November, 1998

SHB 2960 Report
Washington's
Solid Waste Permit System

Supplementary Study of the Solid Waste Permitting System
(Substitute House Bill 2960)

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In Consultation With
the
Washington Solid Waste Advisory Committee
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Executive Summary -- The Recommendations

Substitute House Bill 2960 is a study bill passed by the 1998 Legislature as a supplement to an earlier "ESHB 1419 Report: Washington's Solid Waste Permit System", January 1998. SHB 2960 directs the Department of Ecology to look at three additional issues of the current solid waste permit system and report back to the Legislature by December 1, 1998. This report recommends the following:

A. **The permit-by-rule mechanism would not be beneficial to the solid waste regulation of either compost facilities or material recovery facilities (MRFs).**

The regulation of compost facilities should be improved through the promulgation of performance oriented standards in the solid waste rules, ch. 173-304 WAC.

B. **"Clean" material recovery facilities, handling source separated recyclable materials, should be excluded from permitting as authorized by the recently passed ESSB 6203.**

Facilities where recyclable materials may be extracted from mixed solid waste should be considered transfer stations and permitted as such. This approach should be consistent with the local solid waste management plan.

C. Set performance standards in the Minimum Functional Standards Regulations.

To promote composting as directed by the waste management priorities, the Minimum Functional Standards (MFS) should emphasize performance standards not only for odors but also for other factors as well, such as the quality of the primary product, the composted material. (The Department should use the existing compost quality guidance already developed as a starting point for the standards.) The Department should review the setting of composting standards in a manner that is consistent, to the degree possible, with approaches taken with landfilling, transfer stations and incinerators in the Minimum Functional Standards.

D. **Best available control technology (BACT) should not be used to set standards for composting facilities.**

BACT is specified in some local air quality control regulations, BACT should remain as a technique used by local air quality regulators, not solid waste regulators. BACT is much too specific and prescriptive a mechanism to address the rapidly developing technologies of composting processes. It is also highly dependent on the judgement of the individual regulator. Composting facilities are facilities that require individual permits based on local conditions and controlled by operating standards set in the Minimum Functional Standards.

E. **Development of clearly written performance standards for compost facilities and clear permit exemption language for clean material recovery facilities should address the permit consistency issue fully.**

Consistency of permits is an issue that is bound to arise when 33 different health districts regulate solid waste facilities. Much of the difference in solid waste permitting that may occur is the result of indistinct or confusing language of the current solid waste rules. Ch. 173-304 WAC, the Minimum Functional Standards, was written over a decade ago before compost and material recovery facilities played such a prominent role in the solid waste management.

F. Other recommendations:

Operator certification of all compost facilities should be required. This could be achieved through an amendment of the law, ch. 70.95 RCW that currently requires certification for operators of landfills and incinerators.

The MFS should define the terms "clean MRF" and "dirty MRF". As discussed in Section V, this would help clarify when a MRF needed to be permitted.

Reporting of all MRFs should be required as part of the SW&FA annual report, "Solid Waste In Washington State". This could be done in conjunction with MFS changes to the definitions discussed above. Permitted composting facilities are already required to report.

I. Background of SHB 2960, the Relationship to ESHB 1419 and to the newly Passed SSB 6203

This study is an outgrowth of an earlier study required by ESHB 1419, which Ecology submitted to the Legislature in December of 1997. That study was a comprehensive look at the permitting structure for solid waste facilities including facilities that re-used and recycled solid wastes. It suggested several new mechanisms to managing solid waste including the permit exemption process for beneficially used solid waste and the deferral of solid waste permitting where other environmental permits would be sufficient to protect air and water quality. The Legislature incorporated both of these mechanisms into the law during the 1998 legislative session producing ESSB 6203.

The Legislature also wrote a statute requiring contamination levels be established for solid wastes being used as fertilizers and soil amendments by the agricultural sector on food crops (SSB 6474).

The Legislature did not incorporate recommendations on the use of a permit-by-rule[1] or a general permit[2]. Nor did either the Legislature or the 1419 study address the issue of Best Available Control Technology nor of consistency in permitting. These themes were raised by events taking place outside of Ecology. Interested parties raised these issues in the form

[1] A permit-by-rule is a paperless permit that allows coverage by an owner or operator who complies with conditions spelled out in the rule.

[2] A general permit is one permit written for and issued to a category of permittees, statewide, whose operations, emissions, activities, discharges, or facilities are the same or substantially similar. Permittees must apply for coverage under a general permit which would be issued by Ecology.

of a study bill, which became SHB 2960. The reader may find it useful to read the letter of May 19, 1998 in Appendix A to get a better perspective from one of the chief legislative sponsors of the bill. This study is considered to be a supplement to the 1419 study, extending and making recommendations that may allow the Legislature to act further to address the needs of an evolving solid waste management system.

II. Partial Text of SHB 2960

"NEW SECTION. Sec. 2. The Department of Ecology, in conjunction with the State Solid Waste Advisory Committee, shall continue to refine their recommendations produced pursuant to the comprehensive review of the state's solid waste system required under section 6, chapter 213, Laws of 1997. The department shall submit a report containing the refined recommendations to the appropriate legislative committees by December 1, 1998. In refining these recommendations, the department shall address:

(1) The applicability of a permit-by-rule process for solid waste recycling facilities;

(2) Consistency of permitting for regional, multi-jurisdictional recycling facilities;

(3) The application of best available control technology on a consistent basis, so that similar recycling facilities are subject to the same requirements; and

(4) Methods of integrating facility standards with the recommendations from the study."

III. The Problems Being Addressed in this Study

A. Consistency in Permitting and Permit Conditions

SHB 2960 has asked Ecology to study the issue of consistency in permitting especially as it relates to regional multi-jurisdictional recycling facilities. For purposes of this study Ecology is defining consistency as "permit" consistency -- i.e. when permits are issued, how permits are issued and what requirements are placed in a solid waste permit. However there is the potential for confusion in the reader's mind about the term "consistency" since it is used in a different context in the existing solid waste law, ch. 70.95 RCW. RCW 70.95.185 requires Ecology to review each solid waste permit that has been issued "to ensure that the proposed site facility conforms with ……. the approved comprehensive solid waste management plan". For purposes of this study, the "permit-to-plan" consistency is not the objective of the study bill. Representative Gary Chandler, one of the legislative sponsors of SHB 2960, supports the concept of limiting this study to reviewing "permit" consistency in his letter of May 19, 1998:

> "One of the key points in HB2960 is the desire to provide greater consistency in the permit requirements for these facilities. (Emphasis added) We need more certainty in the requirements and processes, so the private sector can make rational investment decisions and provide facilities that meet environmental requirements. The two specific study items are geared toward getting more consistency and certainty in the permit process. Any additional recommendations to improve consistency would also be very helpful."

With 33 jurisdictional health departments, each with its own ordinances and solid waste policies, the issue of permit consistency has special relevance to our state:

- To what extent does the county-to-county solid waste permitting lead to widely varying permitting strategies and permit conditions?
- To what extent does county-to-county variability help serve a solid waste strategy that reflects Washington State with its widely varying climate and landforms?
- To what extent have various interpretations of the state solid waste rules lead to inconsistencies as to whether a permit is or is not required?

A case in point is woodwaste. Early in 1996, a group of woodwaste handlers, composters and marketers approached Ecology about perceived inconsistencies in how the current rule permitted recycling facilities. The minimum functional standards treated identical piles of woodwaste differently depending on their intended end use. If the woodwaste was being stored before recycling, it required a recycling permit, which meant a fee and the delay while the permit was processed. But if the woodwaste was being stored in piles "temporarily" before being burned in a hog fuel boiler or used as a raw material, it did not need a permit. This is one of the numerous examples where identical waste handling practices have different permitting requirements.

Other differences arose over how broad the exemptions to wood debris resulting from the harvesting of timber and whose disposal is permitted under the State Department of Natural Resource law were meant to be.

A material recovery facility is considered a recycling facility. Receiving "source-separated recyclable materials" qualifies it as a recycling facility. It is more lightly regulated than a transfer station receiving mixed domestic or commercial waste and doing some separation of valuable material from solid waste headed for disposal. It is unclear currently at what level a waste stream (What percent garbage?) qualifies the facility as a recycling facility.

Consistency Example: When does a MRF need a permit?

Waste Control is a recycling and solid waste collection company in Cowlitz County. It is considered a "clean" material recovery facility serving several jurisdictions.[3] The household solid waste is collected and disposed of at the Cowlitz County landfill. The recyclable material is source-separated at the households and businesses and transported to the Waste Control recycling facility for grading and preparation for market.

[3] A "dirty" MRF is a facility that picks or sorts recyclable materials from mixed municipal solid waste (MMSW) --- also referred to as municipal solid waste (MSW). A "clean" MRF is a facility that sorts and removes impurities from "commingled" recyclable materials (paper, cans, glass, etc). Some municipalities require single commodities to be placed at the curbside; facilities that remove impurities from single commodities are also called "clean" MRFs.

The recyclable materials are tipped onto an impervious surface that is fully enclosed within the material recovery facility (MRF) building. The materials will be conveyed onto a pick line and separated into like products such as recovered newsprint, ledger paper, aluminum cans, plastic, etc. The final step is to prepare the materials for shipment to market. In addition to the tip floor, the pick line and the balers etc. are operated within the walls of the enclosed facility. Clean processed market-ready material is occasionally stored in an outside, security fenced area, on an impervious surface. Materials associated with a fire or degradation risk, like baled mixed waste paper, are stored within the enclosed facility.

Soon, the facility will have separate tip-floor bays receiving singular materials such as rolled paper, conveyed and processed for quality. Material could be upgraded by moving it from the tip floor to the pick line, either to quality sort, or just to remove the residuals. If the sort improves the value, it will be utilized, but if value is not added, the material will just be marketed as collected (since all markets allow for some contamination). **While Cowlitz County and Ecology pursued a permit for this type of facility, a similar facility in Clallam County is not required to have a solid waste permit.**

B. Application of BACT to Control Odors From Compost Facilities: Rising public concern with composting odors.

In response to increasing emphasis on diverting organic wastes and especially yardwaste from landfills, private enterprise has responded to encouragement from government to build and operate compost facilities. Some facilities have grown quite large receiving yard waste from an entire county, or multiple counties accepting several hundred tons of raw material daily. Compost operators have employed widely varying technologies including open-air piles called windrows either turned or unturned, and enclosed vessels (in-vessel composting). The typical compost facility has been designed to accept yard waste including grass clippings and brush; wood waste is typically added as a bulking agent to increase airflow, control moisture and encourage aerobic decomposition. Along with newer technologies and increasing size, managing and operating so much material has sometimes presented problems including the emission of offensive odors.

Odor Example

An example of such problems is a regional yard waste compost facility near Puyallup. Like once remote landfills, the area around the facility was being enveloped by urban sprawl. As the supply of yard waste grew faster than capacity at the site, the inventory of yard waste at the site increased and with it, odor complaints from nearby residences. Much of the odors occurred when loads of grass clippings were exposed to the air upon delivery to the site or turning of the compost piles. The company took steps to correct the problem, but these measures were too late to stop the public from appealing to political leaders for the solution. The facility was forced to close. **Would the application of a BACT standard have addressed the level of technology being used and prevented the development of odor problems?**

IV. Scope/Methods of this Study

A. Rationale for limited scope.

The authors of the legislation, SHB 2960, have made it clear that their intent was not to develop an extensive examination of these issues. Rather they felt that the permit-by-rule and BACT deserved additional study within the context of consistency. The authors were particularly interested in multi-jurisdictional, regional recycling facilities, which helped narrow the choice of example facilities to compost facilities and material recovery facilities.[4]

B. Facility and Waste Types

i. Material recovery facilities (MRFs) are facilities that process wastes/recyclable materials collected from households and commercial businesses into usable and marketable commodities such as glass, aluminum, paper, cardboard, etc. Incoming recyclable materials may be either commingled (mixed) or pre-sorted (separated) into commodities. Facilities handling these source-separated recyclable materials are called clean MRFs.

Facilities that take mixed municipal solid waste and remove recyclable materials usually off the tip floor or from on a "pick" line, may be referred to as "dirty" MRFs. Dirty MRFs are often associated with transfer stations that recover a relatively minor fraction of recyclable materials from incoming mixed municipal solid waste destined for disposal. While some large industries may have material recovery facilities (for large forest product complexes or demolition/construction material recovery facilities), this study focused on the more common and similar MRF handling household materials.

ii. Compost facilities promote natural decomposition of organic material using either oxygen-rich or oxygen-poor processes. These processes vary from simple static outdoor piles, and windrows (turned piles), to more complex in-vessel (containerized) composting methods. Compost includes yard waste, wood chips, farm animal wastes and/or food waste found in agricultural, commercial and household waste streams.

C. Methods

i. Interviews: Staff of the Department of Ecology interviewed many affected parties and interest groups to gain their expectations and views on the topic of the study. These interviews are captured in summary form in Appendix B of this report.

ii. Facility visits: Staff visited one material recovery facility and numerous compost facilities to gain some familiarity of the differing technologies currently being used in the state.

iii. Focus sheets: Ecology issued a focus sheet in June to let the interested public know about the course and progress of the study. See Appendix C.

iv. Public meetings: Ecology (will have) conducted several public meetings across the state to gain additional perspectives on the issue of the legislation. Correspondence received during the course of this study is included in Appendix D of this report.

v. Review of existing permits: To explore the current permitting of compost facilities, the staff obtained copies of compost permits and tabulated their common features,

[4] The findings of these studies could be applied to other types of solid waste facilities as well.

as presented in Table 1 in the text. Since most MRFs were unpermitted, no attempt was made to compare features of the material recovery system permits.

V. Discussion of Current System

A. Solid Waste Permits and Local Comprehensive Solid Waste Plans

Permits are a common tool used throughout government to ensure that activities are carried out or conducted in a manner that conforms to an established norm, standard, regulation or law. State and local governments issue many different types of permits that control environmental and human health impacts. Local comprehensive solid waste plans typically create the reference point for using permitting activities, especially at the local level.

The law governing the environmental aspects of solid waste management plans and permits is chapter 70.95 RCW, Solid Waste Management Reduction and Recycling. It requires local governments to adopt local comprehensive solid waste management plans, and to provide a permitting mechanism to ensure that solid waste activities allowed in each county conform to statewide minimum functional standards. It establishes local jurisdictional health departments and districts as the bodies with the authority and responsibility over solid waste permitting. According to the law, solid waste permits must conform to the approved comprehensive solid waste plan.

The law also makes Ecology responsible for the preparation and periodic review and revision of the state solid waste management plan. The state plan allows "local governments revising local comprehensive solid waste plans "…[to] take advantage of the data and analysis in the state plan." Ecology's role in the local solid waste planning process is to work cooperatively with local governments during plan development and to provide technical assistance to cities and counties. Ecology reviews and comments on preliminary and final drafts of local solid waste management plans, plan revisions and plan amendments for conformance with applicable state laws and regulations and approves or disapproves them. Ecology also reviews all permits for solid waste disposal sites or facilities issued by jurisdictional health departments for consistency with local plans.

Two rules govern solid waste management: chapter 173-304 WAC, Minimum Functional Standards for Solid Waste Handling[5] and chapter 173-351 WAC, Criteria for Municipal Solid Waste Landfills. This report will not address chapter 173-351 WAC, since it deals only with the limited universe of municipal solid waste (MSW) landfills and which requires individual permits for each landfill.

Ch. 70.95 RCW apportions responsibility for solid waste management among citizens, local governments and the state. This can be illustrated by the responsibilities for recycling:

[5] Solid waste handling is defined as "the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from solid wastes or the conversion of the energy in solid wastes to more useful forms or combinations thereof."

- Citizens are responsible for minimizing wastes and separating recyclable or hazardous materials from mixed waste.
- Cities and counties have primary responsibility for solid waste management; and for developing and carrying out aggressive and effective waste reduction and source separation strategies. They must develop local comprehensive solid waste management plans and adopt regulations or ordinances governing solid waste handling.
- State government's responsibility is to ensure that opportunities and incentives to recycle are available to all persons in both rural and urban areas, including nonresidential waste generators such as commercial, industrial, and institutional entities.
- State government is also responsible for setting the technical standards for solid waste facilities and to create the institutional structure of the permitting system – which is the subject reviewed in this report.
- Finally, it is the responsibility of city, county, and state governments to provide for a waste management infrastructure to fully implement waste reduction and source separation strategies, and to process and dispose of remaining wastes in a manner that is environmentally safe and economically sound.

B. Scope and Content of Permits

Once the local plan is approved, any solid waste handling must be done under permits from the jurisdictional health department or district. Virtually everything is subject to the site-specific permitting process, regardless of the level of risk to human health and the environment.

Jurisdictional health departments may regularly inspect solid waste handling sites, such as recycling drop boxes. Facilities not in compliance with standards and permits may be granted variances only when the public health and environment are not endangered, or compliance would produce hardship without equal or greater benefit to the public. However, as a matter of policy since 1991, Ecology has not advocated that variances be used routinely. The health department or district can impose penalties if the operation violates the terms and conditions of the permit and endangers the public health.

Ecology has established engineering and design requirements regarding location and operation of many types of handling facilities, such as landfills, transfer stations and drop boxes. Some facilities also have closure and post-closure financial assurance requirements. These standards must be met before an owner or operator receives a solid waste permit.

Only two types of sites and nine types of materials are exempted from this process:

Sites

- Single family residences and single family farms
- Remediation (cleanup) sites, which are under state or federal corrective action

Materials

- Overburden from mining operations intended for return to the mine

- Liquid wastes whose discharge or potential discharge is regulated under federal, state or local water pollution permits
- Dangerous wastes as defined by chapter 70.105 RCW, Hazardous Waste Management and chapter 173-303 WAC, Dangerous Waste Regulations
- Woodwaste for ornamental uses, animal bedding, mulch and plant bedding, or road building purposes
- Agricultural wastes, limited to manure and crop residues, returned to the soils at agronomic rates
- Clean soils and clean dredge spoils as defined in WAC 173-304-100, Minimum Functional Standards for Solid Waste Handling, or as otherwise regulated by section 404 of the Federal Clean Water Act (PL 95-217)
- Septage taken to a sewage treatment plant permitted under chapter 90.48 RCW, Water Pollution Control
- Radioactive wastes, defined by chapters 402-12 WAC, General Provisions, and 402-19 WAC, Requirements of General Applicability to Licensing of Radioactive Material
- Wood debris resulting from the harvesting of timber and whose disposal is permitted under chapter 76.04 RCW, the State Forest Practices Act

Chapter 173-304 WAC sets standards for non-municipal solid waste landfills, surface impoundments, waste-application-to-land-as-disposal sites, waste piles, incinerators, transfer stations, drop boxes, other treatment sites and recycling facilities. The rule:

- Places the most stringent environmental standards on disposal facilities;
- The next most stringent on storage, treatment, and transfer facilities; and
- The least stringent on recycling facilities and solid wastes stored in piles (for less than three to five years).

C. Specific Requirements for Recycling Facilities

There are a few specific requirements that apply to recycling facilities. These include:

- Annual reporting of waste quantities and types
- Time limits for storage in surface impoundments and piles
  - 50 percent used up in three years
  - 100 percent used up in five years
- Actual or potential threat to contaminate air, water or land could trigger full permitting standards for piles or surface impoundments.
- Inspection allowed
- Must be consistent with the local solid waste plan
- Must comply with other environmental laws

These recycling standards **do not** apply to:

- Composting at single family farms and single family residences

- Facilities engaged in the recycling of solid waste containing garbage such as garbage composting (regulated in the standards as treatment in piles)
- Storage of tires (regulated in the standards as storage in piles)
- Problem waste (also excluded from handling standards)
- Surface impoundments (regulated in the standards as liquid storage facilities)
- Wood waste hog fuel piles to be used as fuel, or raw materials stored temporarily in piles being actively used (50 percent used up rule applies)
- Any facility that recycles or uses solid waste in containers, tanks, vessels, or in any enclosed building, including buy-back recycling centers

D. The Permitting Process

The solid waste permitting process begins when an applicant contacts the local jurisdictional health department or other government entity. Frequently the process begins with the land zoning authorities, which may require a conditional use permit for solid waste activities. The conditional use permit ensures that uses of the land are compatible with surrounding land uses and that such activities are consistent with overall land use planning and orderly development.

Applying for a solid waste permit, a conditional use permit, or other permits triggers another set of procedures under the State Environmental Policy Act (SEPA). Typically, this involves listing by possible environmental impacts from a proposed project, followed by a review on behalf of many government entities. The outcome of this process is to determine whether a "declaration of non-significance" can be made or whether a full environmental impact statement (EIS) must be filed as part of the permit issuance process. Except for incinerators, landfills (or possibly major urban transfer stations), most solid waste projects do not require a full EIS.

The jurisdictional health department or district next reviews a solid waste application for completeness of information before forwarding a copy to the Department of Ecology. Ecology may make recommendations to the jurisdictional health department or district on the nature of permit conditions, before the solid waste permit is issued. The permits are issued for periods of from one to five years and are renewable.

The jurisdictional health department or district then issues the solid waste permit to the applicant. The jurisdictional health department or district also sends a copy of the issued permit to Ecology for review. Ecology's review is limited to the permit's consistency with the local solid waste management plan and the minimum functional standards. Ecology may appeal the permit to the Pollution Control Hearings Board if it determines that the permit is inconsistent.

The process for renewing expiring solid waste permits is similar to the initial issuing process, except that the conditional use permit and the SEPA process need not be repeated.

E. Other Environmental Permits

For purposes of this study, it is important to view permitting also from the context of other permits that owners and operators of solid waste facilities must obtain. This knowledge is important to uncover any duplicative permitting that may add costs and administrative burden to the regulated community without added protection for human health and the environment. (Solid waste facilities must also meet other, non-environmental requirements, such as fire and building codes.)

Solid waste facilities, including recycling facilities, are subject to other environmental permits administered under state law. The regulatory mechanisms might include air quality notices of construction and air operating permits, as well as water quality discharge permits of the National Pollution Discharge Elimination System and the State Clean Water Act. Most facilities handling solid wastes outdoors will need surface water non-point source permits to manage runoff from precipitation. State discharge permits can also be required for facilities that discharge to ground water.

VI. Results of Interviews and Analysis of Permit Reviews

A. Consistency across counties

i. Compost facilities: Ecology interviews disclosed that jurisdictional health departments permitted most compost facilities across the state, not otherwise exempted under the current standards (such as household composting). Given that the existing solid waste rules were written over a decade ago and the increasing scale of compost operations over the past five years , it is not surprising that technologies for compost facilities vary. Adding to such variability is the setting into which rural compost facility owners find themselves as some parts of the state rapidly urbanize around existing facilities. This means that some permits reflect intense pressures to abate odors, vectors and runoff problems, even in some cases leading to facility shutdown.

During the course of this study, Ecology staff collected composting permits for most of the larger permitted composting facilities; the degree of consistency of those permitting conditions was difficult to gauge since the operating plans, which are incorporated into the permit by reference were not available for comparison. Permit status or centralized information on compost facilities was not readily available even in some of the regional offices of the Department of Ecology.

ii. MRFs: Ecology interviews have revealed that many clean MRFs are exempted from the MFS rules because processing occurs inside of a building. See Table 1 for a listing of exempted clean MRFs located in the southwest part of Washington[6]Interviews also revealed that there is a strong perception among the regulated community that handling a recyclable material as a commodity should not require a solid waste permit. The emphasis in the annual report has been on landfills and disposal amounts. Other observations that came out of Ecology interviews included:

[6] Detailed information on the status of MRF facilities was available on ly from the Southwest Regional Office of the Department of Ecology/

a. The need to distinguish what level of "contamination" (i.e. refuse) distinguishes a "clean" MRF from a "dirty" MRF, since the former may be exempted from permitting and the latter is not.
b. The need to insure that recyclable materials stored outside in piles meet the accumulation standards of WAC 173-304-300.
c. Reporting of material recovery facilities even where exempted under the rules needs to be required. The purpose of reporting is to insure that the recycling survey includes all facilities that are recycling and to insure that dirty MRFs are not inappropriately classified as "clean" MRFs and exempted from permitting. Some clean MRFs are started up and operated without the knowledge of jurisdictional health departments and/or Ecology.

Table 1. List of Material Recovery Facilities in Southwest Washington.

(Handling Household/commercial waste)

NAME OF MRF FACILITY	COUNTY LOCATION	FACILITY OWNERSHIP	RATIONALE FOR MFS PERMIT EXEMPTION
Stevenson Recycling	Skamania	Public	Enclosed Building
Skookum Recycling	Jefferson	Public	Enclosed Building
Waste Control	Cowlitz	Private	Enclosed Building
West Van MRC(CLEAN)	Clark	Private	Enclosed Building
West Van MRC(DIRTY)	Clark	Private	None (Transfer Station Permit)
D M Recycling	Clallam	Private	Enclosed Building
Tacoma Recycling	Pierce	Private	Enclosed Building
Hub City Recycling	Lewis	Private	Enclosed Building

C. Permit by rule

i. Permit-by-rule described: A permit-by-rule would allow operation of specific facilities that meet specified standards in the rule. When owners or operators believe their situation could be covered by the permit-by-rule, they would notify the jurisdictional health department. The health department then determines if indeed the facility meets the standards. If it does, the owner/operator receives approval in writing. The permit-by-rule facility is subject to inspection by the regulatory authorities and may have annual fees imposed upon it. If the facility do not meet the standards, the jurisdictional health department may deny or revoke the permit-by-rule. Owners or operators would then have to apply for an individual permit before they could operate.

In the context of the solid waste management, the meaning of the term “permit” is not defined in the statute, the regulation, or the solid waste management plan. The plan does not specify the permit mechanism, only "a detailed inventory and description of all existing solid waste handling facilities, any deficiencies in meeting current needs, and a program for the orderly development of solid waste handling facilities in a manner

consistent with the plan." The permitting of solid waste facilities should support the objectives of the plan.

ii. Reactions to the permit-by-rule concept

a. Composting: Some owners of compost facilities saw the permit by rule as a way of insuring that a standard level of technology is used uniformly throughout the state. This was particularly true of some composters who felt that the State should specify in-vessel composting as a pollution control technology. Proponents felt such technologies would guarantee an odor-free and nuisance-free facility regardless of location and feedstock. Such a standardized approach, calling for a high level of environmental control, would insure that there were not financial incentives to develop low technology approaches to composting at isolated locations.

Other operators felt that technologies for composting should remain a choice for the owner and that these could vary depending upon feedstocks, location and climate. These were primarily the composters using simpler processes involving piles and windrows. For them the permit by rule would not be effective because it would have to have requirements for virtually every process as well as capturing variations when utilizing different feedstocks. The permit by rule would be less flexible than the current solid waste standards in ch. 173-304 WAC.

Jurisdictional health departments (JHDs) viewed the proposal to use the permit-by-rule for compost facilities as hampering their ability to effectively regulate. In particular, JHDs did not think that the process would save them any administrative costs, especially where existing individual permits are straightforward and understood by all parties. They also had questions about appeal processes, fees and the nature of the standards, as well as how the State Environmental Policy Act (SEPA) would be implemented.

b. Material Recovery Facilities: Some material recovery facility operators questioned the need for permitting in any form, seeing little environmental threat especially where processing is occurring inside buildings. If they are to be permitted, their issues are fees, fairness and straightforward understandable standards.

Other comments raised more specific questions about the applicability of a permit by rule to dirty and clean MRFs and other wastes such as construction and demolition waste streams. One suggestion was made that the permit-by-rule was more appropriate for source-separated non-putrescible commodities handled in a clean MRF and that the current solid waste permit be retained for putrescible waste such as those handled in a dirty MRF. The commentor was uncertain as to how a MRF handling yard-waste or construction debris would be classified -- that is, regulated under a permit by rule or an individual permit.

In other instances, dirty material recovery facilities owned by the private sector are perceived to be in competition with public waste handling systems, especially where private recyclers threaten to remove solid waste streams from the public revenue stream and is inconsistent with local plans. Some operators may be managing solid waste mostly destined for disposal with little actual recycling. These facilities would be at odds with the franchise hauling laws that require certificates for those collecting household recyclable materials and storing, treating or disposing of municipal solid waste. Several public works officials have pointed out that this practice is also at odds with existing local solid waste management plans. The overall effect would be to threaten public investments made in transfer stations and the revenue streams that these produce to support the county solid waste infrastructure. The courts have prevented governments from using flow control of the material waste stream to insure a steady flow of revenue. In the minds of public officials, any effort to ease or exempt solid waste facilities from permitting would threaten their long term investments, revenue streams and be at odds with long standing, orderly solid waste management planning processes mandated from the very beginning by the state solid waste law.

C. Best Available Control Technology (BACT)

Best available control technology is a term used in air pollution law and regulation. In ch. 173-400 WAC, best available control technology is defined as:
"An emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant……"

In Federal and State law, BACT is used where local air pollution agencies control the emission of criteria pollutants such as sulfur dioxide, nitrogen dioxides, carbon monoxide, particulates, ozone and volatile organic hydrocarbons. As the definition indicates, the emission limitations reflective of air pollution controls or operating methods are selected on a case-by-case basis, depending upon the judgement of regulators taking into account the highly variable factors of energy, environmental and economic impacts. BACT is also typically set for BACT is inconsistent with the MFS which sets minimums, encouraging higher standards and allows equivalency determinations. BACT would start "at-the-ceiling" and allow the facility to take into account economics, to arrive at the final control technology. It is instructive to note that in a similar processing technology, the incinerator standards, that the MFS do not define BACT nor attempt to control air quality emissions. This is clearly in the realm of the Washington Clear Air Act. Neither do the MFS attempt to dictate technologies at transfer stations or drop boxes. Any attempt to use BACT in the control of air emissions from composting operations through a technology forcing mechanism such as BACT would therefore represent an inconsistency with the way in

which other processing facilities are currently regulated. In this context, composting should be viewed as a processing technology, not a disposal technology, such as a landfill.

i. BACT for Compost facilities: Operators of compost facilities differed greatly on the issue of BACT. One person, who had invested in in-vessel composting technology that has excellent air quality controls, took the view that performance standards for composting operations should require a high level of performance to avoid odors and other environmental impacts regardless of the setting of the facility. BACT would mean that an urban or rural facility should be expected to meet the same technology standards. Operating and odor control plans, however, are important for any composting operation according to another major composter.

Smaller facility owners and owners of composting in outdoor piles felt that BACT would force-feed everyone to use the same technology, ignoring the setting, climate and feedstocks. Also this defeats the need for private sector involvement which is based on competition, improving the process while lowering costs. Such inflexibility leads to unnecessary costs and the disincentive to use composting, which is contrary to the state waste management hierarchy. Their view was that operating methods and knowledgeable personnel rather than technology was the key to successful and environmentally-benign composting. The key is in the setting of performance standards for odors, runoff etc. and having the necessary emergency procedures in place if problems arise

Jurisdictional health departments also took a critical view of BACT as a tool to regulate composting operations. They much preferred a performance-based approach. This coupled with requirements for having a well thought-out operations plan and certified operators similar to requirements for landfills and incinerator operators would address their concerns.

Local air pollution control authorities have pretty much arrived at the same conclusion after an experience applying BACT to compost facilities. The Puget Sound Air Pollution Authority (PSAPCA) extended the concept of BACT to odor emissions. It has applied the concept to compost facilities under its control in the manner illustrated in the following example:

Example: BACT Applied to in-vessel and static compost pile technologies in Pierce County.

Staff of the PSAPCA reviewed an in-vessel composting operation at the Land Recovery Inc. facility south of Puyallup. The facility is one of the first in the nation to use this particular technology which incorporates a positive air aerobic reactor to produce compost from yard waste. The air controls consist of engineered biofilters to control odors in the exhaust gases. The biofilters use soils and organic material that adsorb odors and prevent their emission to the environment. The location of the facility is an area seeing rapid growth of residents at or near the property boundary. At one time the local air authority deemed this technology to be BACT.

A second facility located in rural Pierce County is proposing to construct a static pile to compost chicken manure, carcasses, waste eggs and wood chips on an asphalt pad. Finished compost is being applied to nearby agricultural lands -- a move that may help the quality of agricultural runoff and nearby freshwater streams. The facility has virtually no off-farm residents nearby and a large integrated forest product company owns the adjoining lands. The possibility of urbanization seems highly unlikely, given the remoteness of the location. However, a forest products company may be selling some of this land to individuals for residences in the near future. Local air authorities have also called this technology BACT given the remoteness of the operation and the fact that the chicken raising operations are a significant source of odors already. At the time of this study, the product will not be sold on the open market.

These examples raise several questions about how to control odor emissions from compost facilities and the role of traditional air pollution regulatory efforts. For example, odors are localized, impacting nearby residents but are not region-wide in effect. These facts lead to the following questions:

- Is the use of BACT for composting regardless of setting directly comparable to use of BACT for regional criteria pollutants where setting is not a factor?
- Are there other means of controlling compost odors that are more performance oriented and less design specific than BACT?
- Since BACT is site-specific, how would such an application of site-by-site BACT lead to or discourage consistency?
- If problems of defining and applying BACT arose from its use by local air pollution control agencies, to what degree can solid waste law and regulation fix the problem?

ii. <u>BACT for Material Recovery Facilities:</u> As discussed earlier, the issue of BACT for material recovery facilities is overshadowed by the question of whether they should be permitted and what those standards should be. Odors are not the air quality issue associated with MRFs, most of which are clean MRFs and handle non-putrescible material. Particulate emissions would be managed as a criteria pollutant subject to conventional air pollution laws and regulations including the possible application of BACT to MFRs for particulate emissions.

VII. Options (Addressing legislative directives)

- **<u>Permit-by-Rule Options for Compost and MRF Facilities</u>**

1. Develop permit-by-rule for **<u>all</u>** sizes of facilities
2. Develop permit-by-rule for some compost facilities (a **<u>tiered</u>** permitting system):
    a. Small facilities (on-site household?) exempted from permitting.
    b. Permit-by-rule for **<u>some</u>** (medium-size? Institutional or Mono-waste?) facilities.
    c. Use individual permits for larger/complex facilities
3. No permit-by-rule. Maintain the current system of requiring individual permits for all solid waste facilities except those exempted under current rules.

4. Develop permit-by-rule for **no** facilities. Proceed to include performance standards for compost facilities in the Minimum Functional Standards.

TABLE 3. Evaluation Matrix for Permit-by-rule Options for Compost or MRF Facilities

	ADVANTAGES	DISADVANTAGES	IMPLICATIONS FOR CONSISTENCY	COMPATIBILITY WITH 6203 AND MFS REVISION
Option 1:Permit by rule for all size facilities	2. For simple technologies, consistent standards. 2) Less negotiation for individual sites.	2. Confusion of clients 1. Rationale for permit by rule unclear 2. Inflexibility in permitting standards 3. New technologies may not be reflected in rule 4. Locals JHDs may still disagree on approval of like facilities for permit-by-rule.	1. Potential to have consistent state-wide permitting standard 2. Consistency in **standards** for smaller simpler facilities 3. JHD approval on **issuing** PBR may be inconsistent from one county to the next.	1. 6203 may exempt certain small operations (+). 2. Permit-by-rule could be inserted into MFS rule process. Big effort to capture recycling technology and administrative processes of PBR. (-)
Option 2: Permit by rule for "medium" facilities Tiered permit system could be structured as follows: Neighborhood drop-off centers exempted Clean MRFs issued permit-by rule Dirty MRFs issued individual permits	1) Targets permit by rule to simpler facilities 2) Less technology to describe in standards.	5. More confusion & complexity for clients. 6. Same disadvantages as for option 1. 7. Need to define medium; versus large and small categories.	1. Better chance for consistency than option 1 because larger more technology-based facilities are excluded.	3. PBR for medium-sized facilities would dovetail well with exempted recycling facilities under 6203. 4. Rule revision: same as option 1.
Option 3: No permit by rule	2. Site, waste types and technology conditions may be reflected in the permit. (Flexible) 2. Client and regulator familiar with the process	May vary from one health district to another.	Lack of clear MFS standards has lead to inconsistencies on regulating recycling facilities.	Can still outline recycling facilities that are exempt from permitting.
Option 4: **No** permit-by-rule but include performance and operational standards for compost facilities in the Minimum Functional Standards.	1. Allows flexibility in conditions of the permit. 2. Requires consistent **performance** 3. Can be handled under the current solid waste law for MFS. No new legislation required	1. Distinction between simple and complex facilities will have to be included in facility standards. 2. Will have to live with different permit conditions from county to county.	1. Consistency in the performance standards, not design or engineering standards. 2. Consistency in operating standards.	Can still outline recycling facilities that are exempt from permitting.

- **BACT Options for Compost Facilities and MRFs**

1. Apply BACT standards to all facilities.
2. Apply BACT to large, regional facilities, only
3. Do not apply the concept of BACT
4. Do not apply the concept of BACT, but rely on the revision to the solid waste rules to establish MF standards that emphasize operation and performance standards.

Table 4. BACT Options for Compost and Material Recovery Facilities

COMPOST FACILITIES & MRFs	ADVANTAGES	DISADVANTAGES	IMPLICATIONS FOR CONSISTENCY
Option 1. Apply BACT standards to all facilities.	Allows flexibility in permit conditions for widely-varying waste management technologies	1. Subjective decision making by individual regulators. 2. More focused on means than ends. 3. For composting, odors difficult to quantify.	Potential for wide discrepancies in BACT for similar processes
Option 2. Apply BACT to large, regional facilities, only	Targets BACT for the most complex technologies	4. Complexity of a tiered permitting system. 5. Need some rationale for tiers.	Same as option 1.
Option 3. Do not apply BACT	Flexibility of current system.	6. Gives little guidance as to how to interpret current MFS.	Current practice shows some consistency problems with permitting conditions.
Option 4. Do not apply BACT, but revise the MFS using performance standards.	1. Modernizes MFS, emphasizing performance and operation. 1. Encourages new technologies. 2. Consistent with the way other solid waste technologies are regulated.	7. Small facilities may be over regulated. 8. Performance/operational standards not as preventative as more prescriptive requirements for individual technologies.	Improved MFS should improve consistency of permits issued by the JHD.

VIII. Other Options (arising from tangential discussions)

- Given the emphasis on operation of compost facilities being recommended for up-grading of the MFS, operator certification of all compost facilities should be required. This could be achieved through an amendment of the law, ch. 70.95 RCW, which currently requires certificated operators for landfills and incinerators.
- The MFS should define the terms "clean MRF" and "dirty MRF". As discussed in Section V, this would help clarify when a MRF needs to be permitted.
- Reporting for all MRFs should be required as part of the SW&FA annual report. This could be done in conjunction with MFS changes to the definitions discussed above. Section VI discusses the rationale for this recommendation.

IX. Findings

- **Permit by rule**: While the permit-by-rule may seem an attractive permitting mechanism to bring state-wide consistency to regional, multi-county facilities, such as compost and material recovery facilities, it has a number of drawbacks. Chief among these, is the fact that the permit-by-rule is ideal for permitting large numbers of facilities that are relatively simple in design. Compost facilities and to a lesser degree material recovery facilities are using increasing varieties of technologies and feedstocks that would make the requirements under a permit-by-rule extensive and inflexible to apply to such rapidly changing and controversial waste recycling processes. Also the administrative cost savings with the permit by rule (compared with individually-issued permits) do not seem significant, given the relatively few number of facilities and the non-routine nature of recycling facilities, especially those that are regional in nature.

- **BACT:** Best available control technology as it might be applied to odors associated with some compost facilities is borrowed from federal and state air pollution laws. The Puget Sound Air Pollution Control Agency has tried to apply such concepts to several compost facilities at different ends of the composting spectrum: simple static piles versus in-vessel reactors. Regulators with that Agency ended up specifying BACT at one end of the spectrum or the other in two very different facilities. BACT seems much more suited to emissions of pollutants that are regional in character rather than local as is the case with odors. In addition, odors are so much more difficult to regulate because scientific measurement of odor in the ambient air or in stacks is still primitive and human response to odors is widely variable in sensitivity and response. Other solid waste processes such as incineration and transfer station standards have not confused the regulated community with BACT determinations in solid waste waste rules.

  Ecology agrees with many commentors contacted in this study that good operation including a well thought out and step-wise operational plan for dealing

with odors makes more sense than trying to use the much blunter instrument of specifying technologies through an emission standard for odors.

This study did not find that special application BACT for MRFs was appropriate because the odor problem did not exist. Conventional BACT for particulate matter in stack emissions could be used by air pollution control agencies.

- **Consistency findings**: Ecology interviews disclosed that jurisdictional health departments permitted most compost facilities across the state, not otherwise exempted under the current standards (such as household composting). Given that the existing solid waste rules were written over a decade ago and the increasing scale of compost operations over the past five years , it is not surprising that technologies for compost facilities vary. Adding to such variability is the setting into which rural compost facility owners find themselves as some parts of the state rapidly urbanize around existing facilities. This means that some permits reflect intense pressures to abate odors, vectors and runoff problems, even in some cases leading to facility shutdown.

  The study also found that clean material recovery facilities, at least in one region of the state, were commonly not permitted either because the rules did not apply (material separation takes place in a building) or the policy of the jurisdictional health department was not to permit such recycling facilities. The study has not found that a permit by rule or BACT approach would help with consistency issues. Rather a concerted effort to update the minimum functional standards would go a long way towards producing consistency in permitting of all recycling facilities (including regional multi-jurisdictional recycling facilities).

- **Integrating findings with 1419 and ESSB 6203:** Since this study is not recommending any additional legislation (except for compost operator certification), the relationship of these findings to current activity under SB 6203 is more relevant than the relationship to the previous 1419 study. In particular, section 5 of ESSB 6203 calls for Ecology to exempt solid waste facilities from permitting where the environmental risk is low and the facility meets the human health and performance requirements for other similar solid waste facilities. The rationale for implementing section 5 (and other sections of ESSB 6203) will be done through the Minimum Functional Standards revision process. It is expected that small compost and small material recovery facilities may be exempted from permitting by that rationale. A home or neighborhood compost facility and a neighborhood drop off recycling center might be two examples of exempted recycling facilities.

X. Conclusions and Recommendations

A. The permit-by-rule mechanism would not be beneficial to the solid waste regulation of either compost facilities or material recovery facilities (MRFs).
The regulation of compost facilities should be improved through the promulgation of performance oriented standards in the solid waste rules, ch. 173-304 WAC.

B. "Clean" material recovery facilities, handling source separated recyclable materials, should be excluded from permitting as authorized by the recently passed ESSB 6203.
Facilities where recyclable materials may be extracted from mixed solid waste should be considered transfer stations and permitted as such. This approach should be consistent with the local solid waste management plan.

C. Set performance standards in the Minimum Functional Standards Regulations.
To promote composting as directed by the waste management priorities, the Minimum Functional Standards (MFS) should emphasize performance standards not only for odors but also for other factors as well, such as the quality of the primary product, the composted material. (The Department should use the existing compost quality guidance already developed as a starting point for the standards.) The Department should review the setting of composting standards in a manner that is consistent, to the degree possible, with approaches taken with landfilling, transfer stations and incinerators in the Minimum Functional Standards.

D. Best available control technology (BACT) should not be used to set standards for composting facilities.
BACT is specified in some local air quality control regulations, BACT should remain as a technique used by local air quality regulators, not solid waste regulators. BACT is much too specific and prescriptive a mechanism to address the rapidly developing technologies of composting processes. It is also highly dependent on the judgement of the individual regulator. Composting facilities are facilities that require individual permits based on local conditions and controlled by operating standards set in the Minimum Functional Standards.

E. Development of clearly written performance standards for compost facilities and clear permit exemption language for clean material recovery facilities should address the permit consistency issue fully.
Consistency of permits is an issue that is bound to arise when 33 different health districts regulate solid waste facilities. Much of the difference in solid waste permitting that may occur is the result of indistinct or confusing language of the current solid waste rules. Ch. 173-304 WAC, the Minimum Functional Standards, was written over a decade ago before compost and material recovery facilities played such a prominent role in the solid waste management.

F. Other recommendations:

Operator certification of all compost facilities should be required. This could be achieved through an amendment of the law, ch. 70.95 RCW that currently requires certification for operators of landfills and incinerators.

The MFS should define the terms "clean MRF" and "dirty MRF". As discussed in Section V, this would help clarify when a MRF needed to be permitted.

Reporting of all MRFs should be required as part of the SW&FA annual report, "Solid Waste In Washington State". This could be done in conjunction with MFS changes to the definitions discussed above.

Appendix A: Representative Chandler Letter

STATE REPRESENTATIVE
13th DISTRICT
GARY CHANDLER

State of
Washington
House of
Representatives

AGRICULTURE & ECOLOGY
CHAIRMAN
NATURAL RESOURCES
TRANSPORTATION POLICY & BUDGET

May 19, 1998

Mr. Jim Pendowski, Program Manager
Solid Waste and Financial Assistance
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

RE: Implementation of HB 2960

Dear Mr. Pendowski:

I am writing to give you some background about the legislative intent of HB 2960, which was passed earlier this year. I understand that your section is now in the process of implementing this legislation, along with SB 6203. You will see that there is some overlap and duplication in the two bills, and in the Legislature's intent in passing those bills. Obviously, we did not know if either would pass, and so we had to treat each bill on its own merits. Since both bills passed, I hope that you will coordinate the public input and review processes for the two bills as much as possible.

As the prime sponsor on HB 2960, I was interested in following up on the study you conducted last year under HB 1419. In particular, we have heard a lot of publicity about composting facilities, and the difficulties they have had in permitting and odor control. Clearly, the state has a strong interest in making sure that we can have facilities to recycle yard waste, woody debris and similar materials. The study requirements in Section 2 of HB 2960 were intended to focus on composting facilities and material recovery facilities (MRF's); we did not intend that the study be stretched to cover the whole range of recycling facilities.

Consistency of Permitting for Regional Facilities

One of the key points in HB 2960 is the desire to provide greater consistency in the permit requirements for these facilities. We need more certainty in the requirements and processes, so the private sector can make rational investment decisions and provide facilities that meet environmental requirements. The two specific study items

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are geared toward getting more consistency and certainty in the permit process. Any additional recommendations to improve consistency would also be very helpful.

Applicability of Permit-By-Rule Process for Recycling Facilities

The HB 1419 study identified a number of permitting mechanisms that could be used to streamline the approval of recycling facilities, and to regulate them accordingly to their environmental risk. Using the concept of risk in the permit system, it may be appropriate to consider the size of a facility, as well as the type of waste it handles, in determining the appropriate standards or permit process.

The commercial waste management industry was particularly interested in the idea of permits-by-rule or general permits for recycling facilities. Your earlier report discussed these options, but did not generate specific recommendations about their usefulness. We would like to see further consideration of a permit-by-rule or general permit process in light of the exemption process in SB 6203, and see if you feel that these permit mechanisms would be useful for any of the wastes and processes not otherwise exempted. Developing a recommendation on this question is a direct continuation of the earlier study, but viewed in the context of the new exemption processes.

Application of Best Available Control Technology

We also directed Ecology to address the application of best available control technology for recycling facilities. Again, our focus is on composting facilities and MRF's for this issue. These facilities both tend to serve regional needs, and both have to deal with odor emissions.

The federal BACT program addresses various air emissions, but does not consider odors. Therefore, we want to see if this concept may be applicable to odor control at these facilities. It would be very helpful if we could develop guidance and requirements that could be applied consistently to facilities throughout the state. We do not expect to see a final plan for a BACT program in the December 1, 1998 report. We do want an evaluation of the applicability of BACT in this context, and a general idea of how we might approach developing such a program.

I hope this clarifies our intent and expectations for the report called for in HB 2960. I believe that you can address these questions most effectively and efficiently if they are coordinated with the preliminary processes needed to implement SB 6203. Please contact me if I can answer any questions. I look forward to your report and recommendations.

Sincerely,

Rep. Gary Chandler, Chairman
House Agriculture and Ecology Committee

GC:map

Appendix B. Responses from Meetings with Stakeholders

(The views expressed below represent individual views and should not be construed to be the official position or policy of the listed stakeholder.)

1. Stakeholder: Northwest Cascades of Puyallup.

Responses:

Section 2 Interpretation/Emphasis

- Permit-by-rule applicability: Use to allow easier permitting of recycling facilities.
- Consistency of permitting for regional, multi-jurisdictional facilities: For regional facilities serving several counties, we need a process to assure consistency and certainty in the state.
- Best Available Control Technology (BACT): Use to encourage higher end, better technology. Ecology should explore BACT options and make recommendations. Maybe BACT by categories of size dealing with odor control and runoff.
- Integrating this work with 1419 study: Continuing and refining 1419 study

Expected Best Outcome:

Does not see a large 1419 effort. 2960 is a lower key effort to address problems encountered in the regulation of the emerging compost facilities. MRF would also be OK but composting is the main focus.

Pitfalls:

Existing stakeholders that stand to loose: entrepreneurs and local government that depends on fees.

Other Remarks:

Scope and effort should be limited; sees Ecology drafting report, getting input and then issuing final report. Focus on identification of options not specifying what BACT should be for composting. A letter from Chandler emphasizing a recognition of the lack of resources and need for more time would be forthcoming.

2. Stakeholder: Washington Refuse and Recycling Association, (haulers)

Responses: Section 2 Emphasis/Interpretation

- Permit-by-rule: He perceived that our discussion during the 1419 study of permit-by-rule went too far, too fast for most folks, hence the need to study that and other issues further.
- Consistency of permitting for regional, multi-jurisdictional facilities: Aimed at insuring that recycling facilities do not get treated differently in different counties by local authorities.
- Best Available Control Technology (BACT): aimed at preventing different BACTS of rural versus urban areas.
- Integrating this work with 1419 study: Fit the conclusions together as seamlessly as possible with the 1419 study.

Expected and Best Outcome: No big expectations; a huge effort is not envisioned. Integrate findings with 1419 study as well as possible. Develop a process for BACT to apply to everyone and not give some a competitive advantage.

Pitfalls: Keep Representative Chandler informed and others as well.

Other Remarks: Mentioned the work of the American National Standards Institute for material recovery facilities available on the webpage: ansi.org

3. Stakeholder: Waste Management

Responses:

- Permit-by-rule: Does not have flexibility that may be desirable.
- Consistency of permitting for regional, multi-jurisdictional facilities: Equity is important to both. They cited the big difference that had arise in the past in permit fees for facilities in different counties. Need a decent set of regulations to provide solid waste direction by the enforcement agencies.
- Best Available Control Technology (BACT): Should be business not agency-driven.
- Integrating this work with 1419 study: No comments

Expected and Best Outcome: Have a process for all including Jurisdictional Health Departments to participate in the 2960 study. Composting needs clear performance goals. Develop a broad-based definition of BACT.

Pitfalls: Ecology should help to avoid policies that result in widely varying permitting fees from one county to the next. Both individuals also mentioned the redundancy in issuing solid waste permits where there seems to be little "added value", especially where water and air quality permits seem to address environmental issues.

4. Stakeholder: Landfill Recovery, Inc.

Responses:

- PSAPCA: Question the philosophy, where there are no complaints there is no problem. This philosophy drove Tacoma's yard waste bid out of Pierce County. Should BACT be based on the nuisance issue?
  1. The Purdy composting system utilizes positive air pressure. (in compliance?)
  2. The Cedar Grove composting system uses biofiltration technology and negative air pressure. PSAPCA said Cedar Grove is BACT.
  3. The Hidden Valley composting system utilizes enclosed containers and biofiltration. PSAPCA asked about N.O.C. and stated this was BACT.
- The JHDs want good technology (standards), but both local and state regulations are out of date.
  4. County's have in place nuisance ordinances. BACT is a management issue.
  5. No assurance of stability: Political rather than technical.

Expected Best Outcome:

- BACT is "Enclosed and Biofiltered" systems (eliminates need to control feedstocks). However, it is too expensive to be competitive with a static pile composting system.
- BACT should be top down not nuisance driven.
- Identify roles and authority of local JHDs and Air Authorities.
    1. What does Air Authorities currently interpret BACT to be?
    2. What would be the structure through which BACT is applied? (material/size?)
    3. How would state law apply?
    4. Are local Air Authorities the place for applying state law, and if so, how is statewide consistency assured?

Pitfalls:

- "Enclosed Container and Biofiltered" systems are not competitive with a static pile composting system.
    1. How can we balance the interests of small operations/less expensive investments with BACT?
- What is proof of performance and how will enforcement not just chase the odor problem?
    1. Engineering –v- Operations.
    2. Measurement: What is the true value added? (Will the numbers have meaning?)

Other Remarks:

- Need to look at similarities in enforcement:
    1. Landfill operations: Climactic issues rather than one of material dependent.
    2. Farming operations: Biosolids/Waste-to-Fertilizer.

5. Stakeholder: Quad Counties (Western Washington Jurisdictional Health Departments)

Questions:

- Are metal recyclers included in this study?
- The exemptions in '304' are too open to interpretation to provide consistency.
- What was the driving force behind this study bill?
- Will the definitions of a Clean or Dirty Material Recovery Facility be addressed in this study?

Expected Best Outcome:

- BACT should be recognized as an odor problem, with the technical/engineering issues addressed in the 2960 Study. It should be enforced consistently statewide.
- Consistency could be certification.
- Public review should be often and well publicized re: '6203' being rolled into '304.' Exemptions remaining should have clear language. "Should not lose ground on sham recycling."
- P-B-R is not universally accepted.
- Use SEPA to control case-by-case with general technology statewide consistency.

Pitfalls:

- The department is too narrowly focused (on thin ice) if the study excludes woodwaste and metal recovery.
- Ensure the '304' update offers a line-by-line comparison of suggested changes.
- There is a disparity in feedstocks.

Other Remarks:
- Example of consistency: MRFs: where exempted in '304' are not required to obtain permits.
- Example of inconsistency: Composting: When applied as a soil amendment, soil monitoring is not always a permit technical requirement.
- Move Compost Guidelines into MFS.

6. Stakeholder: Washington State Recycling Association

Background: WSRA has a history of the 1419 study bill, knowledge of exemptions in Chapter 173-304 WAC, and understands the role of jurisdictional health departments.

Responses:
- Permit-by-rule applicability: If appropriate, the Department should allow use for easier permitting of compost/recycling facilities. Standards should include a time element, scale, enforcement, and consistency.
  1. MFS reflect standards for both, while local control reflects case-by-case for odor.
  2. Will Permit-by-Rule reduce permit time/costs for JHD's?

- The consistency issue related to permitting and enforcement for both local and regional (multi-jurisdictional) facilities lies heavily on the Department. For regional facilities serving several counties, we need a process to assure consistency and certainty in the state.
  1. Department should define sham recycling so all understand. (e.g. Dirty MRF's are transfer stations.)
  2. Whether JHD's like it or not, a tiered permit system already exists such that, on a case-by-case basis, permit authorities make determinations based on volume, size or technology.

- Best Available Control Technology (BACT): Break composting into three categories. Backyard (exempt); Institutional (P-B-R); and, Multi-jurisdictional (case-by-case).

Expected Best Outcome:
- Compost facilities should have MFS to protect the environment, yet allow local flexibility to be more stringent (including an appeal process). Since a non-standard tiered permit system already exists, identification in a regulation would level the playing field.

- The study element of consistency should focus on multi-jurisdictional facilities.

- MRF facilities should be exempt where it is already exempt (WAC 173-304-300(c)). However, the '304' update should address the definition of Clean MRF's to include: 1. What percentage of solid waste residuals is allowed in curbside recyclable materials? The concept of regulating residuals

back to generating local governments (or $'s associated with percentages). 2. No storage of raw materials uncovered. 3. JHD's could issue permits to exempt facilities if requested by the facility.
- Both should be required to have operation plans, contingency plans, and training/operator certification; and, JHD's should be able to collect annual fees and write tickets as part of an enforcement action.

Pitfalls:
- Do not write knee-jerk standards to regulate what lessons have been learned in the rapid rise of compost facilities to meet the recycling goals.
- Cannot develop flow control regulations.
- Any new standards/regulations should include consideration of local, small jurisdictions.
- If JHDs derive revenue from the waste stream, why would they want recycling to flourish?
- Funding inconsistencies leads to enforcement inconsistencies.

Other Remarks:
- Whatcom County has researched the tiered approach..
- Clean MRF would process only recyclable materials with incidental, accidental residuals.

7. Stakeholders: King County and Snohomish County Public Works Officials

Responses:

- Recycling facilities may evolve into transfer stations.
- Ch. 70.95 RCW is a 4 legged stool:
    1. Inter-local agreements between counties and cities.
    2. Infrastructure and competition.
    3. Regulatory authorities.
    4. Flow Control. (NOTE: The Supreme Court invalidated some forms of flow control.)
- Anything Ecology does to remove local authority erodes plan consistency.
- The lifting of regulatory burdens doesn't necessarily improve recycling programs.

Expected Best Outcome:
- P-B-R for compost and material recovery facilities should not occur, rather, the MFS should be strengthened to include these actions.

Pitfalls:
- Statewide consistency overrides local permitting authority.

8. Stakeholders: East/West Side Health Departments

Responses:

- While the P-B-R process may be an easy way to defend the JHD actions against "sham" recycling, will it prevent lawsuits? It benefits the applicant not the neighbor.
- The Land Use Planners and the SEPA folks need an opportunity to review the P-B-R approach. Will P-B-R actions be filed with WDOE; will SEPA apply?

Expected Best Outcome:
- There is a need for greater coordination between the state and local authorities

Pitfalls:
- Consistency and BACT do not fit.

10. Stakeholders: Washington Organic Recycling Council

Responses:
- BACT: Has been messy for the past two years; up to last spring the guidance was to go with a totally enclosed facility; now it has flipped to a case-by-case basis.
- When dealing with feedstock's that can vary on a day-by-day basis, it would be best to work within a regulatory envelope.
- With a lack of consistency between JHDs, and no clear definitions, the result is inter-jurisdictional bidding.

Expected Best Outcome:
- BACT: There is a need for some performance standards; but, should also retain the flexibility regarding technology to meet the standards.
- Progressive odor management plans would ratchet up controls as needed.
- Consistency in requiring operator training.
- Consistency in managing facilities.

Pitfalls:
- Clean Air Act conflict with MFS regarding Solid Waste Facilities.
- Don't use rural areas as a dumping ground.
- Zero tolerance for odors isn't possible; how do you legislate over reaction?

Other Remarks:
- Need better cooperation and coordination between agencies.
- Need air authority reporting requirements or standards.

11. Stakeholders Comments: King County Public Works Official

Responses:

- 2960: P-B-R is an oxymoron, in that, it will reduce oversight. It does not solve the problem. The tiered system between low-tech and high-tech does not follow either.
  1. Will "exemptions" also exist in this tool, since operators of transfer stations could interpret their operations to be "dirty MRFs" and then not notify the JHD.
- 6203: Local Governments are required to Plan; any exemptions will undercut the local authority. This violates the empowerment of JHDs in Ch. 70.95 RCW.
  2. How would local government investments be protected?
  3. Where is the commitment to respond to concerns when 'exemptions' and the 'environmental excellence program' are implemented?
- If the state's goal is consistency, how will exempting facilities further it, when inconsistencies will occur in comprehensive solid waste management plans?

Expected Best Outcome:

- BACT: Needs to addressed in MFS.
- Threshold: If the '304' exemption language allows MRF operations "within a building," then P-B-R could be applied to low-risk solid waste handling facilities.

Pitfalls:

- What standards will be used to control odor?

12. Stakeholders: Air Pollution Control Officers

Responses:

- Need to consolidate efforts between agencies.
- Is there an existing objective methodology to measure odor?
- The public expects the governing authorities to do something (more?).
- There is a great value in training classes for compost facility operators.
- SEPA might be the answer. Could revisit through public involvement when permit is renewed.
- Presently appeals are made to Ecology, what role does the department want to play?

Expected Best Outcome:

- Since compost facilities are not permanent, SEPA could be triggered at time of renewal.
- Best Management Practices-operators need to maintain appropriate conditions. Since BACT is difficult to manage regarding odors, need to define "good operating practices/standards" for facilities.
- EMS—needs ISO 14000 criteria.

- Trained operators.

Pitfalls:
- Doesn't solve complaints.
- Doesn't solve consistency since BACT is case-by-case.

13. Stakeholder: Pacific Topsoils

Responses:
- Permit-by-rule criteria should include: time element, scale, and be standardized as to feedstock (e.g. keep food out of yard waste); and apply to those facilities handling low to moderate risk materials. Note that YW (grass and leaves) collection is regulated by WUTC, and food waste destined for recycling is not regulated by that agency.
  1. MFS should address bulking, odor control, collection (since odor control begins with setout for collection) and leachate.

- Consistency is interpreted to mean:
  1. Standardized forms.
  2. Where appropriate defer to other permits.
  3. Mobility (the relocating of a facility should not require a full permit review/SEPA).
  4. Issues related to permitting and enforcement for regional (multi-jurisdictional) facilities rests with the Department, since personalities at the local level seem to differ on a case-by-case basis.
  5. WUTC should regulate: Household generated YW, Branches, Sod.
  6. Materials that should be exempt under 6203 include: CDL destined for hog fuel; clean wood waste; asphalt/concrete/brick; inert soil.
  7. The infrastructure needed to accommodate the front end of the process (e.g. the collection and transfer storage prior shipping to the regional facility) should be permitted, from the self hauler to the landscaper.

- Best Available Control Technology (BACT): Personality dependent permit standards can be removed if the standard for BACT is measured by number of complaints.

Expected Best Outcome:
- Permits should be standardized to reflect the mobility of the facilities, population and market.

- Consistency should include operator certification at multi-jurisdictional facilities.

- Standards for levels of odor/response: Level 1. Number of Complaints (source of odor is incoming curbside YW; Level 2. Source of odor originates from opening the pile; Level 3. Source of odor is derived from leachate.

14. Stakeholder: Waste Control Inc.

Responses:

- Permit-by-rule should be paperless with rational conditions spelled out.
  1. A class of exemptions should exist (e.g. Scrap metal businesses).
  2. MFS should reflect exemptions as legislated in SB 6203.
     a. The 2960 study should recommend PBR for compost facilities; while,
     b. MRF's fall under both regulations (exempted as mentioned above when the risk is low or medium and PBR under 2960 with medium to high risk).

- Consistency is interpreted to mean:
  1. Clean MRF's should be defined as such when the highest risk materials are source separated / commingled recyclable.
  2. Same criteria for each JHD.

Expected Best Outcome:

- MRF's, et al, presently exempt under "304" should remain exempt.
- Permits should be crystal clear with reasonable fees and standardized reporting requirements.
- Consistency would base permit fees on risk, the lower the risk the lower the permit fee.
- There should be standards that identify regular inspections, and the criteria to be inspected, such as, time/storage.
- The regional infrastructure needed to accommodate the MRF (e.g. reloading of recyclable materials from compactor truck into shipping containers that consistently show no risk, no storage and short duration) does not need to be permitted.

Pitfalls:

The study should remain cautious regarding the political issues associated with permitting in that the permit intentions differ even between county departments (County SW Program-v-JHD).

Appendix C.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Focus

Solid Waste Permits-by-Rule and Best Available Control Technology

Legislature Requires Further Study of Solid-Waste Permitting (Substitute House Bill 2960)

The 1998 Legislature directed Ecology (through Engrossed Senate Bill 6203) to extend the study performed last year on the Washington solid-waste permitting system. The earlier study, entitled "ESHB 1419 Report: Washington's Solid-Waste Permit System," made recommendations for reducing burdensome permitting mechanisms, especially for recycling facilities. These recommendations prompted the Legislature to adopt **permitting exemptions, permit-by-rule, general permits and permit deferrals**, as part of ESB 6203.

In the new law, the Legislature authorized Ecology to exempt beneficial uses of solid waste and other low-risk facilities from solid-waste permits. The new law also allowed jurisdictional health departments to defer solid-waste permits to other environmental permits issued under air and water pollution laws.

ESB 6203 asks for more investigation of permitting **consistency**, of the usefulness of the **permit-by-rule,** and the applicability of **best available control technology** to recycling facilities. Ecology is to submit its report to the Legislature by December 1, 1998, integrating the results of this study with its earlier studies submitted last December.

What is a Permit-By-Rule?

A permit-by-rule is a permit, all of whose conditions would be spelled out in regulation. Permits-by-rule could be issued to similar and numerous facilities -- like drop boxes or possibly compost facilities. Permits-by-rule are unlike individual solid-waste permits issued to landfills that may have site-specific conditions required by each jurisdictional health department (JHD). The permit-by-rule would cover all facilities in a class of facilities state-wide; each applicant would be required to notify its JHD that its facility is operating under the terms of the permit-by-rule. JHDs would determine applicability of the permit by rule or the need for an individual permit. These facilities would be subject to periodic inspection by the JHD and, where necessary, be subject to enforcement including revoking the permit.

What is Best Available Control Technology?

Best available control technology is a feature of local, state and federal air-quality rules. Expressed as a stack emission limit or as best operating practices, it requires the application of the maximum degree of reduction of air-pollutants or the use of best operating practices achievable for new or modified sources. Most BACT determinations have covered "conventional" air pollutants such as finely divided particulate matter, and gases such as sulfur dioxide, ozone and nitrogen oxides. The Legislature is

interested in whether odorous emissions might be controlled by applying BACT to compost facilities, material recovery facilities and other recycling facilities.

What is meant by "consistency" in solid-waste permitting?

SHB 2960 (adopted in 1998) asks Ecology to study the consistency of multi-jurisdictional, regional recycling facilities to determine whether similar facilities in different jurisdictions are consistently permitted and regulated across the state. Another type of consistency -- consistency of the solid-waste permit with the local comprehensive solid-waste plan -- is not the focus of this study. Two examples of multi-jurisdictional regional recycling facilities are large compost facilities that may take organic material from more than one county, or material recovery facilities that process household recyclables to produce saleable by-products.

What's Next

Ecology has developed a work plan for implementing the study and reviewed its progress with the State Solid Waste Advisory Committee. Concurrently, Ecology is contacting interested audiences to gain their insights about the most desirable outcome and the pitfalls of the study. Ecology will look at the permit-by-rule, options for best available control technology and other regulatory options that address the issues raised in the law. Public meetings will be conducted in October to gain additional comments on the draft report.

For more information or to arrange for a meeting to share your ideas and comments, contact:

Jay Shepard, Section Head
Solid Waste and Financial Assistance Program
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600
(360) 407-6071
FAX (360) 407-7157

or

James C. Knudson, P.E.
Environmental Engineer
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600
(360) 407-6110
FAX (360) 407-7157

E-mail: jknu461@ecy.wa.gov

You can also reply at our Website: http://www.wa.gov/ecology/swfa/swhome.html
Look for drafts of the report that will be posted in the future on this Website.

APPENDIX D: CORRESPONDENCE

City of Seattle
Paul Schell, Mayor

Seattle Public Utilities
Diana Gale, Director

MEMORANDUM

July 30, 1998

Jim Knudsen, P.E.
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Re: Scoping Comments for Substitute House Bill 2960 Study

Dear Mr. Knudsen:

We have many issues for you to address in your upcoming Substitute House Bill 2960 Study as to the need for permitting consistency, the usefulness of permit-by-rule regulation and the applicability of best available control technology for odorous emissions in regard to composting facilities. We have fewer questions as to the need for permitting consistency and the usefulness of permit-by-rule regulation for material recovery facilities which accept only recyclables.

Permitting Consistency

Statewide permitting consistency is an important goal in order to assure that Counties with the same demographic and development potential (urban versus suburban versus rural) do not impose more stringent facility requirements upon the same type of composting operations than others. However, the composting industry is still relatively new and there is a great variability in organic feedstocks which can be composted and technologies which can be successfully employed. It may be desirable not to impose a simplistic permitting system on all types of composting facilities to satisfy this goal of consistency since often it is daily site operations and not so much capital intensive technology that determines whether the facility is a good neighbor and produces a high quality final compost product.

Permit-by-Rule Issues

Applicability of a "Permit-by-Rule" Regulatory System to Composting Facilities
We agree that Section 173-304 of the State's Minimum Functional Standards drastically needs updating in regard to the minimum requirements for composting facilities.

Dexter Horton Building, 10th Floor, 710 Second Avenue, Seattle, WA 98104
Tel: (206) 684-5851, TTY/TDD: (206) 233-7241, Fax: (206) 684-4631

However, many questions are raised for us in regard to instituting a Permit-by-Rule regulatory system for composting facilities instead of updating the Minimum Functional Standards.

1) Composting facilities in Washington State exhibit a great diversity of technologies, feedstocks and throughput capacities. Explore in your Study how a uniform Statewide "permit-by-rule" regulatory framework for this diverse industry is more suitable than the individual, site-specific permits issued by local Health Departments which could be based on updated minimal requirements for facilities processing different organic feedstocks in Section 173-304 of the MFS.

2) Would a "Permit-by-Rule" regulation set up a very stringent base for all composting facilities to meet or a minimum base? If a very stringent base were set for all facilities in the State then this could greatly increase the cost of composting particularly for yard debris so that it is no longer competitive with landfill disposal. If a minimum base were imposed then individual Health Departments may want to impose site specific conditions as is done now in individual facility permits.

3) What criteria would be covered under a "Permit-By-Rule" regulation - odor control, surface water and leachate containment etc.?

4) What variables would be addressed under a "Permit-By-Rule" regulation - facility throughput capacity, feedstock types etc.?

5) A multi-tiered system for composting facilities is conceivable which utilizes both a "Permit-by-Rule" type uniform permit and individual permits with more site-specific conditions included. Please explore in your Study a scenario where a "Permit-by-Rule" regulatory system is in place for small-scale municipal Parks Department type composting operations and small scale on-farm composting situations. Fully enclosed composting operations also might qualify for the simpler "permit-by-rule" regulatory system dependent upon throughput capacity, feedstocks and location. In fact it might be an incentive for project proponents to fully enclose their facility for certain feedstocks as manures and food scraps if they only have to go through a simpler permitting process. Larger scale unenclosed composting facilities which take a complex mix of feedstocks, however, could be regulated by local Health Department individual permits. With such a multi-tiered system where would thresholds be set as far as facility throughput capacity and feedstocks for those facilities eligible for the simpler "permit-by-rule" process?

6) Where is SEPA or the opportunity for public review in a "permit-by-rule" regulatory process? There should be a requirement that the local SEPA ordinance must be complied with in this permit process. Likewise, there should be a term limit on permits so that the compliance record of the facility can be examined before the permit is automatically renewed.

7) What happens under a "Permit-by-Rule" regulatory system if a composting facility has a poor compliance record? Would a facility's permit be automatically revoked or should the facility then be required to do through the more complex individual permit process in order to continue its operation? What would be the appeal process under the "Permit-by-Rule" regulatory system for any operation which was in danger of losing their permit and thus subject to shutdown?

8) DOE staff has asked SPU about whether more stringent requirements than found in a "permit-by-rule" regulation could be imposed under a City collection/processing contract for source-separated organics. The City of Seattle does not want to be in a regulatory role of imposing more stringent requirements through our collection/processing contracts than what is called for in regulations. While we may consider including performance measurements in our bid documents we would always want to defer to a regulatory agency for facility permitting and enforcement. We do not have the staff or expertise for permit enforcement and would view this as a local Health Department, PSAPCA or DOE regulatory role.

Applicability of Permit-by-Rule for Material Recovery Facilities

1) Please discuss in you Study the types of MRFs which could be covered under a "Permit-by-Rule" regulatory framework and what types would fall outside of the system and be required to undergo a more complex individual permit. MRFs which accept only source-separated recyclable but not garbage or source-separated putrescible material as food scraps are certainly candidates for a "permit-by-rule" system. However, what if they accept source-separated yard debris? Would they still qualify if certain conditions were met as the yard debris being transferred to a composting operation by the end of the day?

2) What types of construction and demolition wastes could be handled by a source-separation MRF eligible under the "Permit-by-Rule" system? Would materials as gypsum and painted and/or treated wood be eligible?

3) No material designated as a dangerous waste would be handled by a MRF eligible for a "permit-by-rule" process but how about "special wastes"?

Best Available Control Technology for Odor for Composting Facilities

1998 has proved to be a very successful year for the composting industry in King, Snohomish and Pierce Counties in contrast to 1996 and 1997 which were highlighted by facility closures and numerous odor complaints. The main difference in 1998, at least in the case of the region's largest facility, was adhering to limitations on facility throughput capacity, maintaining optimal levels of temperature, moisture and porosity during all phases of the composting process and close attention to basic housekeeping measures involving other odor generating sources on site. Much of the City of Seattle's yard debris was diverted to relatively "low-tech" composting facilities during the spring and early summer of 1998 utilizing unaerated static piles or windrow composting without

biofiltration. Even these "low-tech" facilities were able to intensively "manage" incoming loads and their composting processes so that no odor complaints were generated. It would seem after this year's experience to date that successful odor management is mostly achieved by daily site operations and not so much by technology. Requiring a facility to have a detailed site Operations Plan and training for its employees may be far more effective than requiring a plant to be fully enclosed with biofiltration if the only type of material accepted is yard debris. Performance results and not so much process may be what is most important in being a good neighbor.

1) Why is a consistent set of BACT requirements for composting facilities more desirable than the "case by case" approach now taken by PSAPCA which takes into account the type of composting technology , feedstock mixes and site specific considerations as proximity to housing, air movement characteristics etc?

2) What kinds of odor containment measures would be interpreted as BACT? Would basic housekeeping measures as minimizing the standing water around piles qualify?

3) It would seem that BACT is very feedstock specific. How would the level of BACT change for a site which accepts only yard debris to one which accepts yard debris and manures to one that accepts food scraps or biosolids?

Thanks for the opportunity to comment on items which we feel should be covered in your examination of the issues raised in Substitute House Bill 2960. If you have any questions please call me at (206) 684-7644.

Sincerely,

Chris Luboff

Christine Luboff, Seattle Public Utilities

cc: Jim Shepard, Department of Ecology
Tim Croll, Seattle Public Utilities
Gabriella Uhlar-Heffner, Seattle Public Utilities
Danielle Purnell, Seattle Public Utilities

Jim Knudson

CITY OF BREMERTON • 239 4th Street • Bremerton, WA 98337

August 11, 1998

Jay Shepard
WA Department of Ecology
Solid Waste and Financial Assistance Program
P.O. Box 4760
Olympia, WA 98504

Dear Mr. Shepard:

I understand that you are currently studying ways to reduce burdensome permitting mechanisms for composting operations as part of a requirement of SHB 2960. I also understand that in ESB 6203, the Legislature authorized Ecology to exempt beneficial uses of solid waste and other low-risk facilities from solid waste permits.

As noted on your "Comparison of Composting Permit Conditions" table distributed at a meeting with Washington state Recycling Association representatives on July 30, the City of Bremerton operates a low-risk, three bin composting system. The history of this project illustrates how a classic burdensome permitting mechanism came very close to causing us to abandon the project.

When we received a Coordinated Prevention Grant (CPG) in 1996 for funds to compost the grass and wood chips generated from our grounds maintenance operations and our parks, we were excited. Our plan was to construct a three bin composting system using concrete "Ecology" blocks on a 20'x60' concrete pad covered by a roof. We expected to compost approximately 350 cubic yards of material generated from all of our parks each year at this central location. Our enthusiasm rapidly dissipated after we contacted the Bremerton-Kitsap County Health District (BKCHD). they offered us two choices:

- build a composting enclosure at each park to avoid the need for a solid waste permit, or
- meet all of the requirements of WAC 173-304-420 for a large scale composting facility.

Either option would be cost prohibitive and excessive considering the risk of the project we were proposing.

After extensive discussion with BKCHD and the production and review of numerous Draft Conditional Operating Requirements Plan's failed to produce an acceptable regulatory solution, Mayor Lynn Horton sent the attached letter to the Director of

BKCHD. the letter effected a change of approach by BKCHD staff. they decided to apply the less restrictive WAC173-304-300 standards to our project.

We lost the initial grant funding for the project due to the bureaucratic nightmare created by the current solid waste regulations as interpreted by the BKCHD. We applied for and received a second chance to fund the project through the CPG. At this writing we have reluctantly agreed to a Conditional Operational Requirement Plan with the BKCHD and have used our grant funds to build the composting enclosure and begin composting. However if we are subject to more regulations, we will no longer use this area for composting. I have spent the last two years of my life fighting with the BKCHD and will not fight with Ecology on this matter again. It is just not worth it for me or the City to have to worry about more restrictions on our little composting project.

I urge Ecology to use the authority granted to you in the last state legislative session to categorically exclude operations, such as ours, from regulation by jurisdictional health departments under solid waste laws. We do not operate a compost facility. the composting regulations designed for large-scale, higher risk facilities should not apply to our small-scale low-risk operation. We want to compost a small amount of grass, leaves and chipped wood. We do not want to waste staff time and City funds complying with unnecessary and excessive regulatory requirements.

Thank you

Tom Cressman

Tom Cressman
Parks Maintenance Supervisor
City of Bremerton
360-478-5309

LYNN S. HORTON, Mayor
239 4th Street • Bremerton, WA 98337 • (360) 478-5266 • FAX (360) 478-5883

September 5, 1997

Willa A. Fisher, MD, MPH
Director
Bremerton-Kitsap County Health District
109 Austin Drive
Bremerton, WA 98312

Dear Dr. Fisher:

The City of Bremerton Parks and Recreation Department has been working with the Kitsap County Public Works Solid Waste division and your office in an attempt to implement a pilot composting project in Stephenson Canyon within the City of Bremerton. This is a coordinated prevention grant project that received funding through Kitsap County Public Works from Ecology, and involves the simple composting of the yard wastes generated by the City parks.

The City was originally excited about this project and its potential. As the project unfolded however, the requirements for operation and maintenance, inspecting and reporting, and monitoring as delineated in the draft plan generated by your office all seem excessive for the program as we understand it. With the many restrictions, it appears to me that the program is doomed for failure.

I am writing in the hope the Health District will review this process so it can be a benefit to the City and not a bureaucratic nightmare. If not, it is my opinion that it is not in the City's best interest to proceed with the composting project described above at this time.

Sincerely,

Lynn S. Horton
Mayor

LH:ev
cc: Tom Cressman
Dave Peters

Kitsap County Department of Public Works
614 Division Street (MS-27), Port Orchard, WA 98366-4686 *R.W. Casteel, P.E., Director*

August 11, 1998

Jay Shepard
WA Department of Ecology
Solid Waste and Financial Assistance Program
P.O. Box 47600
Olympia, WA 98504

Dear Mr. Shepard:

I would like to take the opportunity to follow up on the WSRA-sponsored meeting on 30 July 1998 concerning the SHB 2960 study that Ecology is currently conducting.

As stated in Ecology's "Focus" sheet on the 2960 study: The 1998 Legislature directed Ecology (through Substitute House Bill 2960) to extend the study performed last year on the Washington solid waste permitting system. The earlier study, entitled ESHB 1419 Report: Washington's Solid Waste Permit System," made recommendations for reducing burdensome permitting mechanisms, especially for recycling facilities. These recommendations prompted the Legislature to address permitting exemptions and permit deferrals, as part of ESB 6203.

In the new law, the Legislature authorized Ecology to exempt beneficial uses of solid waste and other low-risk facilities from solid waste permits. The new law also allowed jurisdictional health departments to defer solid waste permits to other environmental permits issued under air and water pollution laws.

Toward these goals, I offer the following solutions for the solid waste permitting process as it applies to composting operations:

1. Adopt an expanded tier structure for regulating composting operations based on the California model.

A two-tiered system for regulating composting operations currently exists in Washington state. The first tier excludes back yard composting operations from the need to obtain a permit. The next tier is a large scale composting facility which accepts material from municipal drop-off and curbside collection programs.

Small scale operations which use low risk feedstocks are not clearly addressed in our current state law. These include but are not limited to Community Colleges, Schools, Fair and Parks Departments and Golf Courses composting vegetative wastes from grounds maintenance operations, and Public Works Departments composting vegetative materials from storm water ponds. Materials generated from these operations may come from more than one Park, pond, etc. (i.e., generated "off-site"). To make the composting operation cost-effective and easily managed the materials may be brought to a central location. Many examples of other possible types of low risk, small scale composting operations can be cited. These include worm bin operations supplying worms to residential customers who want to begin home worm bins, industrial parks with large green spaces or neighborhood associations composting grass and trimmings from the neighborhood at a central site.

If these low risk, small scale operations are subjected to permit fees and extra regulatory requirements such as developing operations and quality assurance plans, monitoring, reporting, etc., they generally choose not to compost. They just want to get the job done and not add excess paperwork to their day.

In 1995, California adopted a five-tier structure to address the same issues currently being studied under the SHB 2960 directive. The five-tier approach streamlines the regulatory process. It is designed to reflect the varying degrees of environmental impact that different types of composting operations are likely to have. For the details of their regulations see http://www.ciwmb.ca.gov/gra/olra/regs/archives/compost/compost.htm.
A copy of the "Plain English Statement" of the California regulations is attached.

California's five tier compost regulatory system encourages the maximum amount of composting while providing a high level of protection to human health and the environment by focusing attention on the higher risk operations. An article that appeared in BioCycle (Oct 1995: 72-78) which describes their system is attached. The tiers are based on the amount of materials on-site and include: Exclusion @ 500 CY, Notification @ 1,000 CY, Registration @ 1,000 - 10,000 CY, Standardization @ more than 10,000, and Full for MSW composting operations.

2. Ecology review and approval of requirements exceeding Minimum Functional Standards.

The Minimum Functional Standards (MFS) are designed to protect human health and the environment. However, jurisdictional health departments are empowered by law to impose additional requirements beyond the MFS for solid waste permits. If the MFS are designed properly, additional requirements beyond the MFS should not be needed to protect human health and the environment. Instead, these additional requirements increase the costs of operating the facility with questionable benefit to the public. Unfortunately, if unnecessary and costly additional requirements are placed on a facility, they have no real alternative but to comply or be shut down. These additional requirements are a factor in the lack of consistency seen throughout the state in regulating compost facilities. The public and the composting industry alike would be better served by a consistent application of a reasonable set of MFS throughout the state.

Additional requirements to MFS are often seen as a way to gain "local control" of a facility. Local control issues may be better addressed by zoning laws, nuisance ordinances, etc. at the County or City Council level rather than by imposing additional requirements on solid waste permits at the jurisdictional health department level.

Ecology should develop a set of MFS specifically designed for compost facilities with feedstocks above 1,000 CY/year through a stakeholder process. These MFS requirements should be sufficient to protect human health and the environment without the need for any additional requirement on a solid waste permit. If an additional requirements clause is deemed necessary, Ecology should be required to review and approve any additions which exceed MFS. Ecology oversight of additional requirements beyond MFS would greatly decrease the lack of regulatory consistency for composting operations currently seen throughout the state.

3. Mandatory training for facility operators and regulators.

Both the facility operator and the regulator must have a firm knowledge of how to operate a compost operation properly. Understanding the science behind composting allows to operator to run the facility with a minimum risk of problems. Understanding the science behind composting allows the regulator to write a permit and conduct inspections that truly address the risks involved.

The current lack of consistency seen in regulating composting operations is due in large part to the lack of understanding of the composting process by a large number regulators. When faced with a vague set of MFS not designed for composting, and a lack of understanding of the basic composting process, a regulator may choose to err on the side of excess caution and require every possible safeguard regardless of cost or actual benefit. Alternatively, a regulator may allow a facility to operate without the necessary safeguards in place to protect human health and the environment because they do not understand the risks.

The key to operating and regulating a compost facility is knowledge of the science of composting. To this end, composters operating facilities with feedstocks exceeding 1,000 CY/year (California's "Registration" level) and their regulators should be required to attend a Compost Facility Operator's training, preferably a training certified or at least recognized by the Washington state.

Sincerely,

Gretchen Olsen
Solid Waste Programs Coordinator

Attachments:
Plain English Summary
Tiered Approach

September 10, 1998

Mr. James C. Knudson, P.E., M.P.H.
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504

RE: SHB 2960 LEGISLATIVE STUDY OF BEST AVAILABLE CONTROL TECHNOLOGY

Dear Mr. Knudson:

Thank you for meeting on June 24th at our facility, and for the various presentations you have made to industry groups regarding the above referenced study. We understand you are preparing the study for a December 1, 1998 submission to the Legislature.

As you know, Cedar Grove Composting, Inc. operates a highly regulated facility in King County. We strongly support your effort to assure consistent requirements for similar recycling facilities. Regulatory consistency is critically important to the success of our company and to the success of the composting infrastructure in Washington State.

We understand your study will address the permit-by-rule process, regulatory consistency for regional and multi-jurisdictional facilities, and application of Best Available Control Technologies to recycling facilities.

In your evaluation we noted you did not show Cedar Grove having requirements for a permit fee, pad requirements, closure plan, or a contingency plan. In all cases we have a requirement for these items. The permit fee is paid to the jurisdictional health department. An impervious surface was required during the development of the facility. The Environmental Management System (Operations Plan) includes a prescribed system for the diversion of acceptable but excess material. This is a contingency plan that is driven by the Management System or regulatory limit, whichever may require contingent capacity. The facility has also submitted a closure plan per the request of the jurisdictional health department.

Our position on BACT remains that we believe uniformity in facility performance is the most important criteria. Each permitted facility should be held to a standard to prevent a substandard system from undermining the existing and valuable infrastructure already in place. The standard should address not just air emissions but also water-borne emissions.

CORPORATE OFFICE: 54 South Dawson Street Seattle, WA 98134 (206) 764-1236 Fax: (206) 764-1234
PLANT LOCATION: 17825 Cedar Grove Rd. S.E. Maple Valley, WA 98038 (206) 432-2395

Historically BACT has changed in scope and definition more rapidly than each facility could possibly accommodate. This results in higher risk for facility operators. If you can extend the useful life of a BACT determination you will have accomplished a valuable objective.

Since odor is such a subjective regulatory arena we encourage you to move regulatory policy away from reactive regulations and enforcement, and toward a more investigative and deliberate approach. An example might be to express the statewide policy for BACT to implement a 30-day review period when odors become a local "nuisance" issue. During this period the agencies and facility operators are required to exchange information before either party takes action. Often times this will focus both parties on each other's position before beginning an expensive legal process.

Our experience shows that the changing conditions in both the demands for our service and the weather were factors in how our facility performed in 1997. In 1998 the same facility has performed in a manner that by nearly all accounts is a substantial improvement in comparison to 1997. The technology did not change during this two-year period.

The some of the variations between the years include a different weather pattern, increased promotion of alternatives to curbside yardwaste service (mulching mowers, backyard composting), an Environmental Management System to improve process control and continuous improvement, and a number of smaller facility improvements. The company worked cooperatively with both the local air quality agency and the jurisdictional health department on the implementation of these changes, concurrently with the legal actions between each organization. The legal process was expensive and should not have been a prerequisite for this positive outcome.

In summary, we request that DOE include a performance standard and dispute resolution process in any application of BACT for composting and odor control. If prescriptive BACT standards are proposed we expect that our facility will be included as conforming to the new BACT standard.

If at any time you wish to meet with us or learn more about our experience in this area do not hesitate to contact me. We appreciate the opportunity to participate in your study.

Sincerely,

CEDAR GROVE COMPOSTING, INC.

J. Stephan Banchero, CEO

cc: Jay Shepard, Section Manager
Jim Nolan, PSAPCA
Greg Bishop, Seattle-King County Department of Public Health

FERRY • PEND OREILLE • STEVENS

EDMUND W. GRAY, M.D. • HEALTH OFFICER MARY C. SELECKY • ADMINISTRATOR

September 14, 1998

Jim Knudsen
Solid Waste and Financial Assistance Program
P.O. Box 7600
Olympia, WA. 98504-7600

Dear Jim:

Thank you for participating with our Environmental Health Directors Solid Waste Committee conference call on July 22, 1998. Your input and participation was very valuable and helpful. The perspective you gave from an applicant's standpoint was especially good in contrasting our view as regulators. As you know, the purpose of the meeting was to discuss the Department's proposed study concerning the permit-by-rule process to comply with HB 2906.

We had a very good discussion about the pros and cons of a permit-by-rule for certain solid waste facilities. I have tried to summarize the two main points below.

1. The concept of permit-by-rule should not be applied to composting facilities. Size, processes, materials and other factors vary so greatly that we did not think it would be possible to adopt rules to fit every situation. Without such standards, we would not be able to make a determination as to whether a facility would be in compliance or not.
2. The study should continue to explore the possibility of applying the permit-by-rule to other types of solid waste facilities. However, we have some concerns about whether it will really be a useful tool. Our understanding is that the purpose is to reduce workload and paperwork. However, realistically, it seems like the JHD and the applicants will spend just as much time and effort in this process as they would completing an application for a standard permit. It appears that the same information will be required to show a facility will meet the requirements for a permit-by-rule as they would for a regular permit.

I hope these comments will be useful. If you have any questions, please feel free to give me a call.

Sincerely,

James D. Matsuyama, R.S.
Chair, Solid Waste Committee

cc. All EH Directors

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Snohomish County

Public Works

Robert J. Drewel
County Executive

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(425) 388-3488
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September 29,1998

Jay Shepard
Department of Ecology
P.O. Box 47600
Olympia, WA 98504

Dear Jay:

Thank you for the opportunity to comment on the first draft of the SHB 2960 report.

We support the conclusions of the report. D.O.E. has also done a good job researching the issues and keeping the scope of the report and the related work manageable.

As with all draft reports, there are areas where we have suggested corrections and some areas of discussion which need improvement. Attached are comments on what we have identified as issues or text needing additional work.

You have asked for specific comment on three areas: content of the report, methodology of the report and the issue of appropriate standards for composting facilities.

Content of the Report

The content of the report is, in general, well designed to respond to the legislature's request. Your presentation of the issues is straightforward and uncomplicated, considering the complex subjects you have addressed. We applaud you for accomplishing this without creating a burdensome process and a complicated report. This said, the section on BACT as it pertains to compost facilities needs work. It is confusing as to whether BACT as discussed in this report provides more flexibility for regulators or would create a high tech state-wide standard. Our attached comments address this.

It is also not clear that Ecology has addressed whether application of BACT is appropriate to apply to odor control at compost facilities, whether by Ecology through the MFS, or by the local air authority. It appears to us that the letter from Representative Chandler requests this evaluation. This report recommends performance standards in the MFS instead of technology-defined BACT in the MFS. It does not, however, resolve the issue of the applicability of BACT to compost facilities.

Also, the discussion of MRFs could be improved and expanded concerning the issue of garbage potentially being disposed in a manner not in compliance with a local solid waste management plan, whether through sham recycling or as a residual from legitimate recycling. Also, we would like to note that developing definitions for clean MRFs and dirty MRFs must be done with great care, and the caution needed in this endeavor is not expressed in the report.

Methodology

Considering the timeline you had for developing the report and its recommendations, it appears that you have done a good job at seeking stakeholder input. Our attached comments do question why MRFs in the Southwest portion of the state are addressed as examples specifically, and not MRFs throughout the state. Also, any written comments received as a result of your meetings should also be summarized. We know that thorough comment, which we reviewed, was provided by the City of Seattle. Due to our own staff workload, we did not provide our own written comment, as our perspective was largely and effectively covered by the City of Seattle comments. We are of course concerned that these comments are not included as an appendix, so that they may be referred to by those doing further work on this issue.

Appropriate Standards for Composting Facilities

Our perspective is that work to revise the Minimum Functional Standards should include updating the MFS to more effectively address compost facilities. The standards should, for the most part, be performance based. Inclusion of some technology based standards might be appropriate, but this needs more thorough research and discussion. There are many types and sizes of compost facilities, and standards should vary based upon scale of the facility and perhaps other factors. This too needs further research and discussion. We also are beginning to think that BACT as a concept and regulatory mechanism may not be appropriate for application to odors at compost facilities, certainly not within the MFS, and perhaps not by the air authorities.

As to how to proceed on this issue, we suggest forming a technical advisory committee on these issues to assist in the revisions to the Minimum Functional Standards. Also, further discussion with the air authorities could assist in assessing the value of BACT in regulating odors in any context.

Thank you again for the opportunity to review this draft and for your good work.

Sincerely,

Jeff Kelley-Clarke
Solid Waste Utilities Director

Sego Jackson
Project Specialist IV

Comments on SHB 2960 Draft Report

Snohomish County Solid Waste Management Division
9/29/98

Page 1, par. B	The 3rd sentence would be easier to understand if rewritten to state "... the Minimum Functional Standards (MFS) should emphasize performance standards not only for odors, but for other factors as well, such as the quality of the primary product, the composted material."
Page 1, par. D	The lead in clause ("Given the emphasis....") is difficult to follow.
Page 4, par. 3	Are ALL MRFs currently considered recycling facilities?
Page 4, par. 6	The first sentence is difficult to understand.
Page 4, foot. 3	This definition is confusing. Shouldn't sentence 3 say that a clean MRF removes impurities and may separate various recyclables from a commingled stream (of recyclables)?
Page 5, par. 2	This paragraph explains concerns about compost odors, but doesn't address the issue of application of BACT. It doesn't provide a similar treatment to the "problem being addressed" as section A provides related to "consistency in permitting and permit conditions." Are compost odors being addressed by this report? Or is it the permitting methods to control such odors?
Page 5, par. 2	We would suggest adding the word "sometimes" between the words "has" and "presented," so that the sentence reads "... so much material has sometimes presented problems including emission of offensive odors."
Page 5, par. IVB	The definition of MRF is misleading. It uses the definition of a Clean MRF to define a MRF. So then when it defines "Dirty MRF", you are left with a facility

that accepts only source separated recyclables, but also accepts mixed waste. Instead, define a MRF as a facility that separates recyclables from a mixed stream of materials to increase their utility. In a Clean MRF, this is a mixed stream of recyclables. In a Dirty MRF, it is a mixed waste stream.

Page 6, par. 4 — It is not accurate to say DOE interviewed "all affected parties and interest groups."

Page 7, par. 2 — The last sentence needs the word "for" added between the words "departments" and "consistency."

Page 8, par. 2 — The discussion on variance is confusing. We were not aware of the authority to grant variances until discussing the matter with Jim Knutsen on 9/28. Our understanding from that discussion is that variances are rarely allowed. The discussion in this report leads one to believe that they are more routine as an option than they are in reality.

Page 10, par. 1 — Transfer stations would seem typical candidates for EISs, at least in urban areas.

Page 13 — This page could use more explanation. Why the table on Southwest Washington MRFs? Are they typical of the situation statewide, or a good example? Does this list include ALL MRFs from that region?

Page 14, par. 3 — The 2nd sentence may be worded incorrectly. We think the word "for" should be "as" so that the sentence reads "...the State should specify pollution control technologies as in-vessel processes."

Page 15, par. 3 — The first sentence is unclear. The issue is not the bonafide recycling of materials by bonafide recyclers as threatening the public revenue stream. The issue is sham recycling by sham recyclers, and the improper disposal of these materials as well as the improper disposal of residuals from bonafide recyclers.

Page 15, par. 3 — It seems that there are two different issues being addressed in this paragraph: illicit collection of

materials and illicit garbage transfer activities under the guise of MRF recycling. The franchise hauling laws do not pertain to storing, treating and disposal of waste, only to collection. We have heard concern from other jurisdictions of operations which are supposedly collecting material for recycling, but in fact are collecting it for disposal. This would be in conflict with franchise rules. A separate issue would be sham recycling at a MRF, which would be in conflict with a local solid waste plan.

Page 15, par. 3 — Another concern is that a MRF which is handling significant amounts of garbage presents the same environmental and community concerns as a transfer station. The community will expect the same level of permitting and right to input that they enjoy on transfer stations, and protection of health will require a similar process.

Page 16, par. 1 — In the last sentence, the word "facility" should be replaced by the word "regulator," as the regulator and not the facility would determine final control technology.

Page 16-17 — The discussion of BACT is very confusing. It talks about this being totally consistent across the State, and that consistency being both its strength and weakness. Then it uses two examples, at least one of which uses BACT which is clearly site specific. The discussion needs to more clearly discuss the problem.

The confusion relates to how BACT is currently used by PSAPCA, and how some parties want it to be used in the MFS. By definition, BACT is site specific, and that is how PSAPCA has used it recently, such as in Pierce County. Some parties want the MFS to establish what technology BACT is specifically, state-wide, and they in fact want this to be fully enclosed buildings with exhaust through a biofilter. This is counter to the site specific nature of BACT by definition. Because BACT is site specific, it cannot be successfully utilized in the MFS. Setting a technological standard in the MFS to control odors is

ill-conceived. The entire concept of applying BACT to compost facilities for odor control is questionable and confusing, whether through the MFS or by the local air authority. These distinctions are not made clear enough in the text.

Page 17, par. 6 & 7
Consider using "Do not develop permit-by-rule for any facilities" instead of "Develop permit-by-rule for no facilities."

Page 17, par. 7 Is it possible to have a tiered approach to performance standards in the MFS requirements?

Page 18, 3rd column, bottom box
The word "be" needs to be inserted between the words "to" and "included."

Page 21, par. 1 The Other Options section is worded as though these things should happen: e.g. operator certification *should be required.* For clarity's sake, since this appears to be the first time these issues are raised, perhaps here the language should say *could be* required. Then on the following page, under Conclusions and Recommendations, DOE would weigh in on whether it believes these should be implemented. As it is, I am not clear whether these are DOE recommendations, or statements from tangential discussions.

Page 21, par. 5 "This study did not find..." The double negatives in this sentence leave its meaning unclear. Is there an odor problem at MRFs?

Page 22, par. 2 "the policy...was not to permit such recycling facilities..." Does the health department not require permits of these MRF's, or do they not allow such facilities? Presumably the former, but the language is unclear.

Page 22, par. 4 We disagree with exempting all MRFs from permitting. Again, Dirty MRFs are still MRFs, and should require permits. This paragraph is not consistent with other

	recommendations in the report on the same subject. The last sentence should have the words "Clean" and "be" added so that it reads "Clean Material Recovery Facilities should be excluded..."
Page 32, par. 3	The Supreme Court invalidated some forms of flow control, but not all. It leaves us less certain of the strength of that leg, but did not cut it entirely off.
General	There ought to be a section discussing why consistency is so important. One could instead argue that flexibility is more important, and it is hard to develop a regulatory system that is simultaneously perfectly flexible and perfectly consistent. Flexibility and consistency needs were discussed in some meetings. Both should be discussed in the report.
General	The report somewhat leaves the impression that BACT may be good for large regional facilities, where facilities can have impacts in large populated areas, but not where problems are localized and specific to the management of the facility. This discussion was slow to gel. We suggest you consider how to clarify this, if it is what you want to state.

TACOMA-PIERCE COUNTY
HEALTH
DEPARTMENT

Federico Cruz-Uribe, MD, MPH
Director of Health

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October 27, 1998

Cullen Stephenson, Program Manager
Jay Shepard, Section Manager
Washington Department of Ecology
Solid Waste and Financial Assistance Program
P.O. Box 47600
Olympia, WA 98504-7600

RE: **SHB 2960 Report Comments**

Dear Mr. Stephenson & Mr. Shepard:

Thank you for providing the opportunity to review and comment on the SHB 2960 Report - Washington's Solid Waste Permit System.

The Tacoma-Pierce County Health Department (TPCHD), in concert with the Pierce County Solid Waste Division, have developed the attached joint comments on the SHB 2960 Report. The content of the joint comments fundamentally support the conclusions and recommendations found in the SHB 2960 Report.

In addition to these joint comments, additional detail orientated comments will be provided at the October 27, 1998 hearing in Seattle.

If you have any questions, please contact me at (253)798-2955.

Sincerely,

Stephen Marek
Public Health Manager
Source Protection Programs

SM:AC:llj

cc: Marty Erdahl, Pierce County Solid Waste Division

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Pierce County
Department of Public Works and Utilities
Solid Waste Division

Tacoma-Pierce County
Health Department
Source Protection Programs

COMMENTS ON THE SHB 2960 REPORT
October 27, 1998

The Pierce County Department of Public Works and Utilities, Solid Waste Division, and the Tacoma-Pierce County Health Department, Source Protection Programs, are pleased to offer the following comments on the SHB 2960 Report. We commend the Department of Ecology and the Washington Solid Waste Advisory Committee on their efforts.

For the most part, our agencies support the recommendations contained within the Report. We welcome the fact that the Report recognizes that there have been successes under the current regulatory system.

Permit-By-Rule and Composting Standards

A permit-by-rule mechanism will not benefit the solid waste regulation of compost facilities or material recovery facilities. It is through the issuance of individual solid waste permits that we assure our communities that all steps have been taken to address specific, local concerns, and implement a level of regulatory control that is appropriate for our communities.

The regulation of composting facilities can be improved through the establishment of performance oriented standards. Studying these through the WAC 173-304 revision process is the proper course of action and we look forward to participating in that process. We are concerned, however, that we not stop with performance standards.

Our experience with compost facilities in Pierce County leads us to conclude that the WAC should include technology and process standards in addition to performance standards. There are many different ways to compost and we do not think that state regulations ought to prescribe the choice of technology. For each composting technology, there should be certain acceptable operating standards and certain agreed upon procedures for corrective action. While regulatory performance standards address the "end results" of composting and recycling operations, emphasis also needs to be placed on the "processes" of composting and recycling.

A third component of successful composting is the experience of the compost facility operator. Performance standards and operational plans are important measures and tools, but we have seen that the best way to prevent problems is to have trained, competent professionals running the facilities. Consequently, we support the recommendation for operator certification and will work with the Department of Ecology to secure passage of the necessary implementation legislation.

The Applicability of Best Available Control Technology

We agree with the conclusion that applying a sort of Best Available Control Technologies (BACT) to compost facility regulation would create more, not less, regulatory uncertainty.

The "MFS approach" (WAC 173-304) appropriately sets a "regulatory minimum" as an objective means of requiring technologies or processes that address the environmental and public health impacts associated with composting and recycling facilities. This is important to the solid waste

regulator and more importantly, the public, to hold the compost and recycling facility owner/operator accountable to prevent and, if necessary, correct environmental and public health impacts from their operations.

While a BACT approach could still contain such a baseline regulatory standard, it would also, by its nature, set a "ceiling" above which no project would be required to strive. We think placing limits on environmental protection sends the wrong message to the public, especially when it concerns composting and other solid waste facilities -- projects around which an active and knowledgeable citizenry has organized.

Consistency

We advise the Department of Ecology against placing too much emphasis on inter-jurisdictional consistency. We will agree that:

1) there need to be minimum acceptable regulatory standards;
2) those standards need to be updated from the present-day standards;
3) project proponents should have some assurance that the rules they face in one jurisdiction are *similar* to the rules they face in another; and
4) citizens need some assurance that a project proponent can not simply cross a jurisdictional boundary to find a community with significantly less stringent standards.

Revised solid waste handling regulations must acknowledge that the natural environment and county-specific circumstances may differ from one jurisdiction to another. The revised regulations must also retain some flexibility that would allow local agencies to adopt stricter standards if deemed necessary by environmental and public health concerns or political realities.

Material Recovery Facilities

We agree that the terms "clean MRF" and "dirty MRF" need definition. But even a "clean MRF" will occasionally handle significant amounts of contamination. While we don't advocate over-regulation, there should be some assurance that worse case scenarios don't evolve into major disasters.

Conclusion

The existing system for permitting solid waste facilities works well to protect public health and the environment. Regulations are implemented fairly, protecting the rights of project proponents and the public. We do, however, see opportunities to revise standards to make them more applicable to present-day situations. But developing and implementing changes need to be done with care. Pierce County learned, with great difficulty, that not all recycling ventures are benign. While we work to improve the regulatory system, let's not lose sight of those lessons nor the public we are called to serve.

Thank you for providing our agencies with an opportunity to share our comments on this Report. If you require clarification, or wish to ask us questions about our comments, please contact:

Tacoma-Pierce County Health Department
Steve Marek, Public Health Manager
(253) 798-2955

Pierce County Solid Waste Division
Marty Erdahl, Solid Waste Manager
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October 27, 1998

Mr. Jay Shepard
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504

Re: **Comments on "SHB 2960: Washington's Solid Waste Permit System"**

Dear Mr. Shepard:

LRI has asked me to provide you with its comments regarding the draft SHB 2960 report. LRI's primary concern with the draft report is with its conclusions regarding the non-advisability of using a BACT construct to address the stated goal of SHB 2960 to promote consistency and certainty in the permitting of composting and recycling facilities. Contrary to the draft's conclusions, LRI believes that, conceptually at least, BACT is a valuable approach to providing such certainty and consistency and should be utilized in the context of both technological and performance standard changes in the minimum functional standards, WAC 173-304.

SHB 2960 contains a clear mandate that Ecology "shall address . . . the application of best available control technology on a consistent basis, so that similar recycling facilities are subject to the same requirements. . ." This mandate was an attempt to deal with the different requirements being imposed on different, but similar, facilities. As set forth in the letter from Representative Chandler, the prime sponsor of SHB 2960, which is attached to the draft report, the requirement was to promote consistency and certainty in permitting so that the private sector could "make rational investment decisions and provide facilities that meet environmental requirements." Representative Chandler also specifically noted that he wanted to determine if the BACT concept could be applicable to the odor issue at composting facilities and noted that it "would be helpful if we could develop guidance and requirements that could be applied consistently to facilities around the state."

A review of this legislative mandate makes it clear that the legislature was trying to solve an existing problem, that being that BACT was being applied in an inconsistent manner around the state, especially to odor control. Some air agencies were not addressing the issue at all while others were applying the concept inconsistently within their jurisdiction. What the legislature was saying was that Ecology should try to figure out a way that BACT could be made to apply consistently so as to allow the private sector some certainty in making investment decisions. LRI believes that this legislative mandate is best accomplished by developing clear, up front technology and performance standards relating to environmental issues of composting and by incorporating such standards into the upcoming MFS revisions. By doing so, a minimum level of compliance would be set state-wide. To the extent these requirements were generally sufficient to deal with the various emissions from such facilities, there would be increased certainty that meeting such requirements would be sufficient for permitting purposes. While, without further changes in law, individual health departments or air quality authorities might still be able to require more on a case-by-case basis when the circumstances demanded it, the private sector would at least know the base level of requirements that would be imposed consistently to all facilities.

Further, it is not critical that these new standards be denominated "BACT" or any other acronym. To the extent they set forth requirements for control of environmental impacts, they would, in fact, establish a base level of available control technology which would be consistently applied statewide, thus moving in the direction mandated by the legislature. These standards should, as part of the MFS, include both up front technology and performance standards. Just as the current MFS dictate minimum levels of technology, backed up by the requirement to meet certain performance standards (e.g. landfill liners with groundwater monitoring), these new standards should require certain technological standards, such as leachate control, maintenance of aerobic conditions, and, for larger facilities, the capture and treatment of emissions, as well as performance standards, such as lack of air or water emissions. While these standards might vary based on feedstock limitations, size of wastestream, etc., as set forth in SHB 2960, "similar facilities" should be subject to the same permitting rules.

While the draft report recommends performance standards as the appropriate response to the legislative mandate, LRI does not believe that performance standards alone are adequate (assuming the common understanding of performance standards.) A purely after-the-fact application of performance standards, such as the absence of nuisance complaints suggested by some commentors, does not provide the type of investment certainty demanded by the legislature. For example, an entity which is allowed to permit a much lower technology facility based on the promise of compliance

with such performance standards could garner all of the compostable organics wastestream by offering substantially lower prices for its services. This could prevent the construction or continued operation of systems with much more sophisticated and effective environmental controls which might not then be available if the cheaper alternative later developed violations of the pertinent performance standards. Further, just as in the case of landfill liner requirements, there needs to be some minimum, up front technological level of protection against known environmental risks, rather than solely a reliance on after-the-fact performance standards. Just as one can surmise that landfills pose a risk to groundwater that justifies the imposition of a liner (technological) requirement to lower that risk, there are "composting" technologies such as large, static pile operations which undoubtedly involve a substantial risk of anaerobic conditions which would then result in the production of substantial quantities of methane and its corresponding odoriferous constituents. By analogy, therefore, technological requirements to either contain and destroy such emissions, or to prevent their occurrence through the maintenance of aerobic conditions, should be required.

In short, LRI would suggest that the concept of BACT be adopted to develop technology and performance standards applicable to compost facilities of a certain size and using certain feedstocks. These provisions should be part of the revisions to the MFS currently being developed. Such an approach should, at a minimum, require compost facilities to either be maintained in a controlled aerobic condition or to capture and destroy any of the gaseous emission products of anaerobic decomposition.

Some additional specific comments on the draft report would include the following:

Page 2 - LRI supports the concept of operator certification for compost facilities.

Page 4 - It should be noted that composting of yard waste may be regulated under the pile standards, if groundwater, surface water, air and/or land contamination has occurred or will likely occur. WAC 173-304-300(3)(c). Thus, composting processes which result in air emissions and/or the likelihood of groundwater or land contamination can be regulated as a pile or a disposal facility.

Page 6 - LRI believes that an appropriate application of technological and performance standards would have addressed the problems noted at the Puyallup facility. These piles were not maintained in an aerobic condition, and therefore developed odor and other air emissions which led to the problem described.

Page 7 - RCW 70.95, as well as Department of Ecology regulations, have defined composting as "controlled aerobic degradation." Thus, compost facilities should not include those that are using oxygen-poor processes as suggested.

Page 10 - Where the report notes that recycling standards do not apply to surface impoundments, some recognition should be given that outdoor composting facilities which produce leachate will be using surface impoundments which may require a higher level of permitting.

Page 16 - Permitting-by-rule should be available to those who choose to use the most protective of technologies to control pollution. For example, totally contained aerobic composting facilities using biofilters could be subject to permitting-by-rule as an inducement to use higher technology, more protective pollution control techniques. Large, open-air facilities could be permitted, but only after receiving an individual permit which ensured the protection of various environmental media. Similarly, very small facilities, or those using very low energy feedstocks, could be allowed pursuant to a permit by rule approach.

Page 17-18 - The discussion of BACT is inaccurate. First, it is important to note that BACT establishes a "emission limitation" based on that which can be achieved through the use of available technology. Unlike the implications of the report, BACT does not dictate a particular technological solution. New applicants still have the flexibility to propose any given technology so long as it can demonstrate that this technology can meet the BACT emission limitations which are achievable through the use of known and available technology. For example, a controlled, aerobic composting process will not result in the generation of methane, hydrogen sulfide, mercaptans, etc., contaminants which are the result of anaerobic decomposition of organic materials. Thus, a combination of performance standards and technological requirements which assure a process maintains its aerobic character would assure that emissions of such materials would be minimized. Since controlled aerobic degradation processes have been demonstrated in this area as economically and technically available and achievable, the emission limits for these contaminants under a BACT approach would be extremely small. A BACT-type approach would, thus, set these emission limits at extremely low levels and any attempt to build an anaerobic putrefaction facility for the degradation of organic materials would require some sort of containment and destruction of these emissions in order to meet the BACT requirement. (In this regard, a "compost" pile which operates on anaerobic principles is nothing more than an above-ground landfill and should be treated

equivalently. Landfill methane, hydrogen sulfide, mercaptans, etc. are required to be combusted, and the leachate is required to be carefully contained and monitored.)

While BACT does establish a "top-down" approach to air quality, this is a desirable result in that it is technology-forcing or emission-limiting. The emphasis in the report on BACT's "case-by-case" approach is misplaced. The case-by-case analysis only suggests a case-by-case review of whether a new or modified stationary source meets the emission limitations required by BACT. In the case of composting odors, this BACT analysis is simplified dramatically since controlled aerobic degradation of organic materials does not produce methane or the corresponding odoriferous materials produced during anaerobic degradation. Thus, the emission limit for these odor-causing materials is minimal on a BACT analysis, and cannot be dramatically affected by any type of case-by-case review.

Page 18 - LRI does believe that, at least for similarly sized facilities in similar markets, emission limits (as required by BACT) should be the same regardless of the setting of the facility. The generation of methane, a green house gas, and its corresponding odoriferous constituents, should not be allowed in major quantities simply because there are not many neighbors in the vicinity of a particular facility. Applying such an approach would have all of our manufacturing facilities being sited in low population density areas and producing as much air emissions as they want because no receptors are complaining. This is not the appropriate approach for limiting damaging air emissions. Therefore, it is simply inappropriate to define the performance of a composting facility in terms of how many complaints are received from neighbors.

Similarly, BACT would not require everyone to use the same technology. First, emissions which would otherwise exceed the BACT limits could be eliminated through containment and thermal destruction. Secondly, small facilities would have much lower levels of emissions, as well as a different standard for what is achievable.

The report's conclusion that jurisdictional health departments took a critical view of BACT as a tool to regulate composting operations and that they much preferred a performance-based approach is not wholly supported by the comment letters attached, nor the comments of such groups in the public hearings associated with the MFS review. (See, for example, comments of Quad Counties at page 32 of the report.) Further, as was demonstrated at the public hearings on the MFS, there is

substantial confusion of the meaning of "performance-based approach." Several jurisdictional health departments, after commenting in favor of a performance-based approach, noted that they were fully supportive of up front technological standards that would require aerobic processes and minimization of emissions as part of the permitting process. They felt a purely performance-based approach could lead to the problems stated above, where a facility could discourage improvements in technology and performance, capture the market, and only after-the-fact fail the performance-based standards.

Page 19 - There are several errors in the description of the proposed chicken manure composting facility in rural Pierce County. First, the proposal includes food waste, yard waste, etc., in addition to wood chips. The neighboring lands owned by a "large integrated forest product company" are now being sold for residential uses, thus largely negating the "remoteness of the location." Perhaps the largest misapprehension in this paragraph is, however, the statement that local air authorities have called this technology BACT given the remoteness of the operation and the fact that the chicken-raising operations are a significant source of odors already. No such determination has been made by PSAPCA. In fact, the applicant has consistently attempted to analogize to the BACT determination for its facility in Snohomish County. However, PSAPCA was clear in that approval that it did not apply to manure feed stocks. Since the Pierce County proposal is clearly and significantly involved with manure, there is no determination that composting of manures in static piles in Pierce County could be considered BACT.

While many of the odor-causing constituents of anaerobic digestion are more local in their effects, their presence is very indicative of much larger quantities of green house gases being produced, such as methane. These larger quantities are not merely localized in their effect, but would have region-wide effects. There is no reason why a landfill should have to burn its methane any more than a compost facility. These comments also, again, reflect a misapprehension about BACT. BACT is not "design specific" as suggested and, at least in the case of aerobic degradation with zero emissions of methane and its corresponding anaerobic degradation products, consistency is easily attained through the requirement of aerobic degradation or some very minimal level of emissions of such contaminants.

Page 23 - To the extent BACT is more suited to emissions of pollutants that are regional in character, this is certainly the case of the green house gas, methane, produced by anaerobic processes. Further, it is true that the regulators with

PSAPCA did specify BACT as two very different things in two different facilities. This was largely due to their failure to describe BACT in terms of emission limits rather than in terms of the impact on potential receptors. Further, PSAPCA did not, in any way, deal with the issue of methane production.

Page 25 - In proposing to reject the use of BACT to set standards for composting facilities, Ecology failed to deal with the very important issue of "technology-driving." Without the application of some sort of BACT approach, there will be no mechanism to assure a continued progress in the limitation of detrimental air emissions from industrial processes.

Sincerely yours,

Daniel D. Syrdal
Attorney for LRI

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BEST AVAILABLE CONTROL TECHNOLOGY AND RESPONDING TO ODOR COMPLAINTS

Presented by Claude Williams, Puget Sound Air Pollution Control Agency.

The Puget Sound Air Pollution Control Agency's (PSAPCA) regulations concerning odor and nuisance control measures state:
(a) It is the policy of the Board that effective control equipment and measures shall be installed and operated to control the emissions of odor bearing air contaminants and thereby prevent air pollution.

(b) It shall be unlawful for any person to cause or allow the emission of odor bearing air contaminants unless such person uses the best available control technology to control the emissions.

When determining what is the best available control technology (BACT), PSAPCA takes into consideration feedstock, quantity, potential for impact and economics. At one time, total enclosure was considered BACT; however, PSAPCA, with the help of WORC members, has reconsidered this position, and no longer considers total enclosure BACT for all locations.

Odor sources include feedstock (type and condition); pile (configuration and age); pile run-off; standing water; source of make-up moisture; dirty roadways, floors and walls; and dirty equipment.

Odor characterization (most to least sensitive) includes sulfur compounds; fatty acids; ammonia and amine compounds; terpines; and, phenols, acetone and toluene.

Odor management strategies include minimize generation, or contain, collect and treat. Planning for control of odor generation and treatment include site design and construction; process control; process air containment and transport; odor treatment before release; and, odor dispersion. Though odor dispersion is never truly an option in area where neighbors are close by.

Key process variables that determine odor generation include pile porosity, nutrient balance, pile oxygen and pH, pile moisture, pile temperature, and retention time. Causes of odor generation include: pile porosity <35% inhibits air circulation; pile moisture >60% eliminates adequate free airspace; initial C:N ratio below 25:1 promotes NH3 volatilization; pile pH >7.5 promotes NH3 generation; pile pH <6.0 promotes H2S and mercaptain generation; and pile O2 <16% promotes VOA formation.

Odor generation can be prevented by: establishing initial pile porosity at ~60%; maintaining pile porosity >35%; continually eliminating clumps; keeping pile below slumping and compaction heights; controlling initial 24-hour aeration for pH 5-5.5 to inhibit NH3 volatilization; aerating after preparing period for pile pH 6-7.5 first 7 to 10 days; aerating to keep pile O2 >16%; and, keeping pile moisture <60%, but >45%.

Odor treatments include multi-stage chemical scrubber, biofilter, bioscrubber, carbon adsorption, chemical counteractants and no masking agents.

(**Cedar Grove** Continued from Page 5)

- And last but not least, Cedar Grove will help support the grasscycling campaign being planned for the upcoming gardening season. This program is a valuable component of the larger waste prevention program that promotes backyard composting, grass mulching, reduced fertilizer/pesticide use and water conservation in gardening. A more enlightened home gardener will more fully appreciate the choices between curbside collected yard waste and what each individual can do to manage their own wastes to improve the environment.

WORC DIRECTORY

Is your listing in the WORC Directory still accurate? Any changes to the Directory listing should be sent to Connie Allison at WORC, PO Box 7514, Olympia, WA 98507-7514, or e-mailed to alacarte@olywa.net. Additional copies of the Directory are available to WORC members for a modest fee.

Please add the following member listing to the original directory:

City of Lynden
Ken MacKenzie
323 Front St
Lynden, WA 98264
Phone (360) 354-3446
FAX (360) 354-5749

Oops,
Our apologies go out to long standing Board Member and WORC supporter Ken MacKenzie for the omission.

from Jeff-Jane 9/22/98

SWANSON
BARK & WOOD PRODUCTS, INC.

October 29, 1998

Department of Ecology
Attention: Mr. Jim Knudsen
P. O. Box 47600
Olympia, WA 98504-7600

Gentlemen:

We want to express our appreciation for the public hearings that you attended on a rainy night, where there was no parking.

Points that I'd like to be sure get into the new regulations include:

1. If there is no: a) odor, or b) water quality problems, we as wood waste handlers would like to be ignored as part of the solid waste process and handled in some other way. Perhaps it could be handled as Snohomish County does, as a topsoiler.

2. Because compost is mentioned so often in your proposed regulations, with regard to wood waste, and especially bark, we'd like some clear definition that tells us at what point we are storing bark and what point we are composting. For instance, if we pack it with all the air out, such as Capininto in Kent, or us, we feel that that is clearly not a compost, even though the color may change slightly. If the product is looser and is changing color, is that compost, etc.?

   When we talk about composters, their purpose is a size reduction because of a need to get rid of the material. Because of the large number of boilers in our area, that is not an issue because we burn all the material that we can generate. So our purpose in changing the wood product is to change how plants deal with the material (a very different process).

3. I do not thoroughly understand permit by rule versus best available technology issues in terms of how it might be applied. What we would like is that the requirements fit the operation so that the results to the public are comparable; i.e., it strikes us that whether or not we have air-handling equipment is not what should be required in the law. What should be required in the law is that the public not be subjected to foul odors, objectionable dust, or water quality problems.

Your attention and patience with us, with us being such a small portion of your total problem, is appreciated. If you have any questions, or wish to call me, please feel welcome to do so.

Sincerely,

John A. Leber
General Manager

2405 Talley Way • Kelso, WA 98626

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