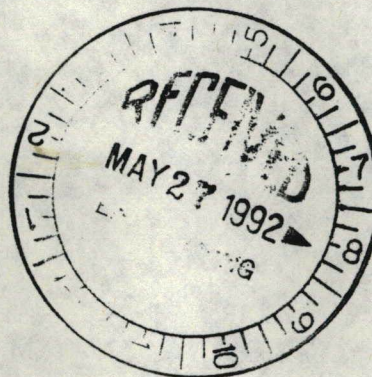
1200 EAST 55TH STREET

CLEVELAND, OHIO 44103

(216) 429-2401

B.J. JENKINS

MAY 27 1992



cc: Wayne Calsido
Harold Cooper Jr
Review and offer
comments.
Chanda BDD.
5/27/92

May 26, 1992

Mr. Bill Jenkins
Olin Ordnance
Ravenna Arsenal
8451 State Route 5
Ravenna, Ohio 44266-9297

Dear Mr. Jenkins:

In reference to our conversation, 5/26/92, Purchase Order #25684: At this point in time we have reached \$5147.00 in Labor and Equipment costs. We have at this point in time invoiced you for \$6947.00. The table below reflects the total cost associated with this job.

The above Invoice amount includes analytical of 2 samples. It does not include Transportation and Disposal of the drums. Your staff will be decanting some of the drums to assist in lowering Disposal costs.

The cost break down is as follows:

LABOR AND EQUIPMENT FOR 20 HOURS.....	\$4120.00
VACUUM TRUCK, AT YOUR REQUEST, FOR 3 HOURS @ \$75/HR. (DAY REQUESTED WAS 4/23/92)	\$600.00
ANALYTICAL FOR 2 SAMPLES.....	\$1800.00
(BREAK DOWN OF ANALYTICAL OUTLINED IN PROPOSAL)	
DISPOSAL 7 DRUMS AT \$290.00 / DRUM	\$2030.00
(THIS IS A WORSE CASE SITUATION)	
TRANSPORTATION MINIMUM LOAD CHARGE APPLIES.....	\$250.00
(TRANSPORTING OF 7 DRUMS FOR DISPOSAL)	

*THERE IS A CREDIT OF 3 HOURS OF DOWN TIME FOR VACUUM TRUCK AND WE ARE HONORING OUR PROPOSAL OF NOT TO EXCEED 20 HOURS.

TOTAL.....	\$8800.00
LESS CREDITS OF \$75.00/HR FOR 3 HOURS.....	\$225.00
NET TOTAL JOB COST.....	\$8575.00



Mr. Jenkins
May 26, 1992
Page 2

Our experience with similar projects was displayed in our proposal. When we became aware of your maintenance schedule, and the excessive blockage, we negotiated to bring in a larger unit. We then informed you that Disposal and Analytical might exceed your P.O. You stated that as long as we kept the labor costs under the P.O. that this would be sufficient. On the 2nd day we were asked to bring in our Vacuum Truck for a third time. I stated to Barbara that the Disposal and Analytical would exceed the original P.O. We agreed that in order to accomplish our objective this had to be done. We showed up on 4/23/92 with the Vacuum truck. Both Joe and Wayne stated that we did a good job and were glad that we followed through.

We are looking to improve our relationship with Olin and Ravenna Arsenal. If you have any questions please call me or Mike David at 429-2401.

Thank You,
Daniel S. Morrison

A handwritten signature in cursive script, appearing to read "Daniel S. Morrison".

PC: Victor Amster, Account Manager



ENVIRONMENTAL SERVICES COMPANIES

1200 EAST 55TH STREET

CLEVELAND, OHIO 44103

(216) 429-2401

J. JENKINS

APR 16 1992

cc: Wayne Caudato
Dwight McCauslin

April 15, 1992

Proposal No. 92.405

Mr. Bill Jenkins
Olin Ordnance
Ravenna Arsenal Inc.
8451 State Route 5
Ravenna, Ohio 44266-9297

Dear Mr. Jenkins:

Clean Harbors of Kingston, Inc.'s Cleveland Service Center (CLEAN HARBORS) is pleased to submit the following proposal for the cleaning of your drains at building 1034.

CLEAN HARBORS is one of the largest providers of comprehensive environmental services. Our hazardous waste management services include treatment, storage, resource recovery, transportation and disposal of hazardous materials in bulk, totes, or drums. We also provide turnkey lab pack services for the disposal of laboratory chemicals. Our environmental remediation services include surface remediation, groundwater restoration, underground storage tank removal and site decontamination. We also provide analytical and engineering services which compliment our customer's complex environmental requirements. These services are available on a 24 hour emergency basis.

Our proposal is based on information provided to CLEAN HARBORS, per a recent site visit by our SPECIALIST Mr. Morrison and our experience with similar projects. The following sections include the scope of work, general approach, and pricing to complete your project.

Scope of Work

The scope of services to be provided by CLEAN HARBORS is:

- o Safety Meeting will be held prior to start of job.
- o Power Lance 400 ft. of floor drains.
- o Vacuum out rinseates.
- o Decant rinseates into water treatment.
- o Drum solids from drains.
- o Drum solids from Vacuum Truck.
- o Sample and Analyze all materials generated.
(Samples will be analyzed at our BEDFORD LAB.)



Mr. Jenkins
April 15, 1992
Page 2

Pricing

The price breakdown is as follows:

- I. Labor, Supplies, and Equipment \$206.00/hour
Portal to Portal not to exceed 20 hours.
- II. Analytical
- | | |
|---------------------------------|----------|
| a. Total Petroleum Hydrocarbons | \$90.00 |
| b. Flash | \$50.00 |
| c. pH | \$25.00 |
| d. Reactivity | \$115.00 |
| e. TCLP* Metals | \$275.00 |
| f. TCLP* VOC** | \$345.00 |
- * Toxicity Characteristic Leaching Procedure
** Volatile Organic Contaminants
All prices are on a per sample basis.
- III. Transportation and Disposal (all prices pending approval)
- | | |
|--|------------------------------------|
| a. Disposal (see page 3 and 4 for code descriptions) | |
| A31-Specification oils (for oil recovery) | \$65.00/drum |
| A22-Non halogenated, Water soluble organics & water mixtures | \$240.00/drum |
| CNO-Non-hazardous organic solids for landfill | \$220.00/drum |
| CNOS-Non-hazardous organic semi-solids for landfill | \$290.00/drum |
| b. Transportation | \$25.00/drum Minimum \$250.00/load |

CLEAN HARBORS BALTIMORE is our proposed facility.

Pricing Conditions

The above pricing is based on the following conditions:

- o CLEAN HARBORS will have access to all work areas, and an authorized site representative will be available.
- o At no time will CLEAN HARBORS assume generator status.

Terms and Conditions

Pricing is firm for 30 days. Pricing subject to revision if work commences 30 days beyond proposal.

Terms are net 30 days (pending credit approval) commencing the last day of work performed at the job site listed on the invoice.



Mr. Bill Jenkins

April 15, 1992

Page 3

For any work extending beyond thirty days (30) days, labor, supplies and equipment will be invoiced based upon a percentage of completion. Disposal, transportation and analytical will be invoiced upon completion.

All work will be performed in strict compliance with all CLEAN HARBORS safety standards. All disposal will be conducted in accordance with all applicable State and Federal laws and regulations.

To commence work on this project, please sign the enclosed field services agreement and return it to my attention.

Conclusion

I would like to emphasize that CLEAN HARBORS is a full service company and our philosophy is to provide you with a turn-key operation that is dependable, cost effective and environmentally responsible. Our service extends beyond each individual project to help you cope with the full range of hazardous waste management problems.

We are very proud of our excellent compliance record. All CLEAN HARBORS field personnel receive an initial 40 hours of OSHA training and a minimum of 24 hours additional training per year, as required by government agencies. In addition our drivers receive an additional 40 hours of DOT training and our transportation fleet is inspected daily.

Thank you for the opportunity to present our proposal and I trust that it addresses all your requirements. If you should have any questions or require additional information, please call me or Mr. Mike David at (216) 429-2401.

WASTE DESCRIPTIONS

- A22-Non-halogenated, water soluble organics and water mixtures
- less than 5ppm PCB's
- less than 3% organic halogen
- must not set up in water or organic solvents
- PH 2-12
- less than one inch of solids in the drum
- no pesticides



Mr. Bill Jenkins
April 15, 1992
Page 4

A31-Specification oils (for recovery)

- PCB's non detectable
- less than 1000ppm organic halogens
- flashpoint greater than 100 f
- total lead less than 100ppm
- total arsenic less than 5ppm
- total chrome less than 10ppm
- total cadmium less than 2ppm
- cannot be mixed with RCRA wastes
- less than 5% water
- PH 4-11
- less than one inch of solids in the drum

W. JENKINS

APR 16 1992

cc: Wayne Casider

CNO-Non-hazardous organic solids for landfill

- non-pourable at 70 F
- no free liquids
- must be able to pass the paint filter test
- must be able to be landfilled
- no pesticides, herbicides, or cyanides
- less than 20ppm PCB's

CNOS-non-hazardous organic semi-solids for landfill

- must be able to be landfilled
- no pesticides, herbicides, or cyanides
- less than 20ppm PCB's
- flashpoint greater than 140 F

Sincerely,

A handwritten signature in cursive script, appearing to read "Daniel S. Morrison".

Daniel S. Morrison
Supervisor

pc: Mr. Victor Amster, Account Manager
Proposal File 92.405

CUSTOMER

SITE ID NUMBER: RVAAP-25

NAME: Building 1034 Motor Pool Waste Oil Tank.
MAP REFERENCE NUMBER: 25.

STATUS: Active.
REGULATORY PROGRAM: Undefined.

AREA OF THE SITE: Approximately 100 square feet.

SITE DESCRIPTION: The Building 1034 Motor Pool Waste Oil Tank is a 500 gallon above ground storage tank set on a four-wheeled chassis.

SERVICE HISTORY: The tank has been used 1974 to store waste oil from shop maintenance. Waste oil is stored in the tank until removed by an oil reclaimer on an as-needed basis.

WASTE CHARACTERISTICS AND VOLUME: Waste types associated with this site are limited to waste lubricating oil from the motor pool area including: crankcase and transmission oil, gear lubricants, and hydraulic and brake fluids. Approximately 300 gallons of waste oil is stored in the tank per year.

UNPLANNED RELEASE DATA: None available.

ASSOCIATED MONITORING WELLS: None.

CHARACTERIZATION DATA: None available.

REFERENCES:

Documents: Jacobs Engineering 1989
Photographs:
Drawings: 1200.13

RVAAP-25

BLDG. 1034 MOTOR POOL AST

SITE DESCRIPTION

This site is not eligible for ER,A funds.

This unit is an inactive above-ground storage tank used to store waste oil from RVAAP vehicle maintenance operations. Use of the tank began in 1974 and was emptied of all contents in FY93 and remains inactive. Contaminants of concern include petroleum and metals. There is a low potential for release of contaminants to the surrounding soils and groundwater from this unit.

This site in RC because it is not eligible for IRP funding.

STATUS

RRSE RATING:

Low

CONTAMINANTS:

Waste Oil

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RC - 1989