62-701.510 Water Quality Monitoring Requirements.

(1) through (4) No Change.

(5) Initial and routine sampling frequency and requirements. Except as otherwise specified in a Department permit or order or in subsection (6) of this rule, frequency of sampling and analysis shall comply with the following. However, the owner or operator of a solid waste disposal unit may request a permit modification from the appropriate District Office of the Department to delete specific monitoring parameters or field parameters from routine analyses of detection or compliance wells and surface water. The Department will grant such modification upon a demonstration that these parameters are not reasonably expected to be in or derived from the waste contained in the unit, or are not reasonably expected to be detected in the ground water as a result of the operations of the facility.

(a) Demonstration to delete parameters. A demonstration to delete monitoring parameters may include an evaluation of:

1. The concentration or contrast between contaminants likely to leach from the waste in the disposal unit and in background water quality; and,

2. The types, quantities and concentrations of constituents in the wastes, and their degradation products, managed at the facility,

(b) Initial background water quality.

1. Initial background water quality for a proposed landfill shall be determined by analysis of at least one water sample taken from each well that was installed, and each surface water monitoring location that was established, during the site hydrogeological investigation. Any new monitoring well that is installed after completion of the site hydrogeological investigation, unless the new monitoring well is installed to replace an existing well within the monitoring network, shall also be analyzed for initial background water quality. The water quality information shall be submitted to the Department as part of the supporting information for the permit application.

2. Sampling and analysis for initial background ground water quality shall be for the parameters listed in paragraphs (7)(a) and (7)(c) of this rule, and for unlined Class III landfills shall also include the parameters in paragraph (7)(d) of this rule.

3. Sampling and analysis for initial background surface water quality shall be for the parameters listed in paragraph (7)(b) of this rule.

(c) Routine monitoring well sampling. All detection wells, and a representative sample of background wells, shall be sampled and analyzed at least semi-annually for the ground water parameters listed in paragraph (7)(a) of this rule, and for unlined Class III landfills shall also include the parameters in paragraph (7)(d) of this rule, in accordance with the water quality monitoring plan. The owner or operator of a solid waste disposal unit may request a permit condition or modification from the appropriate District Office of the Department to use an alternate monitoring frequency. The Department will approve such condition or modification upon a demonstration that the alternate frequency is appropriate based upon site specific lithology of the aquifer and unsaturated zone, hydraulic conductivity of the aquifer and unsaturated zone, ground water flow rates, minimum distance of travel and the fate and transport of parameters detected.

(d) Routine surface water sampling. Surface waters shall be sampled and analyzed semi-annually for the parameters listed in paragraph (7)(b) of this rule, in accordance with the water quality monitoring plan.

(6) Evaluation monitoring, prevention measures and corrective action.

(a) Evaluation monitoring and prevention measures. If monitoring parameters are detected in detection wells in concentrations that are significantly above background water quality, or that are at levels above the Department's water quality standards or criteria specified in chapter 62-520, F.A.C., the permittee may resample the wells within 30 days after the sampling data is received, to confirm the data. Should the permittee choose not to resample, the Department will consider the water quality analysis as representative of current ground water conditions at the facility. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department in writing within 14 days of this finding. The permittee, upon notification to the Department in writing within 14 days of the finding of the above sampling or resampling event, may also choose to demonstrate that a source other than the solid waste disposal unit is expected to be the cause of the observed detections in the water quality analysis. A report documenting this demonstration must be signed and sealed by a Florida registered professional geologist or professional engineer and submitted to the Department within 60 days of the demonstration notification. If a successful demonstration is made and approved by the Department, the owner or operator may continue detection monitoring as specified in this section. If the Department determines that a successful demonstration has not been made within 60 days after the permittee submits the demonstration report, or the permittee chooses not to pursue such demonstration, then upon notification by the Department, the permittee shall initiate evaluation monitoring as follows:

1. Routine monitoring of all monitoring wells and surface water monitoring locations shall continue according to the

requirements of subsection (5) of this rule.

2. Except as provided in paragraph (b) of this subsection, within 90 days of notification from the Department to initiate evaluation monitoring and annually thereafter, the permittee shall sample and analyze a representative sample of the background wells and all affected detection wells for the parameters listed in paragraph (7)(c) of this rule, and for unlined Class III landfills shall also include the parameters in paragraph (7)(d) of this rule. Any new parameters detected and confirmed in the affected downgradient wells shall be added to the routine ground water monitoring parameter lists required in subsection (5) of this rule, for the affected wells.

(6)(a)3. through (6)(c) No Change.

(7) Water quality parameters. The following list of water quality monitoring parameters shall be used for each type of sampling to be done.

(a) Ground water monitoring parameters:

Field Parameters	Laboratory parameters
Static water level in wells before purging	Total ammonia – N
Specific conductivity	Chlorides
pH	Iron
Dissolved oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and sheens	Total dissolved solids (TDS)
(by observation)	Those parameters listed in 40 C.F.R. Part
	258 Appendix I
(b) Surface water monitoring parameters:	
Field parameters	Laboratory parameters
Specific conductivity	Un-ionized ammonia
pH	Total hardness (as mg/L $CaCO_3$)
Dissolved oxygen	Biochemical oxygen demand (BOD_5)
Turbidity	
Temperature	Iron
Colors, sheens (by observation)	Mercury
	Nitrate
	Total dissolved solids (TDS)
	Total organic carbon (TOC)
	Fecal coliform
	Total phosphorus (as mg/L P)
	Chlorophyll A
	Total nitrogen
	Chemical oxygen demand (COD)
	Total suspended solids (TSS)
	Those parameters listed in 40 C.F.R. Part 258 Appendix I

(c) Those parameters listed in 40 C.F.R. Part 258, Appendix II, as well as the field parameters specified in paragraph (a) of this subsection.

(d) For unlined Class III landfills the parameters boron and un-ionized hydrogen sulfide (by calculation). For purposes of the un-ionized hydrogen sulfide calculation, laboratory parameters shall include total sulfide.

(8) No Change.

62-701.730 Construction and Demolition Debris Disposal and Recycling.

(1) through (7) No Change.

(8) Water quality monitoring. A water quality monitoring plan that meets the criteria set forth in rule 62-701.510 and chapter 62-520, F.A.C., shall be included with the permit application. This plan shall be implemented and maintained by the owner or operator, and shall include provisions to provide the reports required by subsection 62-701.510(8), F.A.C., with the following exceptions:

(a) Unless a disposal unit is constructed or operated within 200 feet of a surface water body, or unless site-specific conditions could reasonably be expected to result in contaminants entering a surface water body, surface water sampling is not required. For purposes of this paragraph, a surface water body does not include a body of water contained completely within the property boundaries of the disposal site that does not discharge from the site to surface waters.

(b) The well spacing requirements of subparagraph 62-701.510(3)(d)3., F.A.C., do not apply. A minimum of one upgradient and two downgradient wells is required, as specified in chapter 62-520, F.A.C.

(c) Detection wells, and compliance wells if applicable, shall be sampled and analyzed at least semi-annually for the following parameters:

Field Parameters	Laboratory Parameters
pH	Aluminum
Turbidity	Chlorides
Temperature	Nitrate
Specific conductivity	Sulfate
Dissolved oxygen	Total dissolved solids (TDS)
Water elevations	Iron
Colors and sheens	Sodium
(by observation)	Arsenic
	Boron
	Cadmium
	Chromium
	Un-ionized hydrogen sulfide (by calculation)
	Lead
	Mercury
	Total ammonia – N
	Total Sulfide (for calculation of hydrogen sulfide)
	Xylenes
	Those parameters listed in EPA Methods 601 and 602

(d) Background water quality shall be established in accordance with the provisions of paragraph 62-701.510(5)(b), F.A.C., except that the analysis shall also include boron, Un-ionized hydrogen sulfide (by calculation), sulfate and aluminum. In addition, all background and detection wells shall be sampled and analyzed at least once every five years for those parameters listed in paragraph 62-701.510(7)(a), F.A.C., as well as boron, Un-ionized hydrogen sulfide (by calculation), sulfate sulface and aluminum.

(e) The owner or operator of the facility may request a permit modification from the appropriate District Office of the Department to delete specific laboratory parameters or field parameters from routine analyses of detection or compliance wells and surface water. The Department will grant a request for a permit modification upon a demonstration that these parameters are not reasonably expected to be in or derived from the waste which ws received or disposed of at the facility.

(f) If monitoring parameters are detected in monitoring wells in concentrations which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in chapter 62-520, F.A.C., the provisions of subsection 62-701.510(6), F.A.C., shall apply.

(9) Closure.

(a) At least 90 days prior to the date when wastes will no longer be accepted, the owner or operator of the construction and demolition debris disposal facility shall submit an updated closure plan to the Department to reflect any changes in the closure plan due to actual operational conditions at the facility. If unforeseen circumstances do not allow the notification within 90 days prior to ceasing to receive wastes, then notice shall be provided as soon as the need to close the facility becomes apparent. The updated and approved closure plan shall be incorporated into and made part of the permit.

(b) Final cover and seeding or planting of vegetative cover shall be placed on each disposal unit within 180 days after it has reached its final grade or ceased receiving wastes. Final cover shall consist of a 24-inch-thick soil layer, or a 30-inch thick layer

consisting of approximately 50 percent soil and 50 percent ground or chipped yard trash by volume, the upper six inches of which shall be capable of supporting vegetation, and shall be graded and compacted as necessary to eliminate ponding, promote drainage, and minimize erosion. If any disposal unit has been constructed with a liner system, the final cover must include a barrier layer with a permeability that is substantially equivalent to, or less than, the permeability of the bottom liner system or meets the alternative barrier layer design requirements in subparagraph 62-701.600(3)(g)6., F.A.C. The side slopes of all above-grade disposal units shall be no greater than three feet horizontal to one foot vertical rise. If the disposal unit is lined, the closure design shall include a barrier layer or other measures to ensure that the design leachate head over the liner is not exceeded after closure. The final cover shall be vegetated to control erosion. Disposal units that are aboveground shall be designed to control the flow of stormwater, such as building reverse sloping benches or terraces into the side slopes of the disposal units and shall contain down slope drainage ways with water flow energy dissipaters unless reasonable assurance is provided that adequate erosion control will be achieved in the absence of such measures.

(c) Any disposal unit designed with a geomembrane as part of the barrier layer shall have a gas management system installed during closure that is designed to reduce gas pressure in the interior of the disposal unit and to prevent failure of the final cover. The gas management system may be active or passive. An active system shall be designed and operated in a manner that prevents intrusion of ambient air into the disposal unit.

(d) Placement of final cover may be delayed if additional waste will be deposited on the disposal unit within five years, but only if the disposal unit is temporarily closed in accordance with an approved closure plan. Conditions of temporary closure shall include:

1. The disposal unit was constructed in compliance with its permit conditions,

2. A schedule for temporary and final closure is shown in the closure plan,

3. Final cover is installed on side slopes of each completed disposal unit which will not receive additional waste,

4. Odors and runoff are controlled,

5. The closure cost estimate takes into account the costs of temporary closure as well as the costs of the final closure; and,

6. An intermediate cover is installed on the disposal unit within 30 days after the unit stops accepting waste. The intermediate cover may be removed before placing additional waste or installing final cover.

(e) The owner or operator shall provide a certification of closure construction completion to the Department within 30 days after closing, covering, and seeding the disposal unit. The owner or operator shall also provide a final survey report done by a professional surveyor, in accordance with paragraph 62-701.600(6)(b), F.A.C., if disposal operations have raised the final elevations higher than 20 feet above the natural land surface.

(f) Upon receipt and approval of the documents required in paragraph (e), of this subsection, the Department shall, within 30 days, acknowledge by letter that notice of termination of operations and closing of the facility has been received. The date of this letter shall be the official date of closing for the purpose of determining the long-term care period, in accordance with subsection 62-701.600(8), F.A.C.

(g) Declaration to the public. After closing operations are approved by the Department, the facility owner or operator shall file a declaration to the public in the deed records in the office of the county clerk of the county in which the facility is located. The declaration shall include a legal description of the property on which the facility is located and a site plan specifying the area actually filled with construction and demolition debris. The declaration shall also include a notice that any future owner or user of the site should consult with the Department prior to planning or initiating any activity involving the disturbance of the facility's cover, monitoring system or other control structures. A certified copy of the declaration shall be filed with the Department.

(10) Long-term care. The owner or operator of the construction and demolition debris disposal facility shall continue to monitor and maintain the integrity and effectiveness of the final cover as well as other appurtenances of the facility, control erosion, fill subsidences, control objectionable odors, implement an odor remediation remedication plan that meets the requirements of paragraph 62-701.530(3)(b), F.A.C., if required, and comply with the water quality monitoring plan for five years from the date of closing. Before the expiration of the long-term care monitoring and maintenance period, the Department may extend the time period if the water quality monitoring system indicates that the facility continues to impact water quality at concentrations which may be expected to result in violations of Department water quality standards or criteria; if site-specific conditions make it likely that any contamination that may emanate from the disposal area would not be detected within the long-term care period; if the final cover does not have well established vegetation or is showing signs of continuing significant erosion problems; or if the permittee has not performed all required monitoring or maintenance.

(11) through (21) No Change.