The Hon. John Sandor, Commissioner
Department of Environmental
Conservation

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Assessment of village solid waste landfill requirements

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INTRODUCTION

This memorandum assesses the status of federal solid waste regulations and provides advice on how DEC should comment on proposed rules. Also incorporated are suggestions for state rules.

BACKGROUND

On October 9, 1991, the Environmental Protection Agency (EPA) adopted final rules setting forth minimum federal criteria for Municipal Solid Waste Landfills (MSWLF)[1] While most of the federal criteria applied to all MSWLF, the final rule did exempt small landfills from groundwater monitoring criteria.[2] This exemption would have relieved most rural Alaskan villages from the groundwater monitoring criteria.

The exemption was struck down by the District of Columbia Circuit Court of Appeals in the case of Sierra Club v. EPA, 992 F.2d 337, 345 (D.C. Cir. 1993). The court found that the exemption violated the clear language of the Resource Conservation and Recovery Act (RCRA) § 4010(c).[3]

Concerned that rural Alaskan villages would be unable

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[1] 56 Fed. Reg. 50,978 (1991) codified at 40 C.F.R Parts 257 and 258 (1992).

[2] 56 Fed. Reg. at 51,017, codified at 40 C.F.R. § 258.1(f)(1) (1992). Small landfills were defined as those receiving less than 20 tons of municipal waste on an average day.

[3] 42 U.S.C.S. § 6949a(c) (1993 Supp.).

to comply with the groundwater monitoring requirement and other criteria developed by EPA, you sent a letter to Carol M. Browner, administrator of the EPA, asking EPA to exempt very small landfills (those accepting less than three tons per day of waste) from the federal criteria. You asked Ms. Browner to give the State of Alaska authority to manage such facilities in the manner the state deemed appropriate.[4] You also asked Ms. Browner to postpone the effective date of the municipal solid waste landfill criteria so that the State could develop its own solid waste management program. Such a postponement, you noted, would also give the rural villages more time to develop the infrastructure.

In response, you received a letter from Jeffrey D. Denit, Acting Director for the Office of Solid Waste, EPA.[5] In that correspondence EPA expressed its intent to issue a proposed rule that would postpone the effective dates of the federal criteria. Mr. Denit wrote that the proposed rule would be published during July 1993. He noted that the proposal would extend the effective date of all criteria for facilities receiving less than 100 tons per day That extension would be for six months: from October 9, 1993, to April 9, 1994. Mr. Denit also noted that the proposed rule would extend the time for compliance by very small landfills to October 9, 1995 (a two year extension).

With respect to your request that EPA exempt very small landfills from the federal criteria and give the states authority to manage, Mr. Denit wrote:

> I certainly agree that compliance with the criteria will represent a real challenge for small communities in Alaska. Nevertheless, under the statute, it is not clear that EPA has the legal authority to exempt classes of communities from the criteria. The recent court decision you cite [Sierra Club v. EPA] suggests real limitations in that regard.

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[4] Correspondence of May 27, 1993 from John A. Sandor, Commissioner, Department of Environmental Conservation, to Carol M. Browner, Administrator, U.S. Environmental Protection Agency.

[5] Correspondence from Jeffrey D. Denit, Acting Director for Office of Solid Waste, signed by Bruce Weddle to John A. Sandor, Commissioner, Alaska Department of Environmental Conservation, dated July 7, 1993.

Following receipt of that letter, you asked this Department to assess the situation and recommend appropriate action. This memorandum followed.

ASSESSMENT OF THE SITUATION

1. Request for Extension of Time

(a) Six-Month Extension

The proposed rule referenced by Mr. Denit was published on July 28.[6] If the proposed rule becomes final, that rule will accommodate your request for a postponement of effective dates. Effective dates would be postponed from October 9, 1993 to April 9, 1994.

The proposed postponement is conditional. It will apply only:

1) to existing units and lateral expansions of units;

2) at landfills that receive less than 100 tons per day of waste (calculated on an annual average basis);

3) at landfills which are located in a state that has submitted an application for program approval to EPA by October 9, 1993; and

4) at landfills that are not on the Superfund National Priorities List (NPL).[7]

There is nothing the state can do with respect to three of these. Either a unit exists or it does not. Landfill operators decide how much waste to receive. Listing on the NPL is undertaken by EPA. However, DEC does have the power to submit a program application by October 9.

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[6] 58 Fed. Reg. 40568 (1993).

[7] See proposed 40 C.F.R. §258.1(e)(2). For a discussion of the first condition, see page 5.

A State may retain control of solid waste management if the state develops a management program and "applies" to EPA for approval of that program. That is the application referenced as condition (3), above.

In addition to securing a postponement, submittal of an application and procurement of EPA approval will enable you to offer more flexibility to the regulated community than is offered by the federal program. For instance, aa state with an approved program may be able to exempt small landfills from design criteria.[8] An approved state program may offer greater flexibility in groundwater monitoring requirements.[9] Because an approved state program will give you this authority, we recommend that you submit an application.

Our second suggestion is a "fall-back" position. If the state is not successful in completing and submitting the application by October 9, you should take the position that the six-month extension nonetheless applies to any landfill located in a predominantly Native village.[10] EPA made statements in the July 28 publication which suggested that the extension for Native villages is automatic. As to those communities, the six-month extension of the effective date is not conditioned on timely submittal of an application by the state.[11]

Nonetheless, timely submission of an application is preferable because it will make the exemption applicable to all small MSWLF in the state, not just those run by Native villages.

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[8] This topic is discussed in more detail infra, p. 7.

[9] This topic is discussed in more detail infra, p. 8-11.

[10] Assuming, of course, that the landfills meet the other eligibility criteria (existing units of less than 100 tpd that are not on the NPL).

[11] See the discussion of how EPA will treat Alaska Native Villages as Indian Lands. 58 Fed. Reg. 40572 (1993).

Only two or three landfills in Alaska receive more than 100 tons per day of waste.[12] The only Alaskan landfills on the NPL are those at Eielson and Elmendorf Air Force Bases and Fort Wainwright.[13] Thus, if the state timely submits its application, all existing units at landfills other than these will be exempt from all federal MSWLF criteria until next April.

(b) Two-Year Extension

In addition to the six-month postponement, EPA has proposed a two-year postponement of MSWLF criteria to landfills that dispose of less than twenty (20) tons of municipal solid waste each day.[14] Like the six-month postponement, this extension will be of effective dates circumscribed by eligibility restrictions. For instance, it only applies to existing units and lateral expansions of those units.[15] That eligibility requirement is not particularly restrictive, however, because most landfills in Alaska use one or two very large units and do not usually create new units with any frequency.[16]

1. there is no evidence of ground-water contamination from the MSWLF unit; and

2. the unit serves

   (a) a community that experiences an annual interruption of al least three consecutive

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[12] Personal communication with Doug Bauer, DEC SW section, August 18, 1993.

[13] National Priorities Site Listing: Alaska, EPA/540/8-91/018 (1991).

[14] Proposed 40 C.F.R. 258.1(f)(1). The tonnage is calculated on an annual average.

[15] As noted on p. 3, this is also true of the six-month extension.

[16] A "unit" is a discrete area, such as a trench, pile, hole, etc. 40 C.F.R. §258.2 (1992). Many Alaskan landfills simply sprawl over all available property and, in legal terms, involve only one "unit" that simply grows up and out.

> months of surface transportation that prevents access to a regional waste management facility, or
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> (b) a community that has no practicable waste management alternative and the landfill unit is located in an area that annually receives less than or equal to 25 inches of precipitation.

Proposed 40 C.F.R. 258.1(f)(1) (emphasis added).

We recommend that you inventory the landfills throughout Alaska for the purpose of determining which landfills meet these criteria. Since evidence of eligibility must be maintained in the landfill operator's files,[17] we suggest that you work with each community (perhaps through your existing community agreements) to ascertain the community's landfill status, and then provide the community with written findings of its eligibility status.[18]

Assuming that most of Alaska's rural communities will be eligible for this extension, the additional two-year period should allow them to develop the infrastructure needed to comply with MSWLF criteria. If specific problems arise with particular landfills, we would be happy to provide further advise on this issue.

2. Request for Exemption From Criteria for Very Small Landfills

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[17] 40 C.F.R. § 258.1(f)(2) (1993).

[18] Perhaps facilities could be briefly scrutinized and divided into those that readily meet eligibility criteria and those that do not. The latter group could be more carefully scrutinized on a unit-by-unit basis to determine whether some units will meet the eligibility requirement. This would allow the community to spread compliance costs over a longer period of time or avoid costs altogether for some units.

In addition to asking EPA for an extension of time, you asked them to exempt very small landfills (those accepting less than three tons per day of waste) from the federal criteria. They responded by noting "real limitations" and positing that EPA might not have legal authority to grant your request. We agree that EPA is precluded from completely exempting any MSWLF from the criteria, regardless of size. We find, however, that EPA is free to relax its rules in ways that will assist very small MSWLF.

(a) Exemptions From Design Criteria

The small landfill exemption that was struck down in Sierra Club has been codified as 40 C.F.R. 258.1(f)(1). It exempted small landfills from subparts "D" and "E" of the federal rules. Subpart D sets forth design criteria.[19] Subpart E sets forth groundwater monitoring criteria.[20] Notwithstanding Sierra Club, EPA continues to assert the exemption as to design criteria.

According to EPA's interpretation of Sierra Club, the court only vacated the small landfill exemption "as it pertains to groundwater monitoring."[21] EPA concludes that "small landfills that meet the criteria set forth in 40. C.F.R. 258.1(f)(1) will continue to be eligible for the exemption from the design requirement (emphasis added)."[22]

If EPA is correct, its interpretation allows very small communities to escape the substantial cost of lining landfills. However, EPA's reading of the Sierra Club case is questionable.

While it is true that Sierra Club focuses on groundwater monitoring, the court cited all of § 258.1(f)(1) in describing the "small landfill" exemption. It then vacated "the

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[19] Design criteria include liners and leachate collection systems. 40 C.F.R. § 258.40 (1992).

[20] Groundwater monitoring criteria require the installation of wells and the implementation of testing programs. 40 C.F.R. § 258.51 and § 258.54 (1992).

[21] 58 Fed. Reg. 40568 (1993) at V. B.

[22] Id.

rule's small landfill exemption." 992 F.2d at 345. Because the court did not specifically limit its ruling to groundwater monitoring (Subpart E), a reader might reasonably conclude that the court vacated the regulation in its entirety, including that portion which refers to design criteria (Subpart D).

Focusing on other parts of the decision, however, leads us to conclude that EPA's reading is correct. The court quoted section 4010(c) of the Resource Conservation and Recovery Act (RCRA), which says:

> [MSWLF] criteria shall be those necessary to protect human health and the environment and may take into account the practicable capability of such facilities. At a minimum such revisions for facilities potentially receiving such wastes should require groundwater monitoring as necessary to detect contamination, establish criteria for the acceptable location of new or existing facilities, and provide for corrective action as appropriate.

(Emphasis added.) Interpreting this language, the court held that all facilities must have groundwater monitoring except where such monitoring is not necessary to detect contamination. In other words, the court literally interpreted section 4010(c) as setting out minimum requirements.

Other minimum requirements cited are "criteria for the acceptable location of new or existing facilities" and "corrective action" programs. Location criteria are established in Subpart B of the regulations. Corrective action criteria are established in Subpart E. Section 4010(c) does not list design criteria (subpart D) as a minimum requirement. Consequently, EPA is free to waive design criteria for small landfills.

We recommend that you submit written comments on EPA's proposed rule supporting that agency's interpretation of Sierra Club.[23] This will work toward your goal of providing flexibility to very small landfills, because incorporation of EPA's interpretation into rule will provide greater freedom of design.

(b) Exemption from Groundwater Monitoring Criteria

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[23] The comment period is scheduled to close on August 27. We advise you to seek an extension of that comment period.

There is no question that all landfills must install groundwater monitoring. The Sierra Club court explicitly stated:

> While such factors as size, location, and climate may affect the extent or kind of monitoring necessary to detect contamination at a specific facility, they cannot justify exemption from the statutory monitoring requirement.[24]

Thus, Mr. Denit was understating the case when he said in his letter of July 7: "[I]t is not clear that EPA has the legal authority to exempt classes of communities from the criteria." In fact, it is quite clear that EPA does not have legal authority to exempt classes of communities from the groundwater monitoring criteria. See 992 F.2d at 345.

In anticipation of that conclusion you have noted that this situation may require legislative action. It is true an amendment to RCRA § 4010(c) could be crafted that would provide greater flexibility in the application of municipal solid waste landfill criteria. Such an amendment would allow the state to determine whether any particular landfill needs groundwater monitoring. Whether the state should seek a legislative amendment to RCRA is a policy question upon which we do not comment.

Short of seeking a legislative change, there are several actions you can take that may benefit villages. For instance, the Sierra Club Court explicitly notes that size, location, and climate may affect the extent or kind of monitoring deemed necessary. We advise you to stress those factors with EPA and then seek approval of a state program that is sensitive to those factors.

The federal regulations are not sensitive to those factors. The only type of groundwater monitoring system they allow is one comprised of wells.[25] In Alaska, in an area of continuous permafrost, any movement of water will either be on the surface or just below the sphagnum moss. Such water might be readily monitored with a simple trench. In other villages, where

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[24] 992 F.2d at 345.

[25] See 40 C.F.R. § 258.51 (1992).

salt water intrusion is likely or where groundwater levels are extremely high, testing of surface water may prove to be the most effective method for detecting groundwater contamination.

Nothing in the statute requires EPA to develop a ground-water monitoring program that accepts only one type of system. Any system that will detect contamination will satisfy RCRA § 4010(c). You may wish to prepare comments to EPA on its proposed rule, advocating that other types of groundwater monitoring systems be accepted.

Another option would be to prepare a more flexible state rule and work to convince EPA to approve it. Persuasive argument for flexibility is found in EPA's preamble to the solid waste rules. EPA recognized that different aquifers have varying "resource values." a 1984 "Ground Water Protection Strategy" identified three classes of groundwater and those were reiterated in the preamble.[26] In addition, provisions of the federal rules that varied with the classification of water were cited as examples of the flexibility EPA had built into federal regulation.

We believe that EPA's rules take a first step but do not go far enough. The state can do a better job incorporating varying resource values into varying regulatory requirements.

Nor does EPA capitalize on the statutory exemption from groundwater monitoring requirements. As stated in RCRA and noted in Sierra Club, groundwater monitoring is requisite only "as necessary to detect contamination."[27] Where it isn't necessary, it isn't required by law.

Yet federal regulations lack case-specific exemptions from groundwater monitoring requirements. Under those rules, a landfill can be exempted only when the owner or operator demonstrates that there is no potential for migration of hazardous constituents from the MSWLF unit to the uppermost aquifer.[28] Certainly there are other situations where a groundwater monitoring system is not necessary to detect contamination. Suppose the uppermost aquifer is so close to the surface that it

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[26] 56 Fed. Reg. 50995 (1991).

[27] RCRA § 4010(c); 992 F.2d at 343-44.

[28] 40 C.F.R. § 258.50(a)(1992).

discharges into wetlands or bog. Even if an overlying or adjacent landfill had the potential to leak hazardous constituents into that water body, groundwater monitoring might not be needed to detect contamination. Suppose there is no uppermost aquifer because the groundwater is permanently frozen.[29] In such as case groundwater monitoring may not be necessary to detect contamination even though hazardous constituents may have the potential to leak from an overlying landfill.

It might, therefore, be worthwhile to seek a greater variety of case-specific exemptions from EPA.[30] Commenting on the July 28 proposal would be a good place to begin. Additionally, you should prepare state rules that provide case specific exemptions for situations where groundwater monitoring is not necessary to detect contamination.

One specific place to begin would be with EPA's definition of "aquifer." All groundwater monitoring rules are designed to detect migration of hazardous constituents from a landfill into the "uppermost aquifer."[31] However, the federal definition of "aquifer" is not tied to potability or potential potability. If the state's definition was so tied, fewer communities would need groundwater monitoring.

EPA's definition can be improved by adding the word "potable" as follows:

> 'Aquifer' means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of [**potable**] groundwater to wells or springs.

40 C.F.R. § 258.2. Given EPA's recognition of varying resource values, we doubt it can credibly find fault with modifications

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[29] EPA regulations define aquifer as "a geological formation. . . capable of yielding significant quantities of ground water to wells or springs." 40 C.F.R. § 258.2 (1992) (emphasis added).

[30] Model language for such exemptions might be found in the RCRA hazardous waste regulations such as § 264.90(b)(2) or in the RCRA statutory language, such as § 3005(j)(s)(2), (3), and (4).

[31] E.g., 40 C.F.R. § 258.51(a) (1992).

that differentiate between types of groundwater. Differentiating between a pristine mountain spring and arsenic-laden groundwaters is a reasonable recognition of varying resource values. Differentiating between a freshwater aquifer and a tidally influenced aquifer also seems reasonable, particularly where any leaching of hazardous constituents will occur into an expanse of ocean likely to be capable of immediately diluting the leachate (i.e. Nome, Kotzebue, Dutch Harbor, etc.). Improvements such as this will go a long way toward restoration of the small landfill exemption without running afoul of Sierra Club.

CONCLUSION

Your request for more time has, in essence, been granted. All you need do is submit a program application by October 9. Your request for exemptions cannot be granted in full without legislative change. However, greater flexibility can be added to the federal regulations and crafted into state regulations. Alaska can acquire this flexibility by effectuating a legislative change to RCRA § 4010(c), by commenting on EPA's proposed rule, and by crafting a state program that is responsive to RCRA yet innovative in its case-specific application.