


Florida Department of
Environmental Protection

Memorandum

TO: Directors of District Management
District Waste Program Administrators
Other Interested Parties

FROM: Mike Sole, Director 
Division of Waste Management

DATE: May 18, 2004

SUBJECT: Guidance For The Management Of Street Sweepings, Catch Basin
Sediments and Stormwater System Sediments

Attached is a document titled "Guidance For The Management Of Street Sweepings, Catch Basin Sediments and Stormwater System Sediments." The purpose of this document is to provide guidance to the regulated community and Department staff on the disposal and beneficial use of street sweepings, catch basin sediments and stormwater system sediments. While this document is not a rule and does not create any standards or criteria that must be followed by the regulated community, the Department hopes it will clarify and standardize the approaches that are followed in Florida for the disposal or beneficial use of these materials.

This project began in 1998 and would not have been possible without the support of: (1) EPA and eleven other Florida organizations, including municipalities and counties, that contributed a total of \$175,000 to this research; (2) Dr. Tim Townsend and his students from the University of Florida that obtained the samples and conducted the analyses which are the basis for this guidance; and (3) the thirteen Focus Group members that were willing to give of their valuable time and develop recommendations to the Department on the proper management of these materials. The Department is very grateful to all of the organizations and individuals who worked hard to develop this document. Without your support it would not have been possible.

I hope you will find this guidance useful. If you have any questions concerning this document, please feel free to contact Richard Tedder at 850/245-8735 or Lee Martin at 850/245-8734.

Attachment

cc: Bill Hinkley
Chris McGuire

GUIDANCE FOR THE MANAGEMENT OF STREET SWEEPINGS, CATCH BASIN SEDIMENTS AND STORMWATER SYSTEM SEDIMENTS

FINAL

May 3, 2004



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DISCLAIMER

The information contained in this document is intended for guidance only. It is not a rule and does not create any standards or criteria that must be followed by the regulated community. While the management and use of street sweepings, catch basin sediments and stormwater system sediments in accordance with this guidance is not expected to result in contamination of ground water or surface water or to pose a significant threat to human health, compliance with this document does not relieve the owner or operator from the responsibility for complying with the Department's rules nor from any liability for environmental damages caused by the use of these materials.

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1.0 BACKGROUND

Historically, street sweepings in Florida were disposed of at Class III landfills. These landfills are allowed to receive wastes that "are not expected to produce leachate which poses a threat to public health or the environment," Rule 62-701.200(14), Florida Administrative Code (F.A.C.). Prior to January 6, 1993, Chapter 62-701, F.A.C. allowed trash to be disposed of at Class III landfills and the term "trash" was defined to include street sweepings. Because of concerns that the term "trash" was too all-encompassing, the Department removed this term from the rule in 1993. As a result, street sweepings could no longer be disposed of in Class III landfills without approval by the Department, and had to go to permitted, lined landfills (i.e., usually Class I landfills). This position was stated in a Department memorandum dated April 28, 1998 (DEP, 1998).

Within a few years after this rule change, the Department began to find large piles of street sweepings stored by municipalities. In some cases this practice required local governments to obtain permits for solid waste management facilities. Several municipalities began expressing frustration to the Department over increased disposal costs of street sweepings at Class I landfills. Concerns were also expressed about the proper management of other wastes such as catch basin sediments and stormwater system sediments. The Department maintained that all of these materials were regulated as solid wastes (DEP, 1999). At a Contaminated Soils Forum meeting in 1998, the Department agreed to form a Focus Group to study these wastes (i.e., street sweepings, stormwater system sediments and catch basin sediments) and evaluate possible disposal and management options for them. The individuals that agreed to serve on this Focus Group are shown in APPENDIX A.

Three Focus Group planning meetings were held in 1999. Some research on stormwater system sediments and street sweepings had already been conducted and was considered by the Focus Group (Cox, 1998 and Brinkmann, 1999). It was decided that before appropriate disposal and management options could be proposed, a more comprehensive chemical characterization of these wastes would be required. Dr. Tim Townsend, University of Florida, was selected to conduct this research. The Department contributed \$100,000 from EPA Section 319 Grant Funds to this research. Eleven other organizations, including municipalities and counties, contributed an additional \$75,000 to this project. These contributors were:

- St. Lucie County Public Works
- Reedy Creek Improvement District
- City of Fort Myers
- Sarasota County Public Works
- City of Winter Park
- Palm Beach County Solid Waste Authority
- Brevard County Surface Water Management
- Seminole County Stormwater Division
- City of Orlando
- City of Lake Worth
- Florida Association of Stormwater Utilities

Dr. Townsend began this research in September 2000. Approximately 300 separate samples of street sweepings, catch basin sediments and stormwater system sediments were collected over a period of 15 months from 20 different sampling

locations in Florida. These samples were analyzed for a number of chemical parameters including volatile and semi-volatile organic compounds, pesticides, herbicides, metals and leachable inorganic ions. Townsend presented results from both total analyses and analyses of leaching tests using the Synthetic Precipitation Leaching Procedure (SPLP), EPA Method 1312. In order to identify potential chemicals of concern, the individual total analysis results were compared with the Department's soil cleanup target levels and the leachability results were compared with the Department's ground water cleanup target levels. These cleanup target levels are found in Chapter 62-777, F.A.C., and were used as guidance in determining which constituents in the waste might pose human health risks. The final results of this research were presented on December 31, 2002 (Townsend, 2002).

During a meeting of the Focus Group on December 2, 2002, the Department was asked to calculate the 95% Upper Confidence Limits (UCLs) for the average concentrations of all the chemicals of concern identified in the Townsend study. It was believed that this information would help the Focus Group make recommendations on the proper disposal and beneficial use of the three waste streams.

A draft report evaluating the data was prepared by the Department and discussed by the Focus Group at a meeting on October 28, 2003. A final version of this report was prepared on November 10, 2003 (DEP, 2003). A summary of the results of the Department's data evaluation report is presented in TABLE 1. At the October 28th meeting, the Focus Group made recommendations on the disposal and beneficial use of the three waste streams and asked the Department to prepare a guidance memorandum or document summarizing these recommendations.

2.0 PURPOSE

The purpose of this document is to provide guidance to the regulated community and Department staff on the disposal and beneficial use of street sweepings, catch basin sediments and stormwater system sediments. This document is not a rule and does not create any standards or criteria that must be followed by the regulated community.

3.0 DEFINITIONS

For the purposes of this document, the following definitions apply.

"Catch Basin Sediments" means the solid fraction of materials, consisting primarily of soil, rocks, asphalt, vegetative matter and possibly small amounts of solid waste, collected in settling structures designed to receive stormwater runoff from roads. It may also contain small amounts of other solid wastes that are often discarded along roads.

"Industrial stormwater systems" means stormwater systems that receive stormwater discharges associated with industrial activities.

"Non-industrial stormwater systems" means stormwater systems that do not receive stormwater discharges associated with industrial activities.

"Stormwater discharges associated with industrial activities" has the meaning given it in Rule 62-620.200(45), F.A.C., incorporating by reference 40 CFR 122.26(b)(14). (This language is included in APPENDIX B).

"Stormwater System Sediments" means the solid fraction of materials, consisting primarily of soil, vegetative matter and possibly small amounts of solid waste, collected in permitted stormwater treatment systems (this does not include roadside ditches or canals). It may also contain small amounts of other solid wastes that may be washed into the system during rainfall events.

"Street Sweepings" means materials consisting primarily of soil, rocks, asphalt, leaves and other vegetative matter generated during the routine cleaning of roads. It may also contain small amounts of other solid wastes that are often discarded along roads. It does not include material generated during the cleanup of an oil or hazardous chemical spill.

4.0 GENERAL GUIDANCE FOR DISPOSAL AND BENEFICIAL USE

The disposal and beneficial use options contained in this document were recommended by the Focus Group and accepted as appropriate for these wastes by the Department. They were based on the results of the Townsend study and the results of further data evaluations by the Department that are summarized in TABLE 1.

The management of street sweepings, catch basin sediments and stormwater system sediments in accordance with the guidance contained in this document is not expected to pose a significant threat to human health or the environment. However, the options described in this document assume these wastes are not contaminated by petroleum products or other hazardous chemicals such as might occur as a result of a spill or the cleanup of a spill. If it is reasonable to assume the wastes are contaminated, by petroleum products or other hazardous chemicals, then the generator should seek further guidance before proceeding with disposal or beneficial use of the wastes by contacting the Department's District office in the District where the wastes are located. A list of contacts and addresses for the Tallahassee and District offices is provided in APPENDIX C.

Many counties and municipalities have National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) permits that require the wastes addressed in this document to be managed "properly" and "pursuant to Department rules." This document is intended to provide guidance to permittees on the interpretation and implementation of these requirements.

5.0 GUIDANCE FOR DISPOSAL

5.1 Street Sweepings

Street sweepings may be disposed of in a permitted Class I or II landfill or a permitted waste-to-energy (WTE) facility. If there is no reason to believe that the street sweepings are contaminated, such as being impacted through a chemical spill, and if they are not mixed with excessive amounts of Class I wastes, then they may also be disposed of at a permitted Class III landfill. Street sweepings are not considered to be construction and demolition debris and as such may not be disposed of at a construction and demolition debris disposal facility.

The Focus Group indicated that street sweepings typically contained additional amounts of trash that averaged between 20 to 25 percent by volume of the collected waste. In some cases, depending where the street sweepings were collected, they could contain as much as 40 percent by volume of trash. The composition of this trash fraction can vary. It may consist of discarded materials like paper, glass or plastic that would not be expected to produce a leachate that would pose a threat to public health or the environment. It may also be contaminated with Class I wastes. This trash mixed with the street sweepings can affect the way it should be managed.

If the street sweepings are mixed with significant amounts of Class I wastes, then they must be disposed of at a Class I or II landfill or at a WTE facility. However, if the Class I wastes are separated from the street sweepings, then the street sweepings can be disposed of at a Class III landfill. Depending on the nature of the Class I wastes mixed with the street sweepings, they may either be separated from the street sweepings by hand or separated through the use of screens. If screens are used, the Focus Group recommended a single screening step with a screen size of approximately 1-inch by 1-inch be used. Other screen sizes or separation techniques may be used if approved by the Department. The separated Class I wastes will, of course, need to be disposed of at a permitted Class I or II landfill or a permitted WTE facility.

The Focus Group recognized that street sweepings may need to be accumulated before they can be disposed of at a landfill. This will require the temporary storage of the wastes. Street sweepings that do not require screening may be stored in open areas without leachate controls. Street sweepings that will require screening, as well as separated Class I wastes, must be stored so that leachate and litter are controlled. Examples would include storage in covered roll-offs, storage on impervious surface and under roof, or storage indoors.

Accumulated street sweepings must be disposed of as soon as practical but may be staged for no longer than three months unless a longer storage time is approved by the Department. The separated Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

5.2 Catch Basin Sediments

Since this waste is usually collected with vacuum trucks, it will initially be mixed with the liquids that also accumulate in the catch basins. Catch basin sediments may be disposed of in Class I or II landfills. They may also be disposed of in Class III landfills provided there is no reason to believe they are contaminated, such as being impacted through a chemical spill. If they are mixed with excessive amounts of Class I wastes, then they will need to be screened, as described in Section 5.1, before disposal at a Class III landfill. Prior to disposal, the catch basin sediments must be sufficiently dewatered so that they do not meet the definition of liquid wastes contained in Rule 62-701.200(72), F.A.C. Catch basin sediments are not considered to be construction and demolition debris and as such may not be disposed of at a construction and demolition debris disposal facility.

Catch basin sediments may be stockpiled for a long enough time to achieve adequate dewatering (i.e. Rule 62-701.200(72), F.A.C.) and to accumulate sufficient quantities of the sediments for transportation to the landfill. They do not need to be covered when stockpiled for dewatering since exposure to the air and the sun will help to dry the sediments. However, they may not be stockpiled in a way that may adversely impact surface water bodies or potable wells or in a way that would create a public or sanitary nuisance. The liquids from dewatering must be collected and disposed of at a wastewater treatment plant, a permitted stormwater treatment system (preferably the ones currently receiving liquids from the catch basins) or another disposal location approved by the Department. They may not be disposed of in any other artificial surface water body, in waters of the state, or into a stormwater conveyance system that does not discharge into a permitted stormwater treatment system.

If Class I wastes are screened from the sediments, then these wastes will need to be stored in green boxes and covered with a tarp or under a roof to control leaching. The screened Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

5.3 Stormwater System Sediments

Stormwater system sediments are generated when the sediments accumulate to the point that the system ceases to function for its original intended use and requires maintenance or cleaning. The Focus Group believed it was necessary to distinguish sediments generated from the maintenance of stormwater systems into two groups: those that receive runoff from industrial areas (i.e., industrial stormwater systems) and those that do not (i.e., non-industrial stormwater systems).

Sediments from non-industrial stormwater systems may be disposed of in Class I or II landfills. They may also be disposed of in a Class III landfills, in a manner similar to street sweepings in Section 5.1, provided there is no reason to believe they are contaminated, such as being impacted through a chemical spill. If they are mixed with excessive amounts of Class I wastes, then they will need to be screened, as described

in Section 5.1, before disposal at a Class III landfill. Prior to disposal, the stormwater system sediments must be sufficiently dewatered so that they are not considered a liquid pursuant to Rule 62-701.200(72), F.A.C.

Sediments from industrial stormwater systems may be disposed of in Class I or II landfills provided they are first dewatered pursuant to Rule 62-701.200(72), F.A.C. They may not be disposed of in Class III landfills unless approved by the Department. This may require additional testing of the sediments and the generator should seek further guidance before proceeding with disposal of the wastes by contacting the Department's District office in the District where the wastes are located (see APPENDIX C).

Neither industrial nor non-industrial stormwater system sediments are considered to be construction and demolition debris. Consequently, neither of these wastes may be disposed of at a construction and demolition debris disposal facility.

During system maintenance, the sediments may be stockpiled adjacent to the system from which they are removed. The sediments may be stockpiled there long enough to achieve adequate dewatering (i.e. Rule 62-701.200(72), F.A.C.) and to accumulate sufficient quantities of the sediments for transportation to the landfill. They do not need to be covered when stockpiled for dewatering since exposure to the air and the sun will help to dry the sediments. However, they may not be stockpiled in a way that may adversely impact surface water bodies or potable wells or in a way that would create a public or sanitary nuisance. If the sediments are stockpiled in any other locations, then the liquids from dewatering must be collected and disposed of at a wastewater treatment plant or stormwater system unless an alternate disposal method is approved by the Department.

If Class I wastes are screened from the sediments, then these wastes will need to be stored in green boxes and covered with a tarp or under a roof to control leaching. The screened Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

6.0 GUIDANCE FOR BENEFICIAL USE

6.1 Street Sweepings

Street sweepings may be used as initial cover at Class I or II landfills. They may also be used as initial cover at Class III landfills if they could otherwise be disposed of at that same landfill. In order to be used as initial cover at any landfill, the street sweepings must also be able to meet the requirements for initial cover contained in Rule 62-701.200(59), F.A.C. and may require a solid waste permit modification for the landfill using the wastes.

In accordance with Rule 62-701.220(2)(g), F.A.C., street sweepings may be beneficially used without the need for further testing in road construction or road

maintenance. While it is not specifically stated, the Department has interpreted this rule to include street sweepings. This interpretation was explained in a Department memorandum dated September 13, 2001 (DEP, 2001).¹

Street sweepings may also be beneficially used in nonresidential areas as construction or industrial fill or as a soil amendment provided any benzo(a)pyrene in the street sweepings will not create a significant threat to public health or the environment as managed. In no case may it be used within 200 feet of a potable well or as fill below the water table or in bodies of water. The generator of the street sweepings must use the wastes according to the terms of this document only in projects that are under its control; generators are not allowed to distribute or sell the wastes for use by others unless authorized by the Department.

If a generator wishes to beneficially use street sweepings in a manner other than as allowed above, it must provide additional testing results that demonstrate that the material is not expected to create a significant threat to the environment or public health. If the results indicate that the 95% UCL for the average concentration of benzo(a)pyrene in the street sweepings does not exceed the Department's residential direct exposure criteria and the material's potential threat is no greater than the 95% UCLs calculated in Table 1 for street sweepings, then the material may have unlimited distribution.

Except for use as landfill initial cover, street sweepings shall not be beneficially used if there is reason to believe that they are contaminated, such as being impacted through a chemical spill, or they are excessively mixed with Class I wastes, unless the Class I wastes are removed by screening. To remove the Class I wastes, the street sweepings must be screened through both a coarse screen, such as 1-inch square size, and a fine screen, such as 5 to 10 millimeters square size, i.e., double-screened. Other screen sizes may be used if approved by the Department.

The street sweepings may need to be accumulated before they can be beneficially used. This will require the temporary storage of the wastes. Street sweepings that do not require double screening may be stored in open areas without leachate controls. Street sweepings that will require double screening, as well as separated Class I wastes, must be stored so that leachate and litter are controlled. Examples would include storage in covered roll-offs, storage on impervious surface and under roof, or storage indoors.

Street sweepings destined for beneficial use that also require screening must be double-screened in accordance with this section within three months of collection unless otherwise approved by the Department. Street sweepings that are double-screened, and street sweepings that do not require screening, may be stockpiled for up to six

¹ NOTE: This memorandum does not specifically address the beneficial use of catch basin sediments or stormwater system sediments. The applicability of the rule to these and other materials that may be generated during road maintenance activities will have to be determined on a case-by-case basis or in an addendum to the memorandum.

months prior to beneficial use unless otherwise approved by the Department. Street sweepings that are not destined for beneficial use must be disposed of as described in Section 5.1.

If Class I wastes are screened from the street sweepings, then these wastes will need to be stored in green boxes and covered with a tarp or under a roof to control leaching. The screened Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

6.2 Catch Basin Sediments

Catch basin sediments may be beneficially used in a manner similar to street sweepings in Section 6.1 provided they are dewatered first and there is no reason to believe they are contaminated, such as being impacted by a chemical spill. Prior to beneficial use, the catch basin sediments must be sufficiently dewatered so that they do not meet the definition of liquid wastes contained in Rule 62-701.200(72), F.A.C. If they are mixed with excessive amounts of Class I wastes, then they will need to be double-screened, as described in Section 6.1, before being beneficially used. Catch basin sediments that are not destined for beneficial use must be disposed as described in Section 5.2.

If a generator wishes to beneficially use catch basin sediments in a manner other than as allowed above, it must provide additional testing results which demonstrate that the material is not expected to create a significant threat to the environment or public health. If the results indicate that the material's potential threat is no greater than the 95% UCLs calculated in Table 1 for street sweepings, then the material may have unlimited distribution.

The liquids from dewatering may be disposed of at a wastewater treatment plant, a stormwater system (preferably the ones currently receiving liquids from the catch basins) or another disposal location approved by the Department. They may not be disposed of in any other artificial surface water body, in waters of the state, or into a stormwater conveyance system that does not discharge into a permitted stormwater treatment system.

Catch basin sediments may be stockpiled long enough to achieve adequate dewatering (i.e. Rule 62-701.200(72), F.A.C.) and to accumulate sufficient quantities of the sediments for beneficial use. They do not need to be covered when stockpiled for dewatering since exposure to the air and the sun will help to dry the sediments. However, they may not be stockpiled in a way that may adversely impact surface water bodies or potable wells or in a way that would create a public or sanitary nuisance and the liquids from dewatering must be collected and disposed of as described above.

If Class I wastes are screened from the sediments, then these wastes will need to be stored in green boxes and covered with a tarp or under a roof to control leaching.

The screened Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

6.3 Stormwater System Sediments

As described in Section 5.3, the Focus Group believed it was necessary to distinguish sediments generated from the maintenance of stormwater systems into two groups: those that receive runoff from industrial areas (i.e., industrial stormwater systems) and those that do not (i.e., non-industrial stormwater systems).

Sediments from non-industrial stormwater systems may be beneficially used in a manner similar to street sweepings in Section 6.1 provided they are dewatered first and there is no reason to believe they are contaminated, such as being impacted by a chemical spill. Prior to beneficial use, the stormwater system sediments must be sufficiently dewatered so that they are not considered a liquid by Rule 62-701.200(72), F.A.C. Sediments from industrial stormwater systems may not be beneficially used without prior approval by the Department. This may require additional testing of the sediments and the generator should seek further guidance before proceeding with disposal of the wastes by contacting the Department's District office in the District where the wastes are located (see APPENDIX C).

During system maintenance, the sediments may be stockpiled adjacent to the system from which they are removed and allowed to dewater their liquids back into the system. If the sediments are stockpiled in any other locations, then the liquids from dewatering must be collected and disposed of at a wastewater treatment plant or stormwater system unless an alternate disposal method is approved by the Department.

Stormwater system sediments may be stockpiled long enough to achieve adequate dewatering (i.e. Rule 62-701.200(72), F.A.C.) and to accumulate sufficient quantities of the sediments for beneficial use. They do not need to be covered when stockpiled for dewatering since exposure to the air and the sun will help to dry the sediments. However, they may not be stockpiled in a way that may adversely impact surface water bodies or potable wells or in a way that would create a public or sanitary nuisance and the liquids from dewatering must be managed as described above.

If Class I wastes are screened from the sediments, then these wastes will need to be stored in green boxes and covered with a tarp or under a roof to control leaching. The screened Class I wastes must be disposed of at a Class I or II landfill or at a WTE facility at a frequency no less than weekly.

REFERENCES

- Brinkmann, Robert, et al., 1999, Chemical and Physical Characteristics of Street Sweeping Sediments in Tampa, Florida, Report # 98-12, Florida Center for Solid and Hazardous Waste Management, Gainesville, Florida, May.
- Cox, J. H., et al., 1998, Characterization of Stormwater Contaminated Sediment and Debris for Determining Proper Disposal Methods, Final Report, Florida Department of Environmental Protection, Division of Water Facilities, Tallahassee, Florida, August 13.
- DEP (Department of Environmental Protection), 1998, "Street Sweepings and Sediments from Stormwater Systems," Memorandum # SWM-21.27 from Mary Jean Yon to County Solid Waste Directors, April 28.
- DEP (Department of Environmental Protection), 1999, "Legal Authority to Regulate Street Sweepings," Memorandum # SWM-21.32 from Chris McGuire to Mary Jean Yon, August 17.
- DEP (Department of Environmental Protection), 2001, "Debris from Road Construction or Maintenance," Memorandum # SWM-19.14 from Chris McGuire and Richard Tedder to District Waste Program Administrators and District Solid Waste Engineers, September 13.
- DEP (Department of Environmental Protection), 2003, Evaluation of Analytical Data Characterizing Street Sweepings, Stormwater Sediments and Catch Basin Sediments, Final, November 10.
- Townsend, T. G., et al., 2002, Characterization of Stormwater Sediments, Catch Basin Sediments, and Street Sweepings in Florida for Disposal and Reuse, Final Report, Florida Center for Solid and Hazardous Waste Management, Gainesville, Florida, December 31.

TABLE 1. Summary of the 95% UCL Average Concentrations for Chemicals of Concern

Chemicals of Concern	FDEP RES. SCTL (mg/kg)	FDEP LEACH. SCTL (mg/L)	All Sources		Street Sweepings		Catch Basins		Storm Systems	
			95 % UCL	Decision	95 % UCL	Decision	95 % UCL	Decision	95 % UCL	Decision
Total Metal (mg/kg)										
Arsenic	0.8		0.811	Exceeds	0.722	OK	0.963	Exceeds	1.165	Exceeds
Barium	110		17.35	OK	13.25	OK	24.01	OK	35.29	OK
Copper	110		14.42	OK	12.59	OK	23.21	OK	16.11	OK
Lead	400		11.35	OK	10.63	OK	17.85	OK	14.42	OK
Chromium	210		8.5	OK	7.5	OK	12.7	OK	12.5	OK
Leachable Parameters (mg/L)										
Arsenic		0.010	0.0031	OK	0.0036	OK	0.0031	OK	0.0043	OK
Lead		0.015	0.004	OK	0.0037	OK	0.0056	OK	0.0036	OK ²
Beta-BHC		0.00002	0.000065	Exceeds	0.000055	OK ¹	0.000054	OK ¹	0.000109	Exceeds
4-4 DDT		0.0001	0.000069	OK	0.000065	OK	0.000057	OK	0.000104	Exceeds
Aluminum		0.2	0.52	Exceeds	0.52	Exceeds	0.58	Exceeds	1.09	Exceeds
Iron		0.3	0.53	Exceeds	0.41	Exceeds	0.45	Exceeds	0.499	Exceeds
Leachable Background (mg/L)										
Aluminum		0.2	2.56	Exceeds						
Iron		0.3	0.99	Exceeds						

BADL = Best Available Detection Limit

¹ = OK when using BADLs.

² = OK without the outliers.

APPENDIX A
FOCUS GROUP MEMBERS

Caroline Klos City of Tampa (replacement for Brad Baird)	John Cox City of Tallahassee
Ron Jones Brevard County	Kevin McCann City of Orlando
Eric Livingston Department of Environmental Protection	Donald Mahaffey Sweeping Corporation of America
Mike Morrow Walt Disney World	Alan Obaigbena Florida Department of Transportation
Susan Pelz Department of Environmental Protection (replacement for Bob Butera)	Richard Rachal Department of Environmental Protection
Louis Reis Florida Department of Transportation	Sam Levin S2Li
Nancy Woodley City of Venice	

APPENDIX B STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY (printed February 2, 2004)

Rule 62-620.200(45) F.A.C.

(45) "Stormwater Discharge Associated with Industrial Activity" is as defined in 40 CFR 122.26(b)(14).

40 CFR 122.26(b)(14)

(14) *Storm water discharge associated with industrial activity* means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under this part 122. For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (b)(14)(i) through (xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14):

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 31I, 32 (except 323), 33, 344I, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/ operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

- (iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;
- (v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;
- (vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;
- (vii) Steam electric power generating facilities, including coal handling sites;
- (viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221–25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)–(vii) or (ix)–(xi) of this section are associated with industrial activity;
- (ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;
- (x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;
- (xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221–25;

APPENDIX C
DEPARTMENT SOLID WASTE CONTACTS
 (updated December 5, 2003)

Northwest District:	Marshall Seymore, P.E. Department of Environmental Protection 160 Governmental Center Pensacola, Florida 32501 850/595-8360 Marshall.Seymore@dep.state.fl.us
Northeast District:	Mary Nogas, P.E. Department of Environmental Protection 7825 Baymeadows Way, Suite B200 Jacksonville, Florida 32256-7590 904/807-3300 Mary.Nogas@dep.state.fl.us
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Southeast District:	Joe Lurix Department of Environmental Protection 400 North Congress Avenue West Palm Beach, Florida 33401 561/681-6600 Joe.Lurix@dep.state.fl.us
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