Determination of When Contamination is Caused by a Listed Hazardous Waste
Part II

Environmental Protection Agency

40 CFR Parts 148, 261, 266, 268, and 271
Land Disposal Restrictions Phase IV: Final Rule Promulgating Treatment Standards for Metal Wastes and Mineral Processing Wastes; Mineral Processing Secondary Materials and Bevill Exclusion Issues; Treatment Standards for Hazardous Soils, and Exclusion of Recycled Wood Preserving Wastewaters; Final Rule
no hazardous waste to which a land disposal prohibition could attach (principle (2)).

2. Generator B is excavating soil contaminated by leaks from a closing hazardous waste surface impoundment. The surface impoundment received listed hazardous wastes K062 (spent pickle liquor) and characteristic hazardous waste D018 (wastes that fail the TCLP test for benzene). The surface impoundment stopped receiving K062 waste in 1987 and D018 waste in 1993. The soil does not exhibit a characteristic of hazardous waste and has been determined by an authorized state not to contain listed hazardous waste. The soil is not prohibited from land disposal. This is because, for LDR purposes, the point of generation is when the soil is first excavated from the land (principle (1)). Since no prohibited hazardous waste existed before that time (i.e., the contaminating wastes were not prohibited) and the soil does not contain listed hazardous wastes, the soil exhibits a characteristic of hazardous waste at its point of generation, there is no hazardous waste to which a land disposal prohibition could attach (principle (2)).

3. Generator C is excavating soil contaminated with listed hazardous waste F024. The F024 waste was land disposed after 1991, after it was prohibited from land disposal, and was not first treated to meet applicable land disposal treatment standards (i.e., it was illegally land disposed or accidentally spilled). Since the contaminating waste was prohibited from land disposal and treatment standards were not achieved prior to land disposal, the LDR prohibition continues to apply to any soil contaminated by the waste (principle (3)) regardless of whether the soil “contains” hazardous waste when generated. The soil is prohibited from land disposal and, before land disposal, must be treated to meet applicable technology-based treatment standards or until a site-specific, risk-based minimize threat determination is made through the variance process.

4. Generator D is excavating soil contaminated by an accidental spill of benzyl chloride, which, when discarded, is listed hazardous waste P028 and is prohibited from land disposal. The accidental spill occurred yesterday. The contaminating waste was prohibited from land disposal and, since the treatment standards were not achieved prior to the accidental spill, the prohibition continues to apply to any soil contaminated by the waste (principle (3)). Thus, the soil is prohibited from land disposal and, before land disposal, must be treated to meet applicable technology-based treatment standards or until a site-specific, risk-based minimize threat determination is made through the variance process.

5. Generator E is excavating soil contaminated by listed hazardous waste F004 (generally, spent non-halogenated solvents). The F004 waste was land disposed in 1984, prior to the effective date of an applicable land disposal prohibition; however, on generation the soil contains high concentrations of cresols constituents, so that an authorized state determines it “contains” hazardous waste. The soil is prohibited from land disposal. Although the contaminating waste was not prohibited from land disposal, since the soil contained hazardous waste at the point of generation (and the waste had since become prohibited from land disposal), the land disposal prohibition attaches to the contaminated soil and, before land disposal, the soil must be treated to meet applicable technology-based treatment standards or until a site-specific, risk-based minimize threat determination is made through the variance process (principles (1), (2), and (3)).

EPA acknowledges that the reading of LDR applicability to contaminated soil discussed above creates potential administrative difficulties, since, in many cases, a factual determination will be required as to when hazardous wastes were land disposed in order to determine whether they were prohibited at that time and whether, therefore, the prohibition continues to apply to contaminated soil. The Agency expects that these difficulties will be minimal because, in most cases, contamination will be caused by hazardous wastes placed before the effective date of applicable land disposal prohibitions since land disposal after prohibition would be illegal. The exception is accidental spills of hazardous waste, which the Agency believes are (1) rare, and (2) known, so determining dates of land disposal should not be problematic. This issue was discussed in detail in the HWRD final proposal, 61 FR 18805 (April 29, 1996).

As discussed in the April 29, 1996 proposal, the Agency continues to believe that, if information is not available or inconclusive, it is generally reasonable to assume that contaminated soils do not contain untreated hazardous wastes placed after the effective date of applicable land disposal prohibitions. This is because placement of untreated hazardous waste after applicable LDR effective dates would be a violation of RCRA, subject to significant fines and penalties including criminal sanctions. 61 FR at 18805 (April 29, 1996). Of course, program implementers and facility owners/operators cannot make the determination that information on the types of waste contamination or dates of waste placement is unavailable or inconclusive without first making a good faith effort to uncover such information. By using available site- and waste-specific information, such as manifests, LDR records required under 40 CFR 268.7, vouchers, bills of lading, sales and inventory records, storage records, sampling and analysis reports, accident reports, site investigation reports, spill reports, inspection reports and logs, EPA believes that program implementers and facility owners/operators will typically be able to make informed decisions about the types of waste contamination and dates of waste placement. Most commenters supported this approach.

EPA notes that it is not critical for a declarant to determine whether contaminated soil contains listed hazardous waste or exhibits a characteristic of hazardous waste to be made without removing any of the soil (other than the sample volume) from the land. In an area of generally dispersed soil contamination, soil may be consolidated or managed within the area of contamination to facilitate sampling, for example, to ensure that soil samples are representative or to separate soil from non-soil materials. However, care should be taken not to remove hazardous contaminated soils from separate areas of contamination at a facility and place them in hazardous contaminated soil into a land disposal unit unless, of course, the soil meets applicable LDR treatment standards.

The area of contamination policy is discussed later in this section of today’s preamble.

A few commenters expressed concern or confusion over the application of LDRs to soil contaminated by accidental spills of hazardous wastes. The Agency clarifies that accidental spills of hazardous wastes (or products or raw materials) are not considered placement of hazardous waste into a land disposal unit since, in the case of a spill, prohibited waste is not being placed in one of the identified units named in RCRA Section 3004(m). See 45 FR 76626 (Nov. 19, 1980), issuing clarifying regulations at 40 CFR 254.10(g) to provide that hazardous waste treatment...
Environmental Protection Agency

Requirements for Management of Hazardous Contaminated Media; Proposed Rule
that it may be appropriate to allow States not authorized for this Part to simply approve another authorized States' decision that the media are not hazardous. The Agency requests comments on these issues.

C. Treatment Requirements

1. Overview of the Land Disposal Restrictions

The Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA), enacted on November 8, 1984, largely prohibit land disposal of hazardous wastes. Once a hazardous waste is prohibited from land disposal, the statute provides only two options: comply with a specified treatment standard prior to land disposal, or dispose of the waste in a unit that has been found to satisfy the statutory no migration test (referred to as a "no migration" unit) (RCRA section 3004(m)). Storage of waste prohibited from land disposal is also prohibited, unless the storage is solely for the purpose of accumulating the quantities of hazardous waste that are necessary to facilitate proper recovery, treatment, or disposal (RCRA section 3004(j)). For purposes of the land disposal restrictions, land disposal includes any placement of hazardous waste into a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave (hereafter referred to as "placement") (RCRA section 3004(k)).

Not all management of hazardous waste constitutes placement for purposes of the LDRs. EPA has interpreted "placement" to include putting hazardous waste into a land-based, moving hazardous waste from one land-based unit to another, and removing hazardous waste from the land, managing it in a separate unit, and re-positioning it in the same (or a different) land-based. Placement does not occur when waste is consolidated within a land-based unit when it is treated in situ, or when it is left in place (e.g., capped). (See 55 FR 8665, 8758-8760, March 8, 1990) and "Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions," EPA, OSWER Directive 9347.3-D05S, (July 1989).

Congress directed EPA to establish treatment standards for all hazardous wastes restricted from land disposal at the same time as the land disposal prohibitions take effect. According to the statute, treatment standards established by EPA must substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short- and long-term threats to human health and the environment are minimized (RCRA section 3004(m)(1)). In Hazardous Waste Treatment Council v. EPA, 886 F.2d 385 (D.C. Cir. 1989), the court held that section 3004(m) allows both technology- and risk-based treatment standards, provided that technology-based standards are not established "beyond the point at which there is not a threat to human health or the environment." id. at 362 (i.e., beyond the point at which threats to human health and the environment are minimized) (59 FR 47980, 47986, September 19, 1994). Hazardous wastes that have been treated to meet the applicable treatment standard may be land disposed in land disposal facilities that meet the requirements of RCRA Subtitle C (RCRA section 3004(m)(2)).

Congress established a schedule for promulgation of land disposal restrictions and treatment standards for all hazardous wastes listed and identified as of November 8, 1984 (the effective date of the HSWA amendments) so that treatment standards would be in effect, and land disposal of all hazardous waste that did not comply with the standards would be prohibited, by May 8, 1990 (RCRA section 3004(g)). For some classes of hazardous wastes, Congress established separate schedules: for certain hazardous wastes identified by the State of California ("California List"), Congress directed EPA to establish treatment standards and prohibit land disposal by July 8, 1987; for hazardous wastes containing solvents and inks, Congress directed the Agency to establish treatment standards and prohibit land disposal by November 8, 1986. (RCRA sections 3004(d) and (e)). For wastes listed or identified as hazardous after the HSWA amendments (referred to as "newly identified wastes"), EPA must establish treatment standards and land disposal prohibitions within six months of the effective date of the listing or identification (RCRA section 3004(g)(4)). Under current regulations, environmental media containing hazardous waste are prohibited from land disposal unless they are treated to meet the treatment standards promulgated for the original hazardous waste in question (i.e., the same treatment standard the contaminating hazardous waste would have to meet if it were newly generated). (See 58 FR 48092, 48123, September 14, 1993).

The land disposal restrictions generally apply to hazardous wastes, or environmental media containing hazardous wastes, when they are first generated. Once these restrictions attach, the standards promulgated pursuant to section 3004(m) must be met before the wastes (or environmental media containing the wastes) can be placed into any land disposal unit other than a no migration unit. In cases involving characteristic wastes, the D.C. Circuit held that even elimination of the property that caused EPA to identify wastes as hazardous in the first instance (e.g., treating characteristic wastes so they no longer exhibit a hazardous characteristic) does not automatically eliminate the duty to achieve compliance with the land disposal treatment standards. (Chemical Waste Management v. U.S. EPA, 976 F.2d 2,22 (D.C. Cir. 1992), cert. denied, 113 S.Ct 1961 (1993)). The Agency has examined the logic of the Chemical Waste decision and concluded that the same logic could arguably be applied in the remediation context, i.e., a determination that environmental media once subject to LDR standards no longer contain hazardous wastes may not automatically eliminate LDR requirements. While the Chemical Waste court did not specifically address the remediation context, the Agency believes it may be prudent to follow the logic the court applied to characteristic wastes, and has developed today's proposal accordingly.

It is important to note that the land disposal restrictions apply only to hazardous (or, in some cases, formerly hazardous) wastes and to placement of hazardous wastes after the effective date of the applicable land disposal prohibition—generally May 8, 1990 for wastes listed or identified at the time of the 1984 amendments, or six months after the effective date of the listing or identification for newly identified wastes. In other words, the duty to comply with LDRs has already attached to hazardous wastes land disposed ("placed") after the applicable effective dates, but not to hazardous wastes disposed prior to the applicable effective dates. Accordingly, hazardous wastes...
wastes disposed prior to the effective date of the applicable prohibition only become subject to the LDRs if they are removed from the land and placed into a land disposal unit after the effective date of the applicable prohibition. (See 53 FR 31138, 31148, (August 17, 1988) and Chemical Waste Management v. US EPA, 86 F.2d 1526, 1536 (D.C. Cir. 1989), "treatment or disposal of [hazardous waste] will be subject to the [LDR] regulation only if that treatment or disposal occurs after the promulgation of applicable treatment standards.") Similarly, environmental media contaminated by hazardous wastes placed before the effective dates of the applicable land disposal restrictions does not become subject to the LDRs unless they are removed from the land and placed into a land disposal unit after the effective dates of the applicable restrictions.

The land disposal restrictions do not attach to environmental media contaminated by hazardous wastes when the wastes were placed before the effective dates of the applicable land disposal prohibitions. If these media are determined not to contain hazardous wastes before they are removed from the land, then they can be managed as non-hazardous contaminated media and they’re not subject to land disposal restrictions. For example, soil contaminated by acetone land disposed ("placed") in 1986 (prior to the effective date of the land disposal prohibition for acetone) and, while still in the land, determined not to contain hazardous waste, is not subject to the land disposal restrictions. 17 This is consistent with the Agency’s approach in the HWIR-waste rule, where it indicates that LDRs do not attach to hazardous wastes that are not hazardous at the time they are first generated (60 FR 66344, December 21, 1995).

Since application of the land disposal restrictions is limited, in order to determine if a given environmental medium must comply with LDRs one must know the origin of the material contaminating the medium (i.e., hazardous waste or not hazardous waste), the date(s) the material was placed (i.e., before or after the effective date of the applicable land disposal prohibition), and whether or not the medium still contains hazardous waste (i.e., contained-in decision or not). Facility owner/operators should make a good faith effort to determine whether media were contaminated by hazardous wastes and ascertain the dates of placement. The Agency believes that by using available site- and waste-specific information such as manifests, vouchers, bills of lading, sales and inventory records, storage records, sampling and analysis reports, accident reports, site investigation reports, spill reports, inspection reports and logs, and enforcement orders and permits, facility owner/operators would typically be able to make these determinations. However, as discussed earlier in the preamble of today’s proposal, if information is not available or inconclusive, facility owner/operators may generally assume that the material contaminating the media were not hazardous wastes.

Similarly, if environmental media were determined to be contaminated by hazardous waste, but if information on the dates of placement is unavailable or inconclusive, facility owner/operators may, in most cases assume the wastes were placed before the effective date. The Agency believes that, in general, it is reasonable to assume that environmental media do not contain hazardous wastes placed after the effective dates of the applicable land disposal prohibitions when information on the dates of placement is unavailable or inconclusive, in part, because current regulations, in effect since the early 1980’s, require generators of hazardous waste to keep detailed records of the amounts of hazardous waste they generate. These records document whether the waste meets land disposal treatment standards and list the dates and locations of the waste’s ultimate disposition. With these records, the Agency should be able to determine if environmental media were contaminated by hazardous wastes and if they would be subject to the land disposal restrictions.

In addition, EPA believes that the majority of environmental media contaminated by hazardous wastes were contaminated prior to the effective dates of the applicable land disposal restrictions. Generally, the contamination of environmental media by hazardous waste after the effective date of the applicable land disposal restriction would involve a violation of the LDR’s, subject to substantial fines and penalties, including criminal sanctions. The common exception would be one-time spills of hazardous waste or hazardous materials. In these cases, the Agency believes that, typically, independent reporting and record keeping requirements (e.g., CERCLA sections 102 and 103 reporting requirements or state spill reporting requirements) coupled with ordinary “good housekeeping” procedures, result in records that will allow the Agency to determine the nature of the spilled material, and the date (or a close approximation of the date) of the spill. The Agency requests comments on this approach and on any other assumptions, records, or standards of evaluation that would ensure that facility owner/operators would identify any contaminated media subject to land disposal restrictions properly and completely.

Information on contained-in decisions should be immediately available since, generally, these determinations are made by a regulatory agency on a site-specific basis and careful records are kept.

2. Treatment Requirements—§ 269.30

a. Approach to treatment requirements and recommendations of the PACA Committee. RCRA section 3004(m) requires that treatment standards for wastes restricted from land disposal, "* * * specify those levels or methods of treatment. if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." A recurring debate through EPA’s development of the land disposal restriction program has been whether treatment standards should be technology-based (i.e., based on performance of a treatment technology) or risk-based (i.e., based on assessment of risks to human health and the environment that are posed by the wastes). The Agency believes that both approaches are allowed. It has long been recognized that Congress did not directly address the questions of how to set treatment standards in the language of section 3004(m). 18 In addition, Congress did not specifically address whether the LDR treatment standards for newly generated wastes and remediation wastes must be identical; the structure of RCRA’s LDR provisions suggests that Congress believed that remediation waste may merit special consideration. (See, RCRA sections 3004(d)(3) and 3004(e)(3), which...
Wednesday
December 21, 1988

Part V

Environmental Protection Agency

40 CFR Part 300
National Oil and Hazardous Substances Pollution Contingency Plan; Proposed Rule
was disposed before the effective date

RCRA, the RCRA requirements related weste. In such a case RCRA

action, Second, if the lead agency
determines that RCRA listed or
present et the site (even if the waste
were similar or identical to RCRA
CERCLA action involves predental
storage, or disposal as defined under
RCRA, then RCRA requirements related
to those actions would be applicable.

These two scenarios are contingent upon determinations that RCRA Subtitle C hazardous waste is present and on the identification of the period of waste
treatment. To determine whether a waste is a listed waste under RCRA, it is
often necessary to know the source.
However, at many CERCLA sites no
information exists on the source of the
wastes nor are references available
citing the date of disposal. The lead
agency should use available site
information, manifests, storage records,
and vouchers in an effort to ascertain
the source of these contaminants. When
this documentation is not available, the
lead agency may assume that the wastes
are not listed RCRA hazardous wastes,
unless further analysis or information
becomes available which allows the
lead agency to determine that the
wastes are listed RCRA hazardous wastes.

Under certain circumstances, although
no historical information exists about
the waste and when it was treated,
stored, or disposed, it may be possible
to identify the wastes as RCRA
characteristic wastes. With respect to
certain hazardous characteristics, (ignitability,
corrosivity, reactivity, or EP toxicity), it is
the responsibility of the generator (in
this case, the lead agency or PRP
conducting the action) to determine if
the wastes exhibit those characteristics. (defined in 40 CFR 281.21
through 24). The lead agency must use
best professional judgment to determine,
on a site-specific basis, if testing for
characteristic hazardous waste is necessary.

Testing is required unless it can be
determined, by "applying knowledge of
the hazard characteristic in light of the
materials or process used," that the
waste does not have hazardous
characteristics (40 CFR 282.11(c)).

In determining whether to test for the
toxicity characteristic using the
Extraction Procedure (EP) Toxicity Test,
if it may be possible to assume that
certain low concentrations of waste are
not toxic. For example, if the total waste
concentration is 20 times or less the EP
Toxicity concentration, the waste
cannot be characteristic hazardous
waste. In such a case RCRA
requirements would not be applicable
and would not likely be relevant or
appropriate unless the waste also
contained other RCRA hazardous
wastes and the CERCLA action involved
treatment, storage, or disposal.

If the wastes exhibit hazardous
characteristics, RCRA requirements are
potentially applicable if the wastes also
were either treated, stored, or disposed
after the effective date of the applicable
RCRA requirement or if the CERCLA
actions will involve treatment, storage,
or disposal.

ii. Actions constituting treatment,
storage, or disposal. Many CERCLA
actions occur in areas of contamination
that contain waste treated, disposed of,
and stored prior to November 19, 1980. If
left untouched, wastes in such areas are
not currently regulated under Subtitle C
of RCRA. (Solid waste management
units at RCRA facilities are regulated by
the 3004(u) corrective action
requirements.) However, certain
physical movement, alteration, or
disturbance of the waste associated with a
remedial action may meet the RCRA
definition of treatment, storage, or disposal.
For instance, treatment has occurred when
the CERCLA remedial action uses "any
method, technique, or process, including
neutralization, designed to change the
physical, chemical, or biological
character or composition of any
hazardous waste so as to neutralize
such waste, or so as to recover energy or
material resources from the waste, or so
as to render such waste non-hazardous,
or less hazardous; safer to transport,
store, dispose of, or amenable for
recovery, amenable for storage, or

Similarly, storage occurs when a
CERCLA remedial action involves the
"holding of hazardous waste for a
temporary period, at the end of which
the hazardous waste is treated, disposed
of, or stored elsewhere." 40 CFR 260.10.

Land disposal occurs when RCRA
hazardous waste is placed into a land
disposal unit, including a "landfill,
surface impoundment, waste pile,
injection well, land treatment facility,
salt dome formation, salt bed formation,
or underground mine or cave." RCRA
section 3004(k).

Movement of hazardous waste
entirely within a unit does not constitute
"land disposal" under Subtitle C of
RCRA. However, movement of
hazardous waste into a unit (i.e., across
the boundary of a unit) does constitute
"land disposal."

In many cases CERCLA sites contain
areas of contamination (with differing
levels of concentration, including hot
spots, of hazardous substances,
pollutants, or contaminants) that may be
characterized as a unit, usually a
landfill, under RCRA. In such cases
where RCRA hazardous waste is moved
into the area of contamination, RCRA
disposal requirements are applicable to
the disturbed waste and certain land
disposal requirements (such as for
closure) may be applicable to the area
where the waste is received.

Therefore, the following activities
constitute land disposal under RCRA
Subtitle C where the waste involved is
RCRA hazardous waste:
a. Wastes from different units are
consolidated into one unit;
b. Wastes is removed and treated
outside a unit and redeposited into the
same or another unit; or
c. Waste is picked up from the unit
and treated within the area of
contamination in an incinerator,
surface impoundment, or tank and then
redeposited into the unit (does not
include in-situ treatment). In
contrast, an example of an activity
that does not constitute "land disposal"
is the mere consolidation of RCRA
hazardous wastes within a unit.
Similarly, the covering and sealing off of
hazardous waste, called "capping with
waste in place," is also not considered
"land disposal" and RCRA Subtitle C
requirements would not be applicable. If
some of the waste at a site is moved into
another unit, but other waste is left
behind in the original unit (the unit in
which such waste was found), "land
disposal" applies only with regard to the
waste that is moved into another unit.
Under these examples, however, certain
RCRA land disposal requirements might
nevertheless be relevant and
appropriate to such waste. (See ARAs
paragraphs mentioned above, 16.ii.117)

iii. Hypothetical examples of
compliance with RCRA: land disposal
restrictions. Land disposal restrictions
under RCRA sections 3004 (d) through
(k) are triggered whenever there is
placement of RCRA hazardous wastes
subject to land disposal restrictions
("banned waste") into a land-based unit.
Such land disposal does not occur when
Facility owner/operators should make a good faith effort to determine whether media were contaminated by hazardous wastes and ascertain the dates of placement. The Agency believes that by using available site- and waste-specific information such as manifests, vouchers, bills of lading, sales and inventory records, storage records, sampling and analysis reports, accident reports, site investigation reports, spill reports, inspection reports and logs, and enforcement orders and permits, facility owner/operators would typically be able to make these determinations. However, as discussed earlier in the preamble of today’s proposal, if information is not available or inconclusive, facility owner/operators may generally assume that the material contaminating the media were not hazardous wastes.

Similarly, if environmental media were determined to be contaminated by hazardous waste, but if information on the dates of placement is unavailable or inconclusive, facility owner/operators may, in most cases assume the wastes were placed before the effective dates.

The Agency believes that, in general, it is reasonable to assume that environmental media do not contain hazardous wastes placed after the effective dates of the applicable land disposal prohibitions when information on the dates of placement is unavailable or inconclusive, in part, because current regulations, in effect since the early 1980’s, require generators of hazardous waste to keep detailed records of the amounts of hazardous waste they generate. These records document whether the waste meets land disposal treatment standards and list the dates and locations of the waste’s ultimate disposition. With these records, the Agency should be able to determine if environmental media were contaminated by hazardous wastes and if they would be subject to the land disposal restrictions.

In addition, EPA believes that the majority of environmental media contaminated by hazardous wastes were contaminated prior to the effective dates of the applicable land disposal restrictions. Generally, the contamination of environmental media by hazardous waste after the effective date of the applicable land disposal restriction would violate a violation of the LDRs, subject to substantial fines and penalties, including criminal sanctions. The common exception would be one-time spills of hazardous waste or hazardous materials. In these cases, the Agency believes that, typically, independent reporting and record keeping requirements (e.g., CERCLA’s sections 102 and 103 reporting requirements or state spill reporting requirements) coupled with ordinary “good housekeeping” procedures, result in records that will allow the Agency to determine the nature of the spilled material, and the date (or a close approximation of the date) of the spill. The Agency requests comments on this approach and on any other assumptions, records, or standards of evaluation that would ensure that facility owner/operators would identify any contaminated media subject to land disposal restrictions properly and completely.

Information on contained-in decisions should be immediately available since, generally, these determinations are made by a regulatory agency on a site-specific basis and careful records are kept.

2. Treatment Requirements—§269.30

a. Approach to treatment requirements and recommendations of the FACA Committee. RCRA section 3004(m) requires that treatment standards for wastes restricted from land disposal, “* * * specify those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste, so that short-term and long-term threats to human health and the environment are minimized.” A recurring debate through EPA’s development of the land disposal restriction program has been whether treatment standards should be technology-based (i.e., based on performance of a treatment technology) or risk-based (i.e., based on assessment of risks to human health and the environment that are posed by the wastes). The Agency believes that both approaches are allowable. It has long been recognized that Congress did not directly address the questions of how to set treatment standards in the language of section 3004(m). In addition, Congress did not specifically address whether the LDR treatment standards for newly generated wastes and remediation wastes must be identical; the structure of RCRA’s LDR provisions suggests that Congress believed that remediation waste may merit special consideration. (See, RCRA sections 3004(d)(3) and 3004(e)(3), which...