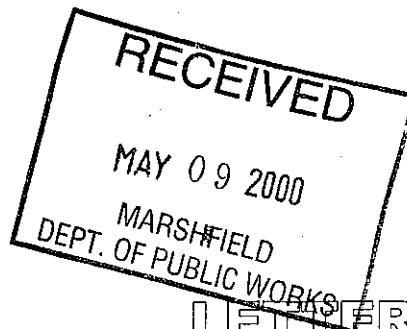


Weston & Sampson
ENGINEERS, INC.



Weston & Sampson Engineers, Inc.
Five Centennial Drive
Peabody, Massachusetts 01960-7985
www.westonandsampson.com

Tel: (978) 532-1900 Fax: (978) 977-0100

Innovative Environmental Solutions since 1899

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LETTER OF TRANSMITTAL

TO:

Dan Connick
Department of Environmental Protection
Division of Solid Waste Management
20 Riverside Drive
Lakeville, MA 02347

DATE	JOB NO.
May 8, 2000	
ATTENTION:	
RE:	
Marshfield Landfill	
Minor Modification, BWP SW 22	
Transmittal No. W 012003	

WE ARE SENDING YOU:

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Shop Drawings | <input checked="" type="checkbox"/> Attached | <input type="checkbox"/> Plans | <input type="checkbox"/> Samples |
| <input type="checkbox"/> Change Order | <input type="checkbox"/> Prints | <input type="checkbox"/> Copy of Letter | <input type="checkbox"/> Specifications |
| <input type="checkbox"/> Other: | <input type="checkbox"/> Under separate cover via: | | |

COPIES	DATE	NO.	DESCRIPTION
1	May 2000		Transmittal Form for Permit Application and Payment
1	May 2000		Permit Application, BWP SW 22, Landfills - Minor Modification
1	May 2000		Permit Application Report

THESE ARE TRANSMITTED AS CHECKED BELOW:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> For approval | <input type="checkbox"/> Approved as submitted | <input type="checkbox"/> Resubmit copies for approval |
| <input type="checkbox"/> For your use | <input type="checkbox"/> Approved as noted | <input type="checkbox"/> Submit copies for distribution |
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> As requested | <input type="checkbox"/> Return corrected prints |
| <input type="checkbox"/> FOR BIDS DUE | <input type="checkbox"/> Prints returned after loan to us | <input type="checkbox"/> Returned for corrections |
| <input type="checkbox"/> Other | | |

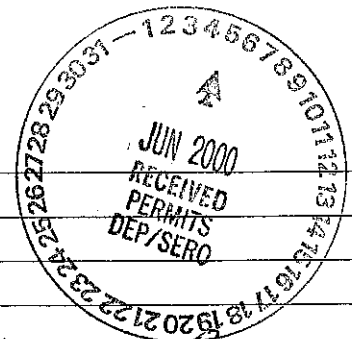
REMARKS:

As required, a copy of the transmittal form has been sent to DEP Boston.

COPY TO:

SIGNED:

Michael J. Richard





Enter Your Transmittal Number → **W 012003**

Your unique Transmittal Number can be accessed through DEP's web site or by calling the DEP InfoLine as listed on the last page of this document

Massachusetts Department of Environmental Protection Transmittal Form for Permit Application and Payment

Instructions

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Your check should be made payable to the Commonwealth of Massachusetts. Please mail your check along with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three (3) copies of this form will be needed.

Copy 1 (the original) must accompany your permit application.
Copy 2 must accompany your fee payment.
Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to DEP, P.O. Box 4062, Boston, MA 02211

For DEP Use Only

Permit No. _____
Rec'd Date _____
Reviewer _____

A. Application Information

DEP Permit Code (the 7 or 8 character code from first page of permit application instructions): BWP SW 22
Name of Permit Category: Solid Waste Management Facility Modifications
Type of Project or Activity: Minor Modification of a Landfill

B. Applicant Information (Firm or Individual)

Name of Firm: Town of Marshfield, Massachusetts		
<i>Or, if party needing this approval is clearly an individual:</i>		
Individual's Last Name:	First Name	MI

Street Address 870 Moraine Street			
City/Town Marshfield	State MA	Zip Code 02050	Telephone Number (781) 834-5560 ext.
Contact: Gregory Robbins		e-mail address (optional)	

C. Facility, Site or Individual Requiring Approval

Name of Facility, Site or Individual Marshfield Sanitary Landfill		DEP Facility Number (if Known)	
Street Address Clay Pit Road		e-mail address: (optional)	
City/Town Marshfield	State MA	Zip Code 02050	Telephone Number () ext.

D. Application Prepared by (if different from Section B)

Name of Individual or Firm: Weston & Sampson Engineers, Inc.			
Address Five Centennial Drive			
City/Town Peabody	State MA	Zip Code 01960-7985	Telephone Number (978) 532-1900 ext.6302
Contact: Michael Richard		LSP Number (21E only)	

E. Permit - Project Coordination

Is this project subject to MEPA review? ☐ yes ☒ no

If yes, indicate the project's EOE file number (assigned when an Environmental Notification Form is submitted to the MEPA unit)
EOEA # _____ Is an Environmental Impact Report Required? ☐ yes ☒ no

Is this application part of a larger project for which two or more DEP permits are being or will be sought? ☐ yes ☒ no

List any other DEP permits that apply to this project:

Permit Category	Date of Submission (tentative or actual)	Transmittal Number (if application already submitted)

F. Amount Due

Special Provisions:

- ☒ Fee Exempt* (city, town or municipal housing authority) (state agency if fee is \$100 or less)
☐ Hardship Request [payment extensions according to 310 CMR 4.04(3)(c)]
☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10)

*There are no fee exemptions for 21E, regardless of applicant status

Check #:	Dollar Amount:	Date:
Please make check payable to the Commonwealth of Massachusetts and mail check and one copy of this form to DEP, P.O. Box 4062, Boston, MA 02211		



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Solid Waste Management

W012003
Transmittal #
Facility ID (if known)

BWP SW 07 Modification of a Large Handling Facility

BWP SW 11 Landfills - Major Modification

BWP SW 21 Modification of a Small Handling Facility

BWP SW 22 Landfills - Minor Modification

Application for Solid Waste Management Facility Modification

A **Project Information** (all applicants must complete this section)

Directions:
Specify the plan/report and page numbers in which the following information is located.

- | | |
|--|--|
| 1. Which permit category are you applying for? | 2. Is MEPA review required for this project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <input type="checkbox"/> BWP SW 07 <input type="checkbox"/> BWP SW 11 | |
| <input type="checkbox"/> BWP SW 21 <input checked="" type="checkbox"/> BWP SW 22 | |
| 3. Permit Modification (310 CMR 19.039) | |
| a. General Description (310 CMR 19.039(1)) | |
| (1) Effect on Current Operation | |
| (2) Effect on Capacity | |
| (3) Effect on Operating Life | |
| b. Effect on Public Health Safety or the Environment (310 CMR 19.039(3)) | |
| 4. Currently Valid Department Approvals | |

Plan / Report #	Page #	DEP USE ONLY
Report	1	
"	"	
"	"	
"	2	
"	"	
"	"	

B **Project Information**

Note: Complete only sections applicable to requested modification. Enter NA if not applicable.

- | | |
|---|--|
| 1. Plan/Report Modifications and/or Revisions | |
| a. Waste Control Plans (310 CMR 19.017) | |
| b. Facility Plan (310 CMR (19.030(3)(c)) | |
| (1) Site Plan (310 CMR 19.030(3)(c)1) | |
| (2) Recycling/Composting Plan (310 CMR 19.030(3)(c)2.) | |
| MSW and Demolition | |
| Landfills and Combustion Facilities | |
| (3) Facility Design Plan (310 CMR 19.030(3)(c) 3.) | |
| (4) Operation and Maintenance (310 CMR 19.030(3)(c) 4.) | |
| (5) Closure/Post-Closure Plan (310 CMR 19.030(3)(c) 5.) | |
| (6) Hydrogeological Study (19.104(3)) | |

"	"	
"	"	
"	"	
"	"	
"	3	
"	"	
"	"	



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Solid Waste Management

BWP SW 07 Modification of a Large Handling Facility

BWP SW 11 Landfills - Major Modification

BWP SW 21 Modification of a Small Handling Facility

BWP SW 22 Landfills - Minor Modification

Application for Solid Waste Management Facility Modification

W012003
 Transmittal #

Facility ID (if known)

C Permit Review Documentation and Criteria

Note: Complete all sections applicable to requested modification. Refer to referenced regulation citation for applicability. Enter NA if not applicable

	Plan/Report#	Page #	DEP USE ONLY
1. Documentation			
a. Site Assignment Documentation (310 CMR 19.030(3)(e))	Report	3	
b. MEPA Status (310 CMR 19.030(3)(f))	"	"	
c. Wetlands Order of Conditions	"	"	
d. Waste Disposal Contract (Transfer Station)	"	1	
e. Financial Assurance Estimate and Mechanism (310 CMR 19.051)	"	"	
2. Permit Criteria (310 CMR 19.038)			
a. MEPA Compliance	"	"	
b. Site Assignment Limits	"	"	
c. Compliance with Facility Specific Regulations	"	"	
d. Health & Environmental Impact Assessment	"	4	
e. Compliance with other applicable laws and regulations	"	"	
f. Compliance with Waste Control	"	"	
g. Enforcement Status	"	"	
h. Bird Hazard	"	"	
i. Structural Support	"	"	
j. Wildlife Endangerment	"	"	
k. Location Restrictions	"	"	
1. Combustion Facilities and Handling Facilities	"	"	
a. Zone II	"	"	
b. IWPA	"	"	
c. Unmonitorable Area	"	"	
d. Waste Handling Setbacks	"	"	



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Solid Waste Management

BWP SW 07 Modification of a Large Handling Facility

BWP SW 11 Landfills - Major Modification

BWP SW 21 Modification of a Small Handling Facility

BWP SW 22 Landfills - Minor Modification

Application for Solid Waste Management Facility Modification

W012003

Transmittal #

Facility ID (if known)

C *Permit Review Documentation and Criteria (cont.)*

	Plan/Report#	Page #	DEP USE ONLY
2. Landfills			
a. Zone II	Report	5	
b. Public Water Supply	"	"	
c. IWPA	"	"	
d. Sole Source Aquifer	"	"	
e. Unmonitorable Area	"	"	
f. Gas Control	"	"	
g. Leachate Containment Structures	"	"	
h. Waste Deposition Setbacks	"	"	
i. Seismic Impact Zone	"	"	
J. Unstable Area	"	"	

D *Certification: 310 CMR 19.011*

Any person, required by these regulations or any order issued by the Department, to submit papers shall identify themselves by name, profession, and relationship to the applicant and legal interest in the facility, and make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment.

Gregory Robbins
Print Name

[Signature]
Authorized Signature

PROJECT MANAGER
Position/Title

5/9/00
Date

**REPORT FOR BWP SW 22
LANDFILLS - MINOR MODIFICATION
TRANSMITTAL NUMBER W012003**

TOWN OF MARSHFIELD, MASSACHUSETTS

A. Project Information

1. Which permit category are you applying for?

BWP SW 22 - Landfills - Minor Modification
Transmittal Number: W012003

2. Is MEPA review required for this project?

MEPA review is not necessary for this report, according to MEPA Regulation 301 CMR 11.03: Review Thresholds, (9) Solid and Hazardous Waste, because there is no expansion or change in capacity.

3. Permit Modification (310 CMR 19.039)

a. General Description (310 CMR 19.039 (1))

The Town of Marshfield is submitting a minor modification permit application to ~~dispose~~ ^{reuse} of approximately 7,800 cubic yards of dredged material at the Marshfield Sanitary Landfill. The existing facility permit does not currently allow for ~~disposal~~ ^{reuse} of such material at the landfill.

The material is sediment dredged from Marshfield Harbor approximately six years ago. The sediment is now stockpiled in a field adjacent to Town Pier Road, located in Marshfield. In May 1999 the material was tested for contaminants and found to contain contaminant concentrations lower than RCS-1 or landfill reuse concentrations. Based on discussions with DEP, the material was tested for specific conductivity in May 2000 and was found to contain contaminant concentrations lower than the allowable limit for reuse in an unlined landfill. The results of the May 2000 tests are included in Table 1.

The material will be delivered to the landfill site by town employees, stockpiled temporarily in the active face, and then used for daily and intermediate cover on the uncapped portion of the landfill.

(1) Effect on Current Operation

The dredge material will be an asset to the current landfill operations. The material is expected to reduce or eliminate odors and wind-blown litter.

(2) Effect on Capacity

The landfill has adequate capacity and will cease accepting solid waste June 30, 2000.

(3) Effect on Operating Life

The dredge material will not impact the operating life of the landfill. The landfill will cease accepting solid waste June 30, 2000.

b. Effect on Public Health Safety or the Environment (310 CMR 19.039(3))

Analytical data indicates the material meets the DEP policy for soil reuse at an unlined landfill. Analytical results are attached as Table 1 and Table 2.

4. Currently Valid Department Approvals

An Initial Site Assessment (ISA) and a Comprehensive Site Assessment (CSA) were submitted to the Department in March 1991 and September 1992, respectively.

Current valid Department approvals are Permit BWPSW25 Corrective Action Design (Closure Plans), Transmittal Number: W001291 (January 7, 1999.)

B. Project Information

1. Plan/Report Modifications and/or Revisions

a. Waste Control Plans (310 CMR 19.017)

Not applicable; for Application for a New Solid Waste Management Facility.

b. Facility Plan (310 CMR 19.030(3)(c))

Not applicable; for Application for a New Solid Waste Management Facility.

(1) Site Plan (310 CMR 19.030(3)(c)1)

Not applicable; for Application for a New Solid Waste Management Facility.

(2) Recycling/Composting Plan (310 CMR 19.030(3)(c)2)

MSW and Demolition Landfills and Combustion Facilities

Not applicable; for Application for a New Solid Waste Management Facility.

(3) Facility Design Plan (310 CMR 19.030(3)(c)3)

Not applicable; for Application for a New Solid Waste Management Facility.

(4) Operation and Maintenance (310 CMR 19.030(3)(c)4)

Not applicable; for Application for a New Solid Waste Management Facility.

(5) Closure/Post-Closure Plan (310 CMR 19.030(3)(c)5)

Closure Plan approved by DEP May 17, 1999, Transmittal Number W001291.

(6) Hydrogeological Study (310 CMR 19.104(3))

Not applicable; for Application for a New Solid Waste Management Facility.

C. Permit Review Documentation and Criteria

1. Documentation

a. Site Assignment Documentation (310 CMR 19.030(3)(e))

Not applicable; for Application for a New Solid Waste Management Facility.

b. MEPA Status (310 CMR 19.030(3)(f))

Not applicable; for Application for a New Solid Waste Management Facility.

c. Wetlands Order of Conditions

Modification will not occur within the 100-foot buffer zone of a wetland area.

d. Waste Disposal Contract (Transfer Station)

Not applicable.

e. Financial Assurance Estimate and Mechanism (310 CMR 19.051)

Not applicable.

2. Permit Criteria (310 CMR 19.038)

a. MEPA Compliance

The modification is not an expansion and will have no effect on landfill capacity. MEPA compliance is therefore not required, according to MEPA Regulation 301 CMR 11.03: Review Thresholds, (9) Solid and Hazardous Waste.

b. Site Assignment Limits

The modification will be within the boundaries of the site described in the Closure Plan for the Marshfield Sanitary Landfill.

c. Compliance with Facility Specific Regulations

The modification will comply with facility specific regulations.

d. Health & Environmental Impact Assessment

The modification does not constitute a threat to the public health, safety, or the environment, as indicated by the testing results included in Table 1.

e. Compliance with Other Applicable Laws and Regulations

The modification complies with other applicable laws and regulations.

f. Compliance with Waste Control

Not applicable.

g. Enforcement Status

There have been no enforcement actions taken.

h. Bird Hazard

The modification of the landfill will not represent a bird hazard.

i. Structural Support

Activities on this site involve the use of heavy equipment that has aided in the compaction of the ground. Due to this compaction, there is no indication that the ground does not provide adequate structural support.

j. Wildlife Endangerment

The modification of the landfill will not cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife as identified in 50 CFR Part 17.

k. Location Restrictions

1. Combustion Facilities and Handling Facilities

Not applicable to landfill; for Combustion or Handling Facilities.

a. Zone II

Not applicable to landfill; for Combustion or Handling Facilities.

b. IWPA

Not applicable to landfill; for Combustion or Handling Facilities.

c. Unmonitorable Area

Not applicable to landfill; for Combustion or Handling Facilities.

d. Waste Handling Setbacks

Not applicable to landfill; for Combustion or Handling Facilities.

2. Landfills

a. Zone II

The landfill is not located within a Zone II of a public or private water supply well. Please refer to the CSA for the Zone II map.

b. Public Water Supply

The landfill is not located within 15,000 feet upgradient of an existing public water supply well.

c. IWPA

The landfill is not located within an Interim Wellhead Protection Area of a public or private water supply well. Please refer to the CSA for the IWPA map.

d. Sole Source Aquifer

The site is not located on or near a sole source aquifer.

e. Unmonitored Area

The landfill is located on an easily accessible site where it is feasible to adequately conduct appropriate environmental monitoring.

f. Gas Control

Please refer to the Design Report, Section 5.0, Landfill Gas Management.

g. Leachate Containment Structures

Not applicable.

h. Waste Deposition Setbacks

Not applicable.

i. Seismic Impact Zone

Not applicable.

j. Unstable Area

Not applicable.

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Table 1
Dredged Sediment Sampling
Field Screening and Analytical Results
Marshfield, Massachusetts
May 12, 1999

Parameter	Unit	Sampling ID/Sample Location					RCS-1 Reportable Concentration (1)	Landfill Reuse Levels (2)	
		A-2	B-4	C-4	D-4	E-3		Lined	Unlined
PID Field Measurements (TVOC)	ppm	2.4	1.8	12	3.0	5.5	100 (3)	--	--
VPH									
C5 - C8 Aliphatics	mg/kg	ND	ND	ND	ND	ND	100	--	--
C9 - C12 Aliphatics	mg/kg	ND	ND	ND	ND	ND	1,000	--	--
C9 - C10 Aromatics	mg/kg	ND	ND	ND	ND	ND	100	--	--
EPH	mg/kg								
C9 - C18 Aliphatics	mg/kg	ND	ND	ND	ND	ND	1,000	--	--
C19 - C36 Aliphatics	mg/kg	160	150	46	ND	ND	2,500	--	--
C11 - C22 Aromatics	mg/kg	ND	ND	ND	ND	ND	200	--	--
Total TPH	mg/kg	160	150	46	ND	ND	--	5,000	2,500
Target PAHs									
Acenaphthene	mg/kg	ND	ND	ND	ND	ND	20	--	--
Acenaphthylene	mg/kg	ND	ND	ND	ND	ND	100	--	--
Anthracene	mg/kg	ND	ND	ND	ND	ND	1,000	--	--
Benzo (a) anthracene	mg/kg	ND	ND	ND	ND	ND	0.7	--	--
Benzo (a) pyrene	mg/kg	ND	ND	ND	ND	ND	0.7	--	--
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	ND	ND	0.7	--	--
Benzo (g,h,i) perylene	mg/kg	ND	ND	ND	ND	ND	1,000	--	--
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	ND	ND	7	--	--
Chrysene	mg/kg	ND	ND	ND	ND	ND	7	--	--
Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	ND	ND	7	--	--
Fluoranthene	mg/kg	ND	ND	ND	ND	ND	1,000	--	--
Fluorene	mg/kg	ND	ND	ND	ND	ND	400	--	--
Indeno (1,2,3-cd) pyrene	mg/kg	ND	ND	ND	ND	ND	0.7	--	--
2-Methylnaphthalene	mg/kg	ND	ND	ND	ND	ND	4	--	--
Naphthalene	mg/kg	ND	ND	ND	ND	ND	4	--	--
Phenanthrene	mg/kg	ND	ND	ND	ND	ND	100	--	--
Pyrene	mg/kg	ND	ND	ND	ND	ND	700	--	--
Total PAHs	mg/kg	ND	ND	ND	ND	ND	--	100 (4)	100 (4)
Target VPH Analytes (VOCs)									
Benzene	mg/kg	ND	ND	ND	ND	ND	10	--	--
Ethylbenzene	mg/kg	ND	ND	ND	ND	ND	80	--	--
Methyl-tert-butyl ether	mg/kg	ND	ND	ND	ND	ND	0.3	--	--
Naphthalene	mg/kg	ND	ND	ND	ND	ND	4	--	--
Toluene	mg/kg	ND	ND	ND	ND	ND	90	--	--
Xylene (total)	mg/kg	ND	ND	ND	ND	ND	500	--	--
Total VOCs	mg/kg	ND	ND	ND	ND	ND	--	10 (5)	4 (5)
Parameter	Unit	Sampling ID/Sample Location					RCS-1 Reportable Concentration (1)	Landfill Reuse Levels (2)	
		A-COMP	B-COMP	C-COMP	D-COMP	E-COMP		Lined	Unlined
Total Metals									
Arsenic	mg/kg	5.21	6.63	ND	7.80	ND	30	40	40
Cadmium	mg/kg	ND	ND	ND	ND	ND	30	80	30
Chromium	mg/kg	61.1	79.1	29.2	86.6	31.4	1,000	1,000	1,000
Lead	mg/kg	60.1	76.0	33.4	81.4	37.3	300	2,000	1,000
Mercury	mg/kg	0.290	0.377	ND	0.404	ND	20	10	10
Pesticides (Method 8081)	mg/kg	ND	ND	ND	ND	ND	--	--	--
PCBs (Method 8082)	mg/kg	ND	ND	ND	ND	ND	2	2	2

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Notes:

- (1) The reportable concentration is for S-1 category soils (310 CMR 40.1600).
- (2) The listed soil disposal concentration is for use at lined and unlined landfills (DEP Policy #COMM-97-001)
- (3) The DEP is required to be notified within 72 hours if, during a tank excavation, the soil headspace is greater than 100 ppm.
- (4) These concentrations are typically compared to the total concentration of SVOCs detected as a result of analysis by EPA Method 8270.
- (5) These concentrations are typically compared to the total concentration of VOCs detected as a result of analysis by EPA Method 8260.

Abbreviations:

COMP	This composite sample was collected from five locations within the specified parcel (A,B,C,D, or E)	PID	Photo-ionization detector
EPH	Extractable petroleum hydrocarbons	PCBs	Poly-chlorinated biphenyls
mg/Kg	milligrams per kilogram (ppm)	SVOCs	Semi-volatile organic compounds
NA	Parameter was not analyzed	TPH	Total petroleum hydrocarbons
ND	Parameter was not detected at the method detection limit	VOCs	Volatile organic compounds
PAHs	Polynuclear aromatic hydrocarbons	VPH	Volatile petroleum hydrocarbons
ppm	Parts per million	--	No applicable standard exists for this parameter

Table 2
Dredged Sediment Sampling
Analytical Results
Marshfield, Massachusetts
May 3, 2000

Parameter	Unit	Sampling ID/Sample Location					Landfill Reuse Levels (1)	
		COMP-1	COMP-2	COMP-3	COMP-4	COMP-5	Lined	Unlined
Specific Conductivity	µmhos/cm	1,600	280	1,600	1,800	940	8,000	4,000

G:\Solidwaste\MARSHFLD\minormod\table 1.xls]Sheet1

Notes:

(1) The listed soil disposal concentration is for use at lined and unlined landfills (DEP Policy #COMM-97-001).

Abbreviations:

COMP This composite sample was collected from five locations within the specified parcel (1,2,3,4, or 5).

µmhos/cm micro mhos per centimeter