



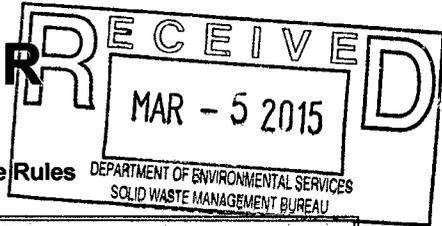
Waste Management Division

For Office Use Only:	
WMD Log #:	_____
Date Rec'd.:	_____
No. of Copies:	_____

ORIGINAL

APPLICATION FOR WAIVER

pursuant to
the provisions of Part Env-Sw 202 of the New Hampshire Solid Waste Rules



APPLICATION FILING AND PROCESSING INSTRUCTIONS

- Complete this form by providing all of the information requested. If you need more space than provided on the form to answer a particular question and you are using a paper copy of this form, attach additional pages as necessary; mark each page clearly to show both the applicant name and the question being answered; and indicate on the form that the additional pages are attached
- Submit **THREE** copies of the completed waiver application, **EACH bearing ORIGINAL signatures**. Applications may be submitted to the department electronically. If the applicant chooses to submit an application electronically, a single paper copy shall also be submitted to the department to the following address:

**New Hampshire Department of Environmental Services (DES)
Waste Management Division (WMD)
Permitting & Design Review Section (P&DRS)
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095**

- All references on this form that begin with "Env-Sw" are citations from the New Hampshire Solid Waste Rules. You may obtain a copy of the Rules from the DES Public Information and Permitting Office at (603) 271-2975. The Rules are also available on the Internet at <http://www.des.nh.gov>.
- DES will process your application in conformance with Env-Sw 202, Env-Sw 304 and Env-Sw 305.
- For further assistance with completing this form, contact the DES Permitting & Design Review Section (P&DRS) at (603) 271-2925 or at the above noted mailing address.
- You may also contact DES at TDD Access: Relay NH 1 (800) 735-2964.

SECTION I. APPLICANT IDENTIFICATION

(1)	Name: TOWN OF WASHINGTON
(2)	Mailing address: 7 HALFMOON POND ROAD, WASHINGTON, NH 03280
(3)	Telephone number: 603.495.3661
(4)	If different than above, identify the individual associated with and designated by the applicant to be the contact individual for matters concerning this application:
	(a) Name: EDWARD THAYER
	(b) Title: ROAD AGENT
	(c) Mailing address: PO BOX 478, WASHINGTON, NH 03280
	(d) Telephone number: 603.495.3641
	(e) E-mail: ethayer@washingtongh.org
(5)	If the applicant is an individual, provide date of birth and go to Section II:
(6)	If the applicant is a corporation, partnership or other association, provide the following information as specified:
	(a) The facility is owned by a: <input type="checkbox"/> corporation <input type="checkbox"/> partnership <input type="checkbox"/> other association
	(b) State of incorporation/formation:
	(c) Principal business address:
	(d) Provide on separate paper and attach/mark as "Attachment I(6)(c)," the names and addresses of all directors, officers and shareholders (*), if for a corporation; all partners (whether general or limited), if for a partnership; or all principals, members or participants, if for another type of association.
	(* For a privately held corporation, identify all shareholders. For a publicly traded corporation, identify all shareholders owning 10% or more of the corporation's equity or debt.

SECTION II. FACILITY OR ACTIVITY TO WHICH THIS REQUEST RELATES

Identify the particular facility or activity to which this application for waiver relates.

(1)	Related activity [check that which applies]:			
	<input type="checkbox"/>	Application for a Standard Permit	<input type="checkbox"/>	Application for a Permit-by-Notification
	<input type="checkbox"/>	Application for an Emergency Permit	<input type="checkbox"/>	Application for Research & Development Permit
	<input type="checkbox"/>	Application to certify a waste-derived product for distribution and use	<input type="checkbox"/>	Application for Operator Certification
	<input checked="" type="checkbox"/>	Application to modify a permit (specify the permit number): DES-SW-TP-95-021		
<input type="checkbox"/>	Other (specify):			
(2)	If the requested waiver relates to a particular application, provide the date the application was/will be submitted to DES:			
(3)	If the requested waiver relates to a particular facility, provide the facility name and location in the space below. (Note: For a waiver relating to a particular facility, you must also notice the host municipality, host solid waste district and, in some instances, the abutters, as specified by Section IV of this form).			
	(a)	Facility name: WASHINGTON MUNICIPAL LANDFILL		
	(b)	Street address: 952 S MAIN STREET, WASHINGTON, NH 03280		
	(c)	Town/City: WASHINGTON		

SECTION III. SPECIFIC RULE(S) FOR WHICH A WAIVER IS SOUGHT

Below, identify the specific solid waste rule(s) that you wish to have waived. Give the complete "Env-Sw" citation(s).

Env-Sw 807.05 (i) and Permit Condition #2 from Permit #DES-SW-TP-95-021

SECTION IV. NOTICE OF FILING REQUIREMENTS

- If this application for waiver relates to a particular facility, you must send by certified mail, or deliver in hand, a complete copy of this application and a "notice of filing" to the host municipality, host solid waste management district and other affected entities, as specified by Env-Sw 303. To identify the host solid waste management district, contact the host town/city office or the P&DRS at (603) 271-2925.
- In addition, if this application for waiver is to reduce the required setback distance to any residence or property line, a notice of filing must be provided to the affected property owner(s) as specified in Env-Sw 303.
- A copy of the required notice(s) of filing and proof of receipt [i.e., signature(s) of the recipient(s) acknowledging receipt] must be attached to and submitted with this application for waiver, unless you are combining the notice of filing with the notice requirements for a related permit application as indicated by item (4) below.
- If this application for waiver is being submitted as part of an application for a facility permit or permit modification, the required notice(s) of filing may be combined with the notice(s) of filing prepared for the permit application/permit modification application itself. If so, check here:
- For assistance with preparing the required notice of filing, please refer to either Env-Sw 303 or "A Guide for Preparing Notices of Filing." If the guide is not included with this application form, you may obtain a copy from the P&DRS at (603) 271-2925.

SECTION V. REASON FOR REQUESTING WAIVER

Explain why a waiver is being requested, including an explanation of the hardship that would be caused by having to comply with the rule. Use extra paper as necessary.

Closed landfill is stable in settlement, groundwater conditions are stabilized to allow biennial reporting and landfill gas has been reading at zero for several years. See Permit Modification request package attached.

SECTION VI. PROPOSED ALTERNATE PROCEDURE, METHOD OR ACTIVITY

Provide a full explanation of any alternate procedure, method, or other activity that you propose to substitute for the procedure, method or activity you wish to have waived. Include written documentation and/or data to support the proposed alternative. Use extra paper as necessary.

See Permit Modification request package outlining biennial landfill gas readings, biennial post closure reporting, annual groundwater sampling, biennial groundwater monitoring reporting, but ongoing semi-annual inspections per original permit.

SECTION VII. DURATION OF WAIVER

Specify the proposed duration for the requested waiver. If you are seeking a "permanent" waiver, including one that would expire when the facility to which it relates may close, so state and provide the desired starting date.

Proposed effective/starting date: March, 2015

Proposed expiration date: OR I am seeking a "permanent" waiver

SECTION VIII. DEMONSTRATION OF CRITERIA

Provide a full explanation of why you believe that having the waiver granted will meet the below listed criteria. [Note: Economic, technological, practical application and safety issues shall be considered in evaluating a demonstration of the criteria; however, the merits of the application shall not be weighed solely on the basis of cost].

Criteria for Waiver, pursuant to Env-Sw 202.04:

- (a) Exemption from complying with the rule shall:
 - 1. Not result in an adverse effect to the environment or natural resources of the state, public health or to public safety.
 - 2. Not result in an impact on abutting properties that is more significant than that which would result from complying with the rule.
 - 3. Be in keeping with the intent and purpose of the rule being waived.
- (b) One or more of the following conditions shall be satisfied:
 - 1. Strict compliance with the rule will result in an adverse effect on the environment, public health or safety; AND/OR
 - 2. Strict compliance with the rule will result in a circumvention of the goals and objectives of the state's solid waste management program, as specified in RSA 149-M:1 through 3 and the state solid waste management plan; AND/OR
 - 3. Strict compliance with the standard will provide no benefit to the public and will cause an operational or economic hardship to the applicant.

Use the space below to provide your demonstration. Use extra paper as necessary.

See separate sheet for Demonstration of Criteria.

SECTION IX. CERTIFICATION OF COMPLIANCE/COMPLIANCE REPORT

If you are able to certify that each of the following statements is true, do so by your signature. If you are unable to certify that each of the following statements is true, you must prepare a separate Compliance Report as specified by Env-Sw 303.15.

COMPLIANCE STATEMENT

The applicant shall certify that each of the statements listed in (1)-(8) below are true for each of the following individuals and entities:

- the applicant, and
- the facility owner, and
- the facility operator, and
- all individuals and entities holding 10% or more of the applicant's debt or equity, and
- all of the applicant's officers, directors, and partners, and
- all individuals and entities having managerial, supervisory or substantial decision making authority and responsibility for the management of facility operations or the activity(s) for which approval is being sought

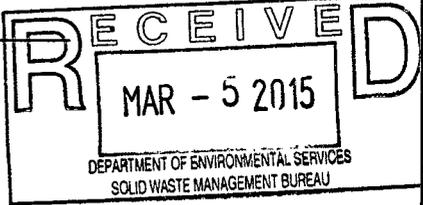
(1)	No individual or entity listed above has been convicted of or plead guilty or no contest to a felony in any state or federal court during the 5 years before the date of the application.				
(2)	No individual or entity listed above has been convicted of or plead guilty or no contest to a misdemeanor for a violation of environmental statutes or rules in any state or federal court during the 5 years before the date of the application.				
(3)	No individual or entity listed above has owned or operated any hazardous or solid waste facility which has been the subject of an administrative or judicial enforcement action for a violation of environmental statutes or rules during the 5 years before the date of the application.				
(4)	No individual or entity listed above has been the subject of any administrative or judicial enforcement action for a violation of environmental statutes and rules during the 5 years before the date of the application.				
(5)	All hazardous and solid waste facilities owned or operated in New Hampshire by any individual or entity listed above are in compliance with either. <table border="1" style="width: 100%;"> <tr> <td>(a)</td> <td>All applicable environmental statutes, rules, and DES permit requirements.</td> </tr> <tr> <td>(b)</td> <td>A DES approved schedule for achieving compliance therewith.</td> </tr> </table>	(a)	All applicable environmental statutes, rules, and DES permit requirements.	(b)	A DES approved schedule for achieving compliance therewith.
(a)	All applicable environmental statutes, rules, and DES permit requirements.				
(b)	A DES approved schedule for achieving compliance therewith.				
(6)	All individuals and entities listed above are in compliance with all civil and criminal penalty provisions of any outstanding				

	consent agreement, settlement, or court order to which DES is a party.
(7)	All individuals and entities listed above have paid, or are in compliance with the payment schedule for any administrative fine assessed by DES.
(8)	All individuals and entities listed above are in compliance with all terms and conditions under every administrative order, court order or settlement agreement relating to programs implemented by DES.
Signature of the applicant certifying the above statements are true:	
Applicant Name (Print Clearly or Type) <u>EDWARD G. THAYER</u>	
Applicant Signature <u>Edward G Thayer</u>	
Date <u>2-24-2015</u>	
OR	
Circle the untrue statement(s) and attach a Compliance Report, pursuant to Env-Sw 303.15	

SECTION X. APPLICANT SIGNATURE REQUIREMENTS

The applicant must sign the following statement prior to submitting this application. All copies of the application filed with DES must bear the applicant's original signature. If the applicant is not an individual, an individual duly authorized by the applicant shall sign the application.

To the best of my knowledge and belief, the information and material submitted herewith is correct and complete. I understand that any approval granted by DES based on false and/or incomplete information shall be subject to revocation or suspension, and that administrative, civil or criminal penalties may also apply.

Applicant Name (Print Clearly or Type) <u>EDWARD G. THAYER</u>		
Applicant Signature <u>Edward G Thayer</u>		
Date <u>2-24-2015</u>		

SECTION XI. PROPERTY OWNER SIGNATURE

For applications relating a specific facility or activity, sited or to be sited on property not owned by the applicant, the property owner must also sign this form as follows. All copies of the application filed with DES must bear the property owner's ORIGINAL signature. If the property owner is not an individual, an individual duly authorized by the property owner shall sign the application.

(1)	I hereby affirm that the applicant has, or shall be granted, the legal right to occupy and use the property on which the subject facility is or will be located for the purposes specified in this application.
(2)	I hereby affirm that I shall grant access to the property for closure and post-closure monitoring of the subject facility and site as required by RSA 149-M and the New Hampshire Solid Waste Rules (Env-Sw 100-300 and Env-Sw 400-2000), as amended.
Property Owner Name (Print Clearly or Type) <u>EDWARD G. THAYER</u>	
Property Owner Signature <u>Edward G Thayer</u>	
Date <u>2-24-2015</u>	



MERIDIAN LAND SERVICES, INC.

CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

Office: 31 Old Nashua Road, Suite 2, Amherst, NH 03031

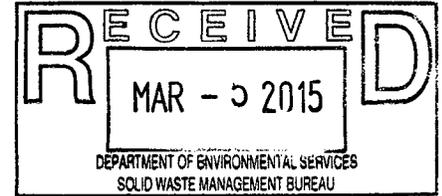
Mailing: PO Box 118, Milford, NH 03055

Phone: 603-673-1441 * Fax 603-673-1584

www.MeridianLandServices.com

March 4, 2015

Ms. Melanie Doiron
NHDES – WMD SWMB
P.O. Box 95, 29 Hazen Drive
Concord NH 03302-0095



Re: Waiver Request of Env-Sw 807.05 (i) and Permit # DES-SW-TP-95-021 Condition #2
To Accompany Type IB Permit Modification to Solid Waste Management Facility Permit
Town of Washington, New Hampshire
Permit # DES-SW-TP-95-021
Landfill Closure - NHDES Site Number 198806031
WMD LOG # 19960002

Dear Ms. Doiron:

The following supplemental information is to accompany the attached NHDES Application for Waiver pursuant to the provisions of Part Env-Sw 202 of the New Hampshire Solid Waste Rules.

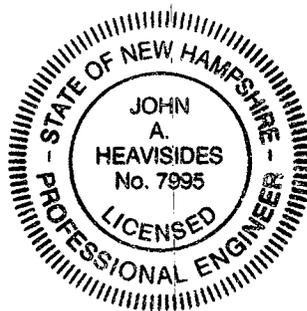
The focus of the waiver is to allow biennial reporting, or reporting every two years rather than the annual reporting required. The justifications for granting such a waiver are essentially that the landfill has demonstrated stable conditions for several years and regular inspections shall continue as required by the active permit. Under these conditions any deterioration or other developing problems would be caught by the inspector and NHDES would be notified immediately via the same process established in the original permit.

If you have any questions please do not hesitate to contact me or email me at JAHeavisides@MeridianLandServices.com.

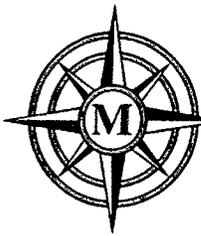
Very truly yours,

MERIDIAN LAND SERVICES, INC.

John A. Heavisides PE
Chief of Engineering
NH License. No. 07995



cc: Mr. Edward Thayer, Town of Washington w/ attachments



MERIDIAN LAND SERVICES, INC.

CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

Office: 31 Old Nashua Road, Suite 2, Amherst, NH 03031

Mailing: PO Box 118, Milford, NH 03055

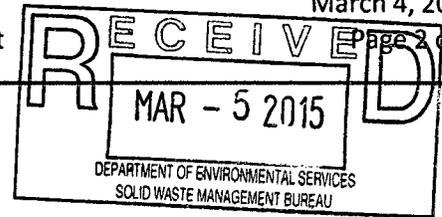
Phone: 603-673-1441 * Fax 603-673-1584

www.MeridianLandServices.com

NHDES –WMD SWMB

Washington Landfill Closure – Permit #DES-SW-TP-95-021 Waiver Request

March 4, 2015



APPLICATION FOR WAIVER SECTION VIII. DEMONSTRATION OF CRITERIA

(a) Exemption from complying with the rule shall:

- 1. Not result in adverse effect to the environment or natural resources of the state, public health or to public safety.** *The stability of the landfill cap has been documented over several years and the composition of the known landfill material lends itself to continued stability. This landfill had prohibited the dumping of hazardous, non-household waste while in operation, became inactive in 1987 and was capped in 1997 and there is a low likelihood that*
- 2. Not result in an impact on abutting properties that is more significant than that which would result from complying with the rule.** *Due to ongoing semi-annual inspections, continuing annual monitoring of water quality under NHDES Permit #198806031-W-004, the absence of any landfill gas during sampling at all monitoring for the last several years, and the ongoing requirement for immediate notification remaining in effect in Permit Condition:3.17 (e), changing the formal reporting of inspection data from annually to biennially [every two (2) years] does not result in an impact that is more significant than that which would result from complying with the rule. The various inspections will catch any deficiencies on a semi-annual basis, the same as without this waiver.*
- 3. Be in keeping with the intent and purpose of the rule being waived.** *As the intent and purpose of the reporting rule is in this case to ensure that the facility is closed in a manner that does not endanger public health or adversely affect the environment and minimizes the potential for accidents that could lead to personal injury or property damage, the semi-annual inspections keeps with this intent, even if the reporting is increased from annual to biennial reporting.*

(b) One or more of the following conditions shall be satisfied:

- 1. Strict compliance with the rule will result in an adverse effect on the environment, public health or safety; AND/OR**
- 2. Strict compliance with the rule will result in a circumvention of the goals and objectives of the state's solid waste management program, as specified in RSA 149-M: 1 through 3t and the state solid waste management plan; AND/OR**
- 3. Strict compliance with the standard will provide no benefit to the public and will cause an operational or economic hardship to the applicant.**

Condition (b) 3. Is applicable since the standard for annual reporting is appropriate for the full range of closed landfills, and in particular those that may be changing dramatically before they reach a stable condition. In the case of the Washington Landfill, the criteria set forth in the Post-Closure Inspection Report criteria have been stable for years so that continuing with annual reporting provides no discernable benefit to or protection of the public. Rather it causes a moderate economic depletion of the Town's public coffers to generate annual reports that have shown a long trend of consistency and stability.



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095

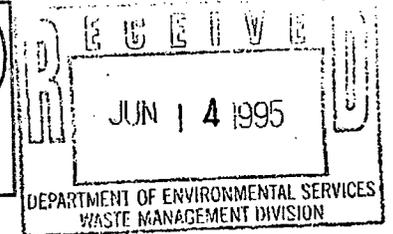
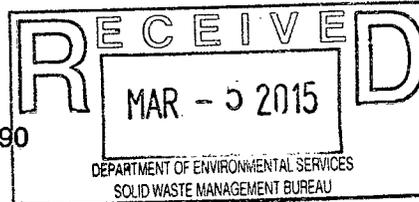
603-271-3503 FAX 603-271-2867

TDD Access: Relay NH 1-800-735-2964



June 14, 1995

Board of Selectmen
Town of Washington
P.O. Box 473
Washington, New Hampshire 03290



SUBJECT: **Temporary Permit No. DES-SW-TP-95-021**
Washington Landfill
Route 31, Washington, NH

Dear Members of the Board:

Enclosed herewith is Temporary Permit No. DES-SW-TP-95-021, which has been issued by the Department of Environmental Services (DES) pursuant to the provisions of RSA 149-M:10 and Part Env-Wm 315 of the New Hampshire Solid Waste Rules, (Rules).

Please note that Temporary Permits are issued to solid waste facilities which have not previously held written permits from the DES, as required by RSA 149-M:10. A Temporary Permit is provided to existing unlined landfills as a first step toward closure of the facility, and is subject to call pursuant to Section Env-Wm 315.08 of the Rules. Once closure plans for the facility have been approved, the authorization to proceed with construction will be granted under the terms of Condition one of this permit.

Please maintain a copy of this permit with your facility file records for future reference and conspicuously post a copy of the permit at the facility. In addition, you should have available a full copy of the New Hampshire Solid Waste Rules, Env-Wm 100-300 and 2100-2800 for reference in correctly administering the provisions of your permit. Copies of the Rules are available from the Public Information & Permitting Office at 271-2975.

Questions regarding the issuance of this permit or questions regarding operational compliance should be directed to Ms. Rebecca Lawrence at the Solid Waste Compliance Section, Waste Management Division at 271-2925. Thank you.

Sincerely,

Richard S. Reed, Supervisor
Waste Management Compliance Bureau

RSR/RSL/neo/permits:wash.tp
Enclosure: DES Permit Process Questionnaire
cc: WMEB-PAD&RS, WMCB-SWCS, PIP, Town, SW District

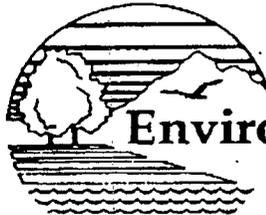
TOWN - WASHINGTON
PROJECT - CLOSURE - WASHINGTON
TOWNSHIP -
LETTING/DISTRICT/OTHER

AIR RESOURCES DIV.
64 No. Main Street
Caller Box 2033
Concord, N.H. 03302-2033
Tel. 603-271-1370
FAX 603-271-1381

WASTE MANAGEMENT DIV.
6 Hazen Drive
Concord, N.H. 03301
Tel. 603-271-2900
FAX 603-271-2456

WATER RESOURCES DIV.
64 No. Main Street
P.O. Box 2008
Concord, N.H. 03302-2008
Tel. 603-271-3406
FAX 603-271-7894

WATER SUPPLY & POLLUTION CONTROL DIV.
P.O. Box 95
Concord, N.H. 03302-0095
Tel. 603-271-3503
FAX 603-271-2181



NEW HAMPSHIRE
DEPARTMENT OF
**Environmental
Services**

SOLID WASTE MANAGEMENT FACILITY TEMPORARY PERMIT

as authorized by the

NH Department of Environmental Services, Waste Management Division
pursuant to RSA 149-M and Part Env-Wm 315 of the New Hampshire Solid Waste Rules

I. PERMIT/FACILITY IDENTIFICATION:

Facility No.: DES-SW-TP-95-021

Facility Type: Landfill

Facility Name: Washington Municipal Solid Waste Landfill

Facility Location: Route 31, Washington, NH; Tax Map 16, Lot 16; NH/Deed Ref: Sullivan County Book 293, Page 386; Latitude 43° 9' 17" N, Longitude 72° 4' 33" W.

Permittee/Facility Operator: Town of Washington, Board of Selectmen, P.O. Box 473, Washington, NH 03280.

Service Type: Limited Public

Facility Owner: Town of Washington, Board of Selectmen, P.O. Box 473, Washington, NH 03280.

Property Owner: N.H. Department of Transportation, John O Morton Building, 1 Hazen Drive, Concord, NH 03301.

Facility Capacity: Facility ceased operations 1987. There is no remaining capacity.

II. FILE REFERENCE/RECORD:

Date(s) Env-Wm 315 notification received: May 24, 1995.

WMD Log #(s): 199500248

III. TERMS AND CONDITIONS:

This facility operated as a landfill receiving municipal solid waste generated within Washington, New Hampshire and is subject to the terms and conditions of Attachment A. Facility operations shall comply with Parts Env-Wm 308, 311 and 312 of the New Hampshire Solid Waste Rules (Rules) as amended. This permit is subject to call by the Division pursuant to Env-Wm 315.08. No additional solid waste is to be disposed of at this facility.

IV. EFFECTIVE DATE: From date of signature below.

V. AUTHORIZATION: Pursuant to RSA Chapter 149-M:10 and Part Env-Wm 315 of the New Hampshire Solid Waste Rules, this permit is hereby issued to the permittee as identified in Section I above for the solid waste management facility identified in Section I above, pursuant to the requirements of Section III above. **BY EXERCISING ANY RIGHTS UNDER THIS PERMIT, THE PERMITTEE HAS AGREED TO ALL TERMS AND CONDITIONS OF THE PERMIT.** Failure to comply with these terms and conditions could result in civil or criminal penalties, suspension or revocation of this permit.

No liability is incurred by the State of New Hampshire by reason of any approval of this solid waste facility. This temporary permit shall not be construed in any way as (1) an authorization of any activity which occurred prior to the effective date of the temporary permit; (2) an authorization of any activity that does not comply with the terms of the permit as set forth above; or (3) a waiver of any cause of action for violation(s) of RSA 149-M or of rules in effect when the violation(s) occurred.


Philip J. O'Brien, Ph.D., Director

6-13-95
Date

Contact the Waste Management Division, Solid Waste Compliance Section, 6 Hazen Drive, Concord, N.H. [telephone (603) 271-2925] if there are questions.



Washington Municipal Solid Waste Landfill
Permit No.: DES-SW-TP-95-021

Temporary Permit

June 14, 1995

ATTACHMENT A TERMS AND CONDITIONS

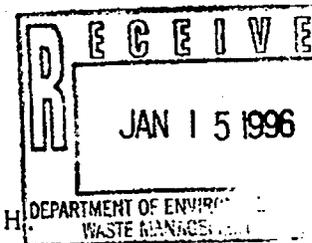
- (1) The facility shall be closed in conformance with the requirements of the New Hampshire Solid Waste Rules (Rules) and in accordance with plans to be approved by the Department of Environmental Services, Waste Management Division.
- (2) The permittee is responsible for meeting the requirements for landfill closure as set forth in Env-Wm 2507.03 and Env-Wm 2507.04, for the length of time required to achieve the performance criteria specified in Env-Wm 2507.05(a)(1)-(4). Although the Rules (see Env-Wm 2507.05) contemplate that such performance criteria may be met within 30 years of final capping the facility, the actual post-closure monitoring and maintenance period for this facility may be different than 30 years. The actual time frame will be determined by the Department on the basis of periodic review and evaluation of the post-closure monitoring data. Therefore, in accordance with Env-Wm 311.07, the permittee shall prepare and submit an annual report that provides all required post-closure monitoring and maintenance data with an evaluation of that data by a qualified Professional Engineer licensed in the State of New Hampshire. The evaluation shall characterize actual facility performance; identify specific data trends that develop; and assess the meaning of those trends as they may apply to meeting the performance criteria in Env-wm 2507.05(a)(1)-(4).
- (3) Facility closure shall comply with Parts Env-Wm 308, 311 and 312 of the Rules.
- (4) In accordance with Solid Waste Rule Env-Wm 2507.05(f), record drawings shall be submitted to the Department upon completion of closure construction.
- (5) In accordance with Solid Waste Rule Env-Wm 2507.05(g), notification that a landfill exists on the property shall be attached to the property deed. The notification, as a minimum, shall include the following information:
 - (a) A statement that a landfill exists on this property.
 - (b) Identification of the Registry of Deeds, book and page numbers where title to the property is recorded.
 - (c) Identification of the property tax map and lot numbers as identified by the political subdivision in which the facility is located.
 - (d) Identification of USGS coordinates listing the site of the landfill.
 - (e) Description of the type and size of the facility.
 - (f) Description of closure implemented and identification of the Permit issued by the Department of Environmental Services under which closure occurred, including a statement that the Permit may contain certain legal obligations regarding this site.
 - (g) A statement that post-closure use of the property shall not disturb the integrity of the final cover, liners, or any other components of the containment systems unless necessary to comply with the requirements of the New Hampshire Solid Waste Rules.
 - (h) A statement that any future change in use must be proposed to the Division for review and approval/denial determination.
 - (i) A statement that access shall be assured to Department inspection personnel and the permit holder for monitoring/maintenance purposes.
- (6) A copy of the deed notification as filed is to be provided to the Department.

ENGINEERING REPORT
(Modified)

TOWN OF
WASHINGTON, NEW HAMPSHIRE
MUNICIPAL WASTE
LANDFILL CLOSURE
SEPTEMBER, 1995

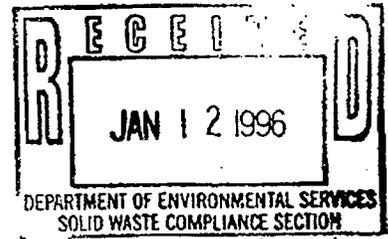
Prepared for:

The Town of Washington, N.H.
Board of Selectmen
P.O. Box 473
Washington, N.H. 03280



Prepared by:

Leon H. Geil, P.E., Consulting Engineer
RR-2 Box 441, Ainsworth Road
Claremont, N.H. 03743
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WMD Log # 199600022

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SECTION 1SITE DESCRIPTION AND BACKGROUND

The Town of Washington, New Hampshire, (Town) has operated a municipal waste landfill on a site of approximately three and one half (3.5) acres since 1949. The actual site is located on the southwesterly side of N.H. Route 31 and is between the new and old N.H. Route 31 roadway location and remains the property of the N.H. Department of Transportation. The area occupied by the landfill is approximately one and one half (1.5) acres, a portion of which is presently being occupied as a recycling center and transfer station.

Although the Town started operating the landfill/dump in 1949, it is believed that roadside dumping in the area started in the 1930's. Northerly of the landfill site is a surficial scattering of glass and cans adjacent to the abandoned portion of NH Route 31. This material is to be removed and disposed of within the landfill area scheduled for closure. The majority of the waste disposed of at the site was burned until on-site disposal was terminated in late 1987.

In August 1987, the Town contacted Leon H. Geil, P.E., Consulting Engineer, to commence the closure procedure. A Phase I hydrogeologic study was underway by the Spring of 1988 with the completed Phase I hydrogeologic study being submitted to the N.H.D.E.S. in April 1989. After review and approval of Phase I by N.H.D.E.S., the Phase II hydrogeologic study was commenced in the Spring of 1990. The Phase II hydrogeologic study was completed and submitted to N.H.D.E.S. in November 1990.

SECTION 2PRESENT CONDITIONS

Since completion of the Phase II hydrogeologic study, groundwater monitoring has been continued by the Town. To date, sampling and testing of both the groundwater and surface waters show no significant impact on these waters from the landfill or its contents. In December 1994, the Town reinitiated the closure process. This engineering report is planned as a portion of the final closure process.

Presently, the waste dumped prior to termination in Fall 1987 has been covered with an intermediate soil cover. The site has continued to be used as a transfer station and recycling center. The site is occupied by a compactor and a roll-off unit for mixed waste, an operators building, a brush pile, a yard waste compost area and other miscellaneous containers for materials to be recycled. A stockpile of intended cover material has also been placed on site. Access to the site is restricted by fencing and gates controlled by the Town.

SECTION 3RESPONSE TO D.E.S. LETTER OF 10/19/95

3.1 The written response to Env-Wm 312.03 is as follows:

- a. Town of Washington
c/o The Board of Selectmen
P.O. Box 473
Washington, N.H. 03280
Site Location - N.H. Route 31
Temp. Permit #DES-SW-87-009
- b. Spring/Summer 1996
- c. No waste will be accepted at the site once closure has commenced.
- d. The site is used only by people within the Town. Notification will be provided at the 1996 Town Meeting, a local newspaper and sign(s) on site.
- e. Since the site is presently operated as a transfer station, waste arriving at the site prior to closure will be transferred off site to approved disposal sites. The exception to this may be a brush pile that may be burned on site.
- f. Existing equipment, containers, operator's building, retaining wall blocks, etc., will be removed by the Town using highway equipment and personnel prior to closure.
- g. Post-closure testing will consist of ground water monitoring and testing in accordance with the approved ground water permit. Due to the fact that the majority of the waste disposed of at this site has been burned and it has been over eight (8) years since household waste was disposed of on site gas monitoring and/or testing will be on an as-requested- basis from-NHDES . After closure of the site, it shall be inspected for damage to the capping system in Fall 1996, Spring 1997 and prior to release of the contractors bond(s). Thereafter the site shall be inspected annually, more often

should severe weather occur. Likewise, it would be at this annual inspection that the site would be checked for settlement. The site shall be maintained as needed with all woody vegetation being cut so that root systems do not develop and damage the capping system.

- h. No additional permits are anticipated.
- i. While it is expected that certain closure activities may overlap, the activities and their estimated time frame is as follows:
 - 1. Removal of any remaining waste, equipment, building, retaining wall blocks, utilities, etc. 1-2 weeks
 - 2. Establish survey control and set offsets for construction (initial). 1-2 days
 - 3. Install silt fence and delineate wetlands/work limits. 1-2 days
 - 4. Reshaping waste and site. 1 week
 - 5. Wetlands clean-up. 1-2 days
 - 6. Place intermediate cover. 2-4 days
 - 7. Reestablish baselines and grades. Verify conformity with design. 1 day
 - 8. Place and compact glacial till cap. 1-2 weeks
 - 9. Install gas vents and probes. 1-2 days
 - 10. Place topsoil. 4-6 days
 - 11. Install fencing. 2-3 weeks
 - 12. Seed, fertilize, etc. 1-2 days
 - 13. Maintenance of erosion control. Ongoing

- j. In response to Env-Wm 312.06, item (c) applies, and a groundwater monitoring program has been established for past closure and a permit has been issued. In response to Env-Wm 2100 through Env-Wm 2600, it appears as though Env-Wm 2106 (transfer station) is the section that would apply in this case. As noted above, items such as equipment, building, retaining wall, etc., will be removed from the site along with recently disposed-of waste prior to the landfill closure.
- 3.2 The gas vent detail error was found and will be corrected. The dimension is to read four (4) feet.
- 3.3 The present ground level in the area of the gas vent is to be lowered, and the final grade is to be between 219 and 220.
- 3.4 An intermediate sand cover of 10^{-3} cm/sec has been added to both the cross-sections and typical section.
- 3.5 A note has been added to the plans noting the protection of ground water monitoring wells. Since monitoring well #GZ-3 will not be enclosed within the permanent fencing, steel protection posts have been called for on the plans for this well.
- 3.6 A total of seven (7) sections have been shown. Sections at 10+50, 12+00 and 13+00 have had the original ground estimated from borings and/or test pits nearby.
- 3.7 Approximate limits of the capping system have been added to the final grading plan.
- 3.8 Gas probes have added to the plan and a typical detail added to the detail sheet.
- 3.9 Since there will be three (3) gas probes established on site in the deepest part of the fill and since they are to consist of rigid pipe driven to firm ground under the waste, it is planned that the piping will also serve as inplace monitors for monitoring settlement. Finish grade can both be marked on the piping and/or measured from the top of the piping. As noted above in Section 3.1.g., settlement would be monitored during the annual site inspection.

- 3.10 A note has been added to sheet 4, the Grading Plan, noting the removal of the retaining wall prior to commencing site grading.
- 3.11 Copies of abutter notifications are enclosed in the Exhibits. The estimated starting day is Spring, 1996. It is stated in the Bid Documents where the plans and specifications can be reviewed, and a notice will be published in a newspaper advertising the same.
- 3.12 The closure design has considered stormwater and minimized run-off. All surface run-off outside the landfill footprint has been diverted away from the landfill. The closure cap has a minimum grade of five (5) percent so that stormwater will not pond on the cap and a maximum slope of one (1) vertical to five (5) horizontal which will provide reduced possibilities of slope failure and reduced velocities in stormwater run-off. It is felt that since the site to be graded is slightly greater one (1) acre, the design grades will provide for minimal concentration of stormwater and therefore, minimal erosion potential.

Once the vegetative layer has been established, stormwater run-off will be more representative of its pre-development condition than it is presently. As noted above, the steep slopes will be flattened and a vegetative cover provided. This action will reduce the rate of run-off stormwater as well as the erosion potential.

- 3.13 The schedule for closure is tentative and is as follows:
- | | |
|-------------------------------|-------------------|
| Advertisement For Bids | January, 1986-- |
| Pre-Bid Meeting & Site Visit | February, 1996-- |
| Town Meeting | March, 1996-- |
| Contract Award | May, 1996-- |
| Removal Of Existing Equipment | May, 1996-- |
| Commence Closure | May, 1996-- |
| Closure Complete | August, 1996-- |
| Final Inspection, Payments | August, 1996-- |
| Bonding & Misc. Documents | -- |
| Complete & Accepted | September, 1996-- |

- 3.14. This will be done.

- 3.15. Prior to commencing closure the Owner will remove all existing equipment, buildings, miscellaneous waste not to be disposed of on site, etc. As this removal is ongoing, the bidder will be able to commence the survey layout and installation of wetlands protective flagging or fencing. In addition to this the Bidder will install erosion control and provide protection for monitoring wells, piezometers and survey control points. When this work has been completed, the cleanup of the waste adjacent to the old roadway and rough grading of the existing on-site materials would commence. Once all equipment, etc. associated with the existing transfer station has been removed, rough grading and compaction of existing waste materials is to proceed. Until such time as the contract fencing has been installed, site security will be provided by the existing fencing system.

After the existing waste materials have been shaped and compacted, an eight (8) inch layer of 10^{-3} cm/Sec intermediate cover will be placed and compacted. All slopes and grades will conform to the typical cross-section shown on Sheet 5 and the grades shown on Sheet 4. Following conformance with the plans, a two (2) foot compacted layer of 10^{-5} cm/sec glacial till (till) shall be placed. The till layer shall be placed in four (4) uniform six (6) inch lifts and compacted to ninety five (95) percent of maximum density per ASTM D-1557. Lift depth may vary depending on the work effort required to reach the required density. Random compaction testing will be performed during the placement of the till cap to assure conformance with the plans and specifications. Throughout the closure process special attention is to be paid to protection of the monitoring wells and piezometers as well as maintenance of the erosion control.

In order to provide protection for both the gas vents and probes, the gas vents and probes will be installed after the placement of the till layer. There shall be two (2) gas vents and three (3) gas probes installed at the locations shown on Sheet 4 and in accordance with the details shown on Sheet 5. Following the installation of the gas vents, the intermediate cover and the till cap shall be replaced and recompacted to the required density.

Once the basic capping system is in place, the placement of the topsoil layer will follow along with the installation of the permanent fencing. Throughout the grading process of all critical junctions (top of waste, intermediate cover, till cap and topsoil) grades will be checked for compliance with the plans. After the topsoil grades have been confirmed, all exposed areas shall be seeded, fertilized, limed and mulched.

Prior to leaving the site, all erosion control devices that are to remain after construction will be checked and repaired or replaced as needed. All excess materials and/or equipment shall be removed from the site. Once conformance with the plans and specifications have been confirmed, the project will be closed out.

- 3.16. With the exception of brush and yard waste, the landfill has been closed since 1987. The brush has been burned and the yard waste has been composted. It is also believed that most, if not all, waste buried on site has decomposed and the chance of gases reduced considerably. This is further supported by the fact that most household waste disposed of to-date has been burned. During closure, two (2) gas vents and three (3) gas probes will be installed for both venting any remaining gases and providing monitoring sources should any gases not be vented. Based on the rural environment the landfill is in, it is believed that there will be no affect on the surrounding properties. Should there be some indication of gases being released, the probes will be available for verification.

It has been agreed by DES Air Resources in a letter dated July 31, 1995, that air emissions should not be a concern at this time. Based on these considerations, a formal gas monitoring program has been established. It was further agreed with the Division that the Owner would install gas probes so as to monitor the site in the future, should it become necessary.

- 3.17. (a) After closure has been completed, it is understood that the site shall be monitored and inspected for a period of thirty (30) years unless a permit modification is approved in accordance with Env-Wm 306 and the criteria noted in Env-Wm 2507.05 (a).

- (b) Post-closure monitoring inspection and reporting will commence following closure in accordance with 3.1.g above and the groundwater permit number GWP-800631-W-00 dated 9/15/95. The purpose of this program will be to insure the integrity of the capping system and no degradation of the surrounding environment. At a minimum, the site shall be inspected for any destruction to the capping system, erosion, damage to the groundwater monitoring wells, gas probes, site security, etc. During the site inspection, site grades shall be checked for any settlement that may have occurred. Should it be found that the gas emission of methane or other explosive gases are being released, additional monitoring will be established.
- (c) The site shall be inspected semi-annually for any degradation of the capping system, condition of the monitoring wells, gas vents and probes, vegetative cover and site security.
- (d) The Owner will file an annual report summarizing the findings on-site and will note any and all deficiencies.
- (e) The division will be notified of any damage or sub-standard performance within one (1) working day when such an occurrence takes place.
- (f) Drawings reflecting any changes or alterations to the construction drawings will be submitted to the Division after closure is complete.
- (g) At the present time, the property is owned by the N.H.D.O.T. The property may, in the future, be deeded to the Town, at which time this notification can be filed with the deed.
- (h) In closing the landfill, the Town will comply with the conditions of Env-Wm 306.
- (i) Any remedial work necessary on-site will conform to the standards set forth in Env-Wm 2507.04.