

US EPA ARCHIVE DOCUMENT

PETROLEUM REFINING LISTING DETERMINATION

**NOTICE OF DATA AVAILABILITY AND
PROPOSED RULE ON LANDFILL LEACHATE;
RESPONSE TO COMMENT DOCUMENT**

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U.S. Environmental Protection Agency
Office of Solid Waste
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**NOTICE OF DATA AVAILABILITY AND PROPOSED RULE ON
LANDFILL LEACHATE; RESPONSE TO COMMENT DOCUMENT**

PR3A-00001 (EDF/Lennett) - The commenter states that the Agency's record in support of the NODA is incomplete and does not contain enough information to evaluate whether deferral is necessary. Assuming deferral is necessary, the commenter agrees with EPA's proposed conditions and supports the condition prohibiting management of deferred leachate in impoundments. The commenter notes that although the Agency's rationale for deferral is the integration of RCRA and CWA, the CWA does not protect against releases to air, soil, or groundwater associated w/ leachate in impoundments.

Response: The commenter's concerns seem to be centered on whether there is sufficient available information (e.g., information on the number of facilities that truck leachate to POTW's, information on potential leachate management costs) for the Agency to make a risk-based determination regarding whether to regulate leachates generated at landfills that previously have managed the newly listed petroleum wastes. Today's action is a narrower determination than that raised by the commenter. The Agency's bases for its regulatory determination is fully set out in the NODA. EPA is issuing the temporary deferral to avoid the potential duplication of regulatory requirements and to avoid any disruptions which could be created by the integration of the petroleum listing and the pending Clean Water Act regulation. EPA proposed national effluent limitations guidelines and pretreatment standards for wastewater discharges -- most notably, leachate -- from certain types of landfills, including those that would be covered by today's notice. EPA needs to take action now since affected persons would face a shutdown of current leachate

management systems (in particular, by POTWs receiving leachate that is trucked to facilities) and be forced immediately to construct alternative leachate treatment facilities which could well prove to be unnecessary. There will be opportunities to revisit the temporary deferral, most logically at the conclusion of the Clean Water Act rulemaking.

The Agency points out that additional information on the number of facilities that previously managed the newly listed petroleum wastes, the volumes of wastes managed by these facilities, and the potential costs associated with managing landfill leachate as hazardous wastes was provided to EPA by several commenters in response to the Agency's NODA. This information is available in the docket for today's final rule.

The commenter points out that neither the pending CWA rules or the CWA itself covers the potential releases to air, soil, or groundwater resulting from the storage or treatment of leachate in surface impoundments or other land disposal units.

Response: As a condition of the deferral provided in today's notice, EPA is stipulating that leachate generated by solid waste landfill facilities that previously accepted one or more of the newly listed petroleum refining wastes may not ordinarily be managed in surface impoundments or otherwise placed on the land after February, 2001.

The commenter said that the recirculation of leachate at landfills that previously managed the newly listed hazardous wastes should stop due to the fact that the Clean Water Act does not apply to this management practice and the LDR requirements apply to the leachate.

Response: Recirculation of landfill leachate (and condensate) within the landfill is a relatively common practice (see 56 FR at 51055 (October 9, 1991)). Under existing interpretations, movement of waste within a land disposal unit is not itself land disposal. See, e.g., 55 FR at 8758-60 (March 8, 1990); 55 FR at 30843 (July 27, 1990). Consequently, such activity will not result in subtitle C regulation of the unit so long as the leachate is merely recirculated in the unit. 55 FR at 8760; 55 FR at 30843. This would be the result whether or not EPA adopted the temporary deferral in today's rule.¹

PR3A-00002 (Superior Services, Inc.) - The commenter owns/operates 12 nonhazardous landfills, one of which is known to have accepted petroleum refinery wastes in the past. This landfill operates an on-site wastewater treatment plant for the treatment of leachate prior to its discharge. The facility has a NPDES permit for the operation of the treatment plant. Sludges generated from the treatment of the leachate are placed back in landfill. The commenter stated that this facility is required to maintain a surface impoundment capable of holding 30 days worth of leachate in case an emergency would cause the wastewater treatment plant to shut down. The

¹ EPA thus disagrees with the implication of the comment that a section 1006 rationale would not apply to such recirculation, since the comment's premise is that recirculation of collected leachate within the landfill automatically makes the landfill a regulated unit if the leachate is a hazardous waste.

impoundment has a double liner and floating cover. The commenter notes that the impoundment has not been used in 2 years. The commenter states its support of the proposed temporary deferral. Although the commenter points out that the commenter is not in favor of the proposed condition that landfill facilities not be allowed to manage affected leachate in surface impoundments. The commenter points out that to replace its facility impoundment with tanks that have adequate capacity for emergency storage would impose excessive and unnecessary costs, including sunk costs for the impoundment.

This commenter also notes that if sludges derived from treating leachate have to be handled as listed hazardous waste, that would result in a dramatic increase in cost (to manage the sludges) without any increase in environmental protection.

Response: The Agency agrees that it may not make sense to replace an impoundment that is not in use, or that is used infrequently in emergency situations, while this temporary deferral is in effect. This is because the critical risk normally posed by impoundments, creation of a pressure head that forces downward dispersion of leachate and other liquid in the impoundment (see Chemical Manufacturers Ass'n v. EPA, 919 F. 2d 158, 166-67, (D.C. Cir. 1990)) would be less present for this type of emergency impoundment since by definition it is only used in emergency situations, and therefore will not contain liquid most of the time. EPA has decided not to require the replacement of this type of impoundment pending more analysis of the leachate. Therefore, the EPA is adding a provision to the temporary deferral to allow the use of surface impoundments for the non-routine, emergency storage of leachate exempted under today's final rule, provided

the exempt leachate is removed from the impoundments and either returned to a tank-based wastewater treatment system, or otherwise discharged under the CWA, as soon as practicable after the emergency ends.

Regarding the status of sludges generated from treating exempt leachate, the Agency points out that because today's deferral applies at the point of generation of the leachate, which would be prior to any wastewater treatment the leachate might undergo as part of compliance with the CWA (including on-site wastewater treatment), these solids would be derived from treating a non-listed waste. Therefore, assuming the conditions of the deferral promulgated today for leachate apply (and therefore the leachate is temporarily not a listed waste), solids from treating this leachate would only be hazardous wastes if they are listed independently (which they are not under existing rules), or exhibit a characteristic of hazardous waste. EPA considered whether there should be a concern about the fate of the hazardous constituents that might be contained in the solids, particularly if the source of the constituents was from the previously disposed refinery wastes. EPA believes this concern is reduced, however, because the hazardous constituents of concern that caused most of these newly-listed petroleum wastes to be listed (benzene and arsenic) are covered by the Toxicity Characteristic (TC). Further, an estimate of the volume of sludges generated from treating leachate (using leachate volumes submitted to EPA in comments, a 0.1% solids content, and a 50% recovery efficiency) is about 100 metric tons per year, much lower than the volume of the newly-listed refinery wastes used in the risk assessment in support of the listings (70,300 metric tons per year in 1992).

PR3A-00003 (Elizabeth Knauss, FL DEP) - The commenter requests that EPA clarify several issues, related to listed wastes, the derived-from rule, and contaminated sites:

Leachate versus ‘precipitation run-off:’ the commenter points out that latter is exempt from the derived-from rule under 40 CFR 261.3(c)(2). Does EPA consider contaminated precipitation runoff to be leachate?

Response: As the commenter points out, runoff is not a derived-from waste, while leachate specifically is a derived-from waste. However, there may be facility-specific circumstances that cause or result in runoff being mixed with leachate. If such circumstances should arise at a landfill that generates leachate that meets a hazardous waste listing, by virtue of the hazardous waste mixture rule, the combined waste would be considered a hazardous waste.

Leachate versus Headworks Exemption for (De Minimus) Spills of Commercial Chemical Product

- The commenter also raises the issue of identifying listed hazardous wastes at sites where rainwater has transported hazardous constituents (from spilled commercial chemical products) and caused contamination to spread throughout a site. Specifically, the commenter requests that EPA clarify whether such ‘contamination’ should be exempt from the derived-from rule as ‘de minimus spills’ under 261.3(a)(2)(iv)(D), or regulated as listed waste being somehow ‘conveyed by leachate.’

Response: The commenter's concern is beyond the scope of today's rulemaking. In addition, the nature of the commenter's question may involve the evaluation of site-specific circumstances that can not readily or easily be addressed within the context of today's final rule.

Point of Generation - The commenter asks if the F039 listing applies to leachate from landfills that accepted CESQG (100-1000 kg/mo) generators between 1980 and 9/22/86.

Response: EPA presumes the commenter is asking whether leachate should be regulated as hazardous waste if it is derived from hazardous wastes that were exempt from RCRA regulation at the time of disposal, but might be regulated if generated today (this is due to the September 22, 1986 amendments to the generator regulations, where the definition of CESQG was changed from generators who generate less than 1000 kg of hazardous waste per month to those generators who generate less than 100 kg/mo).

Today's final rule is specific to leachate derived from wastes disposed in non-hazardous waste landfills that previously managed certain newly-listed petroleum refining wastes. The Agency believes that it would be inappropriate to address, in this document, issues regarding the regulatory status of wastes and leachates that fall outside the limited scope of today's rulemaking.

Petroleum refinery definition - The commenter asks EPA to clarify the status of used oil processors, and whether such facilities might also fall under the SIC codes for petroleum refinery (2911), and whether such facilities produce wastes that meet the new petroleum refinery listings.

The commenter also requested that EPA clarify what types of facilities fall under the definition of petroleum refinery. The commenter seems to be suggesting that wastes from used oil re-refiners should be regulated as listed hazardous wastes because of their apparent similarities to the newly-listed hazardous wastes.

Response: The hazardous waste listing determinations promulgated on August 6, 1998 were specific to petroleum refining operations. Any further refinement to the scope of the listing determinations, other than that provided in the preamble to the August 6, 1998 *Federal Register* notice, is beyond the scope of today's rulemaking.

PR3A-00004 (County Sanitation Districts of Los Angeles County) - The commenter agrees with the Agency's proposed temporary deferral from the definition of hazardous waste for landfill leachate derived from previously disposed wastes that meet the new listing descriptions for one or more of the petroleum refining wastes listed on August 6, 1998. However, the commenter requests clarification regarding the regulatory status of runoff and wastes generated from precipitation infiltration that is directed into the landfill's leachate collection and removal system.

Response: The Agency notes that although precipitation and runoff are not derived-from wastes, when such liquids are mixed with hazardous waste leachate the combined waste is a listed hazardous waste, per the hazardous waste mixture rule. Further, it is incumbent upon the owner/operator of a non-hazardous solid waste landfill to determine whether or not the facility previously accepted and managed wastes that now meet the listing descriptions for one or more of

the four newly listed petroleum wastes. If the facility determines that it previously disposed such wastes, the leachate generated by the facility is, most likely, derived from wastes that are the subject of today's deferral. Generally, leachate generated by such landfills is derived from the wastes disposed in the landfills.

The commenter seems to be describing a specific situation where landfill wastewaters generated by a landfill that previously accepted one or more of the newly listed petroleum wastes does not come in contact with any of the newly listed wastes. If a landfill owner/operator can somehow demonstrate that leachate generated by the facility is not derived from any listed hazardous wastes previously managed at that site, the leachate would not be subject to the derived from rule, and therefore not affected by today's deferral. However, without more specific information regarding the particular circumstances at an individual facility, the Agency cannot make a determination regarding the potential non-applicability of the derived-from rule to the leachate generated at that facility.

PR3A-00005 (National Solid Wastes Management Association) - The commenter agrees with the Agency's proposed temporary deferral from the definition of hazardous waste for landfill leachate derived from previously disposed wastes that meet the new listing descriptions for one or more of the petroleum refining wastes listed on August 6, 1998. The commenter also provides a summary of data on the number of facilities affected by the proposed temporary deferral and the amount of K169, K170, K171, and K172 wastes previously accepted for disposal at non-

hazardous solid waste landfills. The data was collected by the commenter through a survey distributed to members of the commenter's association.

Response: The Agency thanks the commenter for undertaking the survey of its association's membership in response to the proposed deferral and thanks the commenter for providing the Agency with a summary of the survey results.

PR3A-00006 (West Contra Costa Sanitary Landfill) - The commenter requests that EPA clarify what specific records or other information are required to determine whether a landfill "historically received and disposed of one or more of the newly-listed petroleum wastes." Specifically, the commenter cites a situation where several petroleum refineries are located within a landfill's service area, and asked whether the facility must presume that the landfill accepted refinery wastes that the Agency later listed as hazardous.

Response: Determining whether a landfill accepted a particular listed waste is a case-by-case factual determination. Ordinarily, however, without more information, the presence of a petroleum refinery in the general service area of the landfill, without more information, would not require a determination that the listed wastes were disposed at the facility. See 53 FR at 51444 (Dec. 21, 1988); 55 FR at 8758 (Mar. 9, 1990); also 61 FR at 18805 (April 29, 1996), 63 FR at 28619 (May 26, 1998).

PR3A-00007, L0002 (Browning-Ferris Industries) - The commenter agrees with the Agency's proposed temporary deferral from the definition of hazardous waste for landfill leachate derived

from previously disposed wastes that meet the new listing descriptions for one or more of the petroleum refining wastes listed on August 6, 1998. The commenter questioned how a temporary deferral would affect leachate (and condensate) which is recirculated within the landfill, a relatively common practice (see 56 FR at 51055 (October 9, 1991)).

Response: Under existing interpretations, movement of waste within a land disposal unit is not itself land disposal. See, e.g., 55 FR at 8758-60 (March 8, 1990); 55 FR at 30843 (July 27, 1990). Consequently, leachate recirculation activities would not result in subtitle C regulation of the unit so long as the leachate is merely recirculated in the unit. 55 FR at 8760; 55 FR at 30843. This would be the result whether or not EPA adopted the temporary deferral in today's rule.

Regarding the status of sludges generated from treating exempt leachate, because today's deferral applies at the point of generation of the leachate, which would be prior to any wastewater treatment the leachate might undergo as part of compliance with the CWA (including on-site wastewater treatment), these solids would be derived from treating a non-listed waste. Therefore, assuming the conditions of the deferral promulgated today for leachate apply (and therefore the leachate is temporarily not a listed waste), solids from treating this leachate would only be hazardous wastes if they are listed independently (which they are not under existing rules), or exhibit a characteristic of hazardous waste. EPA considered whether there should be a concern about the fate of the hazardous constituents that might be contained in the solids, particularly if the source of the constituents was from the previously disposed refinery wastes. EPA believes this concern is reduced, however, because the hazardous constituents of concern that caused most

of these newly-listed petroleum wastes to be listed (benzene and arsenic) are covered by the Toxicity Characteristic (TC). Further, an estimate of the volume of sludges generated from treating leachate (using leachate volumes submitted to EPA in comments, a 0.1% solids content, and a 50% recovery efficiency) is about 100 metric tons per year, much lower than the volume of the newly-listed refinery wastes used in the risk assessment in support of the listings (70,300 metric tons per year in 1992).

The commenter requested clarification regarding the regulatory status of landfill gas should the landfill owner/operator determine that the landfill disposed of any of the newly-listed petroleum refinery wastes prior to, but not after, the effective date.

Response: Landfills can generate gas, which is derived not from the leachate but from the disposed solid wastes. It is highly desirable to control these gaseous emissions both for safety reasons (to avoid potential fires and explosions) and to prevent air pollution (especially from methane, a significant greenhouse gas). Municipal landfills do typically monitor and control the emission of explosive gases (methane in particular). See 40 CFR 258.23. Clean Air Act regulations further require municipal landfills above a given design capacity (2.5 million megagrams and 2.5 million cubic meters) to capture and control non-methane organic compounds (NMOCs) if greater than 50 megagrams of NMOCs per year are emitted. See 40 CFR Part 60, Subparts Cc and WWW (implementing section 111 of the Clean Air Act). EPA does not regard any of these salutary landfill gas management techniques as constituting active management of the landfilled waste which could result in subtitle C regulation of the landfill. See generally 54 FR at

36597 (Sept. 1, 1989; 55 FR at 39409 (Sept. 27, 1990). (Note: The concept does not include management of releases from otherwise inactive units). Indeed, a different reading would create an incentive not to control such releases. EPA consequently does not view the August 6, 1998 listing rule as triggering subtitle C regulation of landfill gas control operations at landfills which previously received the listed wastes. (It also should be noted that the burning of landfill gas for energy recovery, even if the gas is hazardous waste, is exempt from Subtitle C regulation. 56 FR at 7203, February 21, 1991.)

This commenter also asks whether landfill gas condensate would be regulated as a derived-from hazardous waste, should the landfill owner/operator determine that the landfill disposed of any of the petroleum refinery wastes prior to, but not after, the effective date. Landfill gas condensate is the liquid (primarily water) from moisture within the landfill gas being recovered, which is generated as a result of gas recovery processes at the municipal solid waste landfill (see 40 CFR 258.28(c)(2)). The commenter states that landfill gas condensate is often co-managed with leachate, by either treatment and discharge under the Clean Water Act, or by recirculation.

Response: Landfill gas condensate is the liquid (primarily water) from moisture within the landfill gas being recovered, which is generated as a result of gas recovery processes at the municipal solid waste landfill (see 40 CFR 258.28(c)(2)) (see item B.4. below). EPA understands that landfill gas condensate is often co-managed with leachate, by either treatment and discharge under the Clean Water Act, or by recirculation (discussed in more detail later). Based on the limited data currently available, it appears that this condensate is substantially identical (in terms of

identity and concentration of hazardous constituents) to the leachate. In fact, EPA's proposed rule on effluent guidelines and pretreatment standards for landfills includes condensate along with leachate in the group of 'landfill wastewaters' subject to that rulemaking. 63 FR at 6429.

Therefore, the Agency is including landfill gas condensate along with landfill leachate in the scope of today's deferral.

The commenter also requested clarification of the regulatory status of other non-leachate waste streams generated during the course of operating a landfill (e.g., wastes from clean ups of small spills of leachate, solidification of brine residuals from reverse osmosis units).

Response: The commenter's concern is beyond the limited scope of today's rulemaking.

Information related to site-specific circumstances with regard to the type of spill and the volume of waste released would be necessary for Agency to provide a complete and accurate response to the commenter's concern.

Regarding residues from reverse osmosis units, EPA assumes the reverse osmosis units are treating leachate pursuant to Clean Water Act requirements. Because today's deferral applies at the point of generation of the leachate, which would be prior to any subsequent management of the leachate in compliance with the Clean Water Act that might be undertaken, the residuals would be derived from treating a non-listed waste. Therefore, assuming the conditions of the deferral promulgated today for leachate apply (and therefore the leachate is temporarily not a listed waste), solids from treating this leachate would only be hazardous wastes if they are listed

independently (which they are not under existing rules), or exhibit a characteristic of hazardous waste.

The same commenter also requested clarification regarding the application of the hazardous waste mixture and derived-from rules to materials produced from well construction for the purpose of leachate or gas collection.

Response: The commenter's concern is outside the scope of today's rulemaking. Application of the hazardous waste mixture and derived-from rules could apply to materials produced from well construction, depending upon the regulatory status of the wastes being generated during the drilling operations, and how the subsequent wastes are managed. Of course, there also may be situations where the application of the hazardous waste mixture and derived-from rules would not apply to the drilling wastes due to the fact that the drilling wastes are not themselves hazardous, are mixed only with leachate that meets the conditions of today's temporary deferral, and the mixture is managed in the same unit from which the leachate was generated.

PR3A-L0001, L0003 (WMX Technologies, Inc.) - The commenter supports EPA's proposed temporary deferral from the definition of hazardous waste landfill leachate derived from previously disposed wastes that now meet the listing descriptions of one or more of the newly listed petroleum refinery wastes, as promulgated on August 6, 1998. In addition, the commenter submitted detailed information of its facilities that it determined have previously managed the

newly listed petroleum wastes, including the annual volumes of leachate generated and the leachate management practices undertaken at each facility.

Response: The Agency thanks the commenter for stating the commenter's support of the proposed deferral as well as for the data provided to the Agency by the commenter.