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**STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTE MANAGEMENT DIVISION
SOLID WASTE MANAGEMENT PROGRAM**

**PROCEDURE FOR A COMBINED
SOLID WASTE DISPOSAL FACILITY CERTIFICATION
AND
INDIRECT DISCHARGE PERMIT**

**Original: March 15, 1998
Revised: February 8, 1999**

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PROCEDURE FOR A COMBINED SOLID WASTE DISPOSAL FACILITY CERTIFICATION
AND INDIRECT DISCHARGE PERMIT**

Introduction:

The Waste Facility Panel of the Environmental Board has ruled that discharges from unlined landfills must be found to be in compliance with the Vermont Water Pollution Control Act (10 V.S.A. Chapter 47). To demonstrate compliance, the solid waste disposal facility must be permitted under the Indirect Discharge Rules, effective February 29, 1996, as well as being certified under the Solid Waste Management Rules, effective January 15, 1999. For efficient use of both the staff's and applicant's time and resources, it is appropriate to integrate these two regulatory processes. The majority of the application review and processing would be performed by the Solid Waste Management Program. Under this approach, the result would be the issuance of a solid waste certification that contains the criteria, performance standards, and conditions of an indirect discharge permit.

This document is a description of how the indirect discharge permit and solid waste certification processes can be combined, both administratively and technically. All solid waste and indirect discharge related statutes, rules, and procedures remain applicable and therefore are frequently referenced, but for brevity are not replicated. Readers are encouraged to consult these sources in their entirety as necessary. Although the document is written for use by staff from the two programs, it should also prove useful to prospective applicants.

The following abbreviations are used: Solid Waste Management Program (SWP) and Rules (SWMR); Indirect Discharge Program (IDP) and Rules (IDR).

The procedure is divided into two sections, "Application Processing" and "Technical Review". The Application Processing section is a procedure for administration of the application that conforms with the Solid Waste Management Rules and the Indirect Discharge Rules, and includes an outline of the process. The Technical Review section outlines a method of determining whether the application complies with the technical criteria and standards of the two sets of rules.

This procedure supercedes the March 15, 1998, version of the Procedure for a Combined Solid Waste Certification and Indirect Discharge Permit. These minor revisions were incorporated for conformance with the January 15, 1999, Solid Waste Management Rules.

Section 1: Application Processing

Below is a summary of the requirements for processing an application for certification of an unlined solid waste disposal facility which also is required to obtain an indirect discharge permit. For each step, both program's statutory and rule requirements are listed and a proposed combined process requirement is presented. Specifics may be found in the applicable statutes and rules.

A. Applications Received

It is assumed that applications are received by each program independently. Applicants should be advised that applications should be submitted to the IDP and SWP separately but simultaneously. That way each program can manage the fee.

B. Contents of a Complete Application

For the SWP, a complete application must contain those items found in Solid Waste Management Rule §6-304.

For the IDP, an application must contain the items listed in the Indirect Discharge Rule §14-203(A). This includes forms WR-82 and Schedule I, all data, hydrogeologic studies, final engineering plans, evidence of land ownership or permanent lease, names and addresses of landowners adjacent to the facility and to the point of compliance in the receiving waters, and the application fee.

C. Application Fees

For both programs the application fees are set forth in 3 VSA §2822 and must be included with the application. For the indirect discharge permit there is an administrative fee of \$100, in addition to a review fee of \$0.06 per gallon of daily design capacity (\$235 minimum). The solid waste certification application fee currently is \$0.75 per ton per year for privately owned facilities. Publicly owned facilities are exempt from paying the application fee.

D. Completeness Determination

The completeness determination for the indirect discharge application will be performed by the IDP. The completeness determination for the solid waste application will be performed by the SWP. A complete application package must contain both application forms and all the supporting information required by both sets of Rules.

In accordance with §6-305 (a)(1), the completeness determination is due 15 days from the certification application receipt date. The IDP has no specific deadline in rule, therefore the 15 day deadline in the Solid Waste Management Rules will govern.

Once the application is found to be administratively complete, the application will be publicly noticed as outlined in (E) below. From this point forward, the entire, complete application should be kept with the SWP.

E. Notice of Application and Public Participation

As part of the completeness determination both rules require approval of a “plan” for noticing the application. The public notice plan must meet the SWMR requirements of §6-304(h) and the IDR requirements of §14-304(A)(1)(a) - (f). Essentially, the information to be contained in the plan is the same under both programs: a general project description including the facility type, location, wastes to be managed, and the proposed indirect discharge and the need for an indirect discharge permit. The notice must include the applicant’s name and address, the DEC contact’s name, address and telephone number, and the notice must set forth the review process and opportunities for public comment.

The notice is sent by the applicant to the parties listed in SWMR §6-304(h)(1)(A) - (D) and, in conformance with IDR §14-304(A)(2), the notice is also sent to the town clerk for posting, and to the town planning commission.

The notice must be published by the applicant in newspapers within 14 days of an application being determined to be complete. For a combined indirect permit and solid waste certification, the notice should be published in a local daily newspaper, and if available, a local weekly newspaper.

F. Develop and Publish Draft Findings of Fact

This is unique to the SWMR. For the combined process, the SWP should do the normal Findings of Fact (FOF) but also include findings on the indirect discharge as well. This way the public has a complete description of, and can provide comment on, all aspects of the project. Under the SWMR, the comment period closes 15 days after publication. This is inconsistent with the indirect discharge rules in that when the application is noticed the public is encouraged to provide written comments with no specific end date. The suggestion would be to not have an end date for public comments. Comments may be submitted through the end of the draft certification comment period and the public notice of the application needs to make this clear.

G. Technical Review

The indirect discharge permit review is performed by the SWP with assistance from the indirect permit program staff. The technical review commences upon issuance of the Findings of Fact. See “Section 2: Technical Review” of this document for details.

H. Draft Certification/Indirect Discharge Permit or Denial

If the project does not conform with the SWMR or the IDR a written denial is sent to the applicant with reasons for denial. If the project conforms to both sets of rules, the following documents are prepared and noticed for public comment: a draft certification incorporating the indirect discharge permit, and a fact sheet. The fact sheet sets forth the basis of the draft certification and addresses any public comments on the draft findings of fact.

A copy of the draft certification and fact sheet is sent by the SWP to the applicant, municipalities, solid waste districts, planning commissions, and other state agencies who received notice of application or draft FOF. The draft certification and fact sheet must also be sent to any person who in writing requests the documents.

The issuance of the draft certification must be noticed to all adjoining landowners to the applicants land, and to landowners adjacent to the surface water point of compliance. These individuals generally are not sent the draft certification and fact sheet unless the documents are requested. The notice must also be placed in the newspapers; once in a local daily newspaper and once in a weekly newspaper. The notice may also be posted in public offices, municipal offices, and public places close by the indirect discharge.

The notice must contain:

- The name and address of the applicant, the name, address, and telephone number of the DEC contact person (SWP staff person), and (if different) the DEC address and telephone number for information and copies of documents;
- a brief description of the facility and operations resulting in an indirect discharge, including the name of the receiving water and location and volume of the discharge;
- an explanation of the combined solid waste certification and indirect discharge permit process;
- an explanation of the opportunity for public input; and
- the process for requesting a public hearing;

I. Comment Period

The SWMR require a 22 day minimum comment period after the draft certification is issued. The IDR require a 30 day minimum public comment period. Therefore, for the combined process, a 30 day minimum will be the standard.

J. Public Information Meeting

The secretary must hold a public meeting, if requested within the 30 day public comment period, by petition from the representative of an affected municipality or state agency, or by 25 or more citizens from within the project municipality or adjacent municipalities. A public meeting may also be held if there is “significant public interest”, or upon the Secretary’s own motion. If held, it requires a 30 day notice prior to the meeting, and then a ten day comment period after the meeting

The SWP will be responsible for noticing and arranging the meeting. Representatives of both programs will likely attend.

K. Issuance or denial of the Certification/Permit

Both sets of Rules require a responsiveness summary prior to the issuance of the final permit or certification. The IDR requires one if the permit is denied at this point. The elements of the responsiveness summary are the same for both programs so there should be no significant change to the way the SWP has done this in the past.

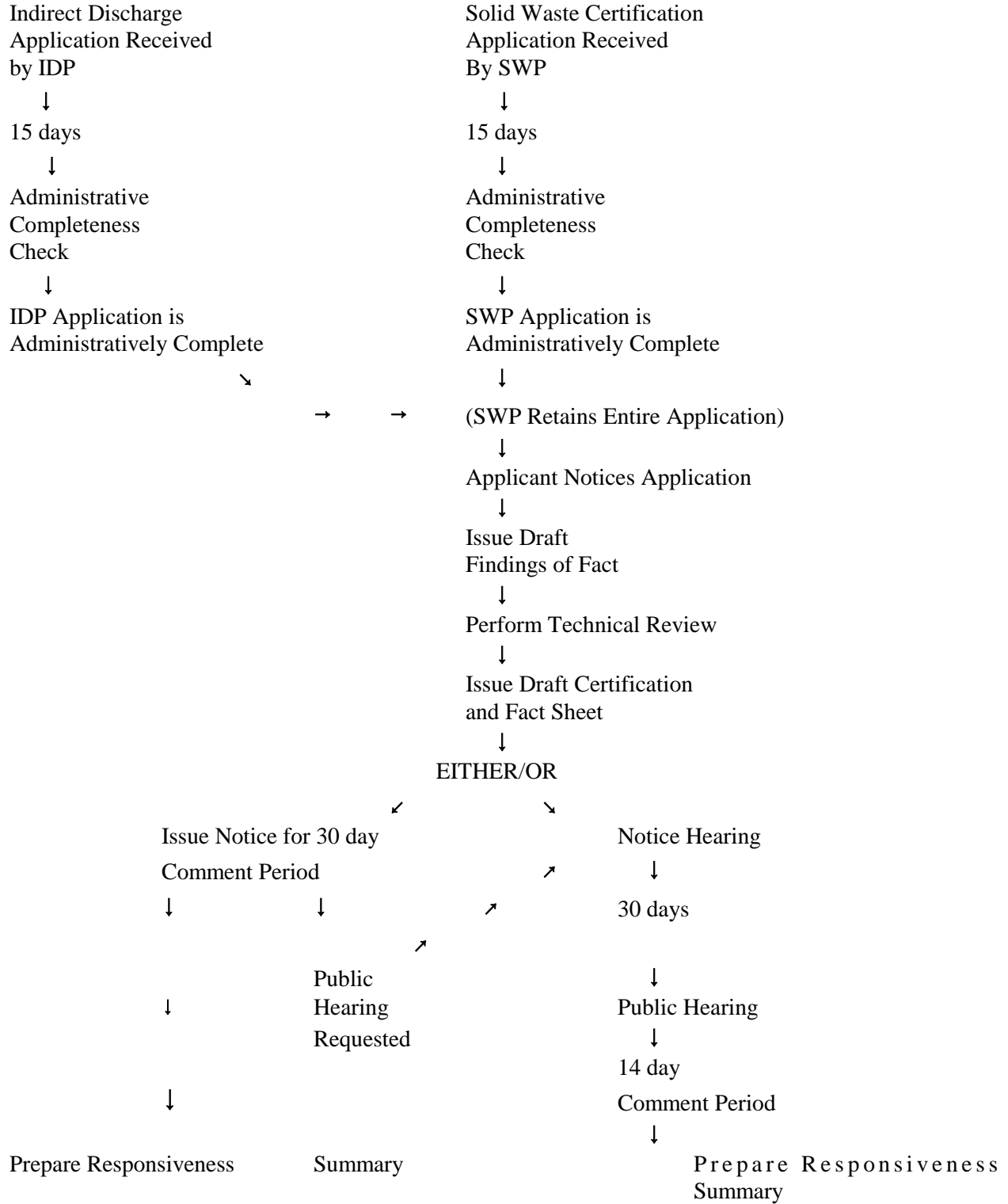
The final document issued to the permittee will be titled “Combined Certification of Solid Waste Facility and Indirect Discharge Permit.” The document will include both the Solid Waste Certification number and the Indirect Discharge Permit number as well as the Project Identification Number (PIN).

The document will include statements on the signature page (or elsewhere in the document) that the application has met the requirements of the Solid Waste Rules and the Indirect Discharge Rules.

L. Appeals

Both programs require that an appeal be filed within 30 days of issuance of the certification or permit. The Waste Facility Panel has exclusive jurisdiction to hear appeals of a certification for a solid waste facility. The Panel has ruled that it has exclusive jurisdiction even where the solid waste facility was required to receive an indirect discharge permit. See, in re: Putney Paper, Inc., #WH-600-WFP, Order, November, 8, 1996.

Combined Solid Waste Certification and Indirect Discharge Permit Application Process Outline



Section 2: Technical Review

Since there is no end date for public comments on the Findings of Fact, “technical review” may begin immediately after issuance of the FOF.

Consolidating the applicable provisions of the indirect discharge permit process into a solid waste facility certification should not be particularly difficult. In most instances, applicants will be required to submit additional technical information, or present the technical information differently than if an indirect discharge permit was not required. The Solid Waste Program, with the assistance of the Indirect Discharge Permit Section, will evaluate the information as part of the “technical review” of an certification application. If the information presented complies with the applicable indirect discharge statutes and rules, this finding can be made, and any subsequent conditions may be incorporated into the certification.

The following is only an outline of the review process. Each section also has listed in italics the sections of the Indirect Discharge Rules, the Solid Waste Management Rules, the Landfill Design Procedure (LDP), and the Groundwater Monitoring Procedure (GMP) that apply to that particular aspect of the process. These documents are available from the Solid Waste Program (241-3444) and should be consulted in their entirety as necessary.

Prior to the submittal of documentation as part of the solid waste certification application, the applicant should submit a Quality Assurance/Quality Control plan for the overall process of evaluating the impacts on surface water. The QA/QC plan would be reviewed and conceptually approved by staff of the indirect discharge program and solid waste program as a form of pre-application technical assistance. The QA/QC plan should outline how the discharge flows, receiving stream flows, leachate quality, and stream background water quality will be determined.

For those facilities that must obtain an indirect discharge permit, the “Siting” or “Design” portions of a solid waste certification application must contain the following documentation:

- A. A determination of the volume of the discharge. (*LDP Step 1*)
 1. For proposed or existing unlined landfills, the leachate volume is probably best estimated by the use of the HELP model. The model must be based on the point in time that the configuration of the landfill produces the greatest quantity of leachate. This maximum rate of leachate generation, in gallons per day, is utilized in subsequent indirect discharge calculations, and likely will be used to demonstrate compliance with the Groundwater Rules.

B. A determination of discharge quality. (*LDP Step 1, Step 5, and Step 6; GMP Sections III(A), III(B), and III(C); IDR §14-B-201, §14-B-206, and §14-C-1000*)

1. Data Acquisition

- a. In order to assess the impact of a discharge on a surface water, the quality of the discharge as it enters the water needs to be determined. To do this, site specific leachate data are preferable, but obviously are difficult to obtain for unlined landfills. Data from lysimeters installed at the base of the landfill are useful, as are downgradient groundwater monitoring data. If site-specific leachate, lysimeter, or down gradient groundwater data are obtainable, at least six samples from each location are recommended. To be worthwhile, monitoring well data should be representative of groundwater which is most affected by the landfill. If the existing data set is incomplete and additional sampling is necessary, it must be performed in accordance with a pre-approved QA/QC plan that minimally includes sampling parameters, locations, frequencies, and analyses. Groundwater sampling methodologies contained in the Solid Waste Program's "Groundwater Monitoring Procedure" may be referred to in the development of the QA/QC plan.

If the data set has between six and thirty values, the data must undergo a statistical evaluation to determine the 5% exceedence value of each parameter. The 5% exceedence value represents that concentration which is expected to be exceeded only 5% of the time. The required statistical evaluation is detailed in IDR Appendix B, §14-B-206, pages 9 - 12.

If the data set is large, greater than 30, and has been accrued over a lengthy period of time, the 5% exceedence computation may be used, but may be modified to account for obvious trends. For example, if after long-term monitoring there is evidence that the concentrations of contaminants are decreasing, consideration may be given to using the average of the results, or of discounting earlier results which are not representative of current conditions. Conversely, if recent data indicate increasing contaminant concentrations, greater emphasis may be placed the more recent results.

- b. If site-specific data cannot be obtained, best possible default leachate concentrations must be utilized. For municipal solid waste (MSW) landfills, the contaminant concentrations found Table A of the Solid Waste Program's "Landfill Design Procedure" are recommended. For construction and demolition waste (C&D) landfills, the concentrations of parameters found in the 1994 Gershman, Brickner, and Bratton report multiplied by a 1.5 factor of safety is recommended (See Appendix A). For other wastes, data from similar facilities, other states' solid waste programs, and other sources of information should be consulted.

2. Discharge Quality

- a. The 5% exceedence value, or other agreed upon value (from 1.a above), or the default concentration (from 1.b above) of each parameter is utilized as the concentration of the discharge in the mass-balance equation outlined in Step E.
- b. Alternatively, the applicant may account for the physical, chemical, and biological processes that occur to leachate in the surface environment. Site-specific leachate, lysimeter, or groundwater data may be used as inputs to an analytical model to simulate the expected fate and transport of the leachate both vertical to groundwater and horizontally to the point(s) of surface water discharge. The model selection and input parameters must be correlated to the analytical model used to demonstrate compliance with the Groundwater Rules. The predicted concentrations of contaminants at the point(s) of discharge are then used in the mass-balance equation outlined in Step E.

C. The Establishment of Stream Flow. (*IDR §14-404(C)*)

1. Where a parameter is listed in both Appendix C and Appendix D of the Vermont Water Quality Standards (VWQS), the most stringent of the two standards applies. For contaminants listed in Appendix C, compliance with standards shall be established at the median annual stream flow. For contaminants listed in Appendix D, compliance with standards shall be determined at the 7Q10 stream flow. If Total Dissolved Phosphorus or Nitrate/Nitrite are expected to be parameters of concern, the standards apply at the Low Median Monthly Flow.

There are a number of methods of determining the appropriate stream flows. Stream flows may be determined by comparing the subject stream with a gaged stream of a similar nature, taking into account watershed size, geologic and topographic setting, and any other available factors. Alternatively, the applicant may use a conservative cubic feet per second per square mile value, which has been accepted by the Program. Further, the applicant may provide actual stream flow measurements and establish a statistical relationship with a USGS gage. The Planning and Engineering Section of the Water Quality Division must be consulted on specific stream flow determinations.

Stream flow data for gaged streams is available from the USGS Internet site (<http://h2o.usgs.gov/swr/>).

D. The Determination of Existing Water Quality.

1. In the majority of instances (see (2) below for the exception) existing water quality of the receiving stream must be determined to assess the impact of a discharge. The applicant

must have analyzed a minimum of ten instream samples collected from the compliance point for all potentially impacted streams. Conceivably, if the landfill in question is an existing facility where surface water sampling has occurred, some or all of the historic data may be used to characterize the water quality. If additional sampling is necessary, it must be performed in accordance with a pre-approved QA/QC plan. The samples must be collected during the “summer season”, June through October, according to one of two procedures contained in IDR, Appendix B §14-B-208(B)(1). The interval between sampling events must be greater than four days.

2. An applicant may attempt to mathematically demonstrate that the discharge will not violate VWQS regardless of the background contaminant concentrations of the receiving stream. If successful, the applicant would not be required to determine the chemistry of the receiving stream. To make this demonstration an applicant would assume that the background concentrations of contaminants in the stream are at the VWQS in the ensuing mass-balance equation. If the additional introduction of contaminants by the discharge does not cause an increase in the assumed concentrations, using accepted practices of significant digits, the discharge is presumed to be in compliance.

E. The Determination of Compliance (*IDR §14-B-209*)

1. A mass-balance equation is used to determine compliance with the VWQS. Under the assumption that the discharge is occurring, the outcome of the mass-balance equation is the calculation of an instream concentration of contaminants. The resulting instream concentration must be less than or equal to the VWQS for each parameter for compliance. The mass-balance equation is:

$$\frac{((E_c)(E_q) + (D_c)(D_q))}{(E_q + D_q)} = \text{Resulting Instream Concentration}$$

Where: E_c is the existing receiving water concentration

E_q is the appropriate flow at the point of compliance and release rate

D_c is the effluent concentration

D_q is the discharge flow

A discussion of the results of a successful determination of compliance should be included as a “Finding” in a solid waste facility certification. The incorporation of the indirect discharge permit process into a certification does not necessarily signify that additional certification conditions are unnecessary. There may be the need to perform or strengthen a surface water monitoring program, or to include statistical evaluation of the surface water sampling results.

- F. The certification must be signed by a person who has been delegated the authority to sign certifications on behalf of the Secretary of the Agency of Natural Resources. Where a solid waste certification is combined with an Indirect Discharge Permit, the certification must be signed by both the Waste Management Division Director and the Wastewater Division Director.

Effective Date

This Procedure is effective upon the date of Signature.

Signature

Signature

Canute Dalmasse, Commissioner
Department of Environmental Conservation

3/15/98
Date