United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9481.05(84)

TITLE: Combining Ground Water Protection Programs in RCRA Permits

APPROVAL DATE: 5-22-84

EFFECTIVE DATE: 5-22-84

ORIGINATING OFFICE Office of Solid Waste

☒ **FINAL**

☐ **DRAFT**

STATUS

A- Pending OMB approval
B- Pending AA-OSWER approval
C- For review &/or comment
D- In development or circulati headquarters

REFERENCE (other documents):

OSWER OSWER OSWER
VE DIRECTIVE DIRECTIVE DI

PARTS 264 AND 265 SUBPART F - GROUND-WATER PROTECTION DOC: 9481.05(84)

Key Words: Compliance Monitoring, Corrective Action, Permit Modifications, RCRA Permits

Regulations: 40 CFR 270.14(c)(1),(2),(4),(6),(7),(8); 270.41(a)(5)(w); 264.98(h)(2)

Subject: Combining Ground Water Protection Programs in RCRA Permits

Addressee: Alexandra Smith, Director, Air and Waste Management Division

Originator: John H. Skinner, Director, Office of solid Waste

Source Doc: #9481.05(84)

Date: 5-22-84

Summary:

40 CFR 264.91(b) allows permit writers to include more than one ground-water protection program (i.e., detection monitoring, compliance monitoring, corrective action) in a facility permit. An advantage of combining programs is that compliance levels are established for key constituents prior to the time when fast action is needed. Imminent hazardous conditions, or the need to protect fragile aquifers, would strongly suggest that an accelerated response is necessary.

In a combined detection/compliance monitoring permit ground-water protection standards for certain hazardous constituents shall become applicable immediately upon finding a statistically-significant increase in detection-monitoring parameters. These standards may be established in the initial permit or the permit may establish procedures for establishing concentration limits once a significant increase has occurred. If standards are established in the initial permit, permit writers should only identify a small number of key constituents and should select these constituents based on their presence, mobility, adverse effects and likelihood of appearing in the ground water at concentrations above accepted health limits.

Combining corrective action provisions with detection and/or compliance monitoring programs may be somewhat more difficult. It may not be possible to include a full, comprehensive corrective action plan in a permit because of the complexity of site-specific hydrogeological and engineering characteristics. It may be possible, however, to develop an interim program that would include general steps to be taken to protect human health and the environment and would require the collection of additional information on the specific remedy needed.

If an applicant wishes to have proposed ACL limits considered in establishing the ground-water protection standard, the supporting ACL demonstration should be submitted along with the initial Part B application.

It may be difficult to obtain the information necessary to design a complete combined permit. If no hazardous constituents have been detected in the ground-water at the time EPA issues the combined permit, the regulations do not require the applicant to submit detailed information necessary to establish permit conditions for compliance monitoring or corrective action programs.

Combining Ground-water Protection Programs
in RCRA Permits

John H. Skinner, Director
Office of Solid Waste (WH-565)

Alexandra Smith, Director
Air and Waste Management Division, M/S 529

In your memo of March 14, 1984, you requested advice as to whether an integrated ground-water permitting approach is feasible and if so, that we provide draft language implementing the concept. The approach is feasible and may be necessary in some situations. Model language will be drafted this summer.

The advantage of combining programs in a permit is that compliance levels are already established for key constituents prior to the time when fast action is needed. The regulations, with clear supporting language in the preamble, allow the specification of more than one program in a facility permit (§264.91(b)). In deciding whether to invoke this authority, the permit writer should consider the potential adverse effects on human health and the environment which might occur during the administrative period necessary to revise the permit. Imminent hazardous conditions, for instance, or the need to protect fragile aquifers would strongly suggest that an accelerated response is necessary.

The first step in designing appropriate permit conditions for facilities "suspected" of having contaminated ground water is to use the authorities of §270.14(c)(1), (2) and (4) to attempt to determine whether contamination has, in fact, occurred. If it is established that contamination has occurred, the permit writer should either (1) invoke the application requirements of §270.14(c)(7) or (8) and establish either compliance monitoring or corrective action conditions in the facility's permit, as appropriate, or (2) consider combining compliance monitoring and corrective action programs in the permit. If it is not possible to determine whether contamination has occurred, or if it is shown that contamination has not in fact occurred, the permit writer should either (1) invoke the application requirements of §270.14(c)(6) and establish only a detection monitoring program in the permit, or (2) consider issuing a combined detection/compliance program permit or a permit combining all three programs.

what's the third? Corrective action

A combined detection monitoring/compliance monitoring permit provides that ground-water protection standards for certain hazardous constituents shall become applicable immediately upon finding a statistically-significant increase in detection monitoring parameters. These ground-water protection standards may be established in the permit at the time of initial permitting or the permit may establish procedures by which such limits are to be established once a significant increase in detection monitoring parameters has occurred. If ground-water protection standards are established in the initial permit, it is suggested that only a small number of key constituents be identified since establishment of specific constituent limits may be time consuming. Moreover, since the specification of an appropriate health-based limit for any one of the constituents which do reach ground water is sufficient to commence corrective action, exhaustive lists are of little advantage. These constituents should be selected in consideration of the following:

(1) presence in the waste;

(2) relative mobility, likelihood of being among the first constituents at point of compliance;

(3) known, documented adverse effects;

(4) likelihood of appearing in the ground water at concentrations greater than the generally accepted health limit.

At the same time that concentration limits (or procedures for establishing such limits) become applicable, the permittee should also be required to identify all hazardous constituents from regulated units in ground water at the compliance point in accordance with §264.98(h)(2). The Regional Administrator should assess the appropriateness of the existing compliance monitoring program in light of any new information resulting from this analysis and, if necessary, initiate a permit modification pursuant to §270.41(a)(2) to modify the compliance monitoring program (e.g., to set standards for hazardous constituents not previously identified or to adjust those values or procedures previously established when necessary).

Combining corrective action provisions with detection and/or compliance monitoring programs may be somewhat more difficult. In many cases, it may not be possible to include a full, comprehensive corrective action plan in a permit due to the complexity of site-specific hydrogeological and engineering characteristics. However, when the situation warrants, it may be possible to develop an interim program which would include general steps to be taken to protect human health and the environment and would require the collection of

additional information on the specific remedy needed. The new information acquired pursuant to this interim program would then provide the basis for a permit modification (pursuant to §270.41(a)(2)) to establish a more detailed corrective action program.

Some permit writers have encountered difficulties in obtaining the information necessary to design a complete combined permit. The permit application requirements of §270.14(c) do not require the submission of detailed information necessary to design a complete compliance or comprehensive corrective action program. Section 270.14(c)(7) provides that an applicant can be required to submit information necessary to establish a compliance monitoring program only "if the presence of hazardous consitituents has been detected in the ground water at the point of compliance at the time of permit application. "Similarly, §270.14(c)(8) provides that information in support of a corrective action program is required only "if hazardous constituents have been measured in the ground water which exceed the concentration limits established under §264.94, Table 1, or...[if such constituents have been measured] over background concentrations. "Thus, if no hazardous constituents have been detected in ground water at the time that EPA seeks to issue a combined permit, these regulations do not require that the applicant submit information necessary to establish permit conditions for compliance monitoring or corrective action programs. (In practice, of course, applicants may find it desirable to submit the information when they know the permit writer is drafting a combined permit).

There are possible problems that may arise when distinguishing what will constitute "new information" in order to initiate the permit modification process. In order to justify application of this "new information" standard, the information acquired after the time of permit issuance (presumably through the "partial" compliance monitoring program or the "interim" corrective action program) must truly be information that was not available at the time of initial permitting. It may be advisable to have your staff identify the kinds of information, if any, that can be expected to be acquired during the "partial" or "interim" compliance monitoring and corrective action programs that would not have been available at the time of initial permitting. It is important to remember that any new permit conditions arising from this new information must be imposed through a formal permit modification allowing for public participation. As noted earlier, the major basis for modification will be §270.41(a)(2) which allows permits to be modified to reflect new information. However, permit writers may also be able to rely upon §270.41(a)(5)(iv) in making modifications to a

corrective action program that has not brought the regulated unit into compliance with the ground-water protection standard within a reasonable period of time.

Finally, it is important to consider ACLs in the context of a combined permit. The regulations contemplate that ACLs will be considered during the time applicable to the establishment of concentration limits based on background or MCLs. See 47 Fed. Reg. 32298. In a combined permit, these limits are estaolished at the time of initial permitting. Accordingly, if an applicant wishes to have proposed ACL limits considered in establishing the ground-water protection standard, the supporting ACL demonstration should be submitted along with the initial part B application. An owner/operator may, of course, submit an ACL demonstration at any time after the issuance of the combined permit, but such later ACL request will not stay implementation of the intergated permit conditions. See 47 Fed. Reg. 32307.

Your request for draft standard language in the form of a model permit is being addressed in the redraft of the Permit Writer's Guidance Manual. We will circulate drafts for your comment this summer and keep you informed of the status of its development. Additionally, we are exploring the possibility of changing the rules strengthening the combined permits approach. There are obvious advantages to this approach, including speeding up the process of initiating corrective action, which may outweigh the up-front cost of additional time and effort to produce the initial permits.

Thank you for your comments and suggestions. They help us to focus our efforts where they will do the most good.

cc: Regional Division Directors, Regions I - IX
Sue Moreland-ASTSWMO