NYSDEC ENVIRONMENTAL RESTORATION

UNDERGROUND STORAGE TANKS

FOR THE

CITY OF ELMIRA
FORMER AMERICAN LAFRANCE SITE
100 ERIE STREET
ELMIRA, NEW YORK
SITE #B-00011-8

SUBMITTED TO:

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

SUBMITTED BY:

UNITED ENVIRONMENTAL GROUP, INC.
ENVIRONMENTAL CONSULTANTS
1738 PARKER ROAD, ELMIRA, NEW YORK 14905
PHONE: 607.731.0145 PHONE/FAX: 607.733.4610
EMAIL: geowetlands@aol.com

SEPTEMBER 2003

UNITED ENVIRONMENTAL GROUP, INC.
ENVIRONMENTAL CONSULTANTS

October 15, 2003

Mr. Manmohan Mehta,P.E.
NYSDEC – Region 8
Division of Hazardous Waste Remediation
6274 East Avon – Lima Road
Avon, NY 14414

RE: Underground Storage Tank Remediation
Former American LaFrance Brownfield Site
Site #B-00011-8

Dear Mr. Mehta:

Enclosed are three copies of the underground storage tank remediation for the former American LaFrance Brownfield site #B-00011-8.

As per our discussion an in accordance with the Record of Decision, a groundwater sample was obtained from the tank grave and analyzed for TAGM 4046 EPA 8270 compounds. There were no compounds detected in the sample indicating successful removal of the source and subsequent natural attenuation due to the age of the spill.

On behalf of the City of Elmira, we request that this issue be closed, as there ~~is~~ limited risk to human health and the environment.

Sincerely,

Stephen G. Degerdon, PWS
Environmental Scientist

Enclosures

C:\alf-ust\mehta-10-15-03.doc

1738 PARKER ROAD, ELMIRA, NEW YORK 14905
PHONE: 607.731.0145 PHONE/FAX: 607.733.4610
EMAIL: geowetlands@aol.com

UNDERGROUND STORAGE TANK REMEDIATION

FORMER AMERICAN LAFRANCE

ELMIRA, NEW YORK

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

I. EXECUTIVE SUMMARY

The United Environmental Group, Inc. has performed an underground storage tank (UST) remediation on the former American LaFrance Brownfields Site #B-00011-8 (see **Figure 1**). The UST remediation included removal and proper disposal of two ±12,000-gallon, #6-fuel oil UST's, contaminated soil, and 6,000-gallons of fuel oil/water from the tank grave (see **Figure 2**). Extensive site photos have been included in chronological order herein as **Appendix A**. Prior to the remedial activities, TCLP laboratory analyses were performed on the #6 fuel oil contaminated material as part of the Chemung County Landfill permit process (see **Appendix B**) for disposal of petroleum contaminated soil.

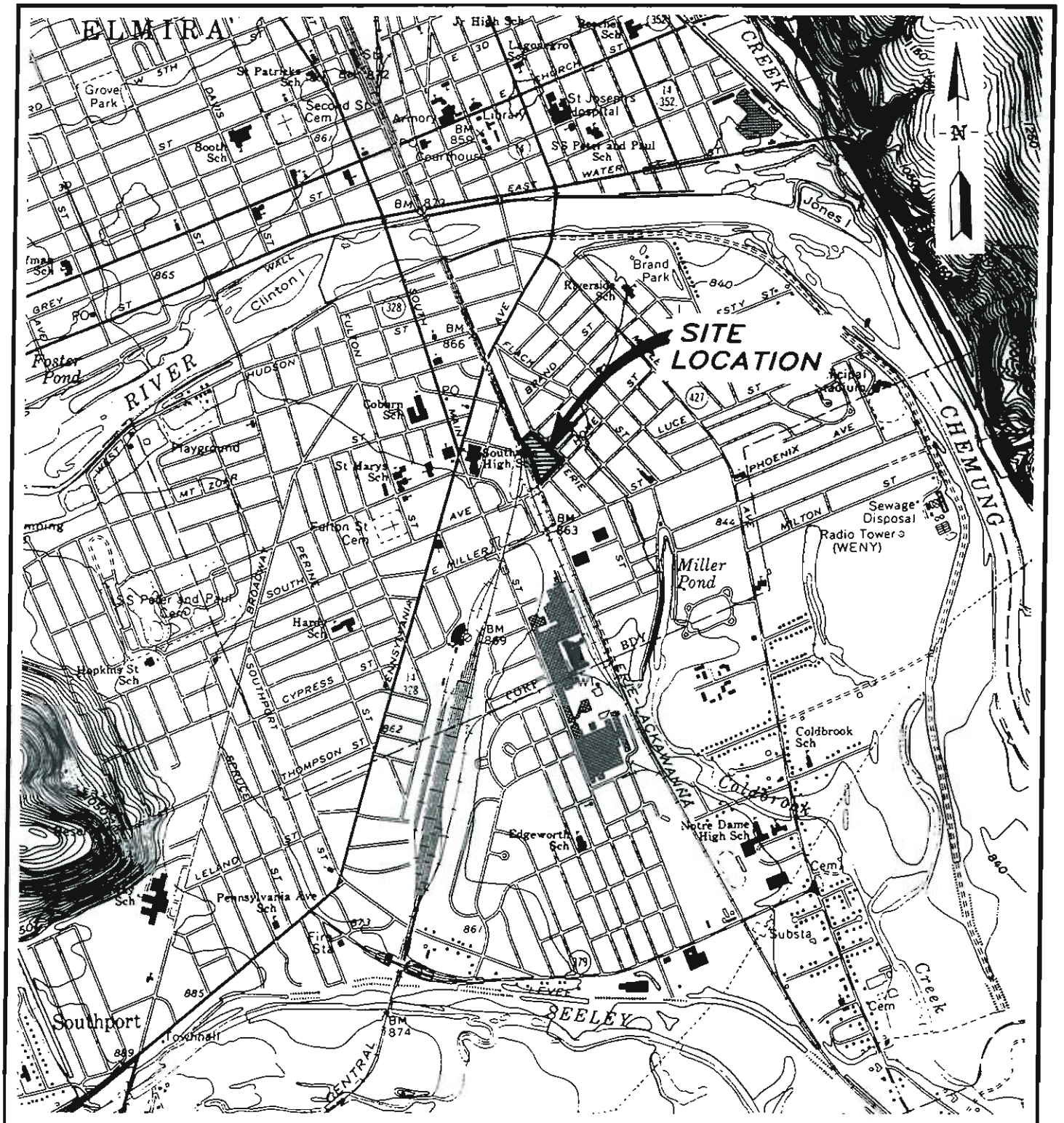
The remedial activities were conducted between May 15 and May 22, 2003. The Remedial Activities section details the remediation.

The on-site remedial activities to address the source of contamination included the following:

1. Removal of two #6 fuel oil underground storage tanks.
2. Disposal of approximately 8,000-gallons of #6 fuel oil and soil mix.
3. Excavation and disposal of 742 cubic yards (1113-tons) of contaminated soil.
4. Pumping and disposal of 5,116-gallons of purged groundwater.

The source of the subsurface site contamination has been excavated, pumped and properly disposed of in accordance with NYSDEC regulations. The groundwater laboratory results did not detect the presence of semi-volatile organics in the tank grave groundwater.

An extensive effort has been conducted to remove the source of on-site contamination in accordance with the Record of Decision (see **Appendix G**). The #6 fuel oil spill issue now poses limited threat to human health and the environment. The subject site use is limited to industrial and commercial development and no use of groundwater from on-site (per the deed restrictions as part of the Record of Decision). Therefore, natural attenuation is recommended for any remaining low-level fuel oil constituents remaining on the site.



AMERICAN LAFRANCE
BROWNFIELDS SITE
UST REMEDIATION

FORMER AMERICAN-LAFRANCE PROPERTY
TAX MAP # 99.12-2-1.1
ELMIRA, NEW YORK
SEPTEMBER 2003

FIGURE 1
LOCATION MAP
NOT TO SCALE

UNITED ENVIRONMENTAL GROUP, INC.
ENVIRONMENTAL CONSULTANTS
Phone: 607-731-0145 – Phone/Fax: 607-733-4610
FILE: 02-107-1.dwg *JOB # 2002.107*

ERIE STREET

E. LA FRANCE ST.

MANDEL'S RESTAURANT PROPERTY

MACHIDE SHOP

SMOKE STACK AREA

D.Y.S.D.O.T. JOB TRAILER

FORMER FACTORY BUILDING

PAIOT SHOP

PAIOTIOG

PAVED AREAS

FOUNDRY

FORMER FACTORY BUILDING

MACHINE SHOP

TANK GRAVE

FORMER FACTORY BUILDING

SPRAY BOOTH AREA

PAVED AREAS

FORMER FACTORY BUILDING

FORMER FACTORY BUILDING

HOME STREET

CONSOLIDATED ARTERIAL RAIL

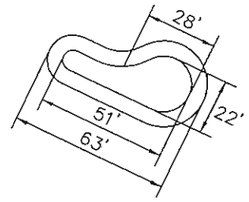
(COUNTY PROPERTY) OFF-SITE

MAINTENANCE BUILDING

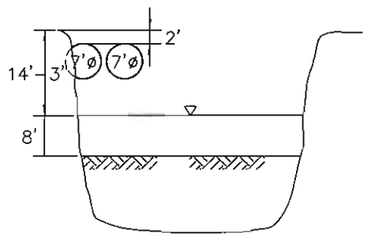
FORMER FACTORY BUILDING LOCATION REFERENCE :

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
CITY OF ELMIRA NORTH – SOUTH ARTERIAL
PENNSYLVANIA AVENUE TO CEDAR STREET
MAP # 2, SHEET 1. DATED : MAY 1980.
FORMER BUILDING LOCATIONS ARE APPROXIMATE AS SITE IS CURRENTLY VACANT.

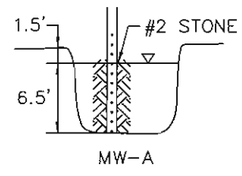
TANK EXCAVATION DETAILS



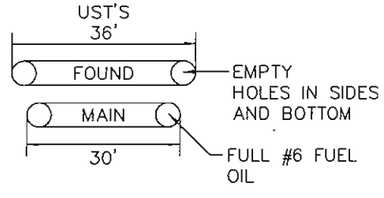
TANK GRAVE



DEPTH



MW–A



TANKS FOUND

AMERICAN LAFRANCE BROWNFIELDS SITE UST REMEDIATION

FORMER AMERICAN–LAFRANCE PROPERTY
TAX MAP # 99.12–2–1.1
ELMIRA, NEW YORK
SEPTEMBER 2003

FIGURE 2
SITE PLAN
SCALE: 1"=60'

UNITED ENVIRONMENTAL GROUP, INC.
ENVIRONMENTAL CONSULTANTS
Phone: 607–731–0145 – Phone/Fax: 607–733–4610

FILE: 02–107–2 JOB # 2002.107

Proper removal of the "poor mans" well is also recommended to prevent any new releases from reaching groundwater.

II. REMEDIAL ACTIVITIES

May 15 & 16, 2003:

Austin Excavating of Waverly, New York excavated two-feet of overburden from the abandoned 9,000-gallon #6 fuel oil UST. The existing hole in the top of the tank was enlarged to accommodate the excavator bucket. An estimated 8,000-gallons of #6 fuel oil and soil mix, and approximately 150-gallons of water was determined to be in the tank.

To reduce the potential for additional spillage or leakage of fuel oil from the tank, solidification of the tank contents took place inside the tank by adding clean bank-run gravel and sand to the tank contents and mixing with the excavator bucket. Fuel oil contaminated soil surrounding the tank was also utilized for solidification of the tank contents to reduce soil disposal quantities. The solidified #6 fuel oil was than loaded onto a plastic lined dump truck and transported to the Chemung County Landfill for proper disposal.

Upon excavation, removal, and disposal of contaminated soil surrounding the tank and most of the tank contents, the tank was removed from the ground. The tank was found to be an old riveted tank measuring seven-feet in diameter by thirty-feet in length. Rusted-out holes were observed in the sides and bottom of the tank. The tank was than cut open and cleaned.

Excavation of fuel oil contaminated soil was performed from the bottom and sides of the tank grave to remove the visible #6 fuel oil source. The remedial effort was located in close proximity to the Norfolk Southern railroad to the west. A sloped excavation was performed and the excavation did not proceed closer than twenty-five feet to the railroad so as not to jeopardize the structural integrity of the railroad. All contaminated soil (1113.05-tons total) was transported to the Chemung County Landfill on each day it was excavated (see **Appendix E**). The clean drill cuttings stored on site from the Brownfield Site Investigation were also disposed of with the tank grave contaminated soil. Contaminated soil was not staged on-site.

May 17, 2003:

No work was performed on Wednesday.

May 18 & 19, 2003:

During excavation of contaminated soil surrounding the removed tank, a second tank was discovered adjacent to the original tank and to the west. The second tank (10,000-gallons) was found to be an empty, abandoned riveted tank and measured seven-feet in diameter by thirty-six feet in length. Rusted-out holes were observed in the sides and bottom of the tank. This tank was removed, cut open, and cleaned.

Groundwater was encountered at a depth of approximately 14-feet. A #6 fuel oil sheen was observed on groundwater in the tank grave. Bails of straw were utilized to absorb the heaviest of the sheen. The fuel oil absorbed straw was removed from the surface of the water by the excavator and disposed of with the contaminated soil. A vac-truck supplied and operated by Gary Dyer Excavating, was utilized to skim remaining fuel oil from the water surface. Approximately 5,100-gallons of groundwater was purged from the excavation and properly disposed of by Dyer Excavating (see **Appendix D**). A new sheen did not return to the tank grave. Clear water was observed in the excavation upon settling.

May 22, 2003:

A "poor-mans" well was installed in the tank grave and designated MW-A. The location of the well corresponded to the area where the greatest contamination was observed from the original tank. The tank grave was excavated an additional depth of 6.5-feet. A 10-foot length of SCH-40 perforated pipe was utilized as the screen in groundwater. The perforated pipe was backfilled with #2 stone to approximately four-feet above groundwater elevation. A solid 10-foot section of SCH-40 was utilized above groundwater to the surface, and subsequently capped above grade.

Both tanks were transported by flatbed to Austin Excavation for proper disposal. Contaminated soil disposal continued as the final site clean-up was performed. The site was subsequently backfilled with clean fill by the City of Elmira.

June 13, 2003:

The "poor mans" well MW-A was sampled at 16:00 hours. Three volumes of water were purged from the well prior to sampling. A groundwater sample was obtained and analyzed for NYSDEC TAGM 4046 EPA 8270 laboratory analysis (see **Appendix F**). All constituents tested were below the detection limits of <0.01 mg/l (see **Appendix C**).

APPENDIX A

SITE PHOTOS

alf-ust-01

alf-ust-02

alf-ust-03

alf-ust-04

alf-ust-05

alf-ust-06

alf-ust-07

alf-ust-08

alf-ust-09

alf-ust-10

alf-ust-11

alf-ust-12

alf-ust-13

alf-ust-14

alf-ust-15

alf-ust-16

alf-ust-17

alf-ust-18

alf-ust-19

alf-ust-20

alf-ust-21

alf-ust-22

alf-ust-23

alf-ust-24

alf-ust-25

alf-ust-26

alf-ust-27

alf-ust-28

alf-ust-29

alf-ust-30

alf-ust-31

alf-ust-32

alf-ust-33

alf-ust-34

alf-ust-35

alf-ust-36

alf-ust-37

alf-ust-38

alf-ust-39

alf-ust-40

alf-ust-41

alf-ust-42

alf-ust-43

alf-ust-44

alf-ust-45

alf-ust-46

alf-ust-47

alf-ust-48

alf-ust-49

APPENDIX B

TCLP LABORATORY RESULTS
#6 FUEL OIL CONTAMINATED SOIL

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-1 **LSL Sample ID:** 0303298-001

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 1311 TCLP Extraction					
TCLP Non-Volatile Extraction				3/13/03 03:00	JRG
(5) EPA 1311 TCLP Z.H. Extraction					
TCLP Zero Headspace Extraction				3/13/03 03:00	JRG
(1) EPA 6010 TCLP Metals					
Arsenic	<1	mg/l	3/17/03	3/19/03	PEF
Barium	<5	mg/l	3/17/03	3/19/03	PEF
Cadmium	<0.5	mg/l	3/17/03	3/19/03	PEF
Chromium	<1	mg/l	3/17/03	3/19/03	PEF
Lead	<1	mg/l	3/17/03	3/19/03	PEF
Selenium	<0.5	mg/l	3/17/03	3/19/03	PEF
Silver	<1	mg/l	3/17/03	3/19/03	PEF
(1) EPA 7471 TCLP Mercury					
Mercury	<0.002	mg/l	3/17/03	3/17/03	PEF
(5) EPA 8082 TCLP PCB's					
Aroclor-1016	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1221	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1232	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1242	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1248	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1254	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1260	<2	ug/l	3/18/03	3/18/03	NJT
Surrogate (DCB)	111	%R	3/18/03	3/18/03	NJT
(5) EPA 8260B TCLP Volatiles					
Acetone	<50	ug/l		3/14/03	PRV
Benzene	<10	ug/l		3/14/03	PRV
Bromodichloromethane	<10	ug/l		3/14/03	PRV
Bromoform	<10	ug/l		3/14/03	PRV
Bromomethane	<30	ug/l		3/14/03	PRV
2-Butanone (MEK)	<30	ug/l		3/14/03	PRV
Carbon disulfide	<10	ug/l		3/14/03	PRV
Carbon tetrachloride	<10	ug/l		3/14/03	PRV
Chlorobenzene	<10	ug/l		3/14/03	PRV
Chloroethane	<10	ug/l		3/14/03	PRV
Chloroform	<10	ug/l		3/14/03	PRV
Chloromethane	<10	ug/l		3/14/03	PRV
Dibromochloromethane	<10	ug/l		3/14/03	PRV
1,1-Dichloroethane	<10	ug/l		3/14/03	PRV
1,2-Dichloroethane	<10	ug/l		3/14/03	PRV
1,1-Dichloroethene	<10	ug/l		3/14/03	PRV
1,2-Dichloroethene, Total	<20	ug/l		3/14/03	PRV
1,2-Dichloropropane	<10	ug/l		3/14/03	PRV
cis-1,3-Dichloropropene	<10	ug/l		3/14/03	PRV
trans-1,3-Dichloropropene	<10	ug/l		3/14/03	PRV
Ethyl benzene	<10	ug/l		3/14/03	PRV
2-Hexanone	<30	ug/l		3/14/03	PRV

Life Science Laboratories, Inc.

Date Printed: 3/26/03

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-1 **LSL Sample ID:** 0303298-001

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 8260B TCLP Volatiles					
Methylene chloride	<30	ug/l		3/14/03	PRV
4-Methyl-2-pentanone (MIBK)	<30	ug/l		3/14/03	PRV
Styrene	<10	ug/l		3/14/03	PRV
1,1,2,2-Tetrachloroethane	<10	ug/l		3/14/03	PRV
Tetrachloroethene	<10	ug/l		3/14/03	PRV
Toluene	<10	ug/l		3/14/03	PRV
1,1,1-Trichloroethane	<10	ug/l		3/14/03	PRV
1,1,2-Trichloroethane	<10	ug/l		3/14/03	PRV
Trichloroethene	<10	ug/l		3/14/03	PRV
Vinyl chloride	<10	ug/l		3/14/03	PRV
Xylenes (Total)	<30	ug/l		3/14/03	PRV
Surrogate (1,2-DCA-d4)	103	%R		3/14/03	PRV
Surrogate (Tol-d8)	100	%R		3/14/03	PRV
Surrogate (4-BFB)	105	%R		3/14/03	PRV
(5) EPA 8270 TCLP B/N					
Acenaphthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Acenaphthylene	<0.03	mg/l	3/14/03	3/14/03	NJT
Anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(a)anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(b)fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(k)fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(ghi)perylene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(a)pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Bromophenyl-phenylether	<0.03	mg/l	3/14/03	3/14/03	NJT
Butylbenzylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
Carbazole	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Chloroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Chloroethoxy)methane	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Chloroethyl)ether	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Chloronaphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Chlorophenyl-phenylether	<0.03	mg/l	3/14/03	3/14/03	NJT
Chrysene	<0.03	mg/l	3/14/03	3/14/03	NJT
Dibenz(a,h)anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Dibenzofuran	<0.03	mg/l	3/14/03	3/14/03	NJT
Di-n-butylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
1,2-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,3-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,4-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
3,3'-Dichlorobenzidine	<0.03	mg/l	3/14/03	3/14/03	NJT
Diethylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
Dimethylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
2,4-Dinitrotoluene	<0.03	mg/l	3/14/03	3/14/03	NJT
2,6-Dinitrotoluene	<0.03	mg/l	3/14/03	3/14/03	NJT
Di-n-octylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Ethylhexyl)phthalate	0.092	mg/l	3/14/03	3/14/03	NJT
Fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT

Life Science Laboratories, Inc.

Date Printed: 3/26/03

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-1 **LSL Sample ID:** 0303298-001

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 8270 TCLP B/N					
Fluorene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorobutadiene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorocyclopentadiene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachloroethane	<0.03	mg/l	3/14/03	3/14/03	NJT
Indeno(1,2,3-c,d)pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
Isophorone	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Methylnaphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
Naphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
3-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
Nitrobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
N-Nitrosodiphenylamine	<0.03	mg/l	3/14/03	3/14/03	NJT
N-Nitroso-di-n-propylamine	<0.03	mg/l	3/14/03	3/14/03	NJT
Pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
Phenanthrene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,2,4-Trichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
Surrogate (Nitrobenzene-d5)	55	%R	3/14/03	3/14/03	NJT
Surrogate (2-Fluorobiphenyl)	52	%R	3/14/03	3/14/03	NJT
Surrogate (Terphenyl-d14)	61	%R	3/14/03	3/14/03	NJT

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-2 **LSL Sample ID:** 0303298-002

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 1311 TCLP Extraction					
TCLP Non-Volatile Extraction				3/13/03 03:00	JRG
(5) EPA 1311 TCLP Z.H. Extraction					
TCLP Zero Headspace Extraction				3/13/03 03:00	JRG
(1) EPA 6010 TCLP Metals					
Arsenic	<1	mg/l	3/19/03	3/19/03	PEF
Barium	<5	mg/l	3/19/03	3/19/03	PEF
Cadmium	<0.5	mg/l	3/19/03	3/19/03	PEF
Chromium	<1	mg/l	3/19/03	3/19/03	PEF
Lead	<1	mg/l	3/19/03	3/19/03	PEF
Selenium	<0.5	mg/l	3/19/03	3/19/03	PEF
Silver	<1	mg/l	3/19/03	3/19/03	PEF
(1) EPA 7471 TCLP Mercury					
Mercury	<0.002	mg/l	3/24/03	3/25/03	PEF
(5) EPA 8082 TCLP PCB's					
Aroclor-1016	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1221	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1232	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1242	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1248	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1254	<2	ug/l	3/18/03	3/18/03	NJT
Aroclor-1260	<2	ug/l	3/18/03	3/18/03	NJT
Surrogate (DCB)	101	%R	3/18/03	3/18/03	NJT
(5) EPA 8260B TCLP Volatiles					
Acetone	<50	ug/l		3/14/03	PRV
Benzene	<10	ug/l		3/14/03	PRV
Bromodichloromethane	<10	ug/l		3/14/03	PRV
Bromoform	<10	ug/l		3/14/03	PRV
Bromomethane	<30	ug/l		3/14/03	PRV
2-Butanone (MEK)	<30	ug/l		3/14/03	PRV
Carbon disulfide	<10	ug/l		3/14/03	PRV
Carbon tetrachloride	<10	ug/l		3/14/03	PRV
Chlorobenzene	<10	ug/l		3/14/03	PRV
Chloroethane	<10	ug/l		3/14/03	PRV
Chloroform	<10	ug/l		3/14/03	PRV
Chloromethane	<10	ug/l		3/14/03	PRV
Dibromochloromethane	<10	ug/l		3/14/03	PRV
1,1-Dichloroethane	<10	ug/l		3/14/03	PRV
1,2-Dichloroethane	<10	ug/l		3/14/03	PRV
1,1-Dichloroethene	<10	ug/l		3/14/03	PRV
1,2-Dichloroethene, Total	<20	ug/l		3/14/03	PRV
1,2-Dichloropropane	<10	ug/l		3/14/03	PRV
cis-1,3-Dichloropropene	<10	ug/l		3/14/03	PRV
trans-1,3-Dichloropropene	<10	ug/l		3/14/03	PRV
Ethyl benzene	<10	ug/l		3/14/03	PRV
2-Hexanone	<30	ug/l		3/14/03	PRV

Life Science Laboratories, Inc.

Date Printed: 3/26/03

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-2 **LSL Sample ID:** 0303298-002

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 8260B TCLP Volatiles					
Methylene chloride	<30	ug/l		3/14/03	PRV
4-Methyl-2-pentanone (MIBK)	<30	ug/l		3/14/03	PRV
Styrene	<10	ug/l		3/14/03	PRV
1,1,2,2-Tetrachloroethane	<10	ug/l		3/14/03	PRV
Tetrachloroethene	<10	ug/l		3/14/03	PRV
Toluene	<10	ug/l		3/14/03	PRV
1,1,1-Trichloroethane	<10	ug/l		3/14/03	PRV
1,1,2-Trichloroethane	<10	ug/l		3/14/03	PRV
Trichloroethene	<10	ug/l		3/14/03	PRV
Vinyl chloride	<10	ug/l		3/14/03	PRV
Xylenes (Total)	<30	ug/l		3/14/03	PRV
Surrogate (1,2-DCA-d4)	121	%R		3/14/03	PRV
Surrogate (Tol-d8)	95	%R		3/14/03	PRV
Surrogate (4-BFB)	106	%R		3/14/03	PRV
(5) EPA 8270 TCLP B/N					
Acenaphthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Acenaphthylene	<0.03	mg/l	3/14/03	3/14/03	NJT
Anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(a)anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(b)fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(k)fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(ghi)perylene	<0.03	mg/l	3/14/03	3/14/03	NJT
Benzo(a)pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Bromophenyl-phenylether	<0.03	mg/l	3/14/03	3/14/03	NJT
Butylbenzylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
Carbazole	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Chloroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Chloroethoxy)methane	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Chloroethyl)ether	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Chloronaphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Chlorophenyl-phenylether	<0.03	mg/l	3/14/03	3/14/03	NJT
Chrysene	<0.03	mg/l	3/14/03	3/14/03	NJT
Dibenz(a,h)anthracene	<0.03	mg/l	3/14/03	3/14/03	NJT
Dibenzofuran	<0.03	mg/l	3/14/03	3/14/03	NJT
Di-n-butylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
1,2-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,3-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,4-Dichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
3,3'-Dichlorobenzidine	<0.03	mg/l	3/14/03	3/14/03	NJT
Diethylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
Dimethylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
2,4-Dinitrotoluene	<0.03	mg/l	3/14/03	3/14/03	NJT
2,6-Dinitrotoluene	<0.03	mg/l	3/14/03	3/14/03	NJT
Di-n-octylphthalate	<0.03	mg/l	3/14/03	3/14/03	NJT
bis(2-Ethylhexyl)phthalate	0.045	mg/l	3/14/03	3/14/03	NJT
Fluoranthene	<0.03	mg/l	3/14/03	3/14/03	NJT

Life Science Laboratories, Inc.

Date Printed: 3/26/03

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: TP-2 **LSL Sample ID:** 0303298-002

Location:

Sampled: 03/05/03 8:30 **Sampled By:** SD

Sample Matrix: SHW as Recd

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 8270 TCLP B/N					
Fluorene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorobutadiene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachlorocyclopentadiene	<0.03	mg/l	3/14/03	3/14/03	NJT
Hexachloroethane	<0.03	mg/l	3/14/03	3/14/03	NJT
Indeno(1,2,3-c,d)pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
Isophorone	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Methylnaphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
Naphthalene	<0.03	mg/l	3/14/03	3/14/03	NJT
2-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
3-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
4-Nitroaniline	<0.03	mg/l	3/14/03	3/14/03	NJT
Nitrobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
N-Nitrosodiphenylamine	<0.03	mg/l	3/14/03	3/14/03	NJT
N-Nitroso-di-n-propylamine	<0.03	mg/l	3/14/03	3/14/03	NJT
Pyrene	<0.03	mg/l	3/14/03	3/14/03	NJT
Phenanthrene	<0.03	mg/l	3/14/03	3/14/03	NJT
1,2,4-Trichlorobenzene	<0.03	mg/l	3/14/03	3/14/03	NJT
Surrogate (Nitrobenzene-d5)	45	%R	3/14/03	3/14/03	NJT
Surrogate (2-Fluorobiphenyl)	50	%R	3/14/03	3/14/03	NJT
Surrogate (Terphenyl-d14)	49	%R	3/14/03	3/14/03	NJT

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

LSL

SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

8/14/02

Method	Surrogate(s)	Water Limits, %R	SHW Limits, %R
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	70-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50-150
8015M_GRO*	4-BFB	50-150	50-150
8015M_DRO*	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/l = microgram per liter ug/kg = microgram per kilogram mg/l = milligram per liter mg/kg = milligram per kilogram %R = Percent Recovery

Life Science Laboratories, Inc.

CHAIN OF CUSTODY RECORD

LSL

LSL Middlesex
5611 Water St.
Middlesex, NY 14507
Phone: 585-554-5347
Fax: 585-554-6743

LSL Central Lab.
5854 Butternut Drive
E. Syracuse, N.Y. 13057
Phone: 315-445-1105
Fax: 315-445-1301

LSL North Lab.
131 St. Lawrence Ave.
Waddington, N.Y. 13694
Phone: 315-388-4476
Fax: 315-388-4061

LSL Finger Lakes Lab.
16 N. Main St., PO Box 424
Wayland, NY 14572
Phone: 585-728-3320
Fax: 585-728-2711

LSL Southern Tier Lab.
30 East Main St.
Cuba, N.Y. 14727
Phone: 585-968-2640
Fax: 585-968-2640

Scott: 585-704-6973

Report Address:
Name: Steve Degerdon
Company: United Environmental Group, Inc
Street: 1738 Parker Road
City/State: Elmira, N.Y. Zip: 14905
Phone: 607-731-0145 Fax: 733-4610
Email: geowetlands@aol.com

Turnaround Time
Normal: 14 DAY [X]
Pre-Authorized: Next Day* [ ] 2-Day* [ ] 3-Day* [ ] 7-Day* [ ]
*Additional Charges may apply

Date Needed or Special Instructions:

Authorization or P.O. # 03.103

Client Project ID/Client Site ID City of Elmira : ALF

LSL Project Number: 0303298
Invoiced_Individ_ML

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv. Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
TP-1	3/5/03	830	Grab	soil	N/A	1	ML	TCLP: 8260/8270/metals/PCB's (CL)		001A
TP-2	3/5/03	830	Grab	soil	N/A	2		" " " " "	ML	002AB

LSL use only:
Temp. of samples: 5°C
Containers this C-O-C: 2

Custody Transfers		Date	Time
Sampled By: S Degerdon	Received By: [signature]	3/11/03	1350
Relinquished By: S Degerdon	Received By: Paul Foulk	3/13/03	9:20
Relinquished By: [signature] 3/11/03 1555	Rec'd for Lab By: Emma Elliott	3/11/03	15:55
Shipment Method: Paul Foulk	Received Intact: (Y) N [signature] 3/14/03		8:00

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY ***

APPENDIX C

MW-A LABORATORY RESULTS

GROUNDWATER

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: MW-A **LSL Sample ID:** 0308837-001

Location:

Sampled: 06/13/03 16:00 **Sampled By:** SD

Sample Matrix: NPW

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) NYS-DEC STARS 8270 Base/Neutrals					
Acenaphthene	<0.01	mg/l	6/18/03	6/18/03	NJT
Acenaphthylene	<0.01	mg/l	6/18/03	6/18/03	NJT
Anthracene	<0.01	mg/l	6/18/03	6/18/03	NJT
Benzo(a)anthracene	<0.01	mg/l	6/18/03	6/18/03	NJT
Benzo(b)fluoranthene	<0.01	mg/l	6/18/03	6/18/03	NJT
Benzo(k)fluoranthene	<0.01	mg/l	6/18/03	6/18/03	NJT
Benzo(ghi)perylene	<0.01	mg/l	6/18/03	6/18/03	NJT
Benzo(a)pyrene	<0.01	mg/l	6/18/03	6/18/03	NJT
Chrysene	<0.01	mg/l	6/18/03	6/18/03	NJT
Dibenz(a,h)anthracene	<0.01	mg/l	6/18/03	6/18/03	NJT
Fluoranthene	<0.01	mg/l	6/18/03	6/18/03	NJT
Fluorene	<0.01	mg/l	6/18/03	6/18/03	NJT
Indeno(1,2,3-c,d)pyrene	<0.01	mg/l	6/18/03	6/18/03	NJT
Phenanthrene	<0.01	mg/l	6/18/03	6/18/03	NJT
Pyrene	<0.01	mg/l	6/18/03	6/18/03	NJT
Surrogate (Nitrobenzene-d5)	76	%R	6/18/03	6/18/03	NJT
Surrogate (2-Fluorobiphenyl)	93	%R	6/18/03	6/18/03	NJT
Surrogate (Terphenyl-d14)	78	%R	6/18/03	6/18/03	NJT

-- LABORATORY ANALYSIS REPORT --

United Environmental Group, Inc. *Elmira, NY*

Sample ID: MW-A **LSL Sample ID:** 0308837-001

Location:

Sampled: 06/13/03 16:00 **Sampled By:** SD

Sample Matrix: NPW

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(5) EPA 8270 SemiVolatiles, TAGM 4046 List					
Acenaphthene	<10	ug/l		6/19/03	NT
Acenaphthylene	<10	ug/l		6/19/03	NT
Aniline	N.D.			6/19/03	NT
Anthracene	<10	ug/l		6/19/03	NT
Benzo(a)anthracene	<10	ug/l		6/19/03	NT
Benzo(a)pyrene	<10	ug/l		6/19/03	NT
Benzo(b)fluoranthene	<10	ug/l		6/19/03	NT
Benzo(ghi)perylene	<10	ug/l		6/19/03	NT
Benzo(k)fluoranthene	<10	ug/l		6/19/03	NT
bis(2-Ethylhexyl)phthalate	<10	ug/l		6/19/03	NT
Butylbenzylphthalate	<10	ug/l		6/19/03	NT
Chrysene	<10	ug/l		6/19/03	NT
4-Chloroaniline	<10	ug/l		6/19/03	NT
4-Chloro-3-methylphenol	<10	ug/l		6/19/03	NT
2-Chlorophenol	<10	ug/l		6/19/03	NT
Dibenzofuran	<10	ug/l		6/19/03	NT
Dibenz(a,h)anthracene	<10	ug/l		6/19/03	NT
3,3'-Dichlorobenzidine	<20	ug/l		6/19/03	NT
2,4-Dichlorophenol	<10	ug/l		6/19/03	NT
2,4-Dinitrophenol	<10	ug/l		6/19/03	NT
2,6-Dinitrotoluene	<10	ug/l		6/19/03	NT
Diethylphthalate	<10	ug/l		6/19/03	NT
Dimethylphthalate	<10	ug/l		6/19/03	NT
Di-n-butylphthalate	<10	ug/l		6/19/03	NT
Di-n-octylphthalate	<10	ug/l		6/19/03	NT
Fluoranthene	<10	ug/l		6/19/03	NT
Fluorene	<10	ug/l		6/19/03	NT
Hexachlorobenzene	<10	ug/l		6/19/03	NT
Indeno(1,2,3-c,d)pyrene	<10	ug/l		6/19/03	NT
Isophorone	<10	ug/l		6/19/03	NT
2-Methylnaphthalene	<10	ug/l		6/19/03	NT
2-Methylphenol (o-Cresol)	<10	ug/l		6/19/03	NT
4-Methylphenol (p-Cresol)	<10	ug/l		6/19/03	NT
Naphthalene	<10	ug/l		6/19/03	NT
Nitrobenzene	<10	ug/l		6/19/03	NT
2-Nitroaniline	<10	ug/l		6/19/03	NT
2-Nitrophenol (o-Nitrophenol)	<10	ug/l		6/19/03	NT
4-Nitrophenol	<10	ug/l		6/19/03	NT
3-Nitroaniline	<10	ug/l		6/19/03	NT
Pentachlorophenol	<20	ug/l		6/19/03	NT
Phenanthrene	<10	ug/l		6/19/03	NT
Phenol	<10	ug/l		6/19/03	NT
Pyrene	<10	ug/l		6/19/03	NT
2,4,5-Trichlorophenol	<10	ug/l		6/19/03	NT

Originally Printed: 7/18/03 **Life Science Laboratories, Inc.** Date Printed: 9/26/03

Analysis performed at NYS DOH ELAP Number: *(1) 10248, (2) 10900, (3) 11667, (4) 10760, (5) 11369*

SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS
8/14/02

Method	Surrogate(s)	Water Limits, %R	SHW Limits, %R
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50-150
8015M_GRO*	4-BFB	50-150	50-150
8015M_DRO*	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/l = microgram per liter ug/kg = microgram per kilogram mg/l = milligram per liter mg/kg = milligram per kilogram %R = Percent Recovery

Life Science Laboratories, Inc.

CHAIN OF CUSTODY RECORD

0308837

LSL North Lab.
131 St. Lawrence Ave.
Waddington, N.Y. 13694
Phone: 315-388-4476
Fax: 315-388-4061

LSL Central Lab.
5854 Butternut Drive
E. Syracuse, N.Y. 13057
Phone: 315-445-1105
Fax: 315-445-1301

LSL Finger Lakes Lab.
16 N. Main St., PO Box 424
Wayland, NY 14572
Phone: 716-728-3320
Fax: 716-728-2711

Turnaround Time

Normal	Pre-Authorized			
14 DAY ☒	Next Day* ☐	3-Day* ☐	*Additional Charges may apply
	2-Day* ☐	7-Day* ☐	

Report Address:
Name: Steve Degerdon
Company: Unified Env. Group Inc.
Street: 1738 Parlor Rd
City/State: Elmira NY 14903 Zip: 14905
Phone: 607-731-0145 Fax:
Email:

Date Needed or Special Instructions:

Authorization or P.O. # 03.103

Client Project ID/Client Site ID ALF: City of Elmira

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
MW-A	6/13/03	16:00	Grab	water	NA	1	liter	8270 ASP/CLP per TAGM 4046		001A

LSL use only:
Containers this C-O-C

Custody Transfers

		Date	Time
Sampled By: S Degerdon	Received By:	6/17/03	1339
Relinquished By: S Degerdon	Received By:		
Relinquished By: John D. Trost	Rec'd for Lab By: Emma Elliott	6/17/03	1615
Shipment Method:	Received Intact: Y N	Sample Temp	7°C on ice

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY ***

Coc

TOTAL P.02

APPENDIX D

WATER DISPOSAL RECIEPT

Oil Company

1062 Old Manheim Pike
Lancaster, PA 17601
(717) 393-2627
FAX (717) 393-0432

Manifest No. 42599

NON-HAZARDOUS WASTE MANIFEST

Date: 5/27/03

Generator: GARY DYER EXC. & TANK SERVICE
2198 N.Y. ROUTE 26
ENDICOTT, N.Y. 13760

Phone No.: (607) 754-0200
EPA ID No.: NYD 986868982
Contact: GARY DYER

Describe the process of generating waste material: ACCUMULATION OF MULTIPLE GENERATORS

The Generator hereby requests and warrants that the material as listed does not contain substances at any level or combined levels that would require its listing as a hazardous waste.

Date: 5/27/03 Signature: _____
Generator's Authorized Representative

Description of Waste	Form	Quantity	Circle Units	No.	Container TT.	Container Drums
FUEL OIL/WATER	Liquid	5116	Pounds / (Gallons)			

Transporter: GARY DYER EXC. & TANK SERVICE
2198 N.Y ROUTE 26
ENDICOTT N.Y. 13760

Phone No.: (607) 754-0200
EPA ID No.: NYD 986868982
Contact: GARY DYER

Tractor Tag No. 11871 PA
Trailer No. AE 46217

certify that the above specified waste is being transported in the above vehicle to the Recycling facility named below.

Date: 5/31/03 Signature: _____

Facility: Lancaster Oil Company
1062 Old Manheim Pike
Lancaster, PA 17601

Phone No.: (717) 393-2627
EPA ID No.: PAD 987266749
Contact: Richard Middleton

The load described above is accepted at this facility.

Date: 5-31-03 Signature: _____

White Copy: Lancaster Oil Company Yellow Copy: Invoice Copy Pink Copy: Transporter Gold Copy: Generator

APPENDIX E

LANDFILL DISPOSAL RECIEPTS

Chemung County Solid Waste Management District
1608 Lake Street Box 588 Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
City of Elmira (Erie Street)
17 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/19/03	45203FA
TICKET NUMBER	"B" or BOX NUMBER
20004868	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73500	29140	44360

TIME IN	TIME OUT
09:10 AM	09:19 AM

VEHICLE DESCRIPTION
JUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.18	Ton	Contaminated Soil By Weight	$5.25	$116.45	$0.00	$116.45

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$116.45	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X

PRINT Name

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

Chemung County Solid Waste Management District
1690 Lake Street Box 588 Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

490
Elmira City of Emira (Erie Street) Greg Jusick
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/19/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004880	

INBOUND LOAD ORIGINATED FROM
DRIVER'S NAME

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
77040	29160	47880

TIME IN	TIME OUT
10:05 AM	10:13 AM

VEHICLE DESCRIPTION

MAROON AUSTIN

NOTES

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUI
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PEF

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
23.94	Ton	Contaminated Soil By Weight	$5.25	$125.69	$0.00	$125.69

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$125.69	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X [signature]

PRINT Name

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2950 • Fax (607) 737-2907

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE,"T" or "C" NUMBER
5/19/03	4520BPA
TICKET NUMBER	"B" or BOX NUMBER
20004850	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
72360	29120	43240

TIME IN	TIME OUT
11:05 AM	11:16 AM

VEHICLE DESCRIPTION
MARCON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
1.62	Ton	Contaminated Soil By Weight	$5.25	$113.51	$0.00	$113.51

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$113.51	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

_____

_____

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/19/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004910	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
71480	29200	42280

TIME IN	TIME OUT
12:27 PM	12:37 PM

VEHICLE DESCRIPTION: MAROON AUSTIN

NOTES:

DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PE

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.14	Ton	Contaminated Soil By Weight	$5.25	$110.99	$0.00	$110.99

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$110.99	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X [signature]

PRINT Name [illegible]

THESE MATERIALS CAME FROM THIS ADD
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone: (607) 737-2826 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Elmira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMB
5/19/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004879	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMB.
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMI

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
70080	32500	37580
TIME IN	TIME OUT	
10:01 AM	10:11 AM	
VEHICLE DESCRIPTION		
BLUE AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
18.79	Ton	Contaminated Soil By Weight	$5.25	$98.65	$0.00	$98.65

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$98.65	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name [signature]

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1600 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2950 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/19/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004891	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PER

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
69780	32500	37280

TIME IN	TIME OUT
11:07 AM	11:17 AM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
18.64	Ton	Contaminated Soil By Weight	$5.25	$97.86	$0.00	$97.86

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$97.86	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District

CUSTOMER

Greg Jusick

City of Elmira (Erie Street)
7 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/19/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004923	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
69720	32620	36100

TIME IN	TIME OUT
01:25 PM	01:46 PM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
18.05	Ton C	& D Const/Demo	$45.00	$812.25	$0.00	$812.25

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$812.25	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.

I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

_____

_____

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2984 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/20/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004982	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
74640	32940	41700

TIME IN	TIME OUT
09:04 AM	09:14 AM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBEI

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PEI

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.85	Ton	Contaminated Soil By Weight	$5.25	$109.46	$0.00	$109.46

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$109.46	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Stotler

PRINT Name Greg Stotler

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira NY 14902-0588
Phone (607) 737-2980 • Fax 607 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBE
5/20/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20005043	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
79440	33020	46420

TIME IN	TIME OUT
01:52 PM	02:01 PM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
23.21	Ton	Contaminated Soil By Weight	$5.25	$121.85	$0.00	$121.85

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$121.85	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Jusick

PRINT Name Greg Jusick

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone: (607) 737-2981 FAX: (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/19/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004940	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
78230	32660	45620
TIME IN	TIME OUT	
02:31 PM	02:41 PM	
VEHICLE DESCRIPTION		
BLUE AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.81	Ton	Contaminated Soil By Weight	$5.25	$119.75	10.00	$119.75

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$119.75	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Jusick

PRINT Name Greg Jusick

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1608 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
17 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45296PA
TICKET NUMBER	"B" or BOX NUMBER
20004950	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
77500	32940	44560

TIME IN	TIME OUT
06:59 AM	07:09 AM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.29	Ton	Contaminated Soil By Weight	$5.25	$116.97	10.00	$110.97

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$116.97	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Stotler

PRINT Name Greg Stotler

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1630 Lake Street Box 588 Elmira, NY 14902-0588
Phone (607) 737-2978 • FAX (607) 737-2907

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/15/03	
TICKET NUMBER	"B" or BOX NUMBER
20004721	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
74940	31360	43580
TIME IN	TIME OUT	
02:16 PM	02:33 PM	
VEHICLE DESCRIPTION		
T1022		
NOTES		

DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PER

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.79	Ton	Contaminated Soil By Weight	$5.25	$114.40	$0.00	$114.40

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$114.40	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name Greg Stoltz

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

City of Emira (Erie Street)
[illegible] Church Street
[illegible]on Hawley (Erie St)
NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/15/03	
TICKET NUMBER	"B" or BOX NUMBER
20004695	1A
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
65520	31120	34400
TIME IN	TIME OUT	
11:47 AM	12:06 PM	

VEHICLE DESCRIPTION
TRK T1022

NOTES

DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
17.2	Ton	Contaminated Soil By Weight	$5.25	$90.30	$0.00	$90.30

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$90.30	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Sattler

PRINT Name Greg Sattler

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Erie Terminal

Chemung County Solid Waste Management District
1690 Lake Street, P.O. Box 588, Elmira, NY 14902-0588
Phone (607) 737-2984 • Fax (607) 737-2467

CUSTOMER

0
mira City of Emira (Erie Street)
7 East Church Street
tn: Ron Hawley (Erie St)
mira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/15/03	
TICKET NUMBER	"B" or BOX NUMBER

INBOUND LOAD ORIGINATED FROM
T1022

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

3760 31020 32740

BOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
10:43 AM		

LUE TR	TIME IN	TIME OUT

VEHICLE DESCRIPTION

NOTES

Ton Contaminated Soil By Weight $5.25 per Ton

JANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	$65. TOTAL

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
65.94	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Slotter

PRINT Name Greg Slotter

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW.)

Chemung County Solid Waste Management District

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBE
5/15/03	
TICKET NUMBER	"B" or BOX NUMBER
20004710	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
78240	31020	47220

TIME IN	TIME OUT
01:04 PM	01:23 PM

VEHICLE DESCRIPTION
T102

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
23.61	Ton	Contaminated Soil By Weight	$5.25	$123.95	$0.00	$123.95

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$123.95	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name Greg Holley

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C"
5/16/23	T1022
TICKET NUMBER	"B" or BOX NUMBER
20004758	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
65780	31380	34400

TIME IN	TIME OUT
09:14 AM	09:27 AM

VEHICLE DESCRIPTION
BlueAustinTruck Erie&Home

NOTES

DRIVER'S NAME	
Greg Stotler Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUM
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
17.2	Ton	Contaminated Soil By Weight	$5.25	$90.30	$0.00	$90.30

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$90.30	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Stotler

PRINT Name Greg Stotler

THESE MATERIALS CAME FROM THIS AI
PLEASE FILL IN THE ADDRESS ON THE LINES BELOW

CUSTOMER

Phone (607) 737-29[illegible] Fax (607) 737-2[illegible]

492
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMB
5/16/03	TRUCK#22
TICKET NUMBER	"B" or BOX NUMBER
20004794	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
71340	28700	42640
TIME IN	TIME OUT	
12:19 PM	12:20 PM	

DRIVER'S NAME	
Gary Coleman Permit# 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMI

VEHICLE DESCRIPTION
RedAustinTruck Erie&Home

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.32	Ton	Contaminated Soil By Weight	$5.25	$111.93	$0.00	$111.93

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$111.93	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name Gary Coleman

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Chemung County Solid Waste Management
1640 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBE
5/16/03	TRUCK#2P
TICKET NUMBER	"B" or BOX NUMBER
20004811	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
72880	28840	44040

TIME IN	TIME OUT
02:18 PM	02:27 PM

VEHICLE DESCRIPTION
RegAustinTruck Erie&Home

NOTES

DRIVER'S NAME	
Gary Coleman Permit# 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.02	Ton	Contaminated Soil By Weight	$5.25	$115.61	$0.00	$115.61

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$115.61	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name GARY COLEMAN

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2962

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/16/03	T1022
TICKET NUMBER	"B" or BOX NUMBER
20004748	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
71500	31340	40160

TIME IN	TIME OUT
08:19 AM	08:28 AM

VEHICLE DESCRIPTION
BlueAustinTruck Erie&Home

NOTES

DRIVER'S NAME	
Greg Stotler Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.08	Ton	Contaminated Soil By Weight	$5.25	$105.42	$0.00	$105.42

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$105.42	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg T. Stotler

PRINT Name Greg T. Stotler

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone: (607) 737-2984 • Fax: (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/19/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20020436(40)	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERI

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
75650	29200	46450
TIME IN	TIME OUT	
07:03 AM	07:12 AM	
VEHICLE DESCRIPTION		
AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
23.23	Ton	Contaminated Soil By Weight	$5.25	$121.96	0.00	$121.96

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$121.96	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name GARY Coleman

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
400 Lake Street Box 588 Elmira, NY 14902-0588
Phone (607) 737-2978 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/19/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004517	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERI

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73620	29200	44420
TIME IN	TIME OUT	
01:26 PM	01:35 PM	
VEHICLE DESCRIPTION		
MAROON AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.21	Ton	Contaminated Soil By Weight	$5.25	$116.60	$0.00	$116.60

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$116.60	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW .)

Chemung County Solid Waste Management District
199 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2951 • Fax (607) 737-2967

CUSTOMER

450
Elmira City of Emira (Erie Street)..
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/19/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004937	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBEF
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PEF

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
74740	29240	45500

TIME IN	TIME OUT
02:22 PM	02:32 PM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.75	Ton	Contaminated Soil By Weight	$5.25	$119.44	$0.00	$119.44

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$119.44	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Coleman

PRINT Name Greg Coleman

THESE MATERIALS CAME FROM THIS ADDF
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2983 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/20/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004905	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PER

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
69780	29380	40400

TIME IN	TIME OUT
08:04 AM	08:13 AM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.2	Ton	Contaminated Soil By Weight	$5.25	$106.05	$0.00	$106.05

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$106.05	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name [signature]

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone: 607-737-2980 • Fax: 607-737-2967

CUSTOMER

450
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/20/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004900	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
#.OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUME
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
74600	29360	45240
TIME IN	TIME OUT	
09:00 AM	09:11 AM	
VEHICLE DESCRIPTION		
MAROON AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.58	Ton	Contaminated Soil By Weight	$5.25	$118.76	$0.00	$118.76

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$118.76	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name [illegible]

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street) Greg Jusick
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20004993	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
70180	29360	40820

TIME IN	TIME OUT
09:56 AM	10:10 AM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.41	Ton	Contaminated Soil By Weight	$5.25	$107.15	$0.00	$107.15

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$107.15	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

90
Imira City of Emira (Erie Street)
17 East Church Street
ttn: Ron Hawley (Erie St)
Imira NY 14901

1090 Lake Street, Box 588, Elmir., NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2567

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45203F-1
TICKET NUMBER	"B" or BOX NUMBER
20005019	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
0000	29480	40520

TIME IN	TIME OUT
11:43 AM	11:53 AM

VEHICLE DESCRIPTION
BRCON AUSTIN

NOTES

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.86	Ton	Contaminated Soil By Weight	$5.25	$106.37	$0.00	$106.37

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$106.37	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
696 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2951 Fax (607) 737-2907

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMB
5/20/03	45303PA
TICKET NUMBER	"B" or BOX NUMBER
20005006	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMI

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
66820	29360	37460

TIME IN	TIME OUT
10:51 AM	11:00 AM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
19.73	Ton	Contaminated Soil By Weight	$5.25	$98.33	$0.00	$98.33

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$98.33	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name [illegible]

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1600 Lake Street, Box 588 Elmira, NY 14902-0588
Phone: (607) 737-2980 • Fax: (607) 737-2907

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUI
5/20/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20005032	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
72000	29380	42620

TIME IN	TIME OUT
12:39 PM	12:49 PM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PER

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.31	Ton	Contaminated Soil By Weight	$5.25	$111.88	$0.00	$111.88

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$111.88	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Jusick

PRINT Name Greg Jusick

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Elmira (Erie Street) Greg Jusick
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/20/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20005039	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
#OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBEI
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PE

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
69300	29420	39880

TIME IN	TIME OUT
01:31 PM	01:40 PM

VEHICLE DESCRIPTION
MAROON AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
19.94	Ton	Contaminated Soil By Weight	$5.25	$104.69	$0.00	$104.69

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$104.69	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDI
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

90
Elmira City of Emira (Erie Street)
17 East Church Street
ttn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45203P4
TICKET NUMBER	"B" or BOX NUMBER
20005052	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
7040	89420	37920
TIME IN	TIME OUT	
02:22 PM	02:34 PM	

VEHICLE DESCRIPTION
GROON AUSTIN

NOTES

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
9.50	Ton	Contaminated Soil By Weight	$5.25	$99.54	$0.00	$99.54

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$99.54	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District

CUSTOMER

0
Imira City of Emira (Erie Street)
7 East Church Street
tn: Ron Hawley (Erie St)
Imira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004966	
INBOUND LOAD ORIGINATED FROM	

IBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
900	32940	41960

TIME IN	TIME OUT
08:05 AM	08:14 AM

VEHICLE DESCRIPTION
DOE AUSTIN

NOTES

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
.98	Ton	Contaminated Soil By Weight	$5.25	$110.15	$0.00	$110.15

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$110.15	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Stotler

PRINT Name Greg Stotler

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1600 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2961 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/20/03	45200PA
TICKET NUMBER	"B" or BOX NUMBER
20005004	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUI
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBEF
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PEF

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73620	33020	40600

TIME IN	TIME OUT
10:34 AM	10:45 AM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.3	Ton	Contaminated Soil By We	ight $5.	25 $106.	18 $0.00	$106.58

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$106.58	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Jusick

PRINT Name Greg Jusick

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1990 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2981 • Fax (607) 737-2967

CUSTOMER

430
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE "T" or "C" NUMB
5/16/03	T10222
TICKET NUMBER	"B" or BOX NUMBER
20004771	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
Greg Stotler Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
68040	31460	36580
TIME IN	TIME OUT	
10:38 AM	10:50 AM	
VEHICLE DESCRIPTION		
BlueAustinTruck Erie&Home		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
18.29	Ton	Contaminated Soil By Weight	$5.25	$96.02	$0.00	$96.02

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$96.02	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

1690 Lake Street, Box 585, Elmira NY 14902
Phone (607) 737-2980 • Fax (607) 737-2967

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBE
5/16/03	T1022
TICKET NUMBER	"B" or BOX NUMBER
20004796	
INBOUND LOAD ORIGINATED FROM:	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
72320	31920	40380
TIME IN	TIME OUT	
12:37 PM	12:46 PM	

VEHICLE DESCRIPTION
BlueBurtinTruck Erie&Home

NOTES

DRIVER'S NAME	
Greg Stotler Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMB
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.19	Ton	Contaminated Soil By Weight	$5.25	$106.00	$0.00	$106.00

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$106.00	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Greg Stotler

PRINT Name Greg Stotler

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box [illegible], Elmira, NY [illegible]
Phone (607) 737-[illegible] • Fax (607) 737-[illegible]

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/16/03	T1022
TICKET NUMBER	"B" or BOX NUMBER
20004786	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
Greg Stoltzer Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
75580	31780	43800

TIME IN	TIME OUT
11:40 AM	11:50 AM

VEHICLE DESCRIPTION

BlueAustinTruck Erie&Home

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.9	Ton	Contaminated Soil By Weight	$5.25	$114.98	$0.00	$114.98

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$114.98	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here **X** [illegible]

PRINT Name Greg Stoltzer

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1600 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/19/03	45206PA
TICKET NUMBER	"B" or BOX NUMBER
20004912	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
72720	32540	40180

TIME IN	TIME OUT
12:40 PM	12:49 PM

VEHICLE DESCRIPTION
BLUE AUSTIN

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
30.09	Ton	Contaminated Soil By Weight	$5.25	$105.47	$2.00	$105.47

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$105.47	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X _____

PRINT Name _____

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District

CUSTOMER

0
lmira City of Emira (Erie Street)
7 East Church Street
tn: Ron Hawley (Erie St)
mira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/16/03	
TICKET NUMBER	"B" or BCX NUMBER
20004732	
INBOUND LOAD ORIGINATED FROM:	

BOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
220	31360	37860
TIME IN		TIME OUT
07:02 AM		07:14 AM
VEHICLE DESCRIPTION		
K t1022		
NOTES		

DRIVER'S NAME	
AUSTINS	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22	Ton	Contaminated Soil By Weight	$5.25	$99.38	$2.00	$99.38

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$99.38	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.

I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Stalley

PRINT Name Greg Stalley

THESE MATERIALS CAME FROM THIS ADDRESS:
PLEASE FILL IN THE ADDRESS ON THE LINES BELOW

Chemung County Solid Waste Management District
1690 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C"
5/16/03	71022
TICKET NUMBER	**"B" or BOX NUMBER**
20004812	

INBOUND LOAD ORIGINATED FROM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
76240	32160	44080

TIME IN	TIME OUT
02:27 PM	02:36 PM

VEHICLE DESCRIPTION

BlueAustinTruck Erie&Home

NOTES

DRIVER'S NAME

Greg Stetler Permit 03-16

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	**TRUCKING CO'S RELEASE**
CADEX OR CUSTOM'S INFO	**CCSWMD "PASS" NUMBER**

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED F

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.04	Ton	Contaminated Soil By Weight	$5.25	$115.71	$0.00	$115.71

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$115.71	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Stetler

PRINT Name Greg Stetler

THESE MATERIALS CAME FROM THIS ADD
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

HORSEHEADS PRINTING HORSEHEADS NY 14845 2893

Chemung County Solid Waste Management District
1060 Lake Street, P.O. Box 588, Elmira, NY 14902-0588
Phone: (607) 737-2946 • Fax: (607) 737-2947

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/16/03	T10??
TICKET NUMBER	"B" or BOX NUMBER
20004524	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
Reg Station Permit 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73360	32060	41300
TIME IN	TIME OUT	
01:30 PM	01:40 PM	
VEHICLE DESCRIPTION		
BlueAustinTruck Erie&Home		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.65	Ton	Contaminated Soil By Weight	$5.25	$108.41	$0.00	$108.41

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$108.41	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Lynn T. Field Jr.

PRINT Name Lynn T. Field Jr.

THESE MATERIALS CAME FROM THIS ADDRE
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Street Box [illegible] NY [illegible]
Phone [illegible] Fax [illegible]

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/16/03	T[illegible]
TICKET NUMBER	"B" or BOX NUMBER
20004779	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
67760	28620	39140
TIME IN	TIME OUT	
11:14 AM	11:23 AM	
VEHICLE DESCRIPTION		
RedGustinTruck Erie&Home		
NOTES		

DRIVER'S NAME	
Gary Coleman Permit# 03-15	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUM
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERI

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
19.57	Ton	Contaminated Soil By Weight	$5.25	$102.74	$0.00	$102.74

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$102.74	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name GARY COLEMAN

THESE MATERIALS CAME FROM THIS ADDRI
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1590 Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2951 • Fax (607) 737-2957

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBE
5/16/03	TRUCK#22
TICKET NUMBER	"B" or BOX NUMBER
20004802	
INBOUND LOAD ORIGINATED FROM:	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
74000	28800	45200
TIME IN	TIME OUT	
01:16 PM	01:25 PM	

VEHICLE DESCRIPTION
RedAustinTruck Erie&Home
NOTES

DRIVER'S NAME	
Gary Coleman Permit# 03-16	
TRACTOR NUMBER	TRAILER NUMBER
#OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBE
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMI

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.6	Ton	Contaminated Soil By Weight	$5.25	$118.65	$0.00	$118.65

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$118.65	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name GARY COLEMAN

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District

CUSTOMER

400
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	45206FN
TICKET NUMBER	"B" or BOX NUMBER
20005024	

INBOUND LOAD ORIGINATED FROM

DRIVER'S NAME

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
80300	32980	47320

TIME IN	TIME OUT
12:06 PM	12:14 PM

VEHICLE DESCRIPTION

BLUE AUSTIN

NOTES

TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
3.66	Ton	Contaminated Soil By Weight	$5.25	$124.22	$0.00	$124.22

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$124.22	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X [signature]

PRINT Name Greg [signature]

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1690 Lake Street Rd. Elmira NY 14902
Phone (607) 737-2980 • Fax (607) 737-2977

CUSTOMER

lmira City of Emira (Erie Street)
East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/20/03	52:06FA
TICKET NUMBER	"B" or BOX NUMBER
20005037	

INBOUND LOAD ORIGINATED FROM

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
60	32920	41900

TIME IN	TIME OUT
12:57 PM	01:09 PM

VEHICLE DESCRIPTION

JE AUSTIN

NOTES

DRIVER'S NAME

TRACTOR NUMBER	TRAILER NUMBER

# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER

CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER

TRUCKING COMPANY

DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
95	Ton	Contaminated Soil By Weight	$5.25	$110.20	$0.00	$110.20

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$110.20	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Greg Shetler

PRINT Name Greg Shetler

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1691 Lake Street Box 588, Elmira NY 14902-0588
Phone (607) 737-2980 • Fax (607) 737-2967

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUME
5/16/03	TRUCK#99
TICKET NUMBER	"B" or BOX NUMBER
20004768	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
68920	28640	40280
TIME IN	TIME OUT	
10:18 AM	10:28 AM	
VEHICLE DESCRIPTION		
RedAustinTruck Erie&Home		
NOTES		

DRIVER'S NAME	
Gary Coleman Permit# 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBI
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMI

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
20.14	Ton	Contaminated Soil By Weight	$5.25	$105.74	$0.00	$105.74

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$105.74	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ Gary Coleman

PRINT Name GARY Coleman

THESE MATERIALS CAME FROM THIS ADDRES
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

Chemung County Solid Waste Management District

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUM
5/16/03	[illegible]
TICKET NUMBER	"B" or BOX NUMBER
200004757	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
71440	28680	42760
TIME IN	TIME OUT	
09:11 AM	09:23 AM	
VEHICLE DESCRIPTION		
RedAustinTruck Erie&Home		
NOTES		

DRIVER'S NAME	
Gary Coleman Permit# 03-16	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMB
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERM

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.38	Ton	Contaminated Soil By Weight	$5.25	$112.25	$0.00	[illegible]

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$112.25	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.

I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name GARY COLEMAN

THESE MATERIALS CAME FROM THIS ADDRESS
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
1696 Lake street, box 588, Elmira, NY 14902-0588
Phone (607) 737-2930 • Fax (607) 737-2967

CUSTOMER

430
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NU
5/16/03	TRUCK#22
TICKET NUMBER	"B" or BOX NUMBER
20004745	
INBOUND LOAD ORIGINATED FROM	

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73720	28700	44020
TIME IN	TIME OUT	
08:11 AM	08:21 AM	
VEHICLE DESCRIPTION		
RED AUSTIN TRUCK		
NOTES		

DRIVER'S NAME	
TRUCK 22	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBEI
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PEI

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
22.01	Ton	Contaminated Soil By Weight	$5.25	$115.55	10.00	$115.55

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$115.55	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here X Gary Coleman

PRINT Name GARY COLEMAN

THESE MATERIALS CAME FROM THIS ADDR
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Chemung County Solid Waste Management District
[illegible] Lake Street, Box [illegible] Elmira, NY 14902-0588
Phone (607) [illegible] • Fax (607) 737-2907

Lynn T. Field Jr.

TRANSACTION DATE	LICENSE PLATE, "T" or "C" NUMBER
5/16/02	
TICKET NUMBER	"B" or BOX NUMBER
200204733	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NUMBER
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBER
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PERMIT #

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
56720	28680	38040
TIME IN		TIME OUT
07:03 AM		07:17 AM

VEHICLE DESCRIPTION
AUSTIN TRK #22

NOTES

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
9.00	Ton	Contaminated Soil By Weight	$5.25	$99.66	$0.00	$99.66

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$99.66	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name Craig Coleman

THESE MATERIALS CAME FROM THIS ADDRESS:
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

Chemung County Solid Waste Management District
[illegible] Lake Street, Box 588, Elmira, NY 14902-0588
Phone (607) 737-2951 • Fax (607) 737-2977

CUSTOMER

490
Elmira City of Emira (Erie Street)
317 East Church Street
Attn: Ron Hawley (Erie St)
Elmira NY 14901

Greg Jusick

TRANSACTION DATE	LICENSE PLATE, "T" or "C" N
5/22/03	45203PA
TICKET NUMBER	"B" or BOX NUMBER
20005218	
INBOUND LOAD ORIGINATED FROM	
DRIVER'S NAME	
TRACTOR NUMBER	TRAILER NUMBER
# OF RECYCLED BALES OUTBOUND	TRUCKING CO'S RELEASE NU
CADEX OR CUSTOM'S INFO	CCSWMD "PASS" NUMBE
TRUCKING COMPANY	
DEC PART 364 HAULING PERMIT #	CCSWMD CONTAMINATED PE

INBOUND WEIGHT	OUTBOUND WEIGHT	NET WEIGHT
73540	30600	42940
TIME IN	TIME OUT	
12:30 PM	12:42 PM	
VEHICLE DESCRIPTION		
MAROON AUSTIN		
NOTES		

QUANTITY	UNIT	DESCRIPTION	RATE	EXTENSION	SURCHARGE	TOTAL
21.47	Ton	Contam Soil By Weight	$5.25	$112.72	$0.00	$112.72

NET AMOUNT	TENDERED	CHANGE AMOUNT	CHECK NUMBER
$112.72	$0.00	$0.00	

Each hauler must fill in the following information and sign, or disposal privileges may be revoked.
I certify that the Material was all generated in Chemung County and that it does not contain hazardous materials.

Sign Here ✕ [signature]

PRINT Name [illegible]

THESE MATERIALS CAME FROM THIS ADD
(PLEASE FILL IN THE ADDRESS ON THE LINES BELOW)

APPENDIX F

NYSDEC TAGM 4046

15 (12-75)

HWR-94-4046
January 24, 1994
(REVISED)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Regional Hazardous Waste Remediation Engineers, Bureau Directors and Section Chiefs
FROM: Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation
SUBJECT: Revised TAGM - Determination of Soil Cleanup Objectives and Cleanup Levels

DATE: JAN 24 1994

Attached is the revised Division Technical and Administrative Guidance Memorandum (TAGM) on Determination of Soil Cleanup Objectives and Cleanup Levels in its final form. The changes are to the Tables of Appendix A. They are minor in nature and do not change the content of the TAGM. The changes include:

1. Alphabetizing contaminants in Table 1 through Table 4.

2. The addition of a few contaminants to Table 1 and Table 2.

3. Table 4 has been revised to indicate that background levels for lead vary widely and provide a range for undeveloped and developed areas. It also has been revised to indicate that site-specific form(s) of cyanide should be considered when establishing soil cleanup objectives for cyanide.

If you have any questions, please contact Ajay Shroff of my staff at (518)485-8792.

Attachment

cc: T. Jorling
J. Lacey
M. Gerstman
A. DeBarbieri
E. Sullivan
T. Donovan
C. Sullivan
J. Eckl
R. Davies
R. Dana
C. Goddard
C. Costopoulos
P. Counterman
J. Davis
J. Kelleher
J. Colquhoun
D. Persson
J. Printup
M. Bermingham
D. Johnson
M. Kadlecek
Regional Directors
Regional Engineers
Regional Solid and Haz. Waste Engrs.
Regional Citizen Participation Spec.

HWR-94-4046
January 24, 1994
(REVISED)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Regional Haz. Waste Remediation Engineers, Bureau Dirs. & Section Chiefs
FROM: Michael J. O'Toole, Jr., Director, Div. of Hazardous Waste Remediation
SUBJECT: DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM: DETERMINATION OF SOIL CLEANUP OBJECTIVES AND CLEANUP LEVELS
DATE: JAN 24 1994

The cleanup goal of the Department is to restore inactive hazardous waste sites to predisposal conditions, to the extent feasible and authorized by law. However, it is recognized that restoration to predisposal conditions will not always be feasible.

1. INTRODUCTION:

This TAGM provides a basis and procedure to determine soil cleanup levels at individual Federal Superfund, State Superfund, 1986 EQBA Title 3 and Responsible Party (RP) sites, when the Director of the DHWR determines that cleanup of a site to predisposal conditions is not possible or feasible.

The process starts with development of soil cleanup objectives by the Technology Section for the contaminants identified by the Project Managers. The Technology Section uses the procedure described in this TAGM to develop soil cleanup objectives. Attainment of these generic soil cleanup objectives will, at a minimum, eliminate all significant threats to human health and/or the environment posed by the inactive hazardous waste site. Project Managers should use these cleanup objectives in selecting alternatives in the Feasibility Study (FS). Based on the proposed selected remedial technology (outcome of FS), final site specific soil cleanup levels are established in the Record of Decision (ROD) for these sites.

It should be noted that even after soil cleanup levels are established in the ROD, these levels may prove to be unattainable when remedial construction begins. In that event, alternative remedial actions or institutional controls may be necessary to protect the environment.

2. BASIS FOR SOIL CLEANUP OBJECTIVES:

The following alternative bases are used to determine soil cleanup objectives:

(a) Human health based levels that correspond to excess lifetime

cancer risks of one in a million for Class A[1] and B[2] carcinogens, or one in 100,000 for Class C[3] carcinogens. These levels are contained in USEPA's Health Effects Assessment Summary Tables (HEASTs) which are compiled and updated quarterly by the NYSDEC's Division of Hazardous Substances Regulation;

(b) Human health based levels for systemic toxicants, calculated fromReference Doses (RfDs). RfDs are an estimate of the daily exposure an individual (including sensitive individuals) can experience without appreciable risk of health effects during a lifetime. An average scenario of exposure in which children ages one to six (who exhibit the greatest tendency to ingest soil) is assumed. An intake rate of 0.2 gram/day for a five-year exposure period for a 16-kg child is assumed. These levels are contained in USEPA's Health Effects Assessment Summary Tables (HEASTs) which are compiled and updated quarterly by the NYSDEC's Division of Hazardous Substances Regulation;

(c) Environmental concentrations which are protective of groundwater/drinking water quality; based on promulgated or proposed New York State Standards;

(d) Background values for contaminants; and

(e) Detection limits.

A recommendation on the appropriate cleanup objective is based on the criterion that produces the most stringent cleanup level using criteria a, b, and c for organic chemicals, and criteria a, b, and d for heavy metals. If criteria a and/or b are below criterion d for a contaminant, its background value should be used as the cleanup objective. However, cleanup objectives developed using this approach must be, at a minimum, above the method detection limit (MDL) and it is preferable to have the soil cleanup objectives above the Contract Required Quantitation Limit (CRQL) as defined by NYSDEC. If the cleanup objective of a compound is "non-detectable", it should mean that it is not detected at the MDL. Efforts should be made to obtain the best MDL detection possible when selecting a laboratory and analytical protocol.

The water/soil partitioning theory is used to determine soil cleanup objectives which would be protective of groundwater/drinking water quality for its best use. This theory is conservative in nature and assumes that contaminated soil and groundwater are in direct contact. This theory is based upon the ability of organic matter in soil to adsorb organic chemicals. The approach predicts the maximum amount of contamination that may remain in soil so that leachate from the contaminated soil will not violate groundwater and/or drinking water

standards.

(1) Class A are proved human carcinogens
(2) Class B are probable human carcinogens
(3) Class C are possible human carcinogens

This approach is not used for heavy metals, which do not partition appreciably into soil organic matter. For heavy metals, eastern USA or New York State soil background values may be used as soil cleanup objectives. A list of values that have been tabulated is attached. Soil background data near the site, if available, is preferable and should be used as the cleanup objective for such metals. Background samples should be free from the influences of this site and any other source of contaminants. Ideal background samples may be obtained from uncontaminated upgradient and upwind locations.

3. DETERMINATION OF SOIL CLEANUP GOALS FOR ORGANICS IN SOIL FOR PROTECTION OF WATER QUALITY

Protection of water quality from contaminated soil is a two-part problem. The first is predicting the amount of contamination that will leave the contaminated media as leachate. The second part of the problem is to determine how much of that contamination will actually contribute to a violation of groundwater standards upon reaching and dispersing into groundwater. Some of the contamination which initially leaches out of soil will be absorbed by other soil before it reaches groundwater. Some portion will be reduced through natural attenuation or other mechanism.

PART A: PARTITION THEORY MODEL

There are many test and theoretical models which are used to predict leachate quality given a known value of soil contamination. The Water-Soil Equilibrium Partition Theory is used as a basis to determine soil standard or contamination limit for protection of water quality by most of the models currently in use. It is based on the ability of organic carbon in soil to adsorb contamination. Using a water quality value which may not be exceeded in leachate and the partition coefficient method, the equilibrium concentration (Cs) will be expressed in the same units as the water standards. The following expression is used:

Allowable Soil Concentration $Cs = f \times Koc \times Cw$ . . . . (1)

Where: f = fraction of organic carbon of the natural soil medium.

Koc = partition coefficient between water and soil media. Koc can be estimated by the following equation:

log Koc = 3.64 - 0.55 log S

S = water solubility in ppm
Cw = appropriate water quality value from TOGS 1.1.1

Most Koc and S values are listed in the Exhibit A-1 of the USEPA Superfund Public Health Evaluation Manual (EPA/540/1-86/060). The Koc values listed in this manual should be used for the purpose. If the Koc value for a contaminant is not listed, it should be estimated using the above mentioned equation.

PART B: PROCEDURE FOR DETERMINATION OF SOIL CLEANUP OBJECTIVES

When the contaminated soil is in the unsaturated zone above the water table, many mechanisms are at work that prevent all of the contamination that would leave the contaminated soil from impacting groundwater. These mechanisms occur during transport and may work simultaneously. They include the following: (1) volatility, (2) sorption and desorption, (3) leaching and diffusion, (4) transformation and degradation, and (5) change in concentration of contaminants after reaching and/or mixing with the groundwater surface. To account for these mechanisms, a correction factor of 100 is used to establish soil cleanup objectives. This value of 100 for the correction is consistent with the logic used by EPA in its Dilution Attenuation Factor (DAF) approach for EP Toxicity and TCLP. (Federal Register/Vol. 55, No. 61, March 29, 1990/Pages 11826-27). Soil cleanup objectives are calculated by multiplying the allowable soil concentration by the correction factor. If the contaminated soil is very close (<3' - 5') to the groundwater table or in the groundwater, extreme caution should be exercised when using the correction factor of 100 (one hundred) as this may not give conservative cleanup objectives. For such situations the Technology Section should be consulted for site-specific cleanup objectives.

Soil cleanup objectives are limited to the following maximum values. These values are consistent with the approach promulgated by the States of Washington and Michigan.

1) Total VOCs $\leq$ 10 ppm.
2) Total Semi VOCs $\leq$ 500 ppm.
3) Individual Semi VOCs $\leq$ 50 ppm.
4) Total Pesticides $\leq$ 10 ppm.

One concern regarding the semi-volatile compounds is that some of these compounds are so insoluble that their Cs values are fairly large. Experience (Draft TOGS on Petroleum

Contaminated Soil Guidance) has shown that soil containing some of these insoluble substances at high concentrations can exhibit a distinct odor even though the substance will not leach from the soil. Hence any time a soil exhibits a discernible odor nuisance, it shall not be considered clean even if it has met the numerical criteria.

4. DETERMINATION OF FINAL CLEANUP LEVELS:

Recommended soil cleanup objectives should be utilized in the development of final cleanup levels through the Feasibility Study (FS) process. During the FS, various alternative remedial actions developed during the Remedial Investigation (RI) are initially screened and narrowed down to the list of potential alternative remedial actions that will be evaluated in detail. These alternative remedial actions are evaluated using the criteria discussed in TAGM 4030, Selection of Remedial Actions at Inactive Hazardous Waste Sites, revised May 15, 1990, and the preferred remedial action will be selected. After the detailed evaluation of the preferred remedial action, the final cleanup levels which can be actually achieved using the preferred remedial action must be established. Remedy selection, which will include final cleanup levels, is the subject of TAGM 4030.

Recommended soil cleanup objectives that have been calculated by the Technology Section are presented in Appendix A. These objectives are based on a soil organic carbon content of 1% (0.01) and should be adjusted for the actual organic carbon content if it is known. For determining soil organic carbon content, use attached USEPA method (Appendix B). Please contact the Technology Section, Bureau of Program Management for soil cleanup objectives not included in Appendix A.

Attachments

cc: T. Jorling
J. Lacey
M. Gerstman
A. DeBarbieri
E. Sullivan
T. Donovan
C. Sullivan
J. Eckl
R. Davies
R. Dana
C. Goddard
E. McCandless
P. Counterman
J. Davis
J. Kelleher
J. Colquhoun
D. Persson
A. Carlson
M. Birmingham
D. Johnson
B. Hogan
Regional Directors
Regional Engineers
Regional Solid and Haz. Waste Engrs.
Regional Citizen Participation Spec.

APPENDIX A
TABLE 1
Recommended soil cleanup objectives (mg/kg or ppm)
Volatile Organic Contaminants

Contaminant	Partition coefficient Koc	Groundwater Standards/ Criteria Cw ug/l or ppb.	a Allowable Soil conc. ppm. Cs	b ** Soil Cleanup objectives to Protect GW Quality (ppm)	USEPA Health Based (ppm) Carcinogens	Systemic Toxicants	CRQL (ppb)	*** Rec.soil Clnup Objct (ppm)
Acetone	2.2	50	0.0011	0.11	N/A	8,000	10	0.2
Benzene	83	0.7	0.0006	0.06	24	N/A	5	0.06
Benzoic Acid	54*	50	0.027	2.7	N/A	300,000	5	2.7
2-Butanone MEK	4.5*	50	0.003	0.3	N/A	4,000	10	0.3
Carbon Disulfide	54*	50	0.027	2.7	N/A	8,000	5	2.7
Carbon Tetrachloride	110*	5	0.006	0.6	5.4	60	5	0.6
Chlorobenzene	330	5	0.017	1.7	N/A	2,000	5	1.7
Chloroethane	37*	50	0.019	1.9	N/A	N/A	10	1.9
Chloroform	31	7	0.003	0.30	114	800	5	0.3
Dibromochloromethane	N/A	50	N/A	N/A	N/A	N/A	5	N/A
1,2-Dichlorobenzene	1,700	4.7	0.079	7.9	N/A	N/A	330	7.9
1,3-Dichlorobenzene	310 *	5	0.0155	1.55	N/A	N/A	330	1.6
1,4-Dichlorobenzene	1,700	5	0.085	8.5	N/A	N/A	330	8.5
1,1-Dichloroethane	30	5	0.002	0.2	N/A	N/A	5	0.2
1,2-Dichloroethane	14	5	0.001	0.1	7.7	N/A	5	0.1
1,1-Dichloroethene	65	5	0.004	0.4	12	700	5	0.4
1,2-Dichloroethene(trans)	59	5	0.003	0.3	N/A	2,000	5	0.3
1,3-dichloropropene	51	5	0.003	0.3	N/A	N/A	5	0.3
Ethylbenzene	1,100	5	0.055	5.5	N/A	8,000	5	5.5
113 Freon(1,1,2 Trichloro-1,2,2 Trifluoroethane)	1,230*	5	0.060	6.0	N/A	200,000	5	6.0
Methylene chloride	21	5	0.001	0.1	93	5,000	5	0.1
4-Methyl-2-Pentanone	19*	50	0.01	1.0	N/A	N/A	10	1.0
Tetrachloroethene	277	5	0.014	1.4	14	800	5	1.4
1,1,1-Trichloroethane	152	5	0.0076	0.76	N/A	7,000	5	0.8
1,1,2,2-Tetrachloroethane	118	5	0.006	0.6	35	N/A	5	0.6
1,2,3-trichloropropene	68	5	0.0034	0.34	N/A	80	5	0.4
1,2,4-Trichlorobenzene	670 *	5	0.034	3.4	N/A	N/A	330	3.4
Toluene	300	5	0.015	1.5	N/A	20,000	5	1.5
Trichloroethene	126	5	0.007	0.70	64	N/A	5	0.7
Vinyl chloride	57	2	0.0012	0.12	N/A	N/A	10	0.2
Xylenes	240	5	0.012	1.2	N/A	200,000	___	1.2

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)
N/A is not available
Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
All other Koc values are experimental values.
Correction Factor (CF) of 100 is used as per TAGM #4046
** As per TAGM #4046, Total VOCs < 10 ppm.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1% , and should be adjusted for the actual soil organic carbon content if it is known.

APPENDIX A (cont.)

TABLE 2

Recommended Soil Cleanup Objectives (mg/kg or ppm)

Semi-Volatile Organic Contaminants

Contaminant	Partition coefficient Koc	Groundwater Standards/ Criteria Cw ug/l or ppb.	a Allowable Soil conc. ppm. Cs	b ** Soil Cleanup objectives to Protect GW Quality (ppm)	USEPA Health Based (ppm) Carcinogens	Systemic Toxicants	CRQL (ppb)	Rec.soil Clnup Objc (ppm)
Acenaphthene	4,600	20	0.9	90.0	N/A	5,000	330	50.0**
Acenaphthylene	2,056*	20	0.41	41.0	N/A	N/A	330	41.0
Aniline	13.8	5	0.001	0.1	123	N/A	330	0.1
Anthracene	14,000	50	7.00	700.0	N/A	20,000	330	50.0**
Benzo(a)anthracene	1,380,000	0.002	0.03	3.0	0.224	N/A	330	0.224 or MD
Benzo(a)pyrene	5,500,000	0.002(MD)	0.110	11.0	0.0609	N/A	330	0.061 or MD
Benzo(b)fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
Benzo(g,h,i)perylene	1,600,000	5	8.0	800	N/A	N/A	330	50.0**
Benzo(k)fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
bis(2-ethylhexyl)phthalate	8,706*	50	4.35	435.0	50	2,000	330	50.0**
Butylbenzylphthlate	2,430	50	1.215	122.0	N/A	20,000	330	50.0**
Chrysene	200,000	0.002	0.004	0.4	N/A	N/A	330	0.4
4-Chloroaniline	43 ****	5	0.0022	0.22	200	300	330	0.220 or MD
4-Chloro-3-methylphenol	47	5	0.0024	0.24	N/A	N/A	330	0.240 or MD
2-Chlorophenol	15*	50	0.008	0.8	N/A	400	330	0.8
Dibenzofuran	1,230*	5	0.062	6.2	N/A	N/A	330	6.2
Dibenzo(a,h)anthracene	33,000,000	50	1,650	165,000	0.0143	N/A	330	0.014 or MD
3,3'-Dichlorobenzidine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	380	1	0.004	0.4	N/A	200	330	0.4
2,4-Dinitrophenol	38	5	0.002	0.2	N/A	200	1,600	0.200 or MD
2,6 Dinitrotoluene	198*	5	0.01	1.0	1.03	N/A	330	1.0
Diethylphthlate	142	50	0.071	7.1	N/A	60,000	330	7.1
Dimethylphthlate	40	50	0.020	2.0	N/A	80,000	330	2.0
Di-n-butyl phthalate	162*	50	0.081	8.1	N/A	8,000	330	8.1
Di-n-octyl phthlate	2,346*	50	1.2	120.0	N/A	2,000	330	50.0***
Fluoranthene	38,000	50	19	1900.0	N/A	3,000	330	50.0***
Fluorene	7,300	50	3.5	350.0	N/A	3,000	330	50.0***
Hexachlorobenzene	3,900	0.35	0.014	1.4	0.41	60	330	0.41
Indeno(1,2,3-cd)pyrene	1,600,000	0.002	0.032	3.2	N/A	N/A	330	3.2
Isophorone	88.31*	50	0.044	4.40	1,707	20,000	330	4.40
2-methylnaphthalene	727*	50	0.364	36.4	N/A	N/A	330	36.4
2-Methylphenol	15	5	0.001	0.1	N/A	N/A	330	0.100 or MD
4-Methylphenol	17	50	0.009	0.9	N/A	4,000	330	0.9
Naphthalene	1,300	10	0.130	13.0	N/A	300	330	13.0
Nitrobenzene	36	5	0.002	0.2	N/A	40	330	0.200 or MD
2-Nitroaniline	86	5	0.0043	0.43	N/A	N/A	1,600	0.430 or MDL
2-Nitrophenol	65	5	0.0033	0.33	N/A	N/A	330	0.330 or MDL
4-Nitrophenol	21	5	0.001	0.1	N/A	N/A	1,600	0.100 or MDL
3-Nitroaniline	93	5	0.005	0.5	N/A	N/A	1,600	0.500 or MDL
Pentachlorophenol	1,022	1	0.01	1.0	N/A	2,000	1,600	1.0 or MDL
Phenanthrene	4,365*	50	2.20	220.0	N/A	N/A	330	50.0***
Phenol	27	1	0.0003	0.03	N/A	50,000	330	0.03 or MDL
Pyrene	13,295*	50	6.65	665.0	N/A	2,000	330	50.0***
2,4,5-Trichlorophenol	89*	1	0.001	0.1	N/A	8,000	330	0.1

APPENDIX A (cont.)

TABLE 3

Recommended soil cleanup objectives (mg/kg or ppm)

Organic Pesticides / Herbicides and PCBs

Contaminant	Partition coefficient Koc	Groundwater Standards/ Criteria Cw ug/l or ppb.	a Allowable Soil conc. ppm. Cs	b ** Soil Cleanup objectives to Protect GW Quality (ppm)	USEPA Health Based (ppm) Carcinogens	Systemic Toxicants	CRQL (ppb)	*** Rec.soil Clnup Objc (ppm)
Aldrin	96,000	ND(<0.01)	0.005	0.5	0.041	2	8	0.041
alpha - BHC	3,800	ND(<0.05)	0.002	0.2	0.111	N/A	8	0.11
beta - BHC	3,800	ND(<0.05)	0.002	0.2	3.89	N/A	8	0.2
delta - BHC	6,600	ND(<0.05)	0.003	0.3	N/A	N/A	8	0.3
Chlordane	21,305*	0.1	0.02	2.0	0.54	50	80	0.54
2,4-D	104*	4.4	0.005	0.5	N/A	800	800	0.5
4,4'-DDD	770,000*	ND(<0.01)	0.077	7.7	2.9	N/A	16	2.9
4,4'-DDE	440,000*	ND(<0.01)	0.0440	4.4	2.1	N/A	16	2.1
4,4'-DDT	243,000*	ND(<0.01)	0.025	2.5	2.1	40	16	2.1
Dibenzo-P-dioxins(PCDD)								
2,3,7,8 TCDD	1709800	0.000035	0.0006	0.06	N/A	N/A	N/A	N/A
Dieldrin	10,700*	ND(<0.01)	0.0010	0.1	0.044	4	16	0.044
Endosulfan I	8,168*	0.1	0.009	0.9	N/A	N/A	16	0.9
Endosulfan II	8,031*	0.1	0.009	0.9	N/A	N/A	16	0.9
Endosulfan Sulfate	10,038*	0.1	0.01	1.0	N/A	N/A	16	1.0
Endrin	9,157*	ND(<0.01)	0.001	0.1	N/A	20	8	0.10
Endrin keytone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
gamma - BHC (Lindane)	1,080	ND(<0.05)	0.0006	0.06	5.4	20	8	0.06
gamma - chlordane	140,000	0.1	0.14	14.0	0.54	5	80	0.54
Heptachlor	12,000	ND(<0.01)	0.0010	0.1	0.16	40	8	0.10
Heptachlor epoxide	220	ND(<0.01)	0.0002	0.02	0.077	0.8	8	0.02
Methoxychlor	25,637	35.0	9.0	900	N/A	400	80	***
Mitotane	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	760	1.5	0.012	1.2	N/A	500	8	1.2
PCBs	17,510*	0.1	0.1	10.0	1.0	N/A	160	1.0(Surface, 10(sub-surf;
Polychlorinated dibenzo-furans(PCDF)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silvex	2,600	0.26	0.007	0.7	N/A	600	330	0.7
2,4,5-T	53	35	0.019	1.9	N/A	200	330	1.9

a. Allowable Soil Concentration Cs = f x Cw x Koc

b. Soil cleanup objective = Cs x Correction Factor (CF)

N/A is not available

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
All other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total Pesticides < 10 ppm.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1% (5% for PCBs as per PCB guidance document), and should be adjusted for the actual soil organic Carbon content if it is known.

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)

N/A is not available
MDL is Method Detection Limit

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm. Other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm., Total Semi-VOCs < 500 ppm. and Individual Semi-VOCs < 50 ppm.

**** Koc is derived from the correlation Koc = 0.63 Kow (Determining Soil Response Action Levels..... EPA/540/2-89/057). Kow is obtained from the USEPA computer database 'MAIN'.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1%, and should be adjusted for the actual soil organic carbon content if it is known.

APPENDIX A Rev. 12/93

TABLE 4

Recommended Soil Cleanup Objectives (mg/kg or ppm) for Heavy Metals

Target Analyte List (TAL) Me

Contaminants	Protect Water Quality ppm	Eastern USA Background ppm	CRDL mg/kg or ppm	***** Rec.soil Cleanup Objct. (ppm)
Aluminum	N/A	33,000	2.0	SB
Antimony	N/A	N/A	0.6	SB
Arsenic	N/A	3-12 **	0.1	7.5 or SB
Barium	N/A	15-600	2.0	300 or SB
Beryllium	N/A	0-1.75	0.05	0.16(HEAST) or SB
Cadmium	N/A	0.1-1	0.05	1 or SB
Calcium	N/A	130 - 35,000 **	50.0	SB
Chromium	N/A	1.5-40 **	0.1	10 or SB
Cobalt	N/A	2.5-60 **	0.5	30 or SB
Copper	N/A	1-50	0.25	25 or SB
Cyanide	N/A	N/A	0.1	***
Iron	N/A	2,000 - 550,000	1.0	2,000 or SB
Lead	N/A	****	0.03	SB****
Magnesium	N/A	100 - 5,000	50.0	SB
Manganese	N/A	50 - 5,000	0.15	SB
Mercury	N/A	0.001-0.2	0.002	0.1
Nickel	N/A	0.5-25	0.4	13 or SB
Potassium	N/A	8,500 - 43,000 **	50.0	SB
Selenium	N/A	0.1-3.9	0.05	2 or SB
Silver	N/A	N/A	0.1	SB
Sodium	N/A	6,000 - 8,000	50.0	SB
Thallium	N/A	N/A	0.1	SB
Vanadium	N/A	1-300	0.5	150 or SB
Zinc	N/A	9-50	0.2	20 or SB

Note: Some forms of metal salts such as Aluminum Phosphide, Calcium Cyanide, Potassium Cyanide, Copper cyanide, Silver cyanide, Sodium cyanide, Zinc phosphide, Thallium salts, Vanadium pentoxide, and Chromium (VI) compounds are more toxic in nature. Please refer to the USEPA HEASTs database to find cleanup objectives if such metal salts are present in soil.

SB is site background
N/A is not available

* CRDL is contract required detection limit which is approx. 10 times the CRDL for water.

** New York State background

*** Some forms of Cyanide are complex and very stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objective.

**** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

***** Recommended soil cleanup objectives are average background concentrations as reported in a 1984 survey of reference material by E. Carol McGovern, NYSDEC.

Recommended Soil Cleanup Objectives for Fuel Oil Contaminated Soil

Contaminant	CAS Registry Number	Partition coefficient Koc	Recommended EPA Method	Groundwater Standards/ Criteria Cw ug/l or ppb.	Allowable Soil Concentration Cs[1] (ppm)	Soil Cleanup objectives to Protect GW Quality (ppm)	USEPA Health Based (HEAST) (ppm)		Detection Limit Solid (ppb)	Rec.soil Cleanup Objective (ppm)
							Carcinogens	Systemic Toxicants		
Benzene	71-43-2	83	8021/8260	0.7	0.0006	0.06	24	N/A	2	0.06 or MDL
Ethylbenzene	100-41-4	1,100	8021/8260	5	0.055	5.5	N/A	8,000	2	5.5
Toluene	108-88-3	300	8021/8260	5	0.015	1.5	N/A	20,000	2	1.5
Mixed Xylenes	N/A	240	8021/8260	5	0.012	1.2	N/A	200,000	2	1.2
Isopropylbenzene	98-82-8	454	8021/8260	5	0.023	2.3	N/A	3,100	1	2.3
n-Propylbenzene	103-65-1	741	8021/8260	5	0.037	3.7	N/A	N/A	1	3.7
p-Isopropyltoluene	99-87-6	2,114	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
1,2,4 - Trimethylbenzene	95-63-6	2,590	8021/8260	5	0.13	13.0	N/A	N/A	1	10.0*
1,3,5 - Trimethylbenzene	108-67-8	661	8021/8260	5	0.033	3.3	N/A	N/A	1	3.3
n-Butyl-Benzene	104-51-8	2,455	8021/8260	5	0.12	12.0	N/A	N/A	1	10.0*
sec-Butyl-Benzene	135-98-8	2,200	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
Tert-Butyl-Benzene	98-06-6	2,200	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
Naphthalene	91-20-3	1,300	8021/8260/8270	10	0.13	13.0	N/A	300	1(330)	13.0
Anthracene	120-12-7	14,000	8270	50	7.00	700.0	N/A	20,000	330	50.0**
Acenaphthene	83-32-9	4,600	8270	20	0.92	92.0	N/A	5,000	330	50.0**
Acenaphthylene	208-96-8	2,056	8270	50	1.03	103.0	N/A	N/A	330	50.0**
Benz(a)anthracene	56-55-3	1,380,000	8270	0.002	0.028	2.8	0.224	N/A	330	0.224 or MDL
Benzo(b)fluoranthene	205-99-2	550,000	8270	0.002	0.011	1.1	0.220	N/A	330	0.220 or MDL
Benzo(k)fluoranthene	207-8-9	550,000	8270	0.002	0.011	1.1	0.220	N/A	330	0.220 or MDL
Benzo(g,h,i)perylene	191-24-2	1,600,000	8270	5	80.00	8,000.0	N/A	N/A	330	50.0**
Benzo(a)pyrene	50-32-8	5,500,000	8270	0.002	0.11	11.0	0.061	N/A	330	0.061 or MDL
Chrysene	218-01-9	200,000	8270	0.002	0.004	0.40	N/A	N/A	330	0.4
Dibenzo(a,h)anthracene	53-70-3	3,300,000	8270	50	1,650.00	165,000.0	0.0143	N/A	330	0.0143 or MDL
Fluoranthene	206-44-0	38,000	8270	50	19.00	1,900.0	N/A	3,000	330	50.0**
Fluorene	86-73-7	7,300	8270	50	3.65	365.0	N/A	3,000	330	50.0**
Indeno(1,2,3-cd)pyrene	193-39-5	1,600,000	8270	0.002	0.032	3.2	N/A	N/A	330	3.2
Phenanthrene	85-01-5	4,365	8270	50	2.18	218.0	N/A	N/A	330	50.0**
Pyrene	129-00-0	13,295	8270	50	6.65	665.0	N/A	2,000	330	50.0**

N/A- Not Applicable
MDL - Method Detection Limit

1 - Allowable concentration with no Dilution Attenuation Factor - see TAGM 4046

*As per TAGM 4046 individual and the sum of VOCs not listed (Tentatively Identified Compounds(TICs))≤ 10 ppm

**As per TAGM 4046 individual non-carcinogenic semivolatiles ≤ 50 ppm and total semivolatiles not listed (Tentatively Identified Compounds(TICs))≤ 500ppm

Note: Soil cleanup objectives are developed for soil organic carbon content (*f*) of 1%, and should be adjusted for the actual soil organic carbon if it is known.

Recommended Soil Cleanup Objectives for Gasoline Contaminated Soils

Contaminant	CAS Registry Number	Partition coefficient Koc	Recommeded EPA Method	Groundwater Standards/ Criteria C_n ug/l or ppb	Allowable Soil Concentration Cs^1 (ppm)	Soil Cleanup objectives to Protect GW Quality (ppm)*	USEPA Health Based (HEAST)		Detection Limit Solid (ppb)	Rec soil Cleanup Objective (ppm)
							Carcinogens (ppm)	Systemic Toxicants (ppm)		
Benzene	71-43-2	83	8021/8260	0.7	0.0006	0.06	24	N/A	2	0.06 or MDL
Ethylbenzene	100-41-4	1,100	8021/8260	5	0.055	5.5	N/A	8,000	2	5.5
Toluene	108-88-3	300	8021/8260	5	0.015	1.5	N/A	20,000	2	1.5
Mixed Xylenes	N/A	240	8021/8260	5	0.012	1.2	N/A	200,000	2	1.2
Isopropylbenzene	98-82-8	454	8021/8260	5	0.023	2.3	N/A	3,100	1	2.3
n-Propylbenzene	103-65-1	741	8021/8260	5	0.037	3.7	N/A	N/A	1	3.7
p-Isopropyltoluene	99-87-6	2,114	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
1,2,4 - Trimethylbenzene	95-63-6	2,590	8021/8260	5	0.13	13.0	N/A	N/A	1	10.0*
1,3,5 - Trimethylbenzene	108-67-8	661	8021/8260	5	0.033	3.3	N/A	N/A	1	3.3
n-Butyl-Benzene	104-51-8	2,455	8021/8260	5	0.12	12.0	N/A	N/A	1	10.0*
sec-Butyl-Benzene	135-98-8	2,200	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
Tert-Butyl-Benzene	98-06-6	2,200	8021/8260	5	0.11	11.0	N/A	N/A	1	10.0*
Naphthalene	91-20-3	1,300	8021/8260	10	0.13	13.0	N/A	300	1	13.0
Methyl-Tert-Butyl-Ether (MTBE)**	1634-04-4	12	8021/8260**	10	0.0012	0.12	N/A	N/A	1	0.12

N/A - Not applicable

MDL - Method Detection Limit

1 - Allowable concentration with no Dilution Attenuation Factor - see TAGM 4046

*As per TAGM 4046 individual and the sum of VOCs not listed (Tentatively Identified Coompounds(TICs))≤ 10 ppm

** Methyl-t-butyl ether (MTBE) is not a target compound of Methods 8021 and 8260, but MTBE may be determined using these methods with appropriate quality assurance and quality control measures

Note: Soil cleanup objectives are developed for soil organic content (f_i) of 1 %, and should be adjusted for the actual soil organic content if it is known

Appendix A
Table 1
Recommended Soil Cleanup objectives for
Volatile Organic Compounds
1998

Contaminant	CAS Registry Number	Partition coefficient Koc	Groundwater Standards/ Criteria ug/l or ppb	Groundwater Standards / Criteria Designation	Soil Cleanup objectives to Protect GW Quality (ppm)	USEPA Health Based (HEAST)		Rec.soil Cleanup Objective (ppm)	Detection Limit	Notations
						Carcinogens (ppm)	Systemic Toxicants (ppm)			
n-Butyl-Benzene	104-58-8	3523	5	P	17.62	N/A	N/A	18		
sec-Butyl-Benzene	135-98-8	4982	5	P	24.91	N/A	N/A	25		
Isopropylbenzene	98-82-8	948	5	P	4.74	N/A	3100	5		
p-Isopropyltoluene	99-87-6	2,114	5	P	10.57	N/A	N/A	11		
Methyl-Tert-Butyl-Ether (MTBE)	1634-04-4	12	10	G	0.12	N/A		0.12		B
N-Propylbenzene	103-65-1	2800	5	P	14.00	N/A	N/A	14		
1,2,4-Trimethylbenzene	95-63-6	2590	5	P	12.95	N/A	N/A	13		
1,3,5 - Trimethylbenzene	108-67-8	661	5	P	3.31	N/A	N/A	3.3		

A- Cleanup objective reflects changes to groundwater standards in June 1998 version of TOGS 1.1.1
B - A groundwater standard is under review and has not been finalized yet 10 ppb was used to reflect the guidance value published in the April 2000 amendment to TOGS 1.1.1
N/A - Not available
MDL - Method detection limit

APPENDIX G

RECORD OF DECISION

Department of Environmental Conservation

Division of Environmental Remediation

Environmental Restoration
Record of Decision
Former American LaFrance Site
Elmira (C), Chemung County
Site Number B-00011-8

March 2002

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* Erin M. Crotty, *Commissioner*

DECLARATION STATEMENT
ENVIRONMENTAL RESTORATION RECORD OF DECISION

Former American LaFrance Environmental Restoration Site
City of Elmira, Chemung County, New York
Site No. B-00011-8

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Former American LaFrance environmental restoration site which was chosen in accordance with the New York State Environmental Conservation Law.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Former American LaFrance environmental restoration site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous substances and petroleum products from this site, if not addressed by implementing the remedy selected in this ROD, presents a current or potential threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Site Investigation/Remedial Alternatives Report (SI/RAR) for the Former American LaFrance site and the criteria identified for evaluation of alternatives, the NYSDEC has selected removal of the underground storage tank, establishment of grass cover, development of a soil management plan, and deed restriction. The components of the remedy are as follows:

- removal of an underground storage tank (UST) containing 6000 gallons of non-hazardous # 6 fuel oil and approximately 500 cubic yards of associated contaminated soil in accordance with 6NYCRR Part 613 and TAGM 4046;

- establishment of grass cover over the exposed soil areas of the site to minimize exposure to surface soil;

- development of a long-term soil management plan (SMP) to address remaining contaminated soils excavated at the site during future redevelopment or excavation. The plan will include but not be limited to soil management, characterization, and disposal in accordance with applicable NYSDEC regulations. Additionally, the SMP will include placement of a minimum one foot thick soil cover in all areas of the site to be green space under the proposed redevelopment plan. A geotextile fabric or similar material will be installed between the soil cover and the existing surface soils to stabilize and serve as a demarcation between the cover and the contaminated soils below. Areas to be paved or where buildings are planned will not require the placement of the soil cover. The SMP must be submitted to and approved by the NYSDEC before any redevelopment or excavation occurs at the site; and

- implementation of a deed restriction to limit future site use to industrial or commercial use. The future commercial use of the site will exclude activities such as day care centers. Further, the deed restriction will require that site redevelopment or excavation shall proceed in compliance with the approved SMP and, that the future property owners shall annually certify to the NYSDEC that the remedy continues to be maintained in accordance with the ROD.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

3/28/2002
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

TABLE OF CONTENTS

Environmental Restoration
RECORD OF DECISION

Former American LaFrance Site
City of Elmira, Chemung County
Site No. B-00011-8
March 2002

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy to address the threat to human health and/or the environment created by the presence of hazardous substances at the Former American LaFrance brownfield site.

The 1996 Clean Water/Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration (Brownfields) Program, the State may provide grants to the City of Elmira to reimburse up to 75 percent of the eligible costs for site remediation activities. Once remediated the property can then be reused.

This 4.357-acre site is located at the western corner of Erie Street and Home Street in a New York State Economic Development Zone in the City of Elmira. The site is currently a vacant parcel owned by the City of Elmira. As more fully described in Sections 3 and 4 of this document, plating, painting, and machine shop operations as well as the presence of an underground storage tank have resulted in the disposal of a number of hazardous substances, including organic compounds, heavy metals and petroleum-based products at the site. These disposal activities have resulted in the following potential threats to the public health and the environment:

- a potential threat to human health associated with ingestion and/or inhalation of contaminated surface soil and dust; and

- a potential environmental threat associated with release of petroleum-based compounds from the underground storage tank to groundwater.

In order to eliminate or mitigate the potential threats to public health and /or the environment that the hazardous substances disposed at the Former American LaFrance brownfield site may have caused, the following remedy was selected to allow for proposed commercial/industrial use of the site:

- removal of an underground storage tank (UST) containing 6000 gallons of non-hazardous # 6 fuel oil and approximately 500 cubic yards of associated contaminated soil in accordance with 6NYCRR Part 613 and TAGM 4046;

- establishment of grass cover over the exposed soil areas of the site to minimize exposure to surface soil;

- development of a long-term soil management plan (SMP) to address remaining contaminated soils excavated at the site during future redevelopment or excavation. The plan will include but not be limited to soil management, characterization, and disposal in accordance with applicable NYSDEC regulations. Additionally, the SMP will include placement of a minimum one foot thick soil cover in all areas of the site to be green space under the proposed redevelopment plan. A geotextile fabric or similar material will be installed between the soil cover and the existing surface soils to stabilize and serve as a demarcation between the cover and the contaminated surface soils. Areas to be paved or where buildings are planned will not require the placement of the soil cover. The SMP must be submitted to and approved by the NYSDEC before any redevelopment or excavation occurs at the site; and

- implementation of a deed restriction to limit future site use to industrial or commercial use. The future commercial use of the site will exclude activities such as day care centers. Further, the deed restriction will require that site redevelopment or excavation shall proceed in compliance with the approved SMP and, that the future property owners shall annually certify to the NYSDEC that the remedy continues to be maintained in accordance with this ROD.

The selected remedy, discussed in detail in Section 8 of this document, is intended to attain the remediation goals selected for this site in Section 6 of this ROD in conformity with applicable standards, criteria, and guidance (SCGs).

SECTION 2: SITE LOCATION AND DESCRIPTION

The 4.357-acre site is located in a light industrial/commercial-residential setting in the City of Elmira, Chemung County. It is bounded on the west by the Consolidated Rail property, on the east by Erie Street, on the north by East LaFrance Street, and on the south by Home Street. Currently, the site is a vacant plot. The area is served by public water and sewer facilities. The nearest public water supply wells are located approximately 1.5 miles west of the site. The Chemung River is located approximately ¾ of a mile north of the site. The Former Chemung Foundry, a simultaneously investigated brownfield project (Site # B-00014-8), is located within ¼ mile of the site. Please refer to Figure 1 for a site location plan.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The site is the location of a former fire truck manufacturing facility (1903-1980). All phases of fire truck and fire extinguisher manufacturing took place on this site. There are no waste disposal records available. Fire trucks were undercoated at this facility which may have released petroleum compounds at the site. Also foundries, machine shops, paint shops, paint spray booths and plating operations may have released heavy metals and organic compounds at the site.

The site was acquired by the City of Elmira in the early 1980s through tax foreclosure proceedings. In 1983, an oil spill containing polychlorinated biphenyls (PCBs) occurred at the site due to illegal salvaging of transformers stationed on the roofs of site buildings.

3.2: Environmental Restoration History

The 1983 PCB spill at the site was immediately cleaned up by the City of Elmira under NYSDEC supervision. The cleanup met the levels established by existing regulations. Approximately 250 cubic yards of contaminated material were removed from the site for appropriate off-site disposal. In 1984, all the buildings on the property were demolished by the City of Elmira and the debris disposed of off-site. In December 1996, a Phase I Environmental Assessment report was prepared by the City of Elmira. The Phase I report identified two potential environmental concerns: 1) liquid tar-like material on the ground surface and 2) unknown potential environmental conditions as the result of former industrial site use.

In 1997, the project was accepted as an Environmental Restoration Project under Title 5 of the New York State 1996 Clean Water/Clean Air Bond Act, making it eligible for up to 75% State financial assistance.

SECTION 4: SITE CONTAMINATION

To determine the nature and extent of contamination by hazardous substances at this environmental restoration site, the City of Elmira has completed a Site Investigation/Remedial Alternatives Report (SI/RAR).

4.1: Summary of the Site Investigation

The purpose of the SI was to define the nature and extent of contamination resulting from previous activities at the site. The SI was conducted between September 1998 and February 2000. A report entitled Site Investigation Report for the Former American LaFrance Site dated December 2000 has been prepared which describes the field activities and findings of the SI in detail.

The SI included the following activities:

- collection of surface soil samples to determine the potential for human exposure to contaminants;
- geophysical (magnetometer) survey to determine the presence of underground tanks;
- excavation of test pits to verify the anomalies identified during the geophysical survey;
- soil gas sampling to determine if volatile organic compounds are present in soil; and
- installation of soil borings and monitoring wells for analyses of soils and groundwater as well as physical properties of soil and hydrogeologic conditions.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the SI analytical data were compared to environmental standards, criteria, and guidance (SCGs). Groundwater and drinking water SCGs identified for the Former American LaFrance site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios. In addition for soils, background concentration levels can be considered for certain categories of contaminants.

Based on the Site Investigation results in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the SI Report.

Chemical concentrations are reported in parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The site overburden is comprised of gravelly fill and foundation remnants of previous buildings to a depth of approximately 5 feet. The subsurface soils are Howard gravelly silt loam consisting of deep, well-drained and somewhat excessively drained, medium-textured soils that developed in stratified glacial outwash deposits of sand and gravel.

The site is located over a major aquifer on a tributary of the Susquehanna River Basin on the south side of the City of Elmira. Groundwater occurs at a depth of approximately 10 feet below ground surface and flows in a northeasterly direction.

4.1.2: Nature of Contamination

As described in the SI report, soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. Results of the SI indicate the site contamination is attributable to industrial activity. Test pits were excavated, based on the

anomalies identified during the geophysical survey. No buried tanks, other than the known buried tank containing non-hazardous # 6 fuel oil, were found. No evidence of hazardous waste disposal was found. Surface soils and subsurface soils at isolated locations are contaminated with elevated levels of metals and semivolatile organic compounds (SVOCs). Analyses of surface soils have also detected slightly elevated levels of PCBs at one location. Data indicate on-site groundwater is not impacted. Figure 2 presents the sample locations for soil and groundwater.

4.1.3: Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in soil, compares the data with the SCGs for the site, and indicates the frequency of exceeding SCGs. The following media were investigated and a summary of the findings is presented below.

Soil

The results of the SI indicate contamination in surface soil (0 - 3 inches) with metals, SVOCs, and PCBs exceeding SCGs (TAGM 4046 Recommended Soil Cleanup Objectives). The highest metal concentration detected was mercury at 6.5 ppm (SCG - 0.1 ppm). The highest concentrations of SVOCs detected include benzo(a)anthracene at 2.7 ppm (SCG - 0.224 ppm), chrysene at 2.7 ppm (SCG - 0.4 ppm), benzo(b)fluoranthene at 2.9 ppm (SCG - 1.1 ppm), benzo(k)fluoranthene at 1.2 ppm (SCG - 1.1 ppm), and benzo(a)pyrene at 2.4 ppm (SCG - 0.061 ppm). The highest concentration of PCBs (Aroclor 1260) detected was 1.4 ppm (SCG - 1 ppm).

The SI results also indicate isolated locations of subsurface soil contamination by metals, SVOCs, and a volatile organic compound (VOC) exceeding SCGs (TAGM 4046 Recommended Soil Cleanup Objectives). The highest concentrations of metals detected include arsenic at 17.2 ppm (SCG - 7.5 ppm or site background), lead at 640 ppm (SCG - 200 to 500 ppm), and mercury at 0.85 ppm (SCG - 0.1 ppm) in a sample collected from 1.5 - 2.5 feet below the surface at test pit B1; barium at 342 ppm (SCG - 300 ppm or site background) in a sample collected from 1 - 3 feet below the surface at soil boring G-8; and cadmium at 12.7 ppm (SCG - 1 ppm or site background) in a sample collected from 2 - 4 feet below the surface at soil boring G-4. The highest concentrations of SVOCs detected include benzo(a)anthracene at 16 ppm (SCG - 0.224 ppm), benzo(a)pyrene at 12 ppm (SCG - 0.061 ppm), chrysene at 26 ppm (SCG - 0.4 ppm), 2-methylnaphthalene at 62 ppm (SCG - 36.4 ppm), naphthalene at 15 ppm (SCG - 13 ppm), and phenanthrene at 53 ppm (SCG - 50 ppm) in a sample collected from 3 - 6 feet below the surface at test pit H1 near the UST. The highest VOC concentration detected was TCE at 1.4 ppm (SCG - 0.7 ppm) in a sample collected from 3.5 - 4 feet below the surface at soil boring GW-3.

Groundwater

The SI results indicate the November 2, 2001 groundwater analyses detected slightly elevated levels of certain metals, but these samples contained excessive turbidity. Generally, metals remain tightly bound to the soil and are not readily soluble in water. The January 11, 2001 samples collected with a low-flow pump (turbidity < 50 NTU) did not detect metals or detected them at

levels well below the SCGs. VOCs detected are below the SCGs. Groundwater results are presented in Table 2.

Waste Materials

The waste material in the underground storage tank was sampled and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) and target compound list parameters. The results indicate the material is non-hazardous and is # 6 fuel oil.

4.2: Summary of Human Exposure Pathways

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 6.0 of the SI report.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are: 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

The potential exposure pathways identified at the site are incidental ingestion, inhalation, and dermal contact with contaminated surface soil by people entering the site. Also, these three would be possible future exposure pathways for on-site utility and construction workers, if the site were redeveloped for industrial or commercial purposes.

Groundwater use is unlikely in the area around the site because homes and businesses are provided with public water from a distant source.

4.3: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The following pathways for environmental exposure or ecological risks have been identified:

There are no nearby surface waters or wildlife habitats that could be impacted by contaminated surface soils. Therefore, no current environmental exposure pathways exist at the site. However, measures must be taken to mitigate potential environmental concerns from the underground storage tank.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers. Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However,

legal action may be initiated at a future date by the State to recover State response costs should PRPs be identified. The City of Elmira will assist the State in its efforts by providing all information to the State which identifies PRPs. The City will also not enter into any agreement regarding response costs without the approval of the NYSDEC.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND THE PROPOSED USE OF THE SITE

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all SCGs and be protective of human health and the environment. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and to the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

The proposed future use for the Former American LaFrance site is light industrial or commercial. The goals selected for this site are:

- to reduce, control, or eliminate to the extent practicable the contamination present within the site soil;
- to eliminate the potential for direct human exposure to contaminated soils on-site; and
- to prevent, to the extent possible, migration of site contaminants in the site soil to groundwater.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective and comply with other statutory requirements. Potential remedial alternatives for the Former American LaFrance site were identified, screened and evaluated in a remedial alternatives report. This evaluation is presented in the report entitled Remedial Alternatives Report dated December 2000. In-situ treatment of the petroleum contaminated soil associated with the fuel oil tank was not viable because: 1) the consistency of the product is such that air sparging and vapor extraction are not appropriate treatments and 2) an oxygen release compound (ORC) has been evaluated and found to be prohibitive in cost compared to source removal. Therefore, the evaluation of remedial alternatives focused on source removal options. A summary of the detailed analysis follows.

As presented below, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy or procure contracts for design and construction.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated soils and groundwater at the site.

Alternative 1 - No Action

Present Worth: ..... $ 28,188
Capital Cost: ..... $ 0
Annual O&M: ..... $ 1,875
Time to Implement: ..... NA

The No Action alternative is typically evaluated as a procedural requirement and as a basis for comparison. It only requires continued long-term monitoring of the existing wells, allowing the site to remain in an unremediated state. The source (UST) would continue to release contaminants to subsurface soil, and eventually, groundwater. Therefore, this alternative would not provide any additional protection to human health or the environment.

Alternative 2 - Source (UST) Removal, Grass Cover, Soil Management Plan, and Deed Restriction

Present Worth: ..... $ 204,887
Capital Cost: ..... $ 204,887
Annual O&M: ..... $ 0
Time to Implement: ..... 6 months

This alternative would include removal of the UST containing 6,000 gallons of non-hazardous # 6 fuel oil) and an estimated 500 cubic yards of associated contaminated soil in accordance with 6NYCRR Part 613 and TAGM 4046. It would also include establishment of grass cover over the exposed soil areas to minimize exposure to surface soil until development commences. Additionally, a soil management plan (SMP) would be developed that would include but not be limited to soil management, characterization, and disposal in accordance with applicable NYSDEC regulations. The SMP would also include placement of a minimum one foot thick soil cover in all areas of the site to be green space under the future redevelopment plan. A geotextile fabric or similar material would be installed between the soil cover and the existing surface soils to stabilize and serve as a demarcation between the cover and the contaminated soils below. Areas to be paved or where buildings are planned would not require the placement of the soil cover. A deed restriction would be placed on the property to limit future site use to industrial or commercial use. Future commercial use of the site would exclude such activities as day care centers. Further, the deed restriction would require that the site redevelopment or excavation shall proceed in compliance with the NYSDEC-approved SMP and, that the future property owners shall annually certify to the NYSDEC that the remedy continues to be maintained in accordance with the site ROD.

Alternative 3 - Source (UST) Removal, Contaminated Surface Soil Removal, Soil Management Plan, and Deed Restriction

Present Worth: . . . . . $ 564,630
Capital Cost: . . . . . $ 564,630
Annual O&M: . . . . . $ 0
Time to Implement: . . . . . 1 year

This alternative would include all the remedial components of Alternative 2, except grass cover. Additionally, this alternative would include excavation and removal of surface soil to a depth of 6 inches with contaminant concentrations exceeding TAGM 4046 levels. It is estimated that 3,500 cubic yards of contaminated surface soil would be removed from the site and disposed of at a NYSDEC- permitted landfill. The deed restriction required would be similar to the one described in Alternative 2.

Alternative 4 - Source (UST) Removal and Removal of Contaminated Surface and Subsurface Soil Exceeding SCGs

Present Worth: . . . . . $ 664,889
Capital Cost: . . . . . $ 664,889
Annual O&M: . . . . . $ 0
Time to Implement: . . . . . 1.5 years

This alternative would include removal of the UST as described in Alternatives 2 and 3. Additionally, this alternative would include excavation and removal of surface and subsurface soil (up to 3 feet below grade) with contaminant concentrations exceeding TAGM 4046 levels. It is estimated that up to 4000 cubic yards of contaminated soil would be removed from the site and disposed of at a NYSDEC-permitted landfill.

7.2: Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of environmental restoration project sites in New York State (6 NYCCR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Remedial Alternatives Report.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The most significant SCGs that the remedy at this site should meet are: 6NYCRR Part 613, Section 613.9 - Closure of Out-of Service Tanks; Division of Environmental Remediation Technical and Administrative Guidance Memorandum (TAGM) # 4046 - Determination of Soil Cleanup Objectives and Cleanup levels; 6NYCRR Part 703 - groundwater standards; and 10NYCRR Part 5 - drinking water standards.

Alternative 1 would not meet the New York State SCGs as no action beyond continued monitoring will occur, leaving unacceptable contamination in soil. Alternatives 2 and 3 would include source (UST) removal and remediate contaminated surface soil to comply with SCGs, but would not remediate isolated areas of contaminated subsurface soil. Alternative 4 would include source (UST) removal and would remediate contaminated surface soil as well as isolated locations of contaminated subsurface soil, to comply with SCGs. However, for the intended industrial or commercial use of the site, Alternatives 2, 3, and 4 would meet the remedial goals established for the site.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternative 1 would not meet this criterion because it involves no remedial action, leaving unacceptable contamination in soil. Alternatives 2 and 3 include source (UST) removal and remediation of surface soil. Also, a soil management plan would be implemented during site restoration and future ground intrusive site activities to protect on-site workers. These measures would help minimize current and future human and environmental exposures. Alternative 4 would also remediate subsurface soil. For intended industrial or commercial use of the site, however, Alternatives 2, 3, and 4 would all be protective of human health and the environment and would meet this criterion.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

There would be no short-term impacts from the implementation of Alternative 1. Alternatives 2, 3 and 4 would disturb contaminated soil and would have potential to generate fugitive dust. However, remedial actions under these alternatives include a soil management plan which should minimize exposure to workers and the nearby community. Therefore, Alternatives 2, 3 and 4 would equally satisfy this criterion.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the

magnitude of the remaining risks; 2) the adequacy of the controls intended to limit the risk; and 3) the reliability of these controls.

Alternative 1 would not meet this criterion as it would leave contaminants on-site without controls. Alternatives 2 and 3 would include placement of 12 inches of soil cover to address soil contamination. Additionally, Alternative 3 would include excavation and removal of contaminated surface soil. Alternatives 2 and 3 would also include deed restrictions limiting site use, and a soil management plan for future ground intrusive site activities to protect workers and the community. Alternative 4 provides the most comprehensive removal action and thus best achieve this criterion. For the intended industrial or commercial use of the site, however, all these are considered adequate and reliable long-term controls. Therefore, Alternatives 2, 3 and 4 would all satisfy this criterion, with Alternative 4 being a more permanent remedy, as it removes all soils contaminated above SCGs.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the hazardous substances at the site.

Alternative 1 would not meet this criterion as it does not involve any remedial action. Alternative 2 would reduce volume (UST removal) and mobility (soil cover) of site contaminants. Alternative 3 would reduce the volume of contaminants more than Alternative 2 by removing contaminated surface soil. Alternative 4 would reduce the volume of contaminants more than Alternative 3 as, in addition to removing contaminated surface soil, it would also remove contaminated subsurface soil. Therefore, Alternatives 4 would better satisfy this criterion than Alternative 3. Likewise, Alternative 3 would better satisfy this criterion than Alternative 2.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternative 1 would meet this criterion as no action would be required. Alternatives 2 and 3 are easy to implement and effectively monitor and would meet this criterion. Alternative 4 would entail a greater level of effort in light of the deeper excavation, however, this could be accomplished via standard construction techniques.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 3.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the SI/RAR reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents comments received and the Department's response to the concerns raised. In general the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to cancer cases in the area. These comments mainly included reference to the 1972 Chemung River floods that brought contamination to their properties, including contaminants from the American LaFrance property. The comments did not require any change in the remedy.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the results of the SI/RAR, and the evaluation presented in Section 7, the NYSDEC is selecting Alternative 2 as the remedy for this site.

This selection is based on the evaluation of the four alternatives developed for this site. With the exception of the No Action alternative, each of the alternatives will comply with the threshold criteria for the intended industrial or commercial future site use and will achieve the remedial goals. In addition, except the No Action alternative, all alternatives are similar with respect to the majority of the balancing criteria. The only major difference between these alternatives is cost. While Alternatives 2, 3, and 4 will remove the fuel oil tank and associated contaminated soil, Alternatives 3 and 4 will provide limited additional environmental benefit at substantial increase in cost. For the intended industrial or commercial use of the site, all the three alternatives are considered technically similar. Therefore, Alternative 2 (UST removal, grass cover, soil management plan, and deed restriction) is the selected remedy for this site. Please refer to Figure 3 for a conceptual sketch of the selected remedy.

The estimated present worth cost to implement the remedy is $204,887 which is the cost to construct the remedy. No operation and maintenance costs are involved in this remedy.

The elements of the selected remedy are as follows:

- removal of an underground storage tank (UST) containing 6000 gallons of non-hazardous # 6 fuel oil and approximately 500 cubic yards of associated contaminated soil in accordance with 6NYCRR Part 613 and TAGM 4046;
- establishment of grass cover over the exposed soil areas of the site to minimize exposure to surface soil;
- development of a long-term soil management plan (SMP) to address remaining contaminated soils excavated at the site during future redevelopment or excavation. The plan will include but not be limited to soil management, characterization, and disposal in

accordance with applicable NYSDEC regulations. Additionally, the SMP will include placement of a minimum one foot thick soil cover in all areas of the site to be green space under the proposed redevelopment plan. A geotextile fabric or similar material will be installed between the soil cover and the existing surface soils to stabilize and serve as a demarcation between the cover and the contaminated surface soils. Areas to be paved or where buildings are planned will not require the placement of the soil cover. The SMP must be submitted to and approved by the NYSDEC before any redevelopment or excavation occurs at the site; and

- implementation of a deed restriction to limit future site use to industrial or commercial use. The future commercial use of the site will exclude activities such as day care centers. Further, the deed restriction will require that the site redevelopment or excavation shall proceed in compliance with the approved SMP and, that the future property owners shall annually certify to the NYSDEC that the remedy continues to be maintained in accordance with this ROD.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As the part of the Former American LaFrance site environmental restoration project, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site.

- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials, local media, and other interested parties.
- A fact sheet containing the information about the upcoming environmental investigation was distributed using the mailing list in September 1998.
- A fact sheet announcing the public meeting and the availability of the Proposed Remedial Action Plan (PRAP) was distributed using the mailing list in February 2002.
- In March 2002, a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

Table 1
Former American LaFrance Environmental Restoration Site
City of Elmira, Chemung County

Nature and Extent of Contamination

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE*	FREQUENCY OF EXCEEDING SCGs OR BACKGROUND	SCG/ BACKGROUND
Soil (subsurface)	volatile organic compounds (VOCs)	trichlorethene (TCE)	ND - 1.4	2 of 20	0.7
	SVOCs	2-methylnaphthalene	ND - 62	1 of 20	36.4
		benzo(a)anthracene	ND - 16	4 of 20	0.224
		benzo(a)pyrene	ND - 12	4 of 20	0.061
		chrysene	ND - 26	4 of 20	0.4
		naphthalene	ND - 15	1 of 20	13
		phenanthrene	ND - 53	1 of 20	50
	metals	arsenic	ND - 17.2	1 of 20	7.5
		cadmium	ND - 12.7	1 of 20	10
		lead	4.86 - 640	1 of 20	200 - 500**
		mercury	ND - 0.85	5 of 20	0.1
		barium	65.2 - 342	1 of 20	300
Soil (surface)	SVOCs	benzo(a)anthracene	ND - 2.7	2 of 3	0.224
		chrysene	ND - 2.7	2 of 3	0.4
		benzo(b)fluoranthene	ND - 2.9	2 of 3	1.1
		benzo(k)fluoranthene	ND - 1.2	1 of 3	1.1
		benzo(a)pyrene	ND - 2.4	2 of 3	0.061
	metals	mercury	0.089 - 6.5	2 of 3	0.1
	PCBs	arochlor 1260	ND - 1.4	1 of 3	1

* soil concentrations are expressed in ppm.
**Typical range of average background levels in metropolitan or suburban areas.

Table 2
Former American LaFrance Environmental Restoration Site
City of Elmira, Chemung County

Compounds/Analytes Detected in Groundwater

Category	Compound/ Analyte of Concern	MW-1		MW-2		MW-3		SCGs
		11/2/99	1/11/01*	11/2/99	1/11/01*	11/2/99	1/11/01*	
VOCs	acetone	ND	NA	0.041	NA	ND	NA	0.05
	chloroform	0.005	NA	ND	NA	ND	NA	0.007
metals	arsenic	0.006	ND	0.034	ND/ND	0.065	ND/ND	0.025
	barium	0.199	0.16	0.3	0.22/0.245	1.17	0.162/0.172	1
	cadmium	ND	ND	ND	ND/ND	ND	0.001/ND	0.005
	chromium	0.01	ND	0.027	ND/ND	0.057	ND/ND	0.05
	lead	0.01	0.011	0.021	0.004/ND	0.12	0.035/0.0077	0.025
	mercury	ND	ND	ND	ND/ND	0.0006	ND/ND	0.0007

Notes: -All concentrations are in ppm
-ND = none detected, NA = not analyzed
-NYSDEC split sample results are in bold type
*1/11/01 samples were collected with low-flow pump

Table 3
Former American LaFrance Environmental Restoration Site
City of Elmira, Chemung County

Remedial Alternative Costs

Remedial Alternative		Capital Cost	Annual O&M	Present Worth of Annual O&M	Total Present Worth
Number	Description				
1	No action	$0	$1,875	$28,188*	$28,188
2	Source (UST) removal, grass cover, soil management plan, and deed restriction	$204,887	0	0	$204,887
3	Source (UST) removal, contaminated surface soil removal, soil management plan, and deed restriction	$564,630	0	0	$564,630
4	Source (UST) removal and contaminated surface and subsurface soil removal	$664,889	0	0	$664,889

Note: Cost estimates are for feasibility study comparison purposes only and are not to be used for construction budgeting or bid purposes.
* Present worth cost for 30 years @ 5% interest rate.

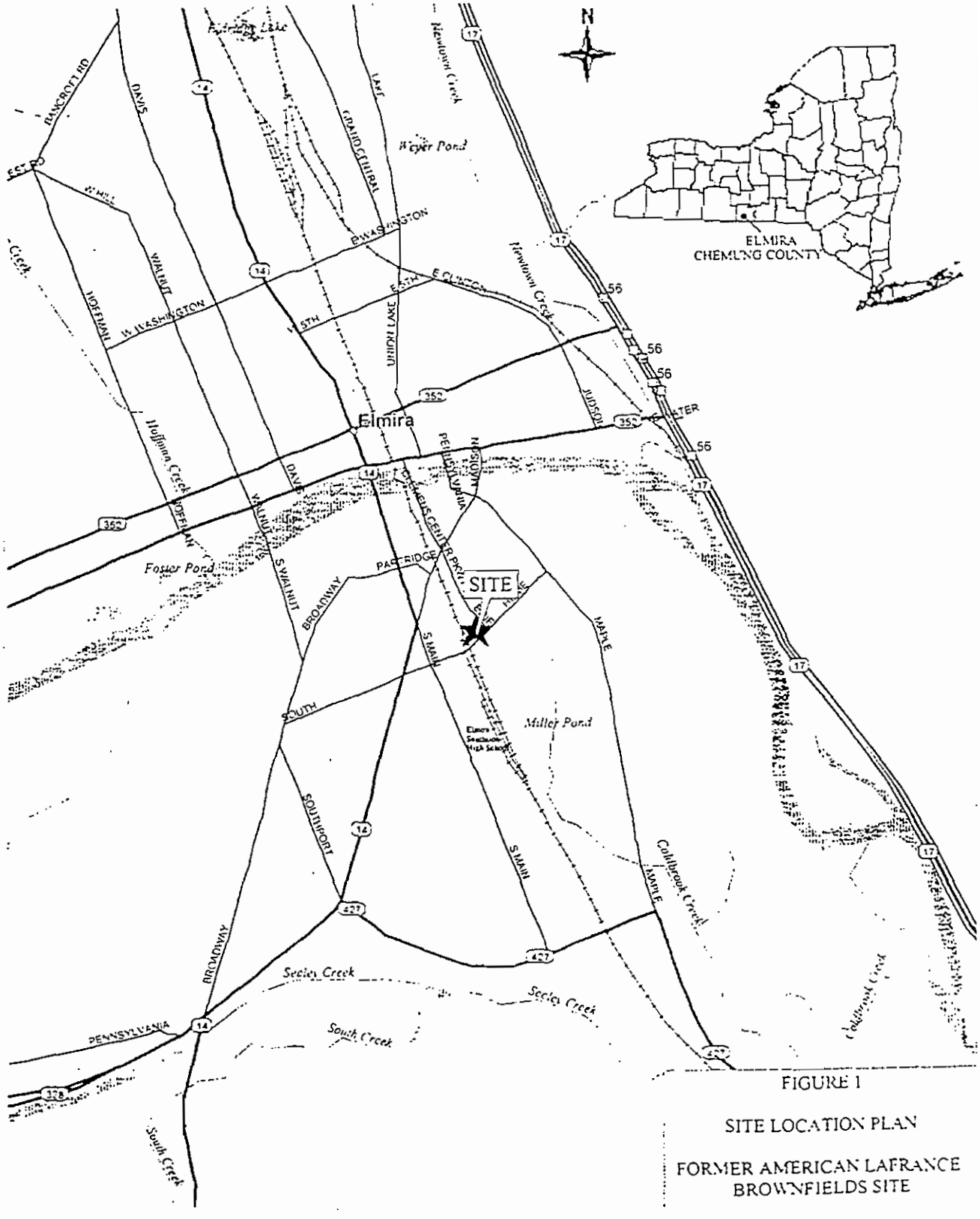


FIGURE 1

SITE LOCATION PLAN

FORMER AMERICAN LAFRANCE
BROWNFIELDS SITE

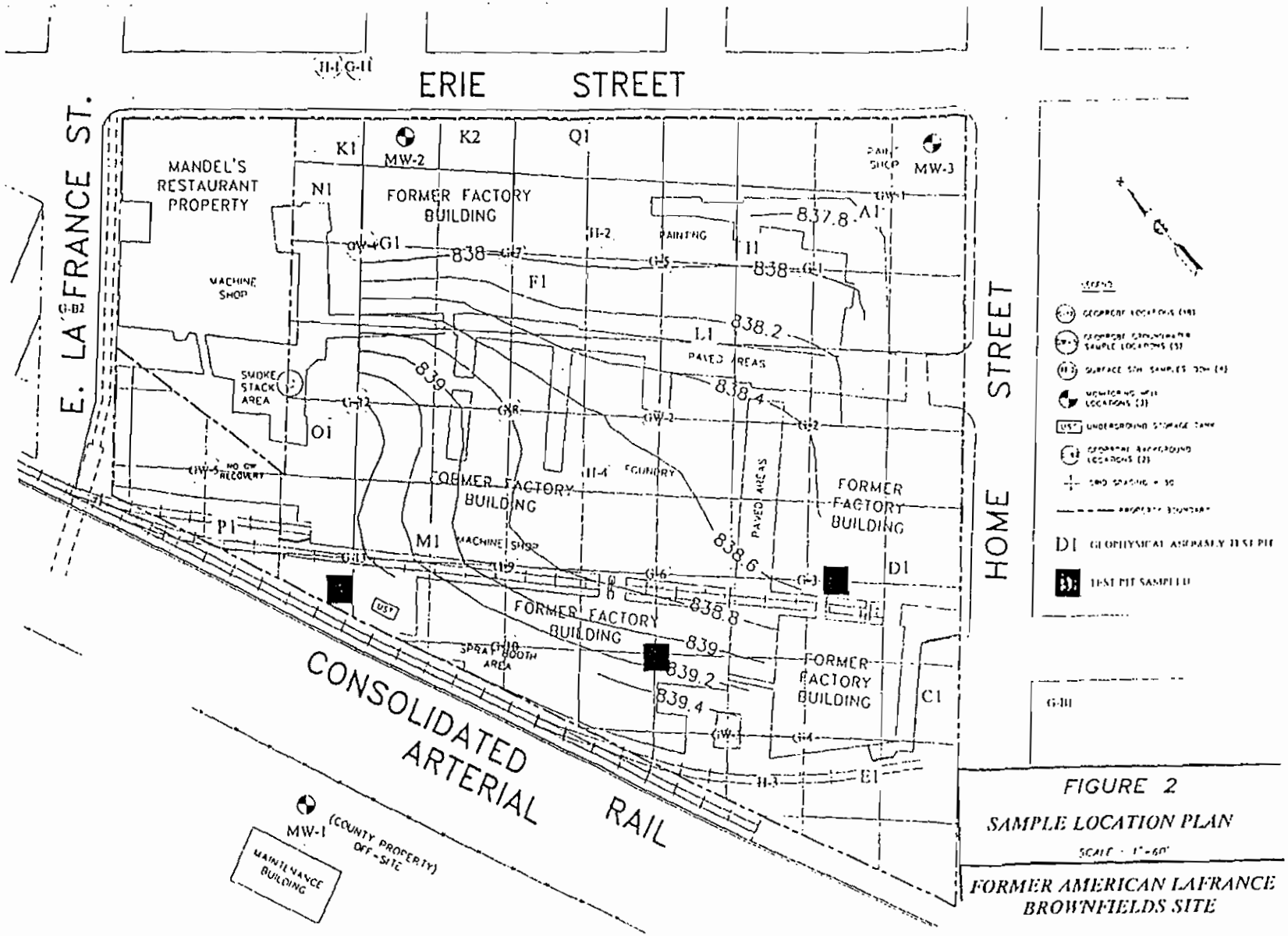


FIGURE 2

SAMPLE LOCATION PLAN

SCALE : 1"=60'

FORMER AMERICAN LAFRANCE BROWNFIELDS SITE

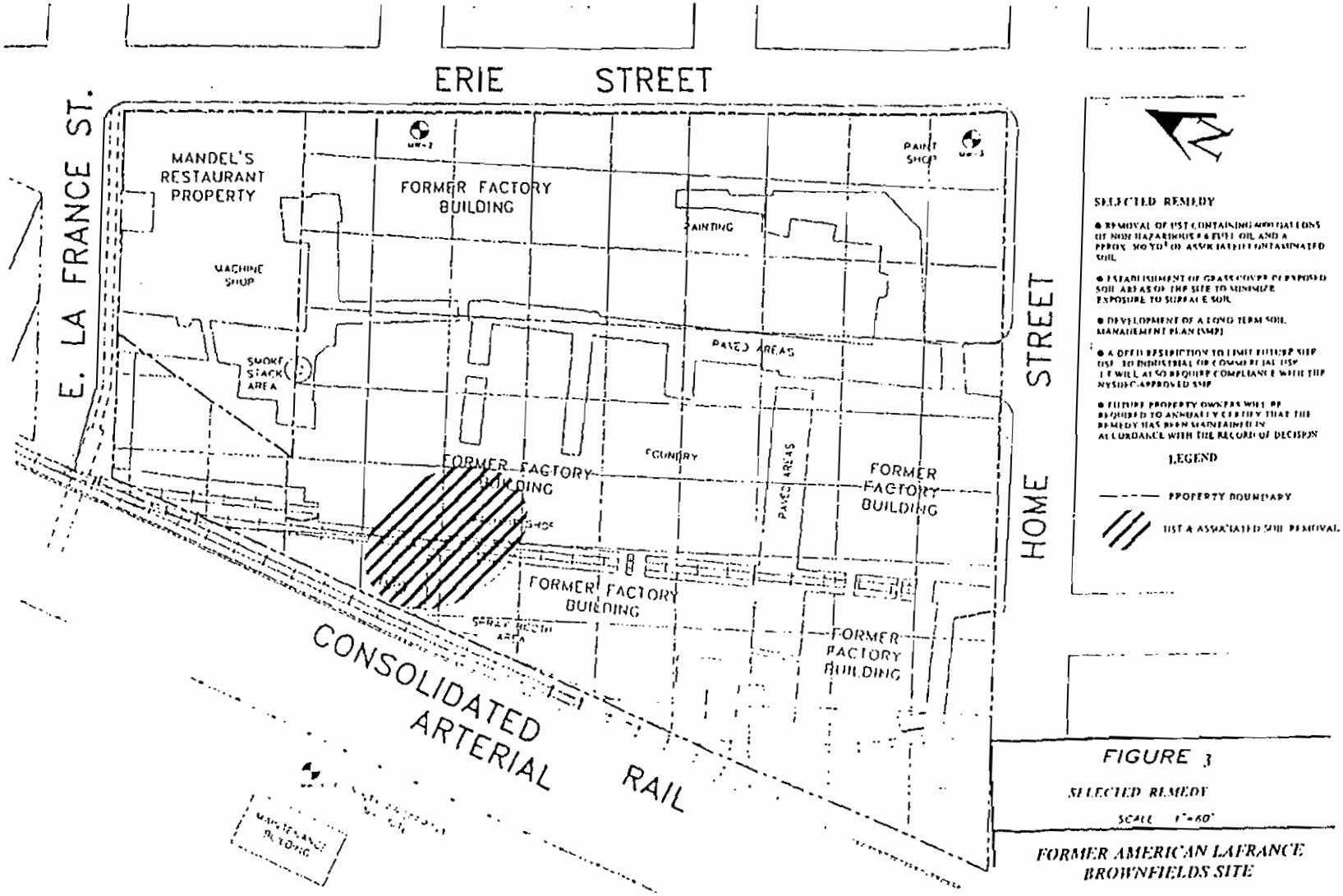


FIGURE 3

SELECTED REMEDY

SCALE 1"=60'

FORMER AMERICAN LAFRANCE BROWNFIELDS SITE

RESPONSE 9: Based on the results of the site investigation, the only hot spot at the site is the location of the underground storage tank. The PRAP includes excavation, removal, and appropriate off-site disposal of the underground tank with 6000 gallons of #6 fuel oil and associated contaminated soil. Surface soils and pockets of subsurface soils are contaminated with semivolatile organic compounds and metals at levels above the NYSDEC Recommended Soil Cleanup Objectives, but these areas are not considered hot spots.

COMMENT 10: Were Sanborn maps used to indicate what type of manufacturing was done at the site in the past?

RESPONSE 10: Yes, available Sanborn maps from 1887 to 1990 were used to indicate the types of activities that occurred at the site in the past. American LaFrance Company operated at this site from 1925 to 1980 under different names: American LaFrance Fire Engine Co., American LaFrance and Foamite Co., American LaFrance Foamite Corporation, American LaFrance - a division of Sterling Precision Instruments, and American LaFrance - a division of Automatic Sprinkler Corporation.

COMMENT 11: Will the soil management plan mandate proper disposal of the excavated soil? Can you be sure this soil won't end up in someone's back yard?

RESPONSE 11: As outlined in the PRAP, a soil management plan would be developed by the City of Elmira and approved by the NYSDEC. The soil management plan would ensure that the soils excavated at the site are properly characterized, and contaminated soil disposed of in accordance with applicable NYSDEC regulations.

COMMENT 12: The building on the corner of Erie Street and Mechanic Street is being excavated without soil sampling. American LaFrance used that building as a paint shop. Why wasn't this building ever tested? The State taxes we pay should cover this testing. Can DOH initiate a soil sampling of this site? Would it be the DOH or DEC who would test this building and site?

RESPONSE 12: The building on the corner of Erie street and Mechanic Street is privately owned and not a part of this project. The City owned 4.35-acre former American LaFrance site was investigated under the State's Brownfields Program. As explained in Response 4, the fund provides financial assistance to municipalities to investigate and/or remediate brownfield properties known or suspected to be contaminated with hazardous substances or petroleum. The State would not investigate an off-site property, even if it may have been historically used by the industry at the Brownfield site unless, it is determined that the on-site contamination has impacted that off-site property. Based on the results of investigation at the Former American LaFrance site, the State does not believe any off-site properties are impacted by the on-site contamination. Therefore, the site you describe was not investigated. If you have information regarding hazardous waste disposal at the property on the corner of Erie Street and Mechanic Street, please submit it to the New York State Department of Environmental Conservation, 6274 E. Avon-Lima

Road, Avon, NY 14414, Attn: Todd Caffoe, P.E.; we will evaluate this information and assess if sampling is warranted.

COMMENT 13: Who determines how the fact sheets are mailed? I live on Falck Street and got the mailings, but I know other people who would like to be on the mailing list.

RESPONSE 13: The Project Manager working with the Citizens Participation Specialist determines how fact sheets are mailed. By NYSDEC policy, residents adjacent to the site, property owners adjacent to a site, and owners of rights of way adjacent to a site (e.g. utilities), are added to the list. In addition, the municipality may add names to the list. In this case, the City of Elmira added names of residents and property owners beyond the adjacent property owners.

Additionally, a portion of the mailing list includes media, elected officials, environmental interest groups, Federal, State, and Local Government agencies. Document repositories are set up to send all information on the site cleanup to public access points, such as libraries, town halls, or neighborhood associations. Fact sheets are also put on the NYSDEC's regional website.

There are return mailers attached to fact sheets sent out. The mailers allow people who are on the initial list to add/change/or delete names from the mailing list. Therefore, if a friend or neighbor did not receive the mailing, they have the opportunity to send back the mailer and request to be added to the mailing list. The fact sheets also have the names and numbers of the project manager and Citizens Participation Specialist to contact for inclusion or deletion from the mail list. All citizens are welcome to be placed on any mailing list for any site they may be interested in.

COMMENT 14: Can acid rain mix with the contaminants and create any sort of chemical compound mixture that is hazardous and can effect the community?

RESPONSE 14: Metals and semivolatile organic compounds in site soil exceed the NYSDEC Recommended Soil Cleanup Objectives. Acid rain can cause very small amounts of metals present in soil to leach into groundwater and surface water. However, all soils are not equally susceptible to acidification. Counteracting forces such as the buffering capacity of soil, texture, pH, salt content, and soil permeability could mitigate the overall final effect. At this site, concentrations of metals detected in groundwater are well below the New York State groundwater standards. Additionally, drinking water in the area is supplied by the Elmira Water Board. The semivolatile organic compounds (SVOCs) present in soil at the site would not be affected by acid rain. Therefore, no adverse effects from site contaminants are anticipated because of acid rain.

APPENDIX B - ADMINISTRATIVE RECORD

Former American LaFrance site
Environmental Restoration Proposed Remedial Action Plan
City of Elmira, Chemung County

1. Proposed Remedial Action Plan dated February 2002

2: Groundwater Sampling Report dated January 11, 2001

3: Final Remedial Alternatives Report dated December 2000

4: Final Site Investigation Report dated December 2000

5: Addendum # 2 to Final Site Investigation Work Plan dated July 1999

6: Addendum # 1 to Final Site Investigation Work Plan dated May 1999

7: Data Usability Summary Report (DUSR) dated May 1999

8: Final Site Investigation Work Plan dated September 1998

9: Brownfield Application dated April 1997