


Florida Department of
Environmental Protection

Memorandum

TO: Directors of District Management
Waste Program Administrators

FROM: Mary Jean Yon, Director 
Division of Waste Management

DATE: August 9, 2006

SUBJECT: Management of Contaminated Media under RCRA

Revised guidance for management of contaminated media subject to RCRA requirements is attached. It replaces the previous guidance dated August 21, 2002. The revised guidance incorporates alternative Land Disposal Restrictions/Universal treatment standards in 40 CFR 268.49, retains the risk-based concentration screening criteria and a format/checklist for a Contained-Out Determination and LDR Variance Request.

If you have any questions, please contact Doug Outlaw at SC 245-8786.

MJY/dot

Attachment

cc: Jon Johnston, EPA, Region 4
Charles Goddard, Chief, Bureau of Solid and Hazardous Waste
Doug Jones, Chief, Bureau of Waste Cleanup
Mike Ashey, Chief, Bureau of Petroleum Storage Systems
Agusta Posner, OGC

Attachment I: Management of Environmental Media that Contains Hazardous Waste

On September 7, 1999 Region 4 of the Environmental Protection Agency (“EPA”) issued a guidance document (<http://www.epa.gov/region4/waste/rcra/contamme.pdf>) addressing procedures and management practices for contaminated media (i.e. soil, sediments, groundwater, surface water). The site-specific guidance in this memorandum supplements the Region 4 guidance. This guidance does not change or supersede specific regulatory requirements under the Resource Conservation and Recovery Act (“RCRA”), the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) or any state statute or rule. This guidance supersedes the Department’s Memorandum dated August 21, 2002, “*Management of Contaminated Media under RCRA*,” which is being updated to incorporate alternative land disposal treatment standards promulgated in 40 Code of Federal Regulations (“CFR”) §268.49, now adopted and effective in Florida, and the concept of alternative CTLs (“ACTLs”) promulgated in Chapter 62-780, F.A.C.

This guidance was developed for sites that generate contaminated media through site investigation, corrective action or other remediation activities, including sites with mixed plumes of petroleum and non-petroleum contamination.

This document explains how to determine if media that contains hazardous waste must continue to be managed as hazardous waste once those media are “generated” (that is, removed or displaced from their original location by human activity) and, if applicable, treated.

Other states may regulate contaminated media differently than Florida. This guidance does not apply to environmental media management outside Florida. However, environmental media transported to Florida for disposal which would not require management as a hazardous waste in accordance with this guidance will not be regulated as a hazardous waste (provided the state of origin also does not regulate the media as hazardous waste.)

“Environmental media” does not include any process wastes, sludges, other treatment residues or by-products of hazardous waste treatment including bag house dust or ash.

Dilution of a hazardous waste with environmental media to avoid land disposal restrictions, and deliberate or routine discharge of hazardous waste to environmental media, are serious violations of RCRA and other environmental laws. Such practices may preclude use of this guidance in cleanup situations.

Environmental Media That Contains Hazardous Waste

Contaminated environmental media can become subject to regulation under RCRA if they contain hazardous waste. Generally, contaminated media contains hazardous waste when:

- (1) the media exhibit a characteristic of a hazardous waste as defined in 40 Code of Federal Regulations (CFR) Part 261 Subpart C (“characteristic waste”); or
- (2) the media are contaminated with hazardous waste listed in 40 CFR Part 261 Subpart D (“listed waste”) AND concentrations of hazardous constituents are above the higher of:
 - (a) health-based cleanup target levels (“CTLs”) OR
 - (b) Land Disposal Restriction Universal Treatment Standards (LDR/UTS) set forth in 40 CFR §§268.40 and 268.48, if a numerical value is available.

[“Health-based CTLs” means the values listed in Chapter 62-777, Florida Administrative Code (FAC), Table I, for groundwater and Table II, Direct Exposure Residential, for soil. Additional health-based groundwater CTLs are listed in the Technical Report, Table 7, for contaminants that do not have a health-based value listed in Chapter 62-777, Table 1. Health-based groundwater CTLs do not include CTLs based on nuisance, aesthetic, or organoleptic considerations.]

In this guidance, media that meet either of these two criteria will be referred to as “hazardous media,” “hazardous soil,” or “hazardous groundwater.” In this guidance, the LDR/UTS in 40 CFR §§268.40 and 268.48 will be referred to as “normal LDR/UTS.” The LDR/UTS in 40 CFR §268.49, which is applicable to contaminated soil only, and defined as 90% removal capped at ten times normal LDR/UTS, will be referred to as “alternative LDR/UTS for soil.”

Environmental media with hazardous constituent concentrations that do not exceed the normal LDR/UTS but do exceed the health-based CTL are not hazardous media but are also not considered “clean” and must be managed in accordance with other Department requirements.

Media Contaminated with Characteristic Waste

Media that exhibits a hazardous characteristic (toxicity, ignitability, reactivity or corrosivity) is subject to full RCRA Subtitle C regulation, and prior to land disposal, must be treated (using the technology specified in 40 CFR §268.40, if any, or an alternate technology approved by the Department) for:

- (a) the characteristic constituent, in the case of toxicity characteristic; and,
- (b) the characteristic property, in the case of ignitability, reactivity or corrosivity; and
- (c) all underlying hazardous constituents (UHC) as specified in the next paragraph.

Hazardous media must meet the normal LDR/UTS, or the alternative LDR/UTS for soil, prior to being land disposed. This applies even if all hazardous characteristics have been removed, until the media meets health-based CTLs for all constituents of concern. Once the characteristic is eliminated (e.g., through treatment), the media may no longer contain hazardous waste but may still contain underlying hazardous constituents (UHCs) that must be treated to meet all applicable LDR/UTSs, prior to being land disposed, unless the media meets health-based CTLs or a site-specific variance is obtained.

Media Contaminated with Listed Waste

Media contaminated with hazardous waste listed in 40 CFR Part 261 Subpart D is subject to full RCRA Subtitle C regulation, and prior to land disposal, must be treated (using the technology specified in 40 CFR §268.40, if any, or an alternate technology approved by the Department) for all UHCs (that is, all hazardous constituents that are reasonably likely to be present at concentrations above the LDR/UTS.)

Hazardous media must meet the normal LDR/UTS set forth in 40 CFR §§268.40 and 268.48, or the alternative LDR/UTS for soil, prior to being land disposed, unless the media meets health-based CTLs or a site-specific variance is obtained.

Media contaminated with a hazardous waste listed only for constituents that also have a specified toxicity characteristic may be managed as if the media had been contaminated with the corresponding characteristic waste. Contaminants that might be managed under this principle, with matching waste codes, are listed in Table 1.

Media contaminated with a hazardous waste listed only for ignitability, corrosivity or reactivity may be managed as if the media had been contaminated with the corresponding characteristic waste only. Listed wastes that might be managed under this principle, with matching waste codes, are listed in Table 2.

Contained Out Determinations and LDR/UTS Variances

Upon written request, the Department may determine, on a site specific basis, that media is no longer hazardous media (“contained out determination”) when concentrations of contaminants in the media meet Direct Exposure Industrial CTLs or Department-approved alternative cleanup target levels (“ACTLs”) and the media is managed in accordance with conditions specified in the Department’s approval. The Department approval would specify required conditions such as implementation of an institutional control.

In accordance with the provisions of 40 CFR §268.44(h) – (m), facilities undertaking cleanups in Florida may obtain a state variance for an increase in the applicable LDR/UTS, including the alternative LDR/UTS for soil. In general, the criteria for such a variance are:

- (a) Treatment to the specified level is not physically possible, or
- (b) Treatment to the specified level is possible but not technically or environmentally appropriate.

Circumstances under which a LDR/UTS variance is justified are exceptional and management requirements will be tailored based on the circumstances. When the concentrations of UHC in media are at or below Industrial CTLs or ACTLs but are above the applicable LDR/UTS, a site-specific LDR/UTS variance will be justified. However, no LDR/UTS will allow media to be placed in an uncontrolled exposure location if it does not meet health-based CTLs.

Where a contained-out determination and/or state LDR/UTS variance would be useful to expedite site remediation, a request in the form of a petition may be submitted to the Department as a part of a permit application, clean closure plan, cleanup agreement document, best management plan, or as a separate submittal. Approval may be by permit, order, or included as a part of another Department authorization.

The requirements for a contained-out determination and/or a state LDR/UTS variance are summarized in Table 3 for cases wherein soil contaminated with hazardous waste has been generated, and the Direct Exposure Residential CTL, the Direct Exposure Industrial CTL, and/or the alternative LDR/UTS for soils may be exceeded (before or after treatment); and Table 4 for cases wherein groundwater contaminated with hazardous waste has been generated, and the groundwater CTL and/or the LDR/UTS for wastewater may be exceeded (before or after treatment).

A suggested format and checklist for requesting a contained-out determination and/or a state LDR/UTS variance is attached (see Table 5). Such relief will be granted by the Department based on the following considerations:

- physical possibility and technical appropriateness of treating the soil to the specified level or by the specified method; and/or
- concentrations of contaminants remaining in the soil are below concentrations necessary to minimize short- and long-term threats to human health and the environment.

Other Considerations

A generator who treats hazardous waste soil on-site to remove a characteristic but not to reach the higher of LDR/UTS or health-based CTLs and who then sends the decharacterized soil off-site for further treatment or disposal must notify the treatment or disposal facility in accordance with 40 CFR 268.7(b)(4)(iv).

Hazardous ground water may not be treated in a waste water treatment unit that discharges to a publicly owned treatment works (POTW) without written authorization from the control authority. Proof of notification pursuant to F.A.C. 62-625.600(15) is also required. In some cases an industrial waste permit or authorization may be required in order to directly discharge contaminated groundwater or surface water to a POTW.

Department staff overseeing the specific project must approve any other Department requirements for managing media, even if it is not or is no longer subject to RCRA. For example, leachability to groundwater must always be addressed when evaluating contaminated soil disposal.

Additional options not included in this memorandum may be available on a site-specific basis when, for example, media are managed in an area of contamination or a corrective action management unit.

In cases where a universal treatment standard, an analytical test method, or a CTL may not be available for a particular constituent, the constituent shall be managed consistent with parent, sister and daughter constituents.

Hazardous sediments may be managed the same as soils and surface water may be managed the same as groundwater. 40 CFR §261.4(g) provides that dredged material that is subject to the requirements of a permit issued under §404 of the Federal Water Pollution Control Act [33 United States Code (USC) §1344] or §103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC §1413) is not hazardous waste.

Section 403.7222, F.S., states that the Department may not issue a permit for a "hazardous waste landfill" and defines the term as a disposal facility or part of a facility (except a land treatment facility) at which hazardous waste that has not undergone treatment is placed in or on land, including an injection well. Disposal of untreated hazardous media in a landfill is prohibited by this statute.

Department guidance for managing contaminated media does not exempt hazardous media from any regulatory requirements. Hazardous media may be managed on-site pursuant to a variety of options, including but not limited to:

- Temporary Units, Staging Piles, and Corrective Action Management Units pursuant to 40 CFR 264 Part 270 Subpart S.
- Remedial Action Permits pursuant to 40 CFR Part 270 Subpart H.
- Generator storage and treatment in tanks and containers pursuant to 40 CFR 262.34.
- The "area of contamination" (AOC) concept described in EPA guidance memo, March 13, 1996, "Use of the Area of Contamination Concept During RCRA Cleanup."

Other state requirements that may apply to contaminated media include:

- Use Restrictions - Soils which have been stabilized (i.e. treated) to remove a characteristic (lead, for example) such that the media would not leach at levels above the groundwater CTL may be reused on-site. However, if concentrations would still be present at levels above the Residential CTL, then a land use restriction would be needed pursuant to Chapter 62-780, F.A.C.
- When contaminated media is disposed of in a solid waste landfill, compliance with regulations applicable to solid waste is required.

Table 1. List of Constituents included for Hazardous Waste with a Characteristic Concentration

Waste Code	Contaminants in Alphabetical Order	Waste Code	Contaminants in Order by Waste Code
D004	Arsenic	D004	Arsenic
D005	Barium	D005	Barium
D018	Benzene	D006	Cadmium
D006	Cadmium	D007	Chromium
D019	Carbon tetrachloride	D008	Lead
D020	Chlordane	D009	Mercury
D021	Chlorobenzene	D010	Selenium
D022	Chloroform	D011	Silver
D007	Chromium	D012	Endrin
D023	o-Cresol	D013	Lindane
D024	m-Cresol	D014	Methoxychlor
D025	p-Cresol	D015	Toxaphene
D026	Cresol	D016	2,4-D
D016	2,4-D	D017	2,4,5-TP (Silvex)
D027	1,4-Dichlorobenzene	D018	Benzene
D028	1,2-Dichloroethane	D019	Carbon tetrachloride
D029	1,1-Dichloroethylene	D020	Chlordane
D030	2,4-Dinitrotoluene	D021	Chlorobenzene
D012	Endrin	D022	Chloroform
D031	Heptachlor (and its epoxide)	D023	o-Cresol
D032	Hexachlorobenzene	D024	m-Cresol
D033	Hexachlorobutadiene	D025	p-Cresol
D034	Hexachloroethane	D026	Cresol
D008	Lead	D027	1,4-Dichlorobenzene
D013	Lindane	D028	1,2-Dichloroethane
D009	Mercury	D029	1,1-Dichloroethylene
D014	Methoxychlor	D030	2,4-Dinitrotoluene
D035	Methyl ethyl ketone	D031	Heptachlor (and its epoxide)
D036	Nitrobenzene	D032	Hexachlorobenzene
D037	Pentachlorophenol	D033	Hexachlorobutadiene
D038	Pyridine	D034	Hexachloroethane
D010	Selenium	D035	Methyl ethyl ketone
D011	Silver	D036	Nitrobenzene
D039	Tetrachloroethylene	D037	Pentachlorophenol
D015	Toxaphene	D038	Pyridine
D040	Trichloroethylene	D039	Tetrachloroethylene
D041	2,4,5-Trichlorophenol	D040	Trichloroethylene
D042	2,4,6-Trichlorophenol	D041	2,4,5-Trichlorophenol
D017	2,4,5-TP (Silvex)	D042	2,4,6-Trichlorophenol
D043	Vinyl chloride	D043	Vinyl chloride

Table 2. Media Containing Hazardous Waste Constituents Listed Only for Ignitability, Corrosivity or Reactivity

Contaminants in Waste Stream in Alphabetical Order	Waste Code	Listing*
Acetaldehyde, Ethanal	U001	I
Acetone	F003	I
Acrylic acid, 2-Propenoic acid	U008	I
alpha.alpha-Dimethylbenzylhydroperoxide	U096	R
Ammonium picrate	P009	R
1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-,	P042	R
Benzenesulfonic acid chloride, Benzenesulfonyl chloride	U020	C,R
1-Butanol n-Butyl alcohol	U031	I
n-butyl alcohol	F003	I
Cyclohexanone	F003	I
Dimethylamine, Methanamine, N-methyl	U092	I
Dipropylamine, 1-Propanamine, N-propyl	U110	I
Ethane, 1,1'-oxybis-Ethyl ether	U117	I
Ethyl acetate	U112	I
Ethyl acetone	F003	I
Ethyl benzene	F003	I
Ethyl ester	U113	I
Ethyl ether	F003	I
Furan, Furfuran	U124	I
Furancarboxaldehyde, Furfural	U125	I
hexahydro, Cyclohexane	U056	I
Methane, tetranitro, Tetranitromethane	P112	R
Methanol	F003	I
Methanol, Methyl alcohol	U154	I
1-Methylbutadiene, 1,3-Pentadiene	U186	I
methyl isobutyl ketone	F003	I
(1-methylethyl), Cumene	U055	I
4-Methyl-2-pentanone, pentanol	U161	I
Nitroglycerine, 1,2,3-Propanetriol, trinitrate	P081	R
Phosphorus sulfide	U089	R
Sulfur phosphide	U189	R
tetrahydro, tetrahydrofuran	U213	I
Xylene	F003	I
Wastewater treatment sludges from the manufacturing and processing of explosives	K044	R
Spent Carbon from the treatment of wastewater containing explosives	K045	R
Pink/red water from TNT operations	K047	R

* I = Ignitability
 C = Corrosivity
 R = Reactivity

Table 3(a). Soil Contaminated with Hazardous Waste

Soil Contains a Listed Hazardous Waste and Exhibits a Characteristic OR Exhibits a Characteristic Only

In Case 1, soil contains hazardous waste because one or more constituent concentrations are greater than the higher of health-based residential CTLs or normal LDR/UTS. The soil also exhibits a characteristic for a constituent different from the constituent that was the basis for the listing. [If the characteristic results from the same constituent as the listing (see Tables 1 and 2), then the soil may be managed as if the soil contained a characteristic only.] For soil that does require management for both a hazardous characteristic and a listed waste, all regulatory requirements for each waste type apply but the order of any treatment needed may be approved on a site specific basis. Soil that exhibits a characteristic must be managed according to requirements for hazardous waste (except that the alternative LDR/UTS applies). Cases 2 through 7 for listed waste assume the characteristic has been removed or never existed.

Soil Contains a Listed Hazardous Waste Only

In Case 2, all constituent concentrations in soil are less than (or equal to) the higher of residential CTL or normal LDR/UTS. This soil does not contain a listed hazardous waste and no contained out determination is required for any disposal option. Since all constituent concentrations are also necessarily less than alternative LDR/UTS for soil, no LDR/UTS variance is required for any disposal option. However, soil management may be subject to other Department requirements. Leachability to groundwater must be addressed, for example.

In Case 3, soil contains listed hazardous waste because one or more constituent concentrations are greater than the higher of residential CTLs or normal LDR/UTS, but all constituent concentrations are less than (or equal to) the industrial CTL (or ACTL) and less than (or equal to) the alternative LDR/UTS for soil. If a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill.

In Case 4, soil contains a listed hazardous waste because one or more constituent concentrations are greater than the higher of residential CTLs or normal LDR/UTS, but all constituent concentrations are less than (or equal to) the industrial CTL (or ACTL). Some concentrations are greater than the alternative LDR/UTS for soil. If a contained-out determination and LDR variance are granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill.

In Case 5, soil contains a listed hazardous waste because one or more constituent concentrations are greater than the industrial CTLs and greater than the normal LDR/UTS, but all constituent concentrations are less than (or equal to) the alternative LDR/UTS for soil. After treatment to meet the Industrial CTL (or ACTL) and if a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if

constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill.

In Case 6, soil contains a listed hazardous waste because one or more constituent concentrations are greater than the industrial CTLs (or ACTL) and greater than the normal LDR/UTS. One or more constituent concentrations exceed the alternative LDR/UTS for soil. After treatment to meet the industrial CTL (or ACTL), and if a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill. If the soil still exceeds the alternative LDR/UTS after treatment, an LDR/UTS variance would also be required for any management option.

The cases are shown in tabular format in Table 3(b). Normal or alternative soil LDR/UTS requirements do not apply if the soil constituent concentration is less than or equal to the residential CTL.

TABLE 3(b)
SUMMARY OF CONTAMINATED MEDIA CASES – SOILS WHICH MAY BE CONTAMINATED WITH A LISTED WASTE

Typical Cases	SC > Residential		SC > Normal LDR/UTS		SC > Alternative LDR/UTS		Alternative LDR/UTS Variance or Contained Out Determination Requirements
	Y	N	Y	N	Y	N	
1	Y	N	Y	N	Y	N	Management as a listed and characteristic hazardous waste is required. Soil may be treated to remove the characteristic and to meet the LDR/UTS. Soil must continue to be managed in accordance with cases 2 through 6 for the listed waste constituents assuming the characteristic has been removed.
2	Y	N	Y	N	Y	N	Soil does not contain hazardous waste and no contained out determination is required for any disposal option. However, soil management may be subject to other Department requirements such as leachability to groundwater or managed on-site via use of controls
3	Y	N	Y	N	Y	N	Soil contains hazardous waste. If a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or the soil may be disposed of at a Class I Landfill. Otherwise manage as hazardous waste.
4	Y	N	Y	N	Y	N	Soil contains hazardous waste. If a contained-out determination and LDR variance are granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill. Otherwise manage as hazardous waste.
5	Y	N	Y	N	Y	N	Soil contains hazardous waste. After treatment to meet the industrial CTL (or ACTL) and if a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill. Otherwise manage as hazardous waste.
6	Y	N	Y	N	Y	N	Soil contains hazardous waste. After treatment to meet the industrial CTL (or ACTL), and if a contained-out determination is granted, this soil may potentially be managed on-site via use of engineering and/or institutional controls, or, if constituent concentrations are less than (or equal to) Industrial CTLs, the soil may be disposed of at a Class I Landfill. If the soils still exceeds the alternative LDR/UTS after treatment, an LDR/UTS variance would also be required for any management option. Otherwise, manage as a hazardous waste.

SC = Soil Concentration

As indicated in Sections 1(e) and 3(a), management of soil, which exceeds the residential CTL, requires a contained-out determination and must comply with alternative LDR/UTS requirements.

Table 4(a). Groundwater which may be Contaminated with Hazardous Waste

In Case 1, the groundwater contains a listed hazardous waste because one or more constituent concentrations are greater than the higher of groundwater cleanup target levels (GCTL) or normal LDR/UTS. The groundwater also exhibits a characteristic for a constituent different from the constituent that was the basis for listing. [If the characteristic results from the same constituent as the basis for listing (see Tables 1 and 2), then the groundwater may be managed under Case 2 as if the groundwater contained a characteristic only.] Regulatory requirements for both characteristic and listed waste apply but the order of any treatment needed may be approved on a site-specific basis. The groundwater must be managed as hazardous waste until the criteria in both Cases 2 and 3 are met. After the groundwater no longer contains a hazardous waste (that is, the groundwater does not exhibit a characteristic and concentrations for all constituents are less than the greater of GCTL or normal LDR/UTS), additional management must be in accordance with other state requirements (for example, to reduce the concentration to the GCTL or AGCTL.) The groundwater must meet normal LDR/UTS prior to being land disposed, unless the groundwater meets health-based CTLs or a site-specific variance is obtained.

In Case 2, the groundwater exhibits a characteristic and must be managed as hazardous waste. After treatment to remove the characteristic, management as hazardous waste is not required. After the groundwater no longer contains a hazardous waste (that is, does not exhibit a characteristic), additional management to comply with the LDR/UTS requirements and to reduce all concentrations to the GCTL or AGCTL must be in accordance with other state requirements. The groundwater must meet normal LDR/UTS prior to being land disposed, unless the groundwater meets health-based CTLs or a site-specific variance is obtained.

In Case 3, the groundwater contains a listed hazardous waste because one or more constituent concentrations are greater than the higher of GCTL or normal LDR/UTS and must be managed as hazardous waste. After treatment to meet either the GCTL or normal LDR/UTS (whichever is higher), management of the groundwater as a hazardous waste is no longer required (provided the GW does not exhibit a characteristic.) Additional management must be in accordance with other state requirements. The groundwater must meet normal LDR/UTS prior to being land disposed, unless the groundwater meets health-based CTLs or a site-specific variance is obtained.

The cases are shown in tabular format in Table 4(b). LDR/UTS requirements do not apply if the groundwater constituent concentration is less than or equal to the groundwater CTL.

Table 4(b). Groundwater (GW) which may be Contaminated with a Hazardous Waste

Table 4(b). Groundwater (GW) which may be Contaminated with a Hazardous Waste			
Typical Case	GW C> GCTL	GW C> LDR/UTS	Requirements
GW Contains a Listed Hazardous Waste and Exhibits a Characteristic:			
1.	Y Y N	Y N Y	Management as a listed and characteristic hazardous waste is required. For the characteristic, the GW may be managed in accordance with Case 2 and for the listed waste, the GW may be managed in accordance with Case 3.
GW Exhibits a Characteristic But Does Not Contain a Listed Hazardous Waste:			
2.	Y	Y	Management as a characteristic hazardous waste is required until the GW is treated to remove the characteristic. The GW must meet normal LDR/UTS prior to being land disposed, unless the GW meets health-based CTLs or a site-specific variance is obtained. The GW must also be managed in accordance with other state requirements.
GW Contains a Listed Waste But Does Not Exhibit a Characteristic:			
3.	Y N Y	Y Y N	Management as a listed waste is required until the concentrations in the GW are \leq the higher of the health based CTL or the normal LDR/UTS. After the GW concentrations comply with one of these criteria, management as a hazardous waste is no longer required. The GW must be managed in accordance with other state requirements.

Notes:

1. C = Concentration
2. GCTLs are listed in Rule 62-777, F.A.C., and LDR/UTS requirements are in 40 CFR Part 268.

FORMAT/CHECKLIST FOR CONTAINED-OUT DETERMINATION
AND STATE LDR VARIANCE

A petition for contained out determination and/or state site-specific variance for alternative Land Disposal Restriction Universal Treatment Standard ("state LDR variance") should be submitted to Administrator, Hazardous Waste Regulation Program, Department of Environmental Protection, 2400 Blair Stone Road, MS 4560, Tallahassee, FL 32399 with a copy to Hazardous Waste Program Attorney, 3900 Commonwealth Blvd, Tallahassee, FL 32399-3000 and contain the following:

- (1) A caption which identifies the petitioner and respondent(s) and which includes the word "Petition" in a title or subject line;
- (2) The printed or typed name, address, telephone number, and any facsimile number of the petitioner and the petitioner's attorney or qualified representative (if any);
- (3) The petitioner's signature;
- (4) A brief general description of the facility with emphasis on the known use of chemicals and generation of waste and an opinion as to how the soil became contaminated.
- (5) A list of all hazardous constituents likely to be present in the contaminated soil, identified through a complete and technically adequate protocol of sampling and laboratory analysis.
- (6) A copy of, or reference to [by title, date and author] the sampling and analysis protocol used to identify hazardous constituents (i.e. waste analysis plan).
- (7) A copy of, or reference to [by title, date and author], scientifically defensible laboratory results with appropriate quality control/quality assurance data that demonstrate that:
 - (a) the soil does not exhibit a hazardous characteristic; and
 - (b) concentrations of contaminants remaining in the soil are below concentrations necessary to minimize short- and long-term threats to human health and the environment.
- (8) If the soil was treated to achieve the applicable concentration for any constituent, a copy of, or reference to [by title, date and author], the complete and technically adequate treatment plan.
- (9) A statement that a variance is sought from land disposal restriction universal treatment standards in 40 CFR Part 268, as promulgated pursuant to §403.721, F.S.; and/or a statement that a determination is sought that the soil no longer contains hazardous waste.
- (10) Specific facts that demonstrate the physical impossibility and/or technical inappropriateness of treating the contaminated soil to the specified level or by the specified method, if applicable.
- (11) A copy of, or reference to [by title, date and author], an appropriate disposal plan for the contaminated soil.