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**ORDINANCE NO. 2003-020**

**PETROLEUM STORAGE SYSTEMS**

	<b>PAGE</b>
<b>Section 1 Short Title; Applicability; Authority</b>	<b>2</b>
<b>Section 2 Purpose</b>	<b>2</b>
<b>Section 3 Definitions</b>	<b>2</b>
<b>Section 4 Reference Standards</b>	<b>13</b>
<b>Section 5 General Requirements and Exemptions</b>	<b>17</b>
<b>Section 6 Registration and Financial Responsibility</b>	<b>20</b>
<b>Section 7 Notification and Reporting</b>	<b>20</b>
<b>Section 8 Performance Standards for Category-C Storage Tank Systems</b>	<b>23</b>
<b>Section 9 Performance Standards for Category-A and Category-B Storage Tank Systems</b>	<b>32</b>
<b>Section 10 Release Detection Standards</b>	<b>38</b>
<b>Section 11 Release Detection Methods</b>	<b>40</b>
<b>Section 12 Performance Standards for Release Detection Methods</b>	<b>43</b>
<b>Section 13 Repairs, Operation, and Maintenance of Storage Tank Systems</b>	<b>53</b>
<b>Section 14 Recordkeeping</b>	<b>57</b>
<b>Section 15 Out-of-Service and Closure Requirements</b>	<b>58</b>
<b>Section 16 Incident and Discharge Response</b>	<b>62</b>
<b>Section 17 Equipment Approvals</b>	<b>63</b>
<b>Section 18 Mineral Acid Storage Tank Requirements</b>	<b>63</b>
<b>Section 19 Storage Tank Forms</b>	<b>69</b>
<b>Section 20 Fees</b>	<b>69</b>
<b>Section 21 Violations; Enforcement; Penalties</b>	<b>69</b>
<b>Section 22 Repeal Laws in Conflict</b>	<b>70</b>
<b>Section 23 Severability</b>	<b>70</b>
<b>Section 24 Inclusion in the Code of Laws and Ordinances</b>	<b>71</b>
<b>Section 25 Effective Date</b>	<b>71</b>

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**Section 1      SHORT TITLE; APPLICABILITY; AUTHORITY**

- 1.01    This Ordinance shall be known as the “Palm Beach County Petroleum Storage Systems Ordinance.”
- 1.02    All provisions of this Ordinance shall be effective within unincorporated and incorporated Palm Beach County and following Chapter 62-761, Florida Administrative Code (F.A.C.), which sets restrictions, conditions, constraints and prohibitions to help protect the water resources of Palm Beach County.
- 1.03    This Ordinance is adopted under the authority of Article VIII, Section 1, of the Florida Constitution, Chapter 125, Florida Statutes (F.S.), Sections 376.3073 and 376.317 F.S., and the Palm Beach County Charter.
- 1.04    This Ordinance is intended to be supplemental to existing state and federal petroleum storage system regulations. Responsible parties subject to this Ordinance must still comply with applicable state and federal regulations. Further, approvals received under this Ordinance do not qualify as local approval required under state and/or federal rules, unless the approval is expressly designated as approval for both this Ordinance and another applicable state or federal rule or regulation.

**Section 2.      PURPOSE**

- 2.01    Except for aboveground mineral acid storage tank systems, the purpose of this Ordinance is to provide standards for the registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems that store regulated substances, and to minimize the occurrence and environmental risks of releases and discharges. This Ordinance provides standards for underground storage tank systems having individual storage tank capacities greater than 110 gallons, and aboveground storage tank systems having individual storage tank capacities greater than 550 gallons.
- 2.02    For mineral acid storage tank systems, the purpose of this Ordinance is to minimize the occurrence and environmental risks of discharges from aboveground storage tanks having capacities greater than 110 gallons that contain hydrobromic, hydrochloric, hydrofluoric, phosphoric or sulfuric acid. Mineral acid storage tank systems are only subject to Section 18.
- 2.03    The purpose of this Ordinance is to establish a registration program for compression vessels and aboveground hazardous substance storage tank systems with individual capacities greater than 110 gallons. These systems are only subject to Subsection 6.01.
- 2.04    This Ordinance implements the requirements of Chapter 376, F.S.

**Section 3      DEFINITIONS**

The following words, phrases or terms used in this Ordinance, unless the context indicates otherwise, shall have the following meaning:

- 3.01    "Airport or seaport hydrant piping" means the pressurized integral piping system, including hydrant pits, associated with petroleum storage tank systems serving airports, seaports, or military bases.
- 3.02    "Ammonia" includes organic amines and inorganic compounds that are liquids at standard temperature and pressure that, when discharged, release free ammonia (NH<sub>3</sub>), or ammonium ion (NH<sub>4</sub><sup>+</sup>).
- 3.03    “AST” means an aboveground storage tank.

- 1 3.04 "AST Category-A system" means a system that was installed on or before March 12,  
2 1991.  
3
- 4 3.05 "AST Category-B system" means a system that was installed after March 12, 1991, and  
5 before July 13, 1998.  
6
- 7 3.06 "AST Category-C system" means a system that was installed on or after July 13, 1998.  
8 ASTs that are removed and relocated after July 13, 1998, are considered Category-C  
9 systems.  
10
- 11 3.07 "Bulk product facility" means a waterfront location with at least one aboveground tank  
12 with a capacity greater than 30,000 gallons that is used for the storage of pollutants.  
13
- 14 3.08 "Bulk product piping" means on-site integral piping with an internal diameter greater  
15 than three inches that:  
16
- 17 (a) Originates at the first stationary or landward valve from a vessel loading or  
18 unloading area, and that delivers regulated substances up to and including the  
19 first valve within the dike field area of a bulk product facility; or  
20
- 21 (b) Is utilized for transporting regulated substances.  
22
- 23 3.09 "Cathodic protection" means a method of preventing corrosion of a metal surface by  
24 making that surface the cathode of an electrochemical cell through the use of devices  
25 such as galvanic anodes or impressed current.  
26
- 27 3.10 "Cathodic Protection Tester" means a person who can demonstrate an understanding of  
28 the principles and measurements of all common types of cathodic protection systems as  
29 applied to buried or submerged metal piping and tank systems. At a minimum, such  
30 persons shall have education and experience in soil resistivity, stray current, structure-  
31 to-soil potential, and component electrical isolation measurements of buried metal  
32 piping and tank systems.  
33
- 34 3.11 "Certified Contractor" means a Pollutant Storage System Contractor certified by the  
35 Department of Business and Professional Regulation in accordance with Chapter 489,  
36 F.S. Except for the exemptions specified in Chapter 489, F.S., Certified Contractors are  
37 not required for activities that do not involve excavating or disturbing the backfill  
38 around UST systems. Certified Contractors are the only contractors authorized to  
39 perform the following activities for underground pollutant storage tank systems:  
40
- 41 (a) Installation of:  
42
- 43 (1) USTs or integral piping, excluding drop tubes;  
44
- 45 (2) Overfill protection and spill containment;  
46
- 47 (3) Secondary containment;  
48
- 49 (4) Internal release detection devices;  
50
- 51 (5) Cathodic protection systems; and  
52
- 53 (6) Dispenser liners when the integral piping is connected or disconnected  
54 during the installation of secondary containment.  
55
- 56 (b) Removal of tanks or integral piping; and  
57
- 58 (c) Internal lining of tanks.  
59

- 1 3.12 "Chlorine" includes organic and inorganic compounds that are liquids at standard  
2 temperature and pressure that, when discharged, may release free chlorine (Cl<sub>2</sub>) or  
3 chlorides (Cl).  
4
- 5 3.13 "Compatible" means the ability of two or more substances to maintain their respective  
6 physical and chemical properties upon contact with one another for the design life of the  
7 storage tank system under conditions likely to be encountered in the storage tank  
8 system.  
9
- 10 3.14 "Compression vessel" means any stationary aboveground container, tank, or on-site  
11 integral piping system, or combination thereof, that has a capacity of greater than 110  
12 gallons and that is primarily used to store pollutants or hazardous substances above  
13 atmospheric pressure or at a reduced temperature in order to lower the vapor pressure of  
14 the contents. Manifold compression vessels that function as a single vessel shall be  
15 considered as one vessel.  
16
- 17 3.15 "Contamination" or "contaminated" means the presence of regulated substances in  
18 surface water, groundwater, soil, sediment, or upon the land, in quantities that result in  
19 exceedances of applicable cleanup target levels in Chapter 62-777, F.A.C., where  
20 petroleum or petroleum products are present, or of the water quality standards in  
21 Chapters 62-302, 62-520, or 62-550, F.A.C.  
22
- 23 3.16 "Corrosion Professional" means a person who, by reason of knowledge of the physical  
24 sciences and the principles of engineering and mathematics acquired by a professional  
25 education and related practical experience, is qualified to engage in the practice of  
26 corrosion control on buried or submerged metal components of a storage tank system.  
27 Corrosion Professionals shall be accredited or certified by NACE International, or be a  
28 professional engineer registered in the State of Florida.  
29
- 30 3.17 "Cut and cover tank" means a tank that is constructed with steel or reinforced concrete  
31 that is surrounded by soil above the natural surface of the ground.  
32
- 33 3.18 "Department" means the Florida Department of Environmental Protection.  
34
- 35 3.19 "Dike field area" means the area around the tank or tanks that extends from the  
36 circumference of the base of an AST to the top of the berm, dike, or retaining wall  
37 surrounding the tank.  
38
- 39 3.20 "Discharge" includes, but is not limited to, any spilling, leaking, seeping, pouring,  
40 misapplying, emitting, emptying, or dumping of any regulated substance which occurs  
41 and which affects lands and the surface and ground waters of the state.  
42
- 43 3.21 "Discovery" means:  
44
- 45 (a) Either actual knowledge, or knowledge of facts that could reasonably lead to  
46 actual knowledge of the existence of an incident, discharge, or an unmaintained  
47 storage tank system; or  
48
- 49 (b) Discovery as specified in the Petroleum Contamination Site Cleanup Criteria  
50 Rule 62-770.200(10), F.A.C.  
51
- 52 3.22 "Dispenser" means a dispensing system that is used to transfer vehicular fuel from a  
53 fixed point to a vehicle.  
54
- 55 3.23 "Dispenser liner" means a liner installed as secondary containment beneath a dispenser  
56 to prevent discharges of regulated substances.

- 1 3.24 "Dispensing system" means equipment that is used to transfer regulated substances from  
2 integral piping through a rigid or flexible hose or pipe to another point of use outside of  
3 the storage tank system.  
4
- 5 3.25 "Double-bottomed" means an AST that has secondary containment in the form of an  
6 outer tank bottom having a closed interstitial space between the primary tank bottom  
7 and the secondary outer tank bottom.  
8
- 9 3.26 "Double-walled" means a storage tank that has an outer tank wall, or integral piping that  
10 has an outer wall that provides secondary containment of the primary tank or piping.  
11
- 12 3.27 "Empty" means all regulated substances have been removed so that no more than one  
13 inch in depth or 0.3 percent by weight of total system capacity of regulated substances  
14 remains in the storage tank system.  
15
- 16 3.28 "ERM" means the Palm Beach County Department of Environmental Resources  
17 Management.  
18
- 19 3.29 "Existing contamination" means:  
20
- 21 (a) The presence of free product or sheen on the groundwater;  
22
  - 23 (b) The presence of vapor levels in monitoring wells measured in accordance with  
24 the Department's "Guidelines for Vapor Monitoring" or by a Flame Ionization  
25 Detector or an equivalent instrument in excess of:  
26
    - 27 (1) 500 parts per million total petroleum hydrocarbons for storage tank  
28 systems containing gasoline or equivalent petroleum products; or  
29
    - 30 (2) 50 parts per million total petroleum hydrocarbons for storage tank  
31 systems containing kerosene, diesel or other equivalent petroleum  
32 products;  
33
  - 34 (c) Results of analytical tests on a groundwater sample that:  
35
    - 36 (1) Exceed the cleanup target levels for petroleum products' chemicals of  
37 concern specified in Table V of Chapter 62-777, F.A.C.; or  
38
    - 39 (2) Indicate the presence of a hazardous substance that is not described in  
40 (c)(1) above; or  
41
    - 42 (3) Indicate the presence of a regulated substance that is not described in  
43 (c)(1) above; or  
44
  - 45 (d) After July 13, 1998, results of analytical tests on a soil sample that:  
46
    - 47 (1) Exceed the lower of direct exposure I and leachability Table V cleanup  
48 target levels for petroleum products' chemicals of concern listed in Table  
49 IV of Chapter 62-777, F.A.C.; or  
50
    - 51 (2) Indicate the presence of a hazardous substance that is not described in  
52 (d)(1) above; or  
53
    - 54 (3) Indicate the presence of a regulated substance that is not described in  
55 (d)(1) above.  
56
- 57 3.30 "Facility" means a nonresidential location containing, or that contained, any stationary  
58 tank or tanks containing, or that contained regulated substances, and that have, or had,  
59 individual capacities greater than:

- 1 (a) 110 gallons for UST systems; and  
2  
3 (b) 550 gallons for AST systems.  
4
- 5 3.31 "Field-erected storage tank" means an AST that is constructed by assembling it on-site  
6 at the facility.  
7
- 8 3.32 "Flow-through process tank" means a tank that forms an integral part of a production  
9 process through which there is a steady, variable, recurring, or intermittent flow of  
10 materials during the operation of the process. Flow-through process tanks include tanks  
11 associated with vapor recovery units and oil-water separators. Flow-through process  
12 tanks do not include storage tanks used for the storage of regulated substances before  
13 their introduction into the production process or for the storage of finished products or  
14 by-products from the production process.  
15
- 16 3.33 "Free product" means a regulated substance in excess of 0.01 foot in thickness,  
17 measured at its thickest point, floating on water, surface water or groundwater.  
18
- 19 3.34 "Groundwater and Natural Resources Protection Board" means the board designated by  
20 the Board of County Commissioners to hear alleged violations of this Ordinance and  
21 other State and Local laws protecting the groundwater and natural resources of Palm  
22 Beach County under Ordinance 92-20, Subsection 14.3, as amended.  
23
- 24 3.35 "Hazardous substances" means those substances defined as hazardous substances in the  
25 Comprehensive Environmental Response, Compensation and Liability Act of 1980,  
26 Pub. L. No. 96-510, 94 stat. 2767, as amended by the Superfund Amendments and  
27 Reauthorization Act of 1986.  
28
- 29 3.36 "Heating oil" means any petroleum based fuel used in the operation of heating  
30 equipment, boilers, or furnaces.  
31
- 32 3.37 "High viscosity" means a pollutant with a viscosity of 30 centistokes (cSt) and higher at  
33 40 degrees Centigrade, such as American Society for Testing and Materials (ASTM)  
34 grades 5 and 6 residual oils, intermediate fuel oils, or Bunker C fuel.  
35
- 36 3.38 "Hydraulic lift tank" means a tank that holds hydraulic fluid for a closed-loop  
37 mechanical system used to operate lifts, elevators, and other similar devices.  
38
- 39 3.39 "Hydrostatic test" means a test for a storage tank or storage tank system component that  
40 is performed in accordance with this Ordinance using equilibrium and the pressure of  
41 liquids to test the integrity of the tank or system component.  
42
- 43 3.40 "Impervious" means:  
44
- 45 (a) A synthetic material or another material approved in accordance with Rule 62-  
46 761.850(2), F.A.C., that is compatible with the stored regulated substance, and  
47 has a permeability rate to the regulated substance stored of  $1 \times 10^{-7}$  cm/sec or  
48 less; or  
49
- 50 (b) For concrete structures, a material that:  
51
- 52 (1) Meets the design and construction standards of ACI 350R-89 and ACI  
53 224R-89; or  
54
- 55 (2) Is applied to the concrete in accordance with NACE International  
56 Standard RP0892-92.  
57
- 58 3.41 "In contact with the soil" means integral piping connected to ASTs or USTs, or any  
59 portion of a tank, that:

- 1 (a) Physically touches the soil; or  
2  
3 (b) Is not in direct contact with the soil, and is separated from the soil only by a  
4 casing, wrapping, or other material that is not impervious.  
5  
6 (c) Those portions of integral piping that are elevated and that are not in direct  
7 contact with the soil are excluded from this definition.  
8
- 9 3.42 "Incident" is a condition or situation indicating that a discharge may have occurred from  
10 a storage tank system.  
11
- 12 3.43 "Industrial occupancy building" means an enclosed structure that contains an AST  
13 system that is used in association with an industrial or manufacturing process, or for  
14 electric power generating utilities, provided that the building was constructed and is  
15 used primarily for industrial, manufacturing, or electric power generating purposes, and  
16 not solely for the purpose of storing regulated substances. An industrial occupancy  
17 building is a structure that has an impervious floor without valves, drains, or other  
18 openings that would permit pollutants to be discharged. Industrial occupancy buildings  
19 constructed after July 13, 1998, must:  
20
- 21 (a) Be constructed in accordance with NFPA 30, Section 2-5, Installation of Tanks  
22 Inside of Buildings, and Section 5-3, Facility Design;  
23  
24 (b) Have at least Type II construction in accordance with NFPA 220, Chapter 3;  
25  
26 (c) Be ventilated in accordance with NFPA 68 and 69; and  
27  
28 (d) Be verified as meeting the above construction requirements by either a registered  
29 architect or a professional engineer registered in the State of Florida.  
30
- 31 3.44 "In-service" means a storage tank system that is being actively maintained and operated  
32 in accordance with this Ordinance. Non-compliance with any specific section within  
33 this Ordinance does not exclude the system from being considered "in-service." Subject  
34 to the above, a storage tank system is also considered to be in-service if it:  
35
- 36 (a) Contains regulated substances or has regulated substances regularly added to or  
37 withdrawn from the system;  
38  
39 (b) Is emptied solely for the purpose of cleaning, routine maintenance, or a change in  
40 product, for a time period not exceeding 45 days; or  
41  
42 (c) Contains non-regulated substances and is still maintained in an in-service status  
43 at the request of the owner or operator.  
44
- 45 3.45 "Integral piping" means on-site piping, originating or terminating at the regulated storage  
46 tank or tanks, that conveys regulated substances. Vapor recovery lines, pipeline  
47 facilities, and vent lines are not considered integral piping. Integral piping is not  
48 considered on-site if the piping crosses state boundaries, or two or more county  
49 boundaries. Integral piping includes all valves, elbows, joints, flanges, pumps, and  
50 flexible connectors, up to the:  
51
- 52 (a) Union of the piping with the dispensing system;  
53  
54 (b) Fill cap or fill valve;  
55  
56 (c) Forwarding pump used for transferring regulated substances to a flow- through  
57 process tank or an industrial production or manufacturing point of use; or  
58  
59 (d) First flange or connection within the loading rack containment area.

- 1 3.46 "Internal lining" means a material that is applied internally on AST bottoms or USTs to  
2 protect the tank from internal corrosion.  
3
- 4 3.47 "Interstitial monitoring" means a release detection method that is used to determine the  
5 presence of regulated substances or water between the primary and secondary  
6 containment. Interstitial monitoring can be performed within:  
7
- 8 (a) A closed interstitial space between two steel or impervious barriers that are  
9 sealed, not open to the atmosphere, and designed to be tested for a breach of  
10 integrity of the interstitial space; or  
11
- 12 (b) An open interstitial space between two steel or impervious barriers that are open  
13 to the atmosphere, and not designed to be tested for a breach of integrity of the  
14 interstitial space.  
15
- 16 3.48 "Liner" means an impervious material that meets the performance standards of  
17 Subsection 8.01(e), that is used externally as a method of secondary containment.  
18
- 19 3.49 "Liquid trap" means sumps, well cellars, and other traps used in association with oil and  
20 gas production, gathering and extraction operations (including gas production plants) to  
21 collect oil, water, and other liquids. Liquid traps may temporarily collect liquids for  
22 subsequent disposition or reinjection into a production or pipeline stream, or may collect  
23 and separate liquids from a gas stream.  
24
- 25 3.50 "Maintenance" means the normal operational upkeep to prevent a storage tank system  
26 from releasing regulated substances.  
27
- 28 3.51 "Mobile tank" means:  
29
- 30 (a) An AST that is moved to a different location at least once every 180 days, and  
31
- 32 (1) Has a current valid vehicle registration with the Florida Department of  
33 Highway Safety and Motor Vehicles and has current test and inspection  
34 markings in accordance with 49 C.F.R. 180.415; or  
35
- 36 (2) Is designed and constructed to be moved to other service locations, and its  
37 relocation within a facility or from site to site is inherent in its use; or  
38
- 39 (3) Is used for on-site construction activities, provided that the construction  
40 activities do not exceed 12 months, or the life of the construction project  
41 as long as construction is continuous, and the tanks are removed from the  
42 site when the construction is complete; and  
43
- 44 (b) Not considered mobile if it is connected to stationary underground or  
45 aboveground integral piping, unless associated with the production of an  
46 agricultural commodity, provided that the tank is moved to a different location at  
47 least once every 180 days.  
48
- 49 3.52 "Nationally Recognized Laboratory" means an organization that can perform quantitative  
50 and qualitative tests on storage tank system equipment, evaluate the test data and  
51 equipment performance, and make determinations of the equipment's capability of  
52 meeting the technical standards of this Chapter. A Nationally Recognized Laboratory  
53 shall have at least five years of professional storage tank system equipment testing  
54 experience. Nationally Recognized Laboratories include organizations such as  
55 Underwriter's Laboratories, Carnegie Mellon Research Institute, Midwest Research  
56 Institute, Ken Wilcox Associates, Factory Mutual, and American Board of Engineering  
57 and Technology (ABET) Accredited Universities.

- 1 3.53 "On-site" means on the same or geographically contiguous property as the facility  
2 regulated under this Ordinance, that is under the same ownership or control, and which  
3 may be divided by a public or private right-of-way or an easement. Piping connecting  
4 ASTs with pipeline facilities are considered on-site up to the point where it crosses  
5 through the dike wall surrounding the AST.  
6
- 7 3.54 "Operational life" refers to the period from the start of installation of the storage tank  
8 system to the completion of the closure of the storage tank system in accordance with  
9 Subsection 15.03.  
10
- 11 3.55 "Operator" means any person operating a facility, whether by lease, contract, or other  
12 form of agreement.  
13
- 14 3.56 "Out-of-service" means a storage tank system that:  
15
- 16 (a) Is designated as an out-of-service system by owner or operator notification to the  
17 Department on Form 62-761.900(2);  
18
  - 19 (b) Is empty as defined in Subsection 3.27; and  
20
  - 21 (c) Does not have regulated substances transferred into or withdrawn from the tank  
22 as specified in Subsection 15.02, for a maximum time of:  
23
    - 24 (1) Two years of being taken out-of-service for USTs; or  
25
    - 26 (2) Five years of being taken out-of-service for ASTs; or  
27
    - 28 (3) Ten years of being taken out-of-service for storage tank systems with  
29 secondary containment.  
30
- 31 3.57 "Overfill" means a release or discharge that occurs when a tank is filled beyond its  
32 capacity.  
33
- 34 3.58 "Owner" means any person as defined in Section 376.301(23), F.S., owning a facility.  
35
- 36 3.59 "Pesticides" means all preparations, products, and substances included in the Department  
37 of Agriculture and Consumer Services' Rule 5E-2.002, F.A.C.  
38
- 39 3.60 "Petroleum" includes:  
40
- 41 (a) Oil, including crude petroleum oil and other hydrocarbons, regardless of gravity,  
42 which are produced at the well in liquid form by ordinary methods and which are  
43 not the result of condensation of gas after it leaves the reservoir; and  
44
  - 45 (b) All natural gas, including casinghead gas, and all other hydrocarbons not defined  
46 as oil in paragraph (a).  
47
- 48 3.61 "Petroleum product" means any liquid fuel commodity made from petroleum.  
49
- 50 (a) Forms of fuel considered to be petroleum products include all fuels known or  
51 sold as:  
52
    - 53 (1) Diesel fuel;  
54
    - 55 (2) Kerosene;  
56
    - 57 (3) Gasoline; and  
58
    - 59 (4) Fuels containing mixtures of gasoline and other products.

- 1 (b) Forms of fuel excluded from this definition are:  
2  
3 (1) Liquefied petroleum gas;  
4  
5 (2) American Society for Testing and Materials (ASTM) grades no. 5 and no.  
6 6 residual oils;  
7  
8 (3) Bunker C residual oils;  
9  
10 (4) Intermediate fuel oils used for marine bunkering with a viscosity of 30  
11 and higher;  
12  
13 (5) Asphalt oils; and  
14  
15 (6) Petrochemical feedstocks.  
16
- 17 3.62 "Pipe" or "piping" means any hollow cylindrical or tubular conveyance through which  
18 regulated substances flow.  
19
- 20 3.63 "Pipeline facilities" are pipe systems, rights-of-way and any associated equipment,  
21 gathering lines, buildings, or break-out tanks necessary for the long range transportation  
22 of regulated substances.  
23
- 24 3.64 "Piping sump" or "Submersible turbine pump sump" means a liner installed as secondary  
25 containment or a monitoring port at the top of a tank or at the lowest point in the integral  
26 piping to detect releases.  
27
- 28 3.65 "Pollutants" includes any "product" as defined in Section 377.19(11), F.S., pesticides,  
29 ammonia, chlorine, and derivatives thereof, excluding liquefied petroleum gas.  
30
- 31 3.66 "Pressure test" means a test to determine the integrity of integral piping performed in  
32 accordance with Subsection 12.03(e)(1).  
33
- 34 3.67 "Pressurized piping" means piping through which regulated substances flow due to a  
35 pump that is not located at the dispensing system.  
36
- 37 3.68 "Product" as defined in Section 377.19(11), F.S., means any commodity made from oil or  
38 gas and includes refined crude oil, crude tops, topped crude, processed crude petroleum,  
39 residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude  
40 oil, residuum, gas oil, casinghead gasoline, natural gas gasoline, naphtha, distillate,  
41 condensate, gasoline, used oil, kerosene, benzene, wash oil, blended gasoline, lubricating  
42 oil, blends or mixtures of oil with one or more liquid products or byproducts derived  
43 from oil or gas, and blends or mixtures of two or more liquid products or byproducts  
44 derived from oil or gas, whether hereinabove enumerated or not.  
45
- 46 3.69 "Registered Precision Tank Tester" means a contractor that performs tightness tests on  
47 USTs, and small diameter piping connected to USTs, that is registered by the Department  
48 of Business and Professional Regulation pursuant to Chapter 489, F.S.  
49
- 50 3.70 "Regulated substance" means a liquid at standard conditions of temperature and pressure  
51 (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), that is:  
52
- 53 (a) A pollutant or a hazardous substance, or any mixture of the two, when stored in a  
54 UST; or  
55
- 56 (b) A pollutant, when stored in an AST.

- 1 3.71 "Release" means:  
2  
3 (a) A discharge; or  
4  
5 (b) A loss of regulated substances from a storage tank system into the system's  
6 secondary containment.  
7
- 8 3.72 "Release detection" means a method of:  
9  
10 (a) Determining whether a discharge of regulated substances has occurred; or  
11  
12 (b) Detecting the presence of regulated substances within a storage tank system's  
13 secondary containment.  
14
- 15 3.73 "Release detection response level" means the point of measurement, calculation,  
16 observation, or level that is established for each individual release detection device or  
17 method at which an investigation must be initiated to determine if an incident, release, or  
18 discharge has occurred.  
19
- 20 3.74 "Repair" means to restore or replace any defective or damaged parts of a storage tank  
21 system. Replacement of a non-defective part is not a repair.  
22
- 23 3.75 "Residential storage tank system" means a storage tank system that is located on property  
24 used primarily for dwelling purposes, and the storage and use of regulated substances in  
25 the tank is for residential purposes.  
26
- 27 3.76 "Secondary containment" means a release detection and prevention system that meets the  
28 performance standards of Subsection 8.01(e), and includes dispenser liners, piping  
29 sumps, double-walled tanks and piping systems, or single-walled tanks or piping systems  
30 that are contained within a liner or an impervious containment area. A Release  
31 Prevention Barrier, as specified in API Standard 650, Appendix I, is considered  
32 secondary containment for field-erected aboveground storage tank bottoms.  
33
- 34 3.77 "Sheen" means a regulated substance less than or equal to 0.01 foot in thickness,  
35 measured at its thickest point, or visibly observed, floating on surface water,  
36 groundwater, or within secondary containment.  
37
- 38 3.78 "Shop-fabricated storage tank" means an AST that is constructed at the tank  
39 manufacturer's plant and transported to the facility for installation.  
40
- 41 3.79 "Significant loss or gain" means the sum of losses and gains of a regulated substance  
42 over a 30 day or monthly period that exceeds:  
43  
44 (a) For tanks with capacities between 111 and 2,000 gallons with an individual flow-  
45 through less than 5,000 gallons during the previous 30 days:  
46  
47 (1) One percent of the tank capacity; or  
48  
49 (2) One percent of the total weekly output; or  
50  
51 (3) Fifty gallons, whichever is greatest; or  
52  
53 (b) For tanks with capacities greater than 2000 gallons, or tanks with an individual  
54 flow-through exceeding 5,000 gallons during the previous 30 days:  
55  
56 (1) One percent of the tank capacity; or  
57  
58 (2) One percent of the amount of product dispensed during the previous 30  
59 days, plus 130 gallons, whichever is greatest; or

- 1 (c) For ASTs with capacities of 30,000 gallons or greater:  
2  
3 (1) One percent of the tank capacity; or  
4  
5 (2) One half of one percent of the amount of product dispensed during the  
6 previous 30 days, whichever is greater.  
7
- 8 3.80 "Small diameter piping" means integral piping with an internal diameter of three inches  
9 or less that is utilized for transporting regulated substances.  
10
- 11 3.81 "Storage tank system" means a tank used to contain regulated substances, its integral  
12 piping, and all its components, including dispensing systems, spill containment devices,  
13 overflow protection devices, secondary containment systems, and any associated release  
14 detection equipment.  
15
- 16 3.82 "Suction piping" means piping through which regulated substances flow due to a pump  
17 located at the dispensing system.  
18
- 19 3.83 "Tank" means an enclosed stationary container or structure that is designed or used to  
20 store regulated substances, and the volume of which, including the volume of  
21 underground piping, is:  
22
- 23 (a) For USTs, ten percent or more buried beneath the surface of the ground; and  
24
- 25 (b) For ASTs, less than ten percent beneath the surface of the ground. For purposes  
26 of this Ordinance, cut and cover tanks are considered aboveground storage tanks.  
27
- 28 3.84 "Temporary out-of-service" means a designation of a service status for a field-erected  
29 storage tank system that is emptied solely for the purpose of cleaning, routine  
30 maintenance, or change of product for a time period exceeding thirty days, but less than  
31 six months.  
32
- 33 3.85 "Tightness test" means a test for an underground storage tank or its small diameter piping  
34 that is performed in accordance with Subsections 12.03(c)(4) and 12.03(d)(2), by a  
35 precision tank tester registered with the Department of Business and Professional  
36 Regulation under Chapter 489, F.S. At ASTs with small diameter piping in contact with  
37 the soil, a tightness test may be performed by persons who are not precision tank testers.  
38
- 39 3.86 "UST" means an underground storage tank.  
40
- 41 3.87 "UST Category-A system" means a system containing pollutants that was installed on or  
42 before June 30, 1992, or a system containing hazardous substances that was installed  
43 before January 1, 1991.  
44
- 45 3.88 "UST Category-B system" means a system containing pollutants that was installed after  
46 June 30, 1992, or a system containing hazardous substances that was installed on or after  
47 January 1, 1991, and before July 13, 1998.  
48
- 49 3.89 "UST Category-C system" means a system that was installed on or after July 13,  
50 1998. USTs that are removed and relocated on or after July 13, 1998 are considered  
51 Category-C systems.  
52
- 53 3.90 "Unmaintained" means:  
54
- 55 (a) A storage tank system that was not closed in accordance with Department rules;  
56 or  
57
- 58 (b) An out-of-service storage tank system that is not returned to in-service status  
59 within:

- 1 (1) Two years of its being out-of-service for USTs; or  
2  
3 (2) Five years of its being out-of-service for ASTs; or  
4  
5 (3) Ten years of its being out-of-service for storage tank systems with  
6 secondary containment.  
7

8 3.91 "Upgrade" means the addition or retrofit of cathodic protection, internal lining, spill  
9 prevention, overfill protection, or secondary containment, to a storage tank system, or the  
10 installation of single wall corrosion resistant storage tanks, to improve the ability of the  
11 storage tank system to prevent discharges of regulated substances.  
12

13 3.92 "Vehicular fuel" means a petroleum product used to fuel motor vehicles, including  
14 aircraft, watercraft, and vehicles used on and off roads and rails.  
15

16 **Section 4** **REFERENCE STANDARDS**  
17

18 4.01 Referenced standards are available for inspection at the Palm Beach County Department  
19 of Environmental Resources Management, the Department of Environmental Protection's  
20 District and Tallahassee Offices and may be obtained from the following sources:  
21

- 22 (a) ACI International (American Concrete Institute), Post Office Box 9094,  
23 Farmington Hills, Michigan 48333-9094, (248) 848-3700;  
24  
25 (b) American Petroleum Institute (API), 1220 L Street, N.W. Washington, D.C.  
26 20005, (202) 682-8000;  
27  
28 (c) ASME International (The American Society of Mechanical Engineers), 22 Law  
29 Drive, Box 2300, Fairfield, New Jersey 07007-2300, (800) 843-2763;  
30  
31 (d) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive,  
32 Conshohocken, Pennsylvania 19103, (610) 832-9500;  
33  
34 (e) Florida Department of Environmental Protection (DEP), Storage Tank Regulation  
35 Section, 2600 Blair Stone Road, MS 4525, Tallahassee, Florida 32399-2400,  
36 (904) 488-3935;  
37  
38 (f) NACE International (National Association of Corrosion Engineers), Post Office  
39 Box 218340, Houston, Texas 77218-8340, (281) 492-0535;  
40  
41 (g) National Fire Protection Association (NFPA), 1 Battery March Park, Post Office  
42 Box 9101, Quincy, Massachusetts 02269-9101, (800) 344-3555;  
43  
44 (h) National Leak Prevention Association (NLPA), Route 2 Box 106A, Falmouth,  
45 Kentucky 41040, (702) 832-2260;  
46  
47 (i) Petroleum Equipment Institute (PEI), Post Office Box 2380, Tulsa, Oklahoma  
48 74101-2380, (918) 494-9696;  
49  
50 (j) Society for Protective Coatings (SSPC), 40 24th Street, 6th Floor, Pittsburgh,  
51 Pennsylvania 15222-4643, (412) 281-2331;  
52  
53 (k) Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, Illinois 60047,  
54 (847) 438-8265;  
55  
56 (l) Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062-  
57 2096, (847) 272-8800; and

1 (m) Government Printing Office, Superintendent of Documents, Attention: New  
2 Orders, Post Office Box 371954, Pittsburgh, Pennsylvania 15250-7954,  
3 (202)512-1800.  
4

5 4.02 Titles of documents.  
6

7 References to documents listed in (a) through (m) below are made throughout this  
8 Ordinance. Each document or part thereof is adopted and incorporated as a standard only  
9 to the extent that it is specifically referenced in this Ordinance.  
10

11 (a) ACI International:  
12

13 (1) ACI 224R-89, "Control of Cracking in Concrete Structures," May, 1990;  
14 and

15  
16 (2) ACI 350R-89, "Environmental Engineering Concrete Structures," June,  
17 1990.  
18

19 (b) American Petroleum Institute Standards:  
20

21 (1) API Specification 12B, "Specification for Bolted Tanks for Storage of  
22 Production Liquids," February, 1995;  
23

24 (2) API Specification 12D, "Specification for Field Welded Tanks for Storage  
25 of Production Liquids," November, 1994;  
26

27 (3) API Specification 12F, "Specification for Shop Welded Tanks for Storage  
28 of Production Liquids," November, 1994, with Addenda 1, February,  
29 1997;  
30

31 (4) API Specification 12P, "Specification for Fiberglass Reinforced Plastic  
32 Tanks," January, 1995;  
33

34 (5) API Standard 570, "Piping Inspection Code: Inspection, Repair,  
35 Alteration, and Rerating of In-Service Piping Systems," June, 1993;  
36

37 (6) API Standard 620, "Design and Construction of Large Welded Low-  
38 pressure Storage Tanks", February, 1996, with Addenda 1, December,  
39 1996, with Additional Pages for Addendum 1, February, 1997;  
40

41 (7) API Standard 650, "Welded Steel Tanks for Oil Storage," July, 1993, with  
42 Addendum 1, December, 1994, Addendum 2, December, 1995, and  
43 Addendum 3, December, 1996;  
44

45 (8) API Recommended Practice 651, "Cathodic Protection of Aboveground  
46 Petroleum Storage Tanks," April, 1991;  
47

48 (9) API Recommended Practice 652, "Lining of Aboveground Petroleum  
49 Storage Tank Bottoms," April, 1991;  
50

51 (10) API Standard 653, "Tank Inspection, Repair, Alteration and  
52 Reconstruction," December, 1995, with Addendum 1, December, 1996;  
53

54 (11) API Recommended Practice 1110, "Recommended Practice for the  
55 Pressure Testing of Liquid Petroleum Pipelines," December, 1991;  
56

57 (12) API Recommended Practice 1604, "Closure of Underground Petroleum  
58 Storage Tanks," March, 1996;  
59

- 1 (13) API Recommended Practice 1615, "Installation of Underground  
2 Petroleum Storage Systems," March, 1996;  
3
- 4 (14) API Recommended Practice 1621, "Bulk Liquid Stock Control at Retail  
5 Outlets," May, 1993;  
6
- 7 (15) API Recommended Practice 1631, "Interior Lining of Underground  
8 Storage Tanks," April, 1992;  
9
- 10 (16) API Recommended Practice 1632, "Cathodic Protection of Underground  
11 Petroleum Storage Tanks and Piping Systems," May, 1996;  
12
- 13 (17) API Recommended Practice 1637, "Using the API Color-Symbol System  
14 to Mark Equipment and Vehicles for Product Identification at Service  
15 Stations and Distribution Terminals," September, 1995; and  
16
- 17 (18) API Recommended Practice 2350, "Overfill Protection for Petroleum  
18 Storage Tanks," January, 1996.  
19
- 20 (c) ASME International:  
21
- 22 (1) B31.4-1992, "Liquid Transportation Systems for Hydrocarbons, Liquid  
23 Petroleum Gas, Anhydrous Ammonia, and Alcohols" January, 1993 with  
24 1994 Addenda; and  
25
- 26 (2) B96.1-1993, "Welded Aluminum-Alloy Storage Tanks," June, 1993.  
27
- 28 (d) American Society for Testing and Materials:  
29
- 30 (1) Specification D4021-92, "Standard Specification for Glass Fiber  
31 Reinforced Polyester Underground Petroleum Storage Tanks," October,  
32 1992; and  
33
- 34 (2) Designation: ES 40-94, "Emergency Standard Practice for Alternative  
35 Procedures for the Assessment of Buried Steel Tanks Prior to the  
36 Addition of Cathodic Protection," January, 1995.  
37
- 38 (e) Florida Department of Environmental Protection:  
39
- 40 (1) "Storage Tank System Closure Assessment Requirements," April, 1998;  
41
- 42 (2) "Guidelines for Vapor Monitoring," April, 1998; and  
43
- 44 (3) "Guidelines for Site-Suitability Determinations for External Monitoring,"  
45 February, 1998.  
46
- 47 (f) NACE International:  
48
- 49 (1) NACE Standard RP-0169-96, "Control of External Corrosion on  
50 Underground or Submerged Metallic Piping Systems," September, 1996;  
51
- 52 (2) NACE Standard RP-0285-95, "Corrosion Control of Underground  
53 Storage Tank Systems by Cathodic Protection," February, 1995;  
54
- 55 (3) NACE Standard RP-0892-92, "Linings Over Concrete for Immersion  
56 Service," December, 1992; and  
57
- 58 (4) NACE Standard RP-0193-93, "External Cathodic Protection of On-Grade  
59 Metallic Storage Tank Bottoms," October, 1993.

- 1 (g) National Fire Protection Association:  
2  
3 (1) NFPA 30, "Flammable and Combustible Liquids Code," August, 1996;  
4  
5 (2) NFPA 30A, "Automotive and Marine Service Station Code," August,  
6 1996;  
7  
8 (3) NFPA 329, "Handling Underground Releases of Flammable and  
9 Combustible Liquids," Chapters 3, 4, and 5, August, 1992;  
10  
11 (4) NFPA 68, "Guide for Venting of Deflagrations," February, 1994;  
12  
13 (5) NFPA 69, "Standard on Explosion Prevention Systems," February, 1997;  
14 and  
15  
16 (6) NFPA 220, "Standard on Types of Building Construction," Chapter 3,  
17 August, 1995.  
18  
19 (h) National Leak Prevention Association: NLPA Standard 631, "Entry, Cleaning,  
20 Interior Inspection, Repair and Lining of Underground Storage Tanks," Chapter  
21 B, 1991.  
22  
23 (i) Petroleum Equipment Institute:  
24  
25 (1) PEI/RP100-97 "Recommended Practices for Installation of Underground  
26 Liquid Storage Systems," 1997; and  
27  
28 (2) PEI/RP200-96, "Recommended Practices for Installation of Aboveground  
29 Storage Systems for Motor Vehicle Fueling," 1996.  
30  
31 (j) Society for Protective Coatings:  
32  
33 (1) SSPC-TU 2/NACE 6G197, SSPC Publication No. 97-04, "Design,  
34 Installation, and Maintenance of Coating Systems for Concrete Used in  
35 Secondary Containment," February, 1997; and  
36  
37 (2) SSPC-PA 1, "Paint Application Specification No. 1," August, 1991.  
38  
39 (k) Steel Tank Institute:  
40  
41 (1) STI-P<sub>3</sub><sup>®</sup> "Specification and Manual for External Corrosion Protection of  
42 Underground Steel Storage Tanks #STI-P<sub>3</sub><sup>®</sup>," April, 1996;  
43  
44 (2) STI R892-89, "Recommended Practice for Corrosion Protection of  
45 Underground Piping Networks Associated with Liquid Storage and  
46 Dispensing Systems," 1989;  
47  
48 (3) STI ACT-100<sup>®</sup> #F894, "Specification for External Corrosion Protection  
49 of FRP Composite Steel Underground Storage Tanks," April, 1996;  
50  
51 (4) STI F911-93, "Standard for Diked Aboveground Storage Tanks,"  
52 November, 1993; and  
53  
54 (5) STI F921, "Standard for Aboveground Tanks with Integral Secondary  
55 Containment," April, 1996.  
56  
57 (l) Underwriters Laboratories Standards:

- 1 (1) UL 58, "Steel Underground Tanks for Flammable and Combustible
- 2 Liquids," December, 1996;
- 3
- 4 (2) UL 142, "Steel Aboveground Tanks for Flammable and Combustible
- 5 Liquids," April, 1993;
- 6
- 7 (3) UL 567, "Pipe Connectors for Petroleum Products and LP Gas," June,
- 8 1996;
- 9
- 10 (4) UL 971, "Nonmetallic Underground Piping for Flammable Liquids,"
- 11 October, 1995;
- 12
- 13 (5) UL 1316, "Glass-Fiber-Reinforced Plastic Underground Storage Tanks for
- 14 Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures," January,
- 15 1994;
- 16
- 17 (6) UL 1746, "External Corrosion Protection Systems for Steel Underground
- 18 Storage Tanks," July, 1993, with Revisions, November, 1997; and
- 19
- 20 (7) UL 2085 "Protected Aboveground Tanks for Flammable and Combustible
- 21 Liquids," December, 1997.
- 22

23 (m) Government Printing Office, Code of Federal Regulations:

- 24
- 25 (1) Title 33, Part 154, July, 1997;
- 26
- 27 (2) Title 33, Part 156.170, July, 1997;
- 28
- 29 (3) Title 40, Part 112, July, 1997;
- 30
- 31 (4) Title 40, Part 280, Subpart H, July, 1997;
- 32
- 33 (5) Title 40, Part 302, July, 1997; and
- 34
- 35 (6) Title 49, Part 180.415, October, 1996.
- 36

37 4.03 Applicability of Reference Standards: Unless otherwise specified in this Ordinance,  
 38 Category-A and Category-B facilities are subject to the Reference Standards listed in the  
 39 Department's storage tank rules that were in effect at the time of facility construction or  
 40 operation. Category-C facilities shall comply with Subsection 4.02.

42 **Section 5 GENERAL REQUIREMENTS AND EXEMPTIONS**

44 5.01 General Requirements:

- 45
- 46 (a) Underground storage tank systems: The requirements of this Ordinance, unless
- 47 specified otherwise, apply to owners and operators of facilities, or owners and
- 48 operators of UST systems with individual storage tank capacities greater than 110
- 49 gallons, that contain or contained:
- 50
- 51 (1) Vehicular fuel, subject to Chapter 17-61, F.A.C., after May 21, 1984;
- 52
- 53 (2) Pollutants or hazardous substances after December 10, 1990; or
- 54
- 55 (3) Regulated substances in unmaintained storage tank systems.

- 1 (b) Aboveground storage tank systems: The requirements of this Ordinance, unless  
2 specified otherwise, apply to owners and operators of facilities, or owners and  
3 operators of aboveground stationary storage tank systems with individual storage  
4 tank capacities greater than 550 gallons, that contain or contained:  
5  
6 (1) Vehicular fuel, subject to Chapter 17-61, F.A.C., after May 21, 1984;  
7  
8 (2) Pollutants after March 12, 1991; or  
9  
10 (3) Pollutants in unmaintained storage tank systems.  
11  
12 (c) Aboveground compression vessels and hazardous substance storage tank systems:  
13 Owners and operators of compression vessels and hazardous substance storage  
14 tanks with capacities of greater than 110 gallons containing hazardous substances  
15 are only required to comply with Subsection 6.01.  
16  
17 (d) Aboveground mineral acid storage tank systems: Owners and operators of  
18 facilities, or owners and operators of aboveground mineral acid storage tank  
19 systems with capacities of greater than 110 gallons containing mineral acids are  
20 only required to comply with Section 18.  
21  
22 (e) This rule is applicable to non-residential facilities. Under 40 C.F.R. 280,  
23 residential tanks greater than 1100 gallons containing motor fuels are subject to  
24 federal UST rules. (Advisory information only-not required by this Ordinance.)  
25  
26 5.02 Exemptions:  
27  
28 (a) General: The following aboveground and underground systems are exempt from  
29 the requirements of this Ordinance:  
30  
31 (1) Any storage tank system storing any hazardous waste listed or identified  
32 under Subtitle C of the Resource Conservation and Recovery Act, or a  
33 mixture of such hazardous waste and other regulated substances;  
34  
35 (2) Any storage tank system regulated under the Toxic Substances Control  
36 Act (15 U.S.C. 2065);  
37  
38 (3) Any pesticide waste degradation system regulated under Chapter 62-660,  
39 F.A.C.;  
40  
41 (4) Storage tank systems used solely for temporary storage of mixtures of  
42 pesticides and diluent for reapplication as pesticides;  
43  
44 (5) Any storage tank system with a storage capacity of less than 30,000  
45 gallons used for the sole purpose of storing heating oil for consumptive  
46 use on the premises where stored;  
47  
48 (6) Any tank that contains asphalt or asphalt products not containing other  
49 regulated substances;  
50  
51 (7) Any storage tank system storing regulated substances that are solid or  
52 gaseous at standard temperature and pressure;  
53  
54 (8) Any storage tank containing LP gas;  
55  
56 (9) Any storage tank system that contains small quantities (de minimus, as  
57 per 40 C.F.R. Section 280.10(b)(5)) of regulated substances;

- 1 (10) Any wastewater treatment tank system that is part of a wastewater  
2 treatment facility regulated under Section 402 or 307(b) of the Clean  
3 Water Act;
- 4
- 5 (11) Any septic tank system;
- 6
- 7 (12) Any stormwater or wastewater collection system;
- 8
- 9 (13) Any surface impoundment, pit, pond, or lagoon;
- 10
- 11 (14) Any agricultural storage tank system of 550 gallons capacity or less;
- 12
- 13 (15) Any residential storage tank system;
- 14
- 15 (16) Any emergency spill or emergency overflow containment storage tank  
16 system that is emptied as soon as possible after use, and that routinely  
17 remains empty;
- 18
- 19 (17) Any flow-through process tank system. For industrial and manufacturing  
20 facilities, integral piping is considered to terminate at the forwarding  
21 pump or valve used to transfer regulated substances to process,  
22 production, or manufacturing points of use or systems within the facility;
- 23
- 24 (18) Any storage tank system, liquid trap, or associated gathering lines directly  
25 related to oil or gas production and gathering operations regulated by  
26 Chapter 377, F.S.;
- 27
- 28 (19) Equipment or machinery that contains regulated substances for  
29 operational purposes, such as hydraulic lift or fluid tank systems and  
30 electrical equipment tank systems;
- 31
- 32 (20) Any pipeline facilities;
- 33
- 34 (21) Any storage tank system containing radionuclides or that is part of an  
35 emergency generator system for nuclear power generation at facilities  
36 regulated by the Nuclear Regulatory Commission under 10 C.F.R. Part 50  
37 Appendix A;
- 38
- 39 (22) Vapor recovery holding tanks and associated vapor recovery piping  
40 systems; or
- 41
- 42 (23) Any rail or tanker truck loading or unloading operations (loading racks)  
43 specified in Chapter 5 of NFPA 30.
- 44

45 (b) Aboveground storage tank systems: The following AST systems are exempt from  
46 the requirements of this Ordinance:

- 47
- 48 (1) Drip irrigation systems that:
  - 49
  - 50 a. Are not in contact with the soil;
  - 51
  - 52 b. Are constructed of corrosion resistant materials;
  - 53
  - 54 c. Are compatible with the products stored;
  - 55
  - 56 d. Contain less than 80% concentration of fertilizer materials by  
57 volume; and
  - 58
  - 59 e. Are applied on site;

- 1 (2) Systems used exclusively for the storage of aqueous solutions of sodium  
2 hypochlorite;  
3  
4 (3) Any mobile tank;  
5  
6 (4) Any system located entirely within an industrial occupancy building;  
7  
8 (5) Any storage tank system located entirely within an enclosed building or  
9 vault with an adequate roof and walls to prevent rainwater from reaching  
10 the system, and with an impervious floor containing no valves, drains, or  
11 other openings that would permit pollutants to be discharged from the  
12 system that were constructed before July 13, 1998; or  
13  
14 (6) Any mobile double-wall tank, regardless of how long it is located at a  
15 facility, that is connected with a power module system that is used for the  
16 emergency or supplemental generation of electrical power by an electric  
17 utility as defined in Chapter 366, Florida Statutes. This exemption is  
18 limited to tanks that are designed and constructed to be moved to other  
19 service locations, and the relocation within a facility or from site to site is  
20 inherent in its use.  
21

22 **Section 6 REGISTRATION AND FINANCIAL RESPONSIBILITY**

23  
24 6.01 General registration requirements.

25  
26 The owner or operator of any facility, or the owner or operator of a storage tank system,  
27 aboveground hazardous substance tank, or compression vessel, shall provide to ERM  
28 proof that the owner or operator has complied with the Department's registration  
29 requirements as specified in Rule 62-761.400, F.A.C., no later than 30 days after  
30 regulated or hazardous substances are put into any new storage tank system, aboveground  
31 hazardous substance tank, or compression vessel.  
32

33 6.02 Financial responsibility.

34  
35 The owner or operator of a facility, or individual tanks, if of different ownership, shall  
36 provide to ERM proof that the owner or operator has complied with the financial  
37 responsibility requirements of Rule 62-761.400(3), F.A.C. If the owner and operator of a  
38 tank are separate persons, only one person is required to demonstrate financial  
39 responsibility. Financial responsibility is only required for tanks containing petroleum  
40 or petroleum products. Financial responsibility is the ability to pay for corrective action  
41 and third-party liability resulting from a discharge at the facility.  
42

43 **Section 7 NOTIFICATION AND REPORTING**

44  
45 7.01 Notification requirements.

46  
47 (a) Verbal or written notice shall be provided to ERM:

- 48  
49 (1) At least 30 days before installation or upgrading to meet the requirements  
50 of Section 8 unless ERM agrees to a shorter time period;  
51  
52 (2) At least 10 days before an internal inspection of a UST, an API 653  
53 internal inspection, a change in service status, closure, or closure  
54 assessment, any of which is performed to meet the requirements of this  
55 Ordinance;  
56  
57 (3) At least 48 hours before:  
58

- 1 a. Initiating activities specified in subparagraphs (1) or (2) above to
- 2 confirm the date and time of the scheduled activities;
- 3
- 4 b. The establishment of temporary out-of-service status for field-
- 5 erected ASTs; and
- 6
- 7 c. Performing any tightness test required under this Ordinance; and
- 8
- 9 (4) Before the close of ERM's next business day for an emergency change to
- 10 an out-of-service status made as required by Section 16. Verbal or written
- 11 notification of the activities specified in subparagraphs (1) or (2) above
- 12 performed as a direct result of the emergency change in service shall be
- 13 made to ERM before initiating the activities.
- 14
- 15 (b) Within 30 days after completion, the owner or operator shall verify to ERM that it
- 16 has complied with the Department's notification requirements as specified in
- 17 Rule 62-761.450, F.A.C., by submitting a copy of the Storage Tank Registration
- 18 Form 62-761.900(2) within 30 days of the following activities:
- 19
- 20 (1) Any change in ownership of a facility or of a storage tank system;
- 21
- 22 (2) Closure or upgrading of a storage tank system;
- 23
- 24 (3) Any change or correction in the information reported in the registration
- 25 form, including changes in the type of regulated substances stored. A
- 26 change within the same blend of regulated substances should not be
- 27 reported (e.g., regular unleaded to premium unleaded gasoline); and
- 28
- 29 (4) The establishment of, or changes to, the method of demonstrating
- 30 financial responsibility required by Subsection 6.02.
- 31
- 32 (c) Underground storage tank systems. Within 30 days after installation,
- 33 replacement, or removal of a storage tank system, the Certified Contractor shall
- 34 submit a completed Underground Storage Tank System Installation and Removal
- 35 Form 62-761.900(5) to ERM.
- 36
- 37 7.02 Incident notification requirements.
- 38
- 39 (a) Notification of the discovery of the following incidents shall be made to ERM on
- 40 Incident Notification Form 62-761.900(6) within 24 hours or before the close of
- 41 ERM's next business day:
- 42
- 43 (1) A failed SIR evaluation, or inconclusive SIR evaluations as specified in
- 44 Subsection 12.03(c)(3), or a failed or inconclusive tightness, pressure, or
- 45 breach of integrity test;
- 46
- 47 (2) Internal inspection results, including perforations, corrosion holes, weld
- 48 failures, or other similar defects, that indicate that a release could have
- 49 occurred;
- 50
- 51 (3) Unusual operating conditions, such as the erratic behavior of product
- 52 dispensing equipment, the sudden loss of product from a storage tank
- 53 system, or any unexplained presence of water in a tank or unexplained
- 54 presence of water with or without sheen in a piping sump, unless system
- 55 equipment is found to be defective but not leaking;
- 56
- 57 (4) The presence of odors of a regulated substance from surface water or
- 58 groundwater, soil, basements, sewers and utility lines at a facility or in the
- 59 surrounding area from which it could be reasonably concluded that a
- 60 release or discharge may have occurred;

- 1 (5) The loss of a regulated substance from a storage tank system exceeding
- 2 100 gallons on impervious surfaces, other than secondary containment,
- 3 such as driveways, airport runways, or other similar asphalt or concrete
- 4 surfaces, provided that the loss does not come in contact with pervious
- 5 surfaces;
- 6
- 7 (6) The loss of a regulated substance exceeding 500 gallons inside a dike field
- 8 area with secondary containment;
- 9
- 10 (7) A positive response of release detection devices or methods described in
- 11 Section 12 or approved under Rule 62-761.850(2), F.A.C. A positive
- 12 response shall be the indication of a release of regulated substances, an
- 13 exceedance of the Release Detection Response Level, or a breach of
- 14 integrity of a storage tank system; and
- 15
- 16 (8) The presence of free product in a piping sump.
- 17
- 18 (b) Incident Notification Form 62-761.900(6) need not be submitted if:
- 19
- 20 (1) Within 24 hours of discovery of an incident, or before the close of ERM's
- 21 next business day, the investigation of the incident confirms that a
- 22 discharge did not occur; or
- 23
- 24 (2) An Incident Notification Form was previously submitted for that incident.
- 25
- 26 7.03 Discharge reporting requirements.
- 27
- 28 (a) Upon discovery of an unreported discharge, the owner or operator shall report the
- 29 following to ERM on Discharge Report Form 62-761.900(1) within 24 hours or
- 30 before the close of ERM's next business day:
- 31
- 32 (1) Results, or receipt of results, of analytical or field tests of surface water or
- 33 groundwater indicating the presence of contamination by:
- 34
- 35 a. A hazardous substance from a UST system;
- 36
- 37 b. A regulated substance, other than petroleum products; or
- 38
- 39 c. Petroleum products' chemicals of concern specified in Table V or
- 40 VII, as applicable, in Chapter 62-777, F.A.C.;
- 41
- 42 (2) Free product or sheen of a regulated substance, or a regulated substance
- 43 that is visibly observed in soil, on surface water, in groundwater samples,
- 44 on basement floors, in subsurface utility conduits or vaults, or in sewer
- 45 lines at the facility or in the surrounding areas;
- 46
- 47 (3) A spill or overflow event of a regulated substance to soil or another
- 48 pervious surface, equal to or exceeding 25 gallons, unless the regulated
- 49 substance has a more stringent reporting requirement specified in C.F.R.
- 50 Title 40, Part 302;
- 51
- 52 (4) Results of analytical or field tests of soil indicating the presence of
- 53 contamination by:
- 54
- 55 a. A hazardous substance from a UST system;
- 56
- 57 b. A regulated substance, other than petroleum products;

- 1 c. Petroleum products' chemicals of concern that exceed the lower of
- 2 direct exposure I and leachability Table V cleanup target levels
- 3 specified in Table IV in Chapter 62-777, F.A.C., unless due to a
- 4 spill or overfill event in a quantity less than that described in
- 5 subparagraph (3) above; or
- 6
- 7 (5) Soils stained by regulated substances that are observed during a closure
- 8 assessment performed in accordance with Subsection 15.04.
- 9
- 10 (b) Copies of analytical or field test results that confirm a discharge shall be
- 11 submitted to ERM with Discharge Report Form 62-761.900(1).
- 12
- 13 (c) A request for a retraction of a submitted Discharge Report Form may be
- 14 submitted to ERM if evidence is presented that a discharge did not occur at the
- 15 facility.
- 16
- 17 (d) A Discharge Report Form 62-761.900(1) does not need to be submitted for
- 18 previously reported discharges.
- 19

20 **Section 8** **PERFORMANCE STANDARDS FOR CATEGORY-C STORAGE TANK**  
 21 **SYSTEMS**

22

23 8.01 General performance standards.

24

25 AST and UST Category-C systems shall be constructed and installed in accordance with

26 the requirements of this section. AST and UST Category-C systems shall be made of, or

27 internally lined with, materials that are compatible with the regulated substance stored in

28 the system. The following requirements are applicable to both UST and AST systems:

29

- 30 (a) Siting. Persons are advised that, pursuant to Rule 62-521.400(1)(l)-(n) and (2),
- 31 F.A.C., no storage tank shall be installed within 500 feet of any existing
- 32 community water supply system or any existing non-transient non-community
- 33 water supply system. No Category-C system (AST or UST) shall be installed
- 34 within 100 feet of any other existing potable water supply well. Rule 62-
- 35 521.400(1)(l)-(n) and (2), F.A.C., provides that these prohibitions shall not apply
- 36 to the replacement of an existing storage tank system within the same excavation
- 37 or dike field area, or the addition of new storage systems meeting the standards
- 38 for Category-C systems at an existing facility.
- 39
- 40 (b) Exterior coatings. Exterior portions of aboveground tanks and aboveground
- 41 integral piping, excluding double-walled systems, shall be coated or otherwise
- 42 protected from external corrosion. The coating shall be designed and applied to
- 43 resist corrosion, deterioration, and degradation of the exterior wall.
- 44

45 SSPC-PA 1, Paint Application Specification No. 1 may be used to protect storage tank

46 systems from external corrosion.

47

- 48 (c) Spill containment. USTs and shop-fabricated ASTs shall be installed with a spill
- 49 containment system at each tank fill connection. The spill containment system
- 50 shall be a fixed component that is designed to prevent a discharge of regulated
- 51 substances when the transfer hose or pipe is detached from the tank fill pipe. The
- 52 spill containment system shall meet the requirements of Subsection 8.01(e).
- 53
- 54 (d) Dispensing systems.
- 55
- 56 (1) The dispensing system used for transferring fuels from storage tanks shall
- 57 be installed and maintained in accordance with the provisions of NFPA 30
- 58 and Chapters 2, 4 and 9 of NFPA 30A.
- 59
- 60

- 1 (2) Dispensers shall be designed, constructed, and maintained to provide  
2 access for examination and removal of collected product and accumulated  
3 water from dispenser liners.  
4
- 5 (e) Secondary containment.  
6
- 7 (1) The materials used for secondary containment shall be:  
8
- 9 a. Impervious to the regulated substance and able to withstand  
10 deterioration from external environmental conditions;  
11
- 12 b. Non-corrosive or of corrosion-protected materials;  
13
- 14 c. Capable of containing regulated substances for at least 30 days;  
15 and  
16
- 17 d. Of sufficient thickness and strength to withstand hydrostatic forces  
18 at maximum capacity to prevent a discharge during its operating  
19 life.  
20
- 21 (2) Owners or operators may only use liners in Palm Beach County that have  
22 been approved by the Department in accordance with Rule 62-761.850(2),  
23 F.A.C. Liners shall not be constructed or consist of naturally occurring  
24 in-situ soils.  
25
- 26 (3) Secondary containment constructed of concrete shall be:  
27
- 28 a. Designed and constructed in accordance with ACI 350R-89 and  
29 ACI 224R-89; or  
30
- 31 b. Lined on the visible interior surfaces of the dike field area in  
32 accordance with NACE International Standard RP 0892-92, or  
33 SSPC Publication 97-04, Design, Installation, and Maintenance of  
34 Coating Systems for Concrete Used in Secondary Containment; or  
35
- 36 c. Designed, evaluated, and certified by a professional engineer  
37 registered in the State of Florida that the concrete secondary  
38 containment system meets the General Construction Requirements  
39 specified in Subsection 8.01(e)(1).  
40
- 41 (4) For cathodically protected tanks and integral piping, secondary  
42 containment systems shall not interfere with the operation of the cathodic  
43 protection system.  
44
- 45 (5) Storage tank system equipment with closed interstitial spaces, such as  
46 double-walled USTs, double-bottomed ASTs, and double-walled integral  
47 piping in contact with the soil that is connected to ASTs or USTs, shall be  
48 designed, constructed and installed to allow for the detection of a breach  
49 of integrity in the inner or outer wall by the monitoring of the interstitial  
50 space in accordance with Subsection 12.03(a). A breach of integrity test  
51 shall be performed before the storage tank system is put into service.  
52
- 53 (6) Secondary containment systems shall be designed and installed to direct  
54 any release to a monitoring point or points.  
55
- 56 (7) Airport and seaport hydrant pits. Underground hydrant pits shall be  
57 installed with a spill catchment basin, secondary containment, or other  
58 spill prevention equipment to prevent the discharge of pollutants during  
59 fueling of aircraft, vessels, or at any other time the hydrant system is in  
60 use. Any such equipment shall be sealed to and around the hydrant piping  
61 with an impervious, compatible material.

- 1 (8) Field-fabricated dispenser liners and piping sumps installed before July  
2 13, 1998, do not have to be approved in accordance with Rule 62-  
3 761.850(2), F.A.C.  
4
- 5 (f) Cathodic protection.  
6
- 7 (1) Test stations. Cathodic protection systems shall be designed, constructed,  
8 and installed with at least one test station or method of monitoring to  
9 allow for a determination of current operating status. Cathodic protection  
10 test stations shall provide direct access to the soil electrolyte in close  
11 proximity to each cathodically protected structure for placement of  
12 reference electrodes, and monitoring wires that connect directly to  
13 cathodically protected structures. Facilities where direct access to soil in  
14 close proximity to cathodically protected structures is present, and where  
15 electrical connections to cathodically protected structures can be  
16 conveniently accomplished, need not have separate dedicated cathodic  
17 protection test stations.  
18
- 19 (2) The cathodic protection system shall be operated and maintained in  
20 accordance with Subsection 13.01(b).  
21
- 22 (3) Any field-installed cathodic protection system shall be designed by a  
23 Corrosion Professional.  
24
- 25 (g) Relocation of USTs. Tanks that have been removed and that are to be reinstalled  
26 at a different location shall:  
27
- 28 (1) Be recertified that all original warranties are confirmed by the original  
29 manufacturer or the manufacturer's successor, and be reinstalled in  
30 accordance with the standards in Section 8; or  
31
- 32 (2) Be recertified by a professional engineer registered in the State of Florida  
33 that the UST meets all applicable standards of Section 8; and  
34
- 35 (3) In addition to proof required by the Department in Rule 62-761.500(1)(g),  
36 F.A.C., the owner or operator shall provide to ERM proof of  
37 recertification prior to the completion of installation. The provisions of  
38 Subsection 17.01, do not apply to the requirements of this subparagraph.  
39
- 40 (h) Relocation of ASTs. Tanks that have been removed and that are to be reinstalled  
41 at a different location shall:  
42
- 43 (1) For field-erected tanks, comply with API Standard 653; or  
44
- 45 (2) For shop-fabricated tanks, be reinstalled in accordance with  
46 manufacturer's specifications, if applicable, and with the standards in  
47 Section 8.  
48
- 49 (i) Reuse of storage tanks. Unless it is recertified for use by a professional engineer  
50 registered in the State of Florida, or is recertified by the manufacturer, and is  
51 brought into service in accordance with Section 8:  
52
- 53 (1) A UST can not be used or reused as an AST for the storage of regulated  
54 substances; and  
55
- 56 (2) An AST can not be used or reused as a UST for the storage of regulated  
57 substances.

- 1 8.02 Underground storage tank systems.  
2  
3 (a) Installation.  
4  
5 (1) All components of a storage tank system shall be installed in accordance  
6 with the manufacturer's instructions.  
7  
8 (2) All storage tank systems shall be installed according to the applicable  
9 provisions of NFPA 30 and 30A, PEI/RP100-97, and API RP 1615.  
10  
11 (3) A Certified Contractor shall perform the installation of storage tank  
12 systems containing pollutants, including tanks, integral piping (excluding  
13 drop tubes), overflow protection and spill containment equipment, internal  
14 release detection equipment, cathodic protection systems, secondary  
15 containment systems, and dispensing systems, if the installation of the  
16 storage tank system component disturbs the backfill, or where the integral  
17 piping is connected or disconnected during installation.  
18  
19 (4) A tightness test shall be performed on the tank and integral piping before  
20 any storage tank system is placed into service unless the system's  
21 equipment approval specifies otherwise.  
22  
23 (b) Tank construction standards.  
24  
25 (1) Fiberglass reinforced plastic tanks shall be constructed in accordance with  
26 UL 1316 and ASTM Standard D4021-86, or certified by a Nationally  
27 Recognized Laboratory that these standards are met.  
28  
29 (2) Cathodically protected steel tanks shall be:  
30  
31 a. Constructed in accordance with UL 58 and UL 1746, or as  
32 applicable;  
33  
34 b. Constructed in accordance with STI #STI-P<sub>3</sub><sup>c</sup> Specification and  
35 Manual for External Corrosion Protection of Underground Steel  
36 Storage Tanks; or  
37  
38 c. Certified by a Nationally Recognized Laboratory that these  
39 standards are met, and constructed and designed by a Corrosion  
40 Professional in accordance with NACE International Standard  
41 RP0285-95 for any field-installed cathodic protection system.  
42  
43 (3) Steel tanks coated with a fiberglass reinforced plastic composite shall be  
44 constructed in accordance with UL-58 and either UL 1746, STI ACT 100  
45 <sup>®</sup> (F894), or certified by a Nationally Recognized Laboratory that one of  
46 these standards is met.  
47  
48 (4) Storage tanks constructed of any other material, design, or corrosion  
49 protection shall not be used in Palm Beach County unless approved by the  
50 Department in accordance with Rule 62-761.850(2), F.A.C.  
51  
52 (5) Any new tank manufactured with previously used or remanufactured  
53 components shall be certified before being installed as meeting the  
54 applicable standards by Underwriters Laboratory, by a comparable  
55 certified product testing laboratory, or by a professional engineer  
56 registered in the State of Florida.  
57  
58 (6) Tanks shall be constructed or installed to provide for interstitial  
59 monitoring.

- 1 (c) Secondary containment. All tanks installed or constructed at a facility after July  
2 13, 1998, shall have secondary containment.  
3
- 4 (d) Overfill protection.  
5
- 6 (1) At a minimum, fillbox covers shall be marked in accordance with API RP  
7 1637, or with an equivalent method approved by the Department in  
8 accordance with Rule 62-761.850(2), F.A.C.  
9
- 10 (2) USTs shall be equipped with a system that either:  
11
- 12 a. Automatically shuts off flow to the tank when the tank is no more  
13 than 95% full;  
14
- 15 b. Restricts flow to the tank when the tank is no more than 90% full;  
16
- 17 c. Alerts the transfer operator when the tank is no more than 90% full  
18 by triggering a high level alarm;  
19
- 20 d. Alerts the transfer operator with a high level alarm set at 400  
21 gallons below tank top, but no less than one minute before  
22 overfilling; or  
23
- 24 e. Automatically shuts off flow into the tank so that none of the  
25 fittings located on top of the tank are exposed to product due to  
26 overfilling.  
27
- 28 (e) Dispenser liners.  
29
- 30 (1) Storage tank systems shall be installed with liners meeting the  
31 performance standards of Subsection 8.01(e), beneath the union of the  
32 piping and the dispenser.  
33
- 34 (2) Hydrostatic tests shall be performed for all dispenser liners before placing  
35 the system into service. The duration of the tests shall be at least:  
36
- 37 a. Twenty-four hours for field-fabricated dispenser liners; or  
38
- 39 b. Three hours for factory-made dispenser liners.  
40
- 41 (3) Dispenser liners shall be installed to allow for interstitial monitoring in  
42 accordance with Subsection 12.03(a).  
43
- 44 (f) Piping sumps.  
45
- 46 (1) Piping sumps shall meet the performance standards of Subsection 8.01(e).  
47 The sumps shall be designed, constructed, and installed to minimize  
48 water entering the sump.  
49
- 50 (2) Hydrostatic tests shall be performed for all piping sumps before placing  
51 the system into service. The duration of the tests shall be at least:  
52
- 53 a. Twenty-four hours for field-fabricated piping sumps; or  
54
- 55 b. Three hours for factory-made piping sumps.  
56
- 57 (3) Piping sumps shall be installed to allow for interstitial monitoring in  
58 accordance with Subsection 12.03(a).

- 1 8.03 Aboveground storage tank systems.  
2  
3 (a) Installation.  
4  
5 (1) All components of a storage tank system shall be installed in accordance  
6 with the manufacturer's instructions.  
7  
8 (2) Storage tank systems shall be installed according to the applicable  
9 provisions of NFPA 30, NFPA 30A and PEI/RP200-96.  
10  
11 (b) Tank construction standards.  
12  
13 (1) Shop-fabricated tanks shall be constructed in accordance with one of the  
14 following:  
15  
16 a. UL 142;  
17  
18 b. API Standard 620;  
19  
20 c. API Specification 12B;  
21  
22 d. API Specification 12F;  
23  
24 e. API Specification 12P;  
25  
26 f. STI F911-93;  
27  
28 g. STI F921<sup>®</sup>;  
29  
30 h. ASME B96.1; or  
31  
32 i. UL 2085.  
33  
34 (2) Field-erected tanks shall be constructed in accordance with one of the  
35 following:  
36  
37 a. ASME B96.1;  
38  
39 b. API Standard 620;  
40  
41 c. API Standard 650;  
42  
43 d. API Specification 12B; or  
44  
45 e. API Specification 12D.  
46  
47 (3) Field-erected tanks shall have an inspection and testing frequency  
48 established in accordance with API Standard 653 and maintained for the  
49 life of the tank.  
50  
51 (4) Steel tanks in contact with soil shall have a cathodic protection system  
52 meeting the following requirements:  
53  
54 a. The cathodic protection system shall be designed, constructed, and  
55 installed in accordance with API RP 651 and NACE International  
56 Standard RP-0193-93;  
57  
58 b. A field-installed cathodic protection system shall be designed by a  
59 Corrosion Professional;

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- c. The cathodic protection system shall be designed and installed with at least one test station in accordance with Subsection 8.02(b)(2)b, or a method of monitoring to allow for a determination of current operating status; and
  - d. The cathodic protection system shall be operated and maintained in accordance with Subsection 13.01(b).
- (5) Tanks constructed of any other material, design, or corrosion protection shall not be used in Palm Beach County unless approved by the Department in accordance with Rule 62-761-850(2), F.A.C.
- (c) Secondary containment.
- (1) All tanks shall have secondary containment beneath the tank and within the dike field area, except for the following:
    - a. Tanks containing high viscosity regulated substances are exempt from the requirements for secondary containment. However, used or waste oil tanks, regardless of viscosity, shall have secondary containment beneath the tank and within the dike field area.
    - b. Double-walled shop-fabricated tanks approved in accordance with Rule 62-761.850(2), F.A.C., do not have to be installed in a dike field area.
    - c. Shop-fabricated tanks containing petroleum contact water pursuant to Chapter 62-740, F.A.C., that are subject to this Ordinance, elevated above and not in contact with the soil, and that have an impervious surface directly beneath the area of the tank.
    - d. Field-erected tanks used for the temporary storage of petroleum contact water pursuant to Chapter 62-740, F.A.C., that are subject to this Ordinance, and that have passed an internal inspection for structural integrity in accordance with API Standard 653.
    - e. AST Category-C field-erected tanks constructed within a dike field area with AST Category-A field-erected tanks shall have secondary containment beneath the tank.
  - (2) Release prevention barriers such as double-bottoms, liners, or other undertank secondary containment systems for field-erected tanks shall be designed and constructed in accordance with API Standard 650.
  - (3) Dike field areas with secondary containment shall:
    - a. Conform to the requirements of NFPA 30, Chapter 2-3;
    - b. Contain a minimum of 110% of the maximum capacity of the tank or of the largest single-walled tank within the dike field area. Capacity calculations shall include the volume occupied above the area of the "footprint" of the tank bottom or the largest tank within the dike field area;
    - c. If not roofed or otherwise protected from the accumulation of rainfall, be constructed with a manually controlled pump or siphon, or a gravity drain pipe which has a manually controlled valve to remove accumulated liquids. Gravity drain pipes shall be designed and constructed to prevent a discharge in the event of fire;

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- d. Have all integral piping and other penetrations that pass through the secondary containment of dike field areas sealed around the outside of the penetration with an impervious compatible material to prevent the discharge of pollutants; and
  - e. If constructed of steel, be tested in accordance with UL 142.
- (d) Overfill protection.
- (1) No transfer of regulated substances shall be made unless the volume available in the tank is greater than the volume of regulated substances to be transferred. The transfer shall be repeatedly monitored to prevent overfilling.
  - (2) Overfill protection shall be performed in accordance with API RP 2350.
  - (3) At a minimum, fillbox covers shall be marked in accordance with API RP 1637, or an equivalent method approved by the Department in accordance with Rule 62-761.850(2), F.A.C.
  - (4) All tanks shall be equipped with at least one of the following:
    - a. A gauge or other measuring device that accurately shows the level of pollutant in the tank and that is visible to the person who is monitoring the filling;
    - b. A high level warning alarm;
    - c. A high level liquid flow cutoff controller;
    - d. An impervious dike field area; or
    - e. Another device approved by the Department in accordance with Rule 62-761.850(2), F.A.C.
  - (5) Calibrated stick measurements of the level of pollutants in the tank shall only be used for tanks with a capacity of 15,000 gallons or less that are not loaded with high-volume pressurized nozzles. Such tanks shall not be loaded beyond 95% capacity.
- (e) Dispenser liners.
- (1) Dispensers connected to AST systems shall be installed with liners meeting the performance standards of Subsection 8.01(e), beneath the union of the piping and the dispenser. Dispensers mounted directly upon a tank are exempt from this requirement.
  - (2) Hydrostatic tests shall be performed for all dispenser liners before placing the system into service. The duration of the tests shall be at least:
    - a. Twenty-four hours for field-fabricated dispenser liners; or
    - b. Three hours for factory-made dispenser liners.
  - (3) Dispenser liners shall be installed to allow for interstitial monitoring in accordance with Subsection 12.03(a).

- 1 (f) Piping sumps.
- 2
- 3 (1) Piping sumps shall meet the performance standards of Subsection 8.01(e).
- 4 The sumps shall be designed, constructed, and installed to minimize
- 5 water entering the sump.
- 6
- 7 (2) Hydrostatic tests shall be performed for all piping sumps before placing
- 8 the system into service. The duration of the tests shall be at least:
- 9
- 10 a. Twenty-four hours for field-fabricated piping sumps; or
- 11
- 12 b. Three hours for factory-made piping sumps.
- 13
- 14 (3) Piping sumps shall be installed to allow for interstitial monitoring in
- 15 accordance with Subsection 12.03(a).
- 16
- 17 8.04 Integral piping for aboveground and underground storage tank systems.
- 18
- 19 (a) Installation.
- 20
- 21 (1) All integral piping shall be installed in accordance with the manufacturer's
- 22 instructions, if applicable.
- 23
- 24 (2) All integral piping shall be installed according to the applicable provisions
- 25 of NFPA 30, NFPA 30A, and ASME B31.4.
- 26
- 27 (3) A tightness test shall be performed on underground small diameter piping
- 28 associated with ASTs before any new underground piping system is
- 29 placed into service. A pressure test shall be performed for underground
- 30 bulk product piping before the piping system is placed into service.
- 31 Tightness tests for underground small diameter piping connected to USTs
- 32 are subject to Subsection 8.02(a)(4).
- 33
- 34 (4) All piping that is not in contact with the soil shall meet the construction
- 35 standards in Subsection 8.04(a)-(d).
- 36
- 37 (b) Integral piping construction standards.
- 38
- 39 (1) Fiberglass reinforced plastic piping or other non-metallic piping installed
- 40 at a facility shall be listed with UL 971, UL 567, certified by a Nationally
- 41 Recognized Laboratory that these standards are met, or approved in
- 42 accordance with Subsection 8.04(b)(3).
- 43
- 44 (2) Coated steel piping shall be constructed in accordance with ASME B31.4.
- 45 Integral piping in contact with the soil shall be cathodically protected in
- 46 accordance with API RP 1632, NACE International RP-0169-96, and STI
- 47 R892-96.
- 48
- 49 (3) Integral piping constructed of other materials, design, or corrosion
- 50 protection shall be approved by the Department in accordance with Rule
- 51 62-761.850(2), F.A.C.
- 52
- 53 (c) Small diameter piping.
- 54
- 55 (1) Pressurized small diameter piping systems connected to dispensers shall
- 56 be installed with shear valves or emergency shutoff valves in accordance
- 57 with NFPA 30A, Section 4-3.6, if applicable. These valves shall be
- 58 designed to close automatically if a dispenser is dislodged from the
- 59 integral piping. The valves shall be rigidly anchored independently of the
- 60 dispenser. For underground small diameter piping, the valves shall be
- 61 checked at the time of installation by a Certified Contractor to confirm

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that the automatic closing function of the valve operates properly and that the valve is properly anchored.

(2) Gravity-fed small diameter integral piping systems must be installed with an isolation valve at the point of connection to the storage tank to prevent the discharge of regulated substances in the case of piping failure. The valve shall meet the standards of NFPA 30A, Section 2-1.7.

(3) Swing-joints shall not be installed.

(d) Bulk product piping. Bulk product piping shall be constructed and installed in accordance with NFPA 30, and ASME B31.4.

(e) Secondary containment.

(1) Small diameter integral piping that is in contact with the soil or that transports regulated substances over surface waters of the state shall have secondary containment.

(2) Bulk product piping that is in contact with the soil shall have secondary containment.

(3) Remote fill piping that is in contact with the soil shall have secondary containment.

(4) The following integral piping systems are exempt from the requirements for secondary containment:

a. Integral piping that is in contact with the soil, and that is connected to storage tanks containing high viscosity regulated substances; and

b. Vertical fill pipes equipped with a drop tube.

**Section 9 PERFORMANCE STANDARDS FOR CATEGORY-A AND CATEGORY-B STORAGE TANK SYSTEMS**

9.01 General.

This section references and adopts Department deadlines for Category-A and Category-B storage tank systems to meet the standards for Category-C storage tank systems in accordance with Rule 62-761.500, F.A.C. Owners of storage systems that do not meet applicable deadlines as of the effective date of this Ordinance shall have 30 days to bring the storage system into compliance. If the storage system does not comply with the requirements of this Ordinance after the 30-day period, the owner or operator may be subject to enforcement, fines and penalties as described in Section 21 of this Ordinance.

(a) Installation:

(1) Installation shall be completed by the deadlines specified in Table UST and Table AST. However, if installation or upgrade activities were initiated before the deadlines, work can continue after the deadlines, provided that all work is completed within 90 days of:

a. Contract execution; or

b. Receipt of construction approval or permits.

(2) Installation is considered to have begun if:

- 1 a. All federal, state, and local approvals or permits have been  
2 obtained or applied for to begin physical construction for  
3 installation of the system; or  
4  
5 b. Contractual obligations have been made for installation of the  
6 system which cannot be canceled or modified without substantial  
7 economic loss, provided that such obligations are pursued  
8 diligently in good faith to achieve the requirements of this  
9 Ordinance.  
10  
11 (b) By December 31, 1998:  
12  
13 (1) All pressurized small diameter piping systems connected to dispensers  
14 shall have shear valves or emergency shutoff valves installed in  
15 accordance with Subsection 8.04(c).  
16  
17 (2) Cathodic protection test stations shall be installed in accordance with  
18 Subsections 8.01(f)(1) and 8.02(b)(2), for cathodically protected UST or  
19 AST systems without test stations.  
20  
21 (3) Fillboxes shall be color coded in accordance with Subsection 8.02(d)(1).  
22  
23 (4) ASTs that have been reinstalled as USTs, and USTs that have been  
24 reinstalled as ASTs, shall meet the requirements of Section 8.  
25  
26 (c) After July 13, 1998, a closure assessment shall be performed in accordance with  
27 Subsection 15.04, before the installation of dispenser liners, piping sumps, or  
28 secondary containment of tanks and integral piping.  
29  
30 (d) Valves meeting the requirements of Section 2-1.7 of NFPA 30A, shall be  
31 installed by January 13, 1999, on any storage tank system located at an elevation  
32 that produces a gravity head on the dispenser or on small diameter piping.  
33  
34 (e) Small diameter piping transporting regulated substances over surface waters of  
35 the state shall have secondary containment by December 31, 2004.  
36  
37 9.02 Underground storage tank systems.  
38  
39 (a) UST Category-A single-walled tanks or underground single-walled piping shall  
40 be considered to be protected from corrosion if the tank or piping was constructed  
41 with corrosion resistant materials, initially installed with cathodic protection, or  
42 had cathodic protection or internal lining installed before June 30, 1992.  
43  
44 (b) UST Category-B systems.  
45  
46 (1) All tanks containing pollutants, installed or constructed at a facility after  
47 June 30, 1992, shall have secondary containment.  
48  
49 (2) All tanks containing hazardous substances, installed or constructed at a  
50 facility after January 1, 1991, shall have secondary containment.  
51  
52 (c) Small diameter integral piping in contact with the soil that is connected to UST  
53 systems shall have secondary containment if installed after December 10, 1990.  
54  
55 (d) By December 31 of the appropriate year shown in Table UST below, all storage  
56 tank systems shall meet the performance standards of Section 8, or be  
57 permanently closed in accordance with Subsection 15.03.

TABLE UST						
<u>Year Tank or Integral Piping Installed</u>	1989	1992	1995	1998	2004	2009
Before 1970	O	B		ACFL	D	E
1970 - 1975		SBL		ACF	D	E
1976 - 1980		B	SL	ACF	D	E
1981 - 09/01/84		B		ACFL	D	E
09/02/84 - 06/30/92		B		ACFL	D	E
Other*		B		ACFL	D	E

*Key to Table UST*

- 1  
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3  
4 \* = All systems with a capacity between 110 gallons and 550 gallons, all marine fueling  
5 facilities as defined in Section 376.031, F.S., and those systems of greater than 550  
6 gallon capacity that use less than 1,000 gallons per month or 10,000 gallons per year.  
7
- 8 A = (1) Small diameter piping that was protected from corrosion by June 30, 1992, shall  
9 have:  
10  
11 (a) For pressurized piping, line leak detectors with automatic shutoff, or flow  
12 restriction in accordance with Subsection 12.03(d); or  
13  
14 (b) For suction integral piping:  
15  
16 1. Secondary containment in accordance with Subsection 8.01(e);  
17  
18 2. A single check valve installed in accordance with Subsection  
19 11.04(a)(3);  
20  
21 3. An annual line tightness test in accordance with Subsection  
22 11.04(a)(1); or  
23  
24 4. External monthly monitoring or release detection in accordance  
25 with Subsection 11.04(a)(1)b.  
26
- 27 (2) Bulk product piping in contact with soil shall be upgraded with secondary  
28 containment unless the piping is:  
29  
30 (a) Constructed of corrosion resistant materials or upgraded with cathodic  
31 protection; and  
32  
33 (b) Tested on an annual basis in accordance with API RP 1110, ASME  
34 B31.4, or an equivalent method approved by the Department in  
35 accordance with Rule 62-761.850, F.A.C.  
36
- 37 B = Vehicular fuel petroleum storage tank systems shall be upgraded with spill containment.  
38
- 39 C = Secondary containment in accordance with Subsection 8.01(e) shall be required for the  
40 following:  
41  
42 (1) Concrete storage tanks;  
43  
44 (2) Hazardous substance storage tank systems; and  
45  
46 (3) For pollutant storage tank systems, the storage tank or small diameter piping not  
47 protected from corrosion by June 30, 1992.

- 1  
2 D = (1) Secondary containment shall be installed for small diameter piping extending  
3 over surface waters.  
4  
5 (2) Secondary containment for remote fill-pipes associated with Category-A and  
6 Category-B systems.  
7  
8 E = Pollutant storage tanks and small diameter piping protected from corrosion on or before  
9 June 30, 1992, and all manifolded piping, shall be upgraded with secondary containment.  
10  
11 F = (1) Storage tank systems, excluding vehicular fuel petroleum storage tank systems,  
12 shall be upgraded with spill containment, dispenser liners (as applicable), and  
13 overfill protection.  
14  
15 (2) Unless contained within secondary containment, swing-joints and flex-connectors  
16 that are not protected from corrosion shall be protected from corrosion. Facilities  
17 that have pressurized small diameter piping and that have not met the foregoing  
18 standard on or before July 13, 1998, shall protect the submersible turbine pump  
19 from corrosion or provide corrosion protection for the submersible turbine pump  
20 if the pump is not installed within secondary containment. Corrosion protection  
21 is not required for the submersible turbine pump riser.  
22  
23 L = (1) Category-A USTs and their integral piping systems that contain vehicular fuel,  
24 and that are not protected from corrosion, shall have secondary containment, or  
25 be upgraded with secondary containment in accordance with Section 8.  
26  
27 (2) Dispenser liners and overfill protection equipment shall be installed at UST  
28 Category-A systems containing vehicular fuel.  
29  
30 O = UST Category-A vehicular fuel storage tank systems subject to Chapter 17-61,  
31 F.A.C.,(1984), shall be retrofitted for corrosion protection.  
32  
33 S = Secondary containment for storage tanks and integral piping not protected from  
34 corrosion.  
35  
36 9.03 Aboveground storage tank systems.  
37  
38 (a) All storage tank systems with tanks having capacities greater than 550 gallons  
39 that contain vehicular fuel and that were subject to Chapter 17-61, F.A.C., shall  
40 have met the requirements of such chapter by January 1, 1990.  
41  
42 (b) AST Category-B tanks, with the exception of tanks exempt under Subsection  
43 8.03(c)(1) installed or constructed at a facility after March 12, 1991, shall have  
44 secondary containment for the tank.  
45  
46 (c) Integral piping that is in contact with the soil and that is connected to AST  
47 systems shall have secondary containment if installed after March 12, 1991. For  
48 integral piping that is exempt under Subsection 8.04(e)(4), it is not required to  
49 install secondary containment.  
50  
51 (d) By January 1 of the appropriate year shown in Table AST below, unless specified  
52 otherwise, all AST Category-A and Category-B storage tank systems shall have  
53 met the following requirements or be permanently closed in accordance with  
54 Subsection 15.03.  
55

<b>TABLE AST</b>				
<u>Year Tank or Integral Piping Installed</u>	1993	2000	2005	2010
Before July 13, 1998	P	TVX	W	U

Key to Table AST

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- P = With the exception of high viscosity bulk product piping, bulk product piping in contact with soil and not in secondary containment shall be tested in accordance with API RP 1110, ASME B31.4, or an equivalent method approved by the Department in accordance with Rule 62-761.850, F.A.C. Such testing shall be performed annually thereafter.
- T = (1) With the exception of siting and material construction standards, Category-A and Category-B systems shall meet the performance standards of Section 8. In addition:
- (a) Storage tank system construction standards that include cathodic protection remain applicable; and
  - (b) Storage tanks where the entire bottom of the tank is in contact with concrete do not have to seal the concrete beneath the tank until such time that the tank bottom is replaced. However, concrete secondary containment systems designed in accordance with Subsection 8.01(e)(3), do not have to be sealed.
- (2) Category-A bulk product piping in contact with the soil shall be upgraded with secondary containment, unless:
- (a) A structural evaluation is performed in accordance with API 570, as specified in "U" (2)(b), of Table AST, and results of the structural evaluation indicate that the bulk product piping has remaining useful life; or
  - (b) The integral piping conveys high viscosity regulated substances, that are exempt from secondary containment in accordance with Subsection 8.04(e)(4); or
  - (c) The integral piping is protected from corrosion and is tested annually in accordance with ASME B31.4, API 1110, or an equivalent method approved by the Department in accordance with Rule 62-761.850, F.A.C. This piping shall have secondary containment by January 1, 2010, in accordance with "U" of Table AST.
- (3) Initial internal and external inspections, examinations, and tests for each tank shall be performed in accordance with API Standard 653, and an appropriate reinspection interval for each tank shall be established in accordance with API Standard 653. If any deficiency is discovered during the inspections, the person performing the evaluation of the tank in accordance with API 653 must verify that the tank is ready for service before the storage tank is put back into service. This verification must be documented in the internal inspection records. Future tests for each tank shall be performed in accordance with the inspection interval established in accordance with API 653 (1996). Baseline inspections already conducted according to the API Standard 653 (1991) will be accepted.
- (4) As an alternative to installing secondary containment underneath an AST Category-A or Category-B storage tank, the interior bottom of the tank and at least 18 inches up the sides may be internally lined in accordance with API RP 652. Secondary containment must nonetheless be installed in the dike field area and be continuously bonded to the perimeter of the tank foundation.
- U = (1) All internally lined single bottom storage tanks, with the exception of tanks exempt under Subsection 8.03(c)(1), shall be upgraded with secondary containment.

- 1 (2) All AST Category-A bulk product piping in contact with the soil , except for  
2 piping exempt from secondary containment requirements under Subsection  
3 8.04(e)(4), shall be:  
4
- 5 (a) Upgraded with secondary containment in accordance with Subsection  
6 8.01(e); or  
7
- 8 (b) Instead of being upgraded with secondary containment, be evaluated for  
9 structural integrity by:  
10
- 11 1. Establishing and maintaining the piping inspection intervals in  
12 accordance with API 570, Section 4-2, by January 1, 2000;  
13
- 14 2. Determining the remaining life of the system in accordance with  
15 API 570, Section 5.0, by January 1, 2000. If the determination  
16 indicates that the piping:  
17
- 18 a. Must be repaired, then the piping shall be repaired within  
19 three months of the determination in accordance with API  
20 570 and Section 13;  
21
- 22 b. Is leaking, then the piping must be immediately taken out  
23 of operation. If the piping cannot be repaired, it must be  
24 closed or upgraded with secondary containment within one  
25 year of the determination;  
26
- 27 c. Is not leaking, but has corroded to a point where it no  
28 longer has structural integrity, then the piping shall be  
29 closed, or upgraded with secondary containment by  
30 January 1, 2000; or  
31
- 32 d. Has remaining useful life, then the piping shall be closed  
33 or upgraded with secondary containment when the API 570  
34 inspection and remaining life determination data indicates  
35 that closure or replacement is necessary.  
36
- 37 3. Providing a certification by a professional engineer registered in  
38 the State of Florida that the evaluation meets the above criteria.  
39
- 40 V = (1) Secondary containment for cut and cover or concrete storage tanks.  
41
- 42 (2) Spill containment in accordance with Subsection 8.01(c).  
43
- 44 (3) Dispenser liners for shop-fabricated tanks in accordance with Subsection 8.03(e).  
45
- 46 (4) Secondary containment in accordance with Subsections 8.01(e) and 8.03(c), for  
47 dike field areas of facilities with shop-fabricated tanks having dike field area  
48 secondary containment that is constructed of concrete or installed with synthetic  
49 liners not meeting these requirements.  
50
- 51 W = (1) Secondary containment in accordance with Subsections 8.01(e) and 8.03(c), for  
52 dike field areas of facilities with field-erected tanks having dike field area  
53 secondary containment that is constructed of concrete or installed with synthetic  
54 liners not meeting these requirements.  
55
- 56 (2) Secondary containment for small diameter piping extending over surface waters.  
57
- 58 (3) Secondary containment for small diameter petroleum contact water piping in  
59 contact with the soil.

1 X = Deadline to determine integrity of single wall bulk product piping with an API 570  
2 structural integrity evaluation in accordance with the option for Category-A systems in  
3 “U” of Table AST.  
4

5 **Section 10 RELEASE DETECTION STANDARDS**  
6

7 10.01 General.  
8

- 9 (a) Storage tank systems shall have a method, or combination of methods, of release  
10 detection that:  
11  
12 (1) Can detect a new release from any portion of the storage tank system;  
13  
14 (2) Is installed, calibrated, operated and maintained in accordance with the  
15 manufacturer's instructions, including routine maintenance and service  
16 checks for operability to ensure that the device is functioning as designed;  
17 and  
18  
19 (3) Meets the applicable performance standards in Section 12. All  
20 manufacturer's instructions, and the performance claims and their manner  
21 of determination described in writing by the equipment manufacturer or  
22 installer shall be retained for as long as the storage tank system is used.  
23  
24 (b) A release detection response level shall be described in writing for each method  
25 or combination of methods of release detection used for a storage tank system.  
26  
27 (c) A release detection method shall be established and provided for all storage tank  
28 systems upon installation.  
29  
30 (d) Except as otherwise specified in Sections 10-12, the release detection method or  
31 combination of methods used at a facility shall be performed at least once a  
32 month, but not exceeding 35 days, to determine if a release from the storage tank  
33 system has occurred.  
34  
35 (e) At least once a month, but not exceeding 35 days, any storage tank and  
36 component of a storage tank that can be inspected visually shall be visually  
37 inspected in accordance with Subsection 12.02(e). A visual inspection is not  
38 required for any system component that has a continuous or monthly electronic  
39 release detection sensor. Continuous electronic leak detection devices shall be  
40 inspected for proper operation on a monthly basis. Inspection may consist of  
41 visual observation or remote verification of proper operation.  
42  
43 (f) A site suitability determination shall be performed for UST and AST systems in  
44 accordance with Subsections 12.02(a)-(d), for storage tank systems using  
45 groundwater or vapor monitoring wells for release detection. If the site suitability  
46 determination indicates that on-site conditions are unsuitable for external  
47 monitoring, another method of release detection must be used.  
48  
49 (g) Vapor monitoring plans shall be performed for UST and AST systems in  
50 accordance with Subsection 12.02(d) for storage tank systems using vapor  
51 monitoring for release detection.  
52  
53 (h) Any component of a storage tank system with secondary containment shall have  
54 an interstitial monitoring method meeting the requirements of Subsection  
55 12.03(a).  
56  
57 (i) Pressurized piping, excluding bulk product piping, shall be equipped with a line  
58 leak detector that meets the standards of Subsection 12.03(d)(1). Gravity piping  
59 systems are exempt from this requirement.

- 1 (j) Any storage tank system not provided with a method, or combination of methods,  
2 of release detection in accordance with this section, shall be closed in accordance  
3 with Subsection 15.03.  
4
- 5 (k) Groundwater and vapor monitoring wells meeting the standards for external  
6 monitoring specified in Subsections 12.02(a)-(d) that are no longer used for  
7 release detection, shall be closed in accordance with Rule 62-532.500(4), F.A.C.,  
8 by December 31, 2010. Wells not meeting these standards shall be closed in  
9 accordance with Rule 62-532.500(4), F.A.C., unless the wells are:  
10
- 11 (1) Used for contamination assessment purposes as specified in Subsection  
12 10.02(d); or  
13
- 14 (2) Required by rules adopted by Palm Beach County in accordance with  
15 Chapter 376.317, F.S.  
16
- 17 10.02 Underground storage tank systems.  
18
- 19 (a) Vehicular fuel petroleum storage tank systems of greater than 550 gallons  
20 capacity and all other storage tank and integral piping systems in contact with the  
21 soil shall be provided with release detection.  
22
- 23 (b) Any groundwater monitoring plan or spill prevention control and countermeasure  
24 plan implemented before December 22, 1990, shall be capable of detecting the  
25 leak rate or quantity specified in Subsection 12.01(a).  
26
- 27 (c) UST systems that store fuel solely for use by emergency power generators are not  
28 required to comply with the release detection standards of Sections 10-12.  
29
- 30 (d) Monitoring wells shall meet the standards of Subsection 12.02. Wells that do not  
31 meet these standards shall be closed in accordance with Rule 62-532.500(4),  
32 F.A.C. However, if a monitoring well is used solely for the purpose of  
33 monitoring petroleum contamination in accordance with Chapter 62-770, F.A.C.,  
34 the well does not have to be closed until the completion of the site rehabilitation  
35 pursuant to Chapter 62-770, F.A.C. Covers of leak detection monitoring wells  
36 redesignated as site assessment wells by the facility owner or operator shall be  
37 colored black with a white circle within the black background. The diameter of  
38 the white circle shall be approximately one half the diameter of the manhole  
39 cover, or approximately four inches.  
40
- 41 10.03 Aboveground storage tank systems.  
42
- 43 (a) The following methods of release detection that were implemented before March  
44 12, 1991, shall be capable of detecting the leak rate or quantity specified in  
45 Subsection 12.01(a):  
46
- 47 (1) Any groundwater monitoring plan that meets the requirements of Rule 62-  
48 528.700, F.A.C.; or  
49
- 50 (2) Any Spill Prevention Control and Countermeasure plan as required by 40  
51 C.F.R. Section 112.  
52
- 53 (b) All monitoring wells used for release detection shall meet the standards in  
54 Subsection 12.02, or be properly closed in accordance with Rule 62-532.500(4),  
55 F.A.C.  
56
- 57 (c) Release detection for field-erected storage tanks with secondary containment  
58 beneath the tank shall comply with API Standard 650, Appendix I.

- 1 (d) Storage tanks upgraded with internal lining shall, by the completion of the  
 2 installation of the internal lining, be provided with a method of release detection  
 3 that meets the standards in Subsection 12.02.  
 4
- 5 (e) AST integral piping in contact with the soil shall be provided with a method, or  
 6 combination of methods, of release detection. Integral piping in contact with the  
 7 soil having secondary containment shall have interstitial monitoring, and single-  
 8 walled integral piping in contact with the soil shall have release detection meeting  
 9 the requirements of Subsection 11.04.  
 10
- 11 (f) Facilities using a Spill Prevention Control and Countermeasure plan as required  
 12 by 40 C.F.R. Section 112, for release detection, or a groundwater monitoring plan  
 13 meeting the requirements of Rule 62-528.700, F.A.C., for release detection, shall  
 14 meet the release detection requirements of Section 11.  
 15
- 16 (g) ASTs containing high viscosity regulated substances are exempt from all release  
 17 detection requirements except for visual inspections pursuant to Subsection  
 18 12.02.  
 19

20 **Section 11. RELEASE DETECTION METHODS**

21  
 22 11.01 General.

- 23
- 24 (a) Category-A and Category-B systems. Owners or operators of a Category A or B  
 25 system shall use one of the release detection methods specified in this section,  
 26 and shall meet the performance standards contained in Section 12.  
 27
- 28 (b) Category-C systems. Owners or operators of a Category C system shall use either  
 29 interstitial or visual monitoring of the secondary containment for release  
 30 detection in accordance with Section 12. Small diameter pressurized piping shall  
 31 have a line leak detector in accordance with Subsection 12.03(d)(1). A breach of  
 32 integrity test shall be performed every five years for Category-C storage tank  
 33 systems with closed interstitial spaces, unless the test is a continuous test.  
 34

35 11.02 Underground storage tank systems. Category-A and Category-B USTs shall be equipped  
 36 with one or more of the following release detection systems:  
 37

- 38 (a) An interstitial monitoring system between the walls of a double-walled tank;  
 39
- 40 (b) Interstitial monitoring involving a single monitoring well or vapor detector  
 41 located within a liner that meets the standards in Subsection 8.01(e), provided the  
 42 well or detector is placed at the low point of the liner so that collected liquids will  
 43 drain to the monitoring point;  
 44
- 45 (c) A continuously operating release detection system placed around a tank in an  
 46 excavation or in the secondary containment in accordance with the manufacturer's  
 47 requirements;  
 48
- 49 (d) A network of groundwater or vapor monitoring wells installed or verified in  
 50 accordance with Subsections 12.02(a)-(d), as applicable;  
 51
- 52 (e) Automatic tank gauge systems;  
 53
- 54 (1) An automatic tank gauge system with a tightness test of the storage tank  
 55 every three years; or  
 56 (2) A continuous automatic tank gauge system;  
 57
- 58 (f) A statistical inventory reconciliation system with a tightness test of the storage  
 59 tank every three years;

- 1 (g) Manual tank gauging shall be performed as specified in Table MTG in  
2 Subsection 12.03(c), for tanks of 550 gallons or less nominal capacity, and for  
3 tanks 551-1000 gallons with known diameters of 48 or 64 inches;  
4
- 5 (h) Manual tank gauging may be used for tanks of 551 to 2000 gallons nominal  
6 capacity provided that a tank tightness test is performed:  
7
- 8 (1) Every 12 months for tanks not protected from corrosion by June 30,  
9 1992; or  
10
- 11 (2) Every five years for tanks installed with corrosion protection, or for tanks  
12 upgraded with corrosion protection by June 30, 1992. However, this  
13 method is only available for the first 10 years after:  
14
- 15 a. A tank is upgraded with cathodic protection; or  
16
- 17 b. A single-walled corrosion-protected tank is installed;  
18
- 19 (i) An annual tank test in conjunction with inventory control performed in  
20 accordance with Section 12. This method can only be used until:  
21
- 22 (1) Ten years after the date of installation of a single-walled corrosion  
23 protected tank;  
24
- 25 (2) Ten years after the tank is upgraded with corrosion protection or internal  
26 lining.  
27

28 11.03 Aboveground storage tank systems.  
29

- 30 (a) Tanks. Category-A and Category-B ASTs shall be equipped with one or more of  
31 the following release detection systems:  
32
- 33 (1) Tanks with secondary containment shall have an interstitial monitoring  
34 system:  
35
- 36 a. Between the walls of a double-walled tank;  
37
- 38 b. In the interstice between the tank and any liner used for secondary  
39 containment;  
40
- 41 c. Between the tank bottom and the secondary containment for  
42 double-bottomed tanks;  
43
- 44 (2) Tanks without secondary containment or that are exempt from secondary  
45 containment shall have a visual inspection performed in accordance with  
46 Subsection 11.03(b).  
47
- 48 (3) Tanks with internal lining and cut and cover tanks shall have a method of  
49 release detection that meets the requirements of Subsection 12.02.  
50
- 51 (b) Visual inspections of tank systems. A visual inspection of the exterior of each  
52 tank, the aboveground integral piping system, the secondary containment within  
53 the dike field area (if applicable), the dike field area, and any other storage system  
54 components shall be conducted and documented at least once a month, but not  
55 exceeding 35 days.  
56

57 11.04 Integral piping.  
58

- 59 (a) Small diameter piping in contact with the soil. Single-walled piping that is in  
60 contact with soil shall be equipped with one of the following release detection  
61 systems:

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- (1) Suction or gravity piping shall have:
    - a. An annual line tightness test; or
    - b. An external monthly monitoring or release detection method meeting the requirements of Subsection 12.02 if designed to detect a discharge from any portion of the integral piping.
  - (2) All pressurized piping shall have:
    - a. Mechanical line leak detectors meeting the requirements of Subsection 12.03(d) and either an annual line tightness test, or an external release detection method meeting the requirements of Subsections 12.02(a)-(d); or
    - b. Electronic line leak detectors meeting the requirements of Subsection 12.01(a).
  - (3) Exemptions. Release detection is not required for piping associated with:
    - a. Suction pumps, provided that a single check valve is installed directly below the suction pump, and the piping is sloped so that the contents of the pipe will drain back to the tank if the suction is broken. Written verification shall be provided by a certified contractor that no other check valves exist between the dispenser and the tank, and that the above criteria are met. Any subsequent modification of the piping which involves disconnection shall be recertified by a Certified Contractor that these conditions are still being met; and
    - b. Manifold piping systems.
  - (b) Small diameter piping not in contact with the soil, or that is exempt from secondary containment. These systems shall be visually inspected in accordance with Subsection 11.03(b).
  - (c) Small diameter piping with secondary containment that is in contact with the soil. Double-walled piping, or single-walled piping with secondary containment shall be equipped with the following release detection systems:
    - (1) Interstitial monitoring;
    - (2) A method of testing for a breach of integrity that meets the requirements of Subsection 12.03(a)(2), for Category-C systems, as applicable; and
    - (3) A line leak detector that restricts or shuts off flow or a continuously operating interstitial monitoring device that meets the requirements of Subsection 12.03(d)(1)e, for pressurized piping connected to a UST.
  - (d) Bulk product and hydrant piping.
    - (1) Single-walled piping in contact with the soil:
      - a. Shall be pressure tested annually in accordance with Subsection 12.03(e); or
      - b. Instead of annual testing, a monthly release detection system meeting the requirements of Subsection 12.02, may be installed.

- 1 (2) Piping not in contact with the soil, or that is exempt from secondary  
2 containment, shall be visually inspected in accordance with Subsection  
3 11.03(b).  
4
- 5 (3) Piping with secondary containment that is in contact with the soil, such as  
6 double-walled piping or single-walled piping with secondary containment,  
7 shall be equipped with the following release detection systems:  
8
- 9 a. Interstitial monitoring; and, if applicable,  
10
- 11 b. For Category-C systems, a method of testing for a breach of  
12 integrity that meets the requirements of Subsection 12.03(a)(2) for  
13 piping with closed interstitial spaces.  
14

15 **Section 12** **PERFORMANCE STANDARDS FOR RELEASE DETECTION**  
16 **METHODS**  
17

18 12.01 General.  
19

20 Methods of release detection shall:  
21

- 22 (a) Be capable of detecting a release of 0.2 gallons per hour or 150 gallons within 30  
23 days with a probability of detection of 0.95, and a probability of false alarm of  
24 0.05, with the exception of:  
25
- 26 (1) Tightness testing requirements in Subsections 12.03(c)(4) and  
27 12.03(d)(2);  
28
- 29 (2) Visual inspections in Subsection 12.02(e);  
30
- 31 (3) Groundwater or vapor monitoring in Subsection 12.02; and  
32
- 33 (4) Manual tank gauging in Subsection 12.03(c)(1).  
34
- 35 (b) With the exception of bailers and monitoring wells, be approved by the  
36 Department in accordance with Rule 62-761.850(2), F.A.C.  
37
- 38 (c) Have a release detection response level described in writing for each method or  
39 combination of methods.  
40

41 12.02 External release detection methods.  
42

- 43 (a) Well construction standards.  
44
- 45 (1) Monitoring well requirements. Monitoring wells shall be constructed and  
46 installed by a licensed water well contractor when required by Chapter 62-  
47 531, F.A.C. Monitoring wells shall:  
48
- 49 a. Be a minimum of two inches in interior diameter;  
50
- 51 b. Be slotted from the bottom to two feet below ground surface;  
52
- 53 c. Have a minimum slot size of 0.010 inch;  
54
- 55 d. Be backfilled with clean sand or a gravel filter pack to prevent  
56 blockage of the slots;  
57
- 58 e. Be constructed of at least schedule 40 PVC without any joints, or  
59 of another corrosion protected material;

- 1 f. Be grouted into the borehole from the surface to the top of the
- 2 filter pack plug with neat cement grout or other equivalent
- 3 materials. Grouting shall not extend below the top of the well
- 4 slotting. Bentonite slurry grouts shall not be used;
- 5
- 6 g. Unless the monitoring well has an extended exterior casing, be
- 7 equipped with a minimum six inch diameter manhole designed to
- 8 prevent water intrusion with a one inch minimum grade increase
- 9 above the surrounding surface. The well opening shall extend at
- 10 least one inch above the bottom of the manhole;
- 11
- 12 h. Be equipped with a watertight cap. The well shall be kept locked
- 13 or secured to prevent tampering at all times except when the
- 14 monitoring well is being sampled or maintained. Monitoring
- 15 wells shall be marked in accordance with API RP 1615;
- 16
- 17 i. Extend no deeper than 20 feet below ground surface. If such a
- 18 depth penetrates a confining layer below the excavation, the
- 19 monitoring well shall extend no deeper than to within six inches of
- 20 the confining layer. Any well that penetrates a confining layer
- 21 shall immediately be properly abandoned in accordance with Rule
- 22 62-532.500, F.A.C.; and
- 23
- 24 j. If installed within a secondary containment liner system, extend no
- 25 deeper than six inches from the liner.
- 26
- 27 (2) Groundwater monitoring wells shall:
- 28
- 29 a. Extend at least five feet below the normal groundwater surface
- 30 level; and
- 31
- 32 b. Be properly developed by the licensed water well contractor before
- 33 the initial sampling.
- 34
- 35 (3) Vapor monitoring wells shall meet the requirements specified in the
- 36 Department's "Guidelines for Vapor Monitoring."
- 37
- 38 (4) Electronic sensors, probes, or fiber-optic systems shall be tested at least
- 39 annually to verify that they operate in accordance with the Department's
- 40 approval given pursuant to Rule 62-761.850(2), F.A.C.
- 41
- 42 (5) Groundwater and vapor monitoring wells using the placement of sensors
- 43 or probes in vertical, horizontal, or directionally-drilled wells shall be
- 44 designed and installed in accordance with the equipment approval for that
- 45 system granted in Rule 62-761.850(2), F.A.C.
- 46
- 47 (b) Site suitability determinations.
- 48
- 49 (1) A site suitability determination shall be performed for each facility using
- 50 groundwater or vapor monitoring. The site suitability determination shall
- 51 be performed in accordance with the Department's "Guidelines for Site
- 52 Suitability Determinations for External Monitoring" by a professional
- 53 geologist registered in the State of Florida. If the site is not suitable for
- 54 external monitoring, another method of release detection must be used.
- 55
- 56 (2) The following facilities having Category-A and Category-B USTs and
- 57 ASTs that use external monitoring are not required to perform site
- 58 suitability determinations:

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- a. Facilities with monitoring wells located in the tank excavation, provided that a demonstration can be made that the excavation contains sand or gravel backfill, and the wells were properly constructed and installed within the backfill.
  
- (c) Groundwater monitoring.
  - (1) The regulated substance shall be immiscible in water and have a specific gravity of less than one.
  
  - (2) Groundwater monitoring shall not be used for release detection after free product or a sheen is discovered in a monitoring well, unless:
    - a. A Site Rehabilitation Completion Order has been issued by the Department following the remediation of the free product or sheen, and there is no longer any free product in the monitoring well; or
  
    - b. Free product or sheen is not present and has not been observed in the well within the previous thirty (30) months, as demonstrated by records of at least six (6) monthly ground water monitoring sampling events, and within the previous two years, the system has been tested tight with tank and line piping tests or another internal method of release detection performed in accordance with Subsection 12.03.
  
  - (3) Another method of release detection specified in Section 11, other than groundwater monitoring, shall be used when:
    - a. There is less than one foot of groundwater present in the well; or
  
    - b. The groundwater level is above the slotted portion of the well.
  
  - (4) Records. The following information shall be maintained in accordance with the recordkeeping requirements of this Ordinance:
    - a. Date of sampling;
  
    - b. Depth of well;
  
    - c. Depth to groundwater;
  
    - d. Any presence of odor of stored regulated substances; and
  
    - e. Any sheen or free product found.
  
- (d) Vapor monitoring.
  - (1) Vapor monitoring can only be used to monitor regulated substances that are sufficiently volatile to be detected in soils or groundwater by vapor monitoring equipment.
  
  - (2) The measurement of vapors in a vapor monitoring well shall not be rendered inoperative by groundwater, rainfall, soil moisture or other known interferences so that a discharge could go undetected for more than 30 days.
  
  - (3) Sampling equipment shall be capable of detecting:

- 1 a. A vapor concentration of 500 parts per million total petroleum
- 2 hydrocarbons, as measured by a flame ionization detector, for
- 3 storage tank systems containing gasoline or equivalent petroleum
- 4 substances;
- 5
- 6 b. A vapor concentration of 50 parts per million total petroleum
- 7 hydrocarbons, as measured by a flame ionization detector, for
- 8 storage tank systems containing kerosene, diesel or equivalent
- 9 petroleum substances;
- 10
- 11 c. Vapor concentrations of hazardous substances or their constituents
- 12 that would indicate a release; or
- 13
- 14 d. Vapor concentrations of tracer compounds used for release
- 15 detection.
- 16
- 17 (4) Vapor monitoring shall not be used for release detection if existing
- 18 contamination interferes with the ability to detect a new release.
- 19
- 20 (5) The vapor monitoring plan shall be developed and performed in
- 21 accordance with the Department's "Guidelines for Vapor Monitoring."
- 22 The plan shall include a description of monitoring wells or probes, the
- 23 method of sampling, the establishment of a release detection response
- 24 level and the data management procedures. Facilities with monitoring
- 25 wells located in the tank excavation do not have to meet the requirements
- 26 for the Department's "Guidelines for Site-Suitability Determinations for
- 27 External Monitoring," under this Ordinance, provided that a
- 28 demonstration can be made that the excavation contains sand or gravel
- 29 backfill, and the wells were properly constructed and installed within the
- 30 backfill.
- 31
- 32 (e) Visual inspections. Any visual inspection of the storage tank system or its
- 33 secondary containment that reveals signs of corrosion, cracks, structural damage,
- 34 leakage, or other similar problems shall be noted. Repairs shall be made in
- 35 accordance with the requirements of Section 13.
- 36

### 37 12.03 Internal release detection methods.

- 38
- 39 (a) Interstitial monitoring for UST and AST systems.
- 40
- 41 (1) Interstitial monitoring for double-walled tanks, double-walled integral
- 42 piping, dispenser liners, piping sumps, and other secondary containment
- 43 systems, shall be designed and constructed to allow monitoring of the
- 44 space between the primary and secondary containment. One or more of
- 45 the following methods of interstitial monitoring shall be used:
- 46
- 47 a. Manual sampling of, or visual monitoring for, liquids;
- 48
- 49 b. Continuous electronic sensing equipment;
- 50
- 51 c. Hydrostatic monitoring systems; or
- 52
- 53 d. Vacuum monitoring.
- 54
- 55 (2) Breach of integrity tests for Category-C systems. A test shall be
- 56 performed for a breach of integrity of the interstice for double-walled
- 57 USTs, double-bottomed ASTs, and for double-walled integral piping that
- 58 is in contact with the soil and that is connected to ASTs or USTs.
- 59 Double-walled shop-fabricated ASTs, piping sumps, and dispenser liners
- 60 are not required to perform a breach of integrity test. The test shall be
- 61 performed to determine the integrity of the inner and outer wall, is

1 required only for tanks and integral piping with closed interstices, and  
2 does not apply to open-interstice systems with liners. The test shall be  
3 performed at the time of installation, and every five years from the date of  
4 installation, unless the test is a continuous test. If a UST is totally  
5 submerged in groundwater, monthly monitoring of the interstice for the  
6 presence of water shall be conducted. The breach of integrity test may be  
7 performed by using at least one of the following methods:  
8

- 9 a. A continuous hydrostatic system approved by the Department in  
10 accordance with Rule 62-761.850(2), F.A.C.;
- 11
- 12 b. A continuous vacuum system, pursuant to Subsection 12.03(a),  
13 that is approved by the Department in accordance with Rule 62-  
14 761.850(2), F.A.C. ;
- 15
- 16 c. Testing of the interstice for liquid tightness in accordance with  
17 manufacturer's installation instructions; or
- 18
- 19 d. Another method in accordance with Section 17.

20  
21 (3) Vacuum monitoring of the interstice shall meet the following  
22 requirements:

- 23
- 24 a. Liquid-filled gauges and air-filled gauges shall be calibrated in  
25 accordance with the National Institute of Standards and  
26 Technology. The gauges shall be operational at all times.
- 27
- 28 b. Vacuum monitoring may be used as a continuous method of  
29 release detection provided that the vacuum system is equipped  
30 with an audible or visual alarm. The alarm shall indicate when the  
31 minimum vacuum level allowed is reached as provided in the  
32 equipment approval granted in accordance with Rule 62-  
33 761.850(2), F.A.C.
- 34
- 35 c. Vacuum readings shall be recorded monthly. Upon discovery of  
36 any significant vacuum level decrease, or any loss of vacuum  
37 exceeding 20% of the initial level, or any loss in excess of the  
38 levels established in the test protocols provided in the third party  
39 certification for the test method, the tank manufacturer shall be  
40 contacted and the vacuum refreshed in accordance with the storage  
41 tank system's equipment approval in Rule 62-761.850(2), F.A.C.  
42 If the loss of vacuum persists, an investigation shall be initiated  
43 and an incident reported in accordance with Subsection 7.02. The  
44 source of the loss shall be repaired in accordance with Section 13.

45  
46 (4) Interstitial monitoring for storage tanks and integral piping equipped with  
47 liners shall be designed and constructed to allow monitoring of the space  
48 between the primary and secondary containment and shall:

- 49
- 50 a. Be capable of detecting a release through the inner wall into the  
51 interstice;
- 52
- 53 b. Be constructed and installed so that groundwater, rainfall, or soil  
54 moisture will not render the testing or sampling method used  
55 inoperative; and
- 56
- 57 c. Be equipped with an external release detection method meeting  
58 the standards of Subsections 12.02(a)-(d), except for the  
59 groundwater level and excavation zone assessment requirements;  
60 or

61

- 1 d. Be visually inspected in accordance with Subsection 12.02(e); or  
2  
3 e. Be equipped with a monitoring device approved in accordance  
4 with Rule 62-761.850(2), F.A.C., installed at the monitoring point  
5 within the liner.  
6  
7 (b) Inventory control.  
8  
9 (1) General.  
10  
11 a. Inventory control shall be maintained for each single-walled tank  
12 that contains vehicular fuel.  
13  
14 b. Storage tank systems that are elevated above the soil or that have  
15 secondary containment are exempt from inventory control  
16 requirements. ASTs that rest on an impervious surface are also  
17 exempt.  
18  
19 (2) Inventory control for USTs and shop-fabricated ASTs shall be performed  
20 and recorded in accordance with API RP 1621, as applicable. Manifolded  
21 tanks may be treated as a single tank for the purposes of inventory control.  
22 Inventory control shall be performed in the following manner:  
23  
24 a. Volume measurements for product inputs, withdrawals, and the  
25 amount remaining in each tank shall be recorded each operating  
26 day;  
27  
28 b. Measurements of product levels shall be recorded to the nearest  
29 one-eighth of an inch;  
30  
31 c. Product inputs shall be reconciled with delivery receipts by  
32 measurement of the tank product volume before and after delivery;  
33  
34 d. Product dispensed shall be metered as required by Chapters 525  
35 and 531, F.S., and in accordance with the standards established by  
36 the Florida Department of Agriculture and Consumer Services in  
37 Chapter 5F-2, F.A.C.;  
38  
39 e. The measurement of water level in the bottom of the tank shall be  
40 made at least once a week to the nearest one-eighth of an inch; and  
41  
42 f. The significant loss or gain of product shall be calculated for each  
43 month.  
44  
45 (3) Inventory control requirements for USTs. Water fluctuations exceeding  
46 one inch not attributed to deliveries shall be investigated in the following  
47 manner:  
48  
49 a. The accessible parts of the storage system shall be inspected for  
50 damage or openings;  
51  
52 b. Release detection systems shall be checked for signs of a  
53 discharge; and  
54  
55 c. If, within a week, the investigation does not reveal the source of  
56 the water fluctuation, the entire storage tank system shall be tested  
57 in accordance with Subsection 12.03.  
58  
59 (4) Inventory control requirements for field-erected ASTs.

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- a. Bulk product facilities may use product inventory control for multiple tanks provided that a demonstration of equivalent protection is made in accordance with Subsection 17.01.
  - b. Inventory measurements for field-erected systems, manifolded systems, and non-manifolded systems with a capacity of 30,000 gallons or greater shall be reconciled to detect the presence of a significant loss or gain. The equipment and method used shall be capable of accurately measuring the level or volume of product over the full range of the tank's usable storage capacity, to the nearest one fourth of an inch.
- (5) Investigation procedures for significant loss or gain. An investigation shall be initiated immediately to determine the source of a significant loss or gain. The entire storage tank system, excluding the vent, but including piping connections and remote fill lines, shall be tested or inspected to determine if the system is product tight. The investigation shall continue until the source has been found, using the following investigative procedure:
- a. Inventory records shall be checked for errors in arithmetic, data recording, and measurement;
  - b. If the significant loss or gain is not reconcilable or cannot be affirmatively demonstrated to be the result of theft, the accessible parts of the storage system shall be checked for damage or leaks;
  - c. Release detection systems shall be checked for signs of a discharge;
  - d. Calibration of the inventory measuring system and dispensing system shall be verified;
  - e. If the investigation does not reveal the source of the significant loss or gain within one week for USTs, and two weeks for ASTs, or if ERM determines that it is necessary to investigate based on evidence that the significant loss or gain could result in potential harm to the environment, the storage tank system shall be tested in accordance with the manufacturer's guidelines, if applicable, and Subsections 12.03 and 12.04; and
  - f. If a discharge is discovered, the leaking or defective component of the storage tank system shall be repaired in accordance with Section 13. If the storage tank system cannot be repaired, it shall be closed in accordance with Subsection 15.03.
- (c) Underground storage tanks.
- (1) Manual tank gauging. Manual tank gauging for tanks of 2000 gallons or less containing regulated substances shall meet the following requirements:
- a. Tank liquid level measurements shall be taken weekly at the beginning and ending of a period between 36 hours and 58 hours in accordance with Table MTG, during which no liquid is added to or removed from the tank;
  - b. Level measurements shall be based on an average of two consecutive stick readings taken at both the beginning and ending of the period; and

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- c. The equipment used shall be capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.
- d. Readings exceeding the standards described in Table MTG shall be investigated in accordance with Section 16.

<b>TABLE MTG</b>			
<b>Nominal tank capacity</b>	<b>Minimum duration of test</b>	<b>Weekly standard (one test)</b>	<b>Monthly standard (average of four tests)</b>
550 gallons or less	36 hours	10 gallons	5 gallons
551-1,000 gallons (Tank diameter is less than or equal to 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (Tank diameter is less than or equal to 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (Tank diameter unknown)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons	36 hours	26 gallons	13 gallons

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- (2) Automatic tank gauge systems.
  - a. Automatic tank gauge systems that do not analyze data in a continuous manner shall be placed in a test mode at least once every 30 days.
  - b. Automatic tank gauge systems that continuously analyze the data collected by the system shall be operated in continuous test mode at all times and shall provide test results daily.
- (3) Statistical Inventory Reconciliation (SIR). SIR shall be conducted according to the following requirements:
  - a. Data submitted for SIR analysis must be gathered in accordance with the requirements of Subsections 12.03(b)(2) a.-f.;
  - b. Results of each monthly analyses must include the calculated results from the data set for leak threshold, the minimum detectable leak rate, the calculated leak rate, and a determination of whether the result of the test was "Pass," "Fail," or "Inconclusive." For the purposes of this section, the "leak threshold" is defined as the specific leak threshold of the SIR method approved in accordance with Rule 62-761.850(2), F.A.C., to meet the release detection level specified in Subsection 12.01(a);
  - c. "Pass" means that the calculated leak rate for the data set is less than the leak threshold and the minimum detectable leak rate is less than or equal to the certified performance standard (0.2 gph);

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- d. "Fail" means that the calculated leak rate for the data set is equal to or greater than the leak threshold;
  - e. "Inconclusive" means that the minimum detectable leak rate exceeds the certified performance standard (0.2 gph) and the calculated leak rate is less than the leak threshold. If for any other reason the test result is not a "pass" or "fail," the result is "inconclusive";
  - f. An Incident Notification Form shall be submitted to ERM when a monthly SIR report of "Fail" is received;
  - g. An Incident Notification Form shall be submitted to ERM after the receipt of two consecutive monthly SIR reports of "Inconclusive." An investigation shall be performed in accordance with the Incident Response requirements specified in Section 16. However, if at the end of the fourteen day investigation period provided in Subsection 16.01, the SIR data from the previous month is still inconclusive, a tightness test of the system shall be performed;
  - h. A data set shall consist of at least one month of valid data gathered over a time period not exceeding 35 days. A minimum of 20 data points over this 35 day period shall be used to calculate the leak rate unless the vendor of the SIR system approved under Rule 62-761.850(2), F.A.C., has provided a third party determination that a lesser number of data points is capable of detecting a release of 0.2 gph or 150 gallons within 30 days with a probability of detection of 0.95 and a probability of false alarm of 0.05; and
  - i. Results of monthly evaluations shall be recorded on Form 62-761.900(7) or on another similar form that provides the same information. These forms shall be kept as records in accordance with Section 14.
- (4) Tightness testing.
- a. Tightness testing for all tanks shall be capable of detecting a 0.1 gph leak rate with a probability of detection of 0.95 and a probability of false alarm of 0.05 from any portion of the tank. Tightness testing shall account for the effects of thermal expansion or contraction of the regulated substance, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.
  - b. If any volumetric tank tightness test is conducted at a level lower than the overfill protection device set point, a non-volumetric test shall also be used to test the ullage portion of the tank. When volumetric tests are conducted, there must be a minimum pressure differential of plus or minus one psig (pounds per square inch gauge), measured at the bottom of the tank, between the product hydrostatic pressure inside the tank and the hydrostatic pressure due to the external water table. When using this method, positive field verification of the depth of the water table must be performed, and the minimum liquid level of product in the tank shall be at least 30% of tank capacity, provided that the third party evaluation for the test method verifies detection capability at this level. If the water table depth cannot be verified, the minimum liquid level for volumetric tank testing shall be 65% of tank capacity.

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- c. Tank and line tightness testing shall be performed in accordance with Chapter 4 of NFPA 329.
  - d. Overfill protection and spill containment devices shall be inspected before a tightness test is performed to ensure that these devices do not interfere with the test, and after the test to ensure that the devices are operating properly.
- (d) Small diameter integral piping in contact with the soil.
- (1) Line leak detectors for USTs. Line leak detectors shall:
    - a. Be capable of detecting a discharge of 3.0 gph with a probability of detection of 0.95 and a probability of false alarm of 0.05 at a line pressure of 10 psi within one hour;
    - b. Have an annual test of the operation of the leak detector conducted in accordance with the manufacturer's requirements by an individual certified or trained by the manufacturer to determine whether the device is functioning as designed. Remote testing of the leak detector can be performed by the manufacturer if the remote test is approved under Rule 62-761.850(2), F.A.C.;
    - c. Restrict flow within one hour if designed with mechanical flow restriction;
    - d. When a discharge of 3.0 gph is detected, shut off power to the pump if designed with automatic electronic shutoff. When in test mode, line leak detectors with automatic electronic shutoff shall also be able to detect a discharge of 0.2 gph at a line pressure of 150% of operating pressure, or an equivalent leak rate, with a probability of detection within a one month period of at least 0.95 and a probability of false alarm of no more than 0.05. When a discharge of 0.2 gph is detected, the leak detector shall provide audible or visual alarms that can be clearly heard or seen by the operator of the facility, or if monitored remotely on a real time basis, the alarm condition must be immediately transmitted from the remote location to the facility operator; and
    - e. Instead of using a line leak detector as a method of release detection for pressurized small diameter piping associated with double-walled integral piping, a continuously operating interstitial monitoring device can be used. Continuously operating interstitial monitoring devices shall be capable of detecting a release of 10 gallons within one hour and shutting off the pump.
  - (2) Tightness testing. Tightness testing for pressurized piping in contact with the soil shall be capable of detecting a 0.1 gallon per hour leak rate at one and one-half times the operating pressure with a probability of detection of 0.95 and a probability of false alarm of 0.05.
- (e) Bulk product piping.
- (1) An annual test shall be performed of single-walled bulk product piping in contact with the soil. Prior to testing the piping system, a leak tightness evaluation of all exposed components shall be performed through visual inspection, or by another method approved by the Department in accordance with Rule 62-761.850, F.A.C. The evaluation shall be verified and recorded. One of the following methods shall be used for the annual test:

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- a. A bulk product piping test method approved in accordance with Rule 62-761.850(2), F.A.C.;
  - b. An API RP 1110 hydrostatic test; or
  - c. An ASME B31.4 hydrostatic test.
- (2) Double-walled bulk product and hydrant piping, and other bulk product piping equipped with secondary containment shall have methods of release detection and testing for a breach of integrity that meet the requirements of Subsections 12.03(a)(2) or (4), as applicable.
- (3) Records of all test results shall be maintained in accordance with the Appendix-Test Records of API RP 1110, or Chapter VI of ASME B31.4, as applicable, pursuant to Subsection 14.01.

**Section 13     REPAIRS, OPERATION AND MAINTENANCE OF STORAGE TANK SYSTEMS**

13.01 General.

- (a) Repairs.
- (1) Repairs shall be performed if any component of a storage tank system is discovered to have:
- a. Discharged or contributed to the discharge of a regulated substance;
  - b. A release of regulated substances or AST water bottoms into secondary containment;
  - c. The presence of groundwater in the interstice of a double-walled UST or pipe; or
  - d. An operational or structural problem that could potentially result in a discharge or release.
- (2) If repairs are required for any component or part of a storage tank system, and the nature of the repair activities or the condition of the component or part of the system requiring a repair may result in a release, and the component or part cannot be otherwise isolated from the system, the storage tank system shall be taken out of operation until the tank has been repaired or replaced. The restrictions against storage tank system operation shall not apply if the system contains heating oil or other fuels used solely for the generation of electricity where the removal of the storage system from service would result in the shut down of electrical generating units serviced by the system.
- (3) Repairs shall be made:
- a. In a manner that will prevent discharges from structural failure or corrosion for the remaining operational life of the storage tank system;
  - b. In accordance with manufacturer's specifications, NFPA Standard 30 or other applicable reference standards; and
  - c. To restore the structural integrity of the storage tank system.

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- (4) Repaired components shall be tightness tested, pressure tested, or tested for a breach of integrity, as applicable, before being placed back into service.
  - (5) Repairs to fiberglass reinforced plastic tanks and steel tanks coated with a fiberglass reinforced plastic composite shall be made by an authorized representative of the tank manufacturer or its successor, or in accordance with Subsection 8.02.
  - (6) Piping that is damaged or that has caused a discharge of a regulated substance shall be replaced or repaired. Pipe sections and fittings may be repaired in accordance with applicable standards in Subsection 8.04. Replacement of additional lengths of piping in contact with the soil are exempt from the requirements for secondary containment, provided that:
    - a. The piping system does not have, or will not have to install, secondary containment until the deadlines established in Section 9; and
    - b. The length of replacement or additional piping is less than 25% of the total length of the existing integral piping for the individual tank, or 100 feet, whichever is less.
- (b) Cathodic protection.
- (1) Cathodic protection systems shall be installed, operated and maintained to provide continuous corrosion protection to the metal components of those portions of the tank and integral piping in contact with the soil.
  - (2) Inspection and testing requirements.
    - a. General. Storage tank systems equipped with any type of cathodic protection must be inspected and tested by a Corrosion Professional or a Cathodic Protection Tester within six months of installation or repair and at least every year thereafter in accordance with the criteria contained in NACE International RP-0169-96, RP-0193-93, and RP-0285-95, as applicable. Factory-installed (galvanic) cathodic protection systems may be tested every three years.
    - b. Impressed current systems. Storage tank systems with impressed current systems shall be inspected at intervals not exceeding two months. All sources of impressed current shall be inspected. Evidence of proper functioning shall be current output, normal power consumption, a signal indicating normal operation, or satisfactory electrical state of the protected structure. Impressed current systems that are inoperative for a cumulative period exceeding 1440 hours shall be assessed by a Corrosion Professional to ensure that the storage tank system is structurally sound, free of corrosion holes, and operating in accordance with the design criteria.
    - c. Sacrificial anode systems. Storage tank systems with sacrificial anodes shall either have permanent test stations for soil-to-structure potential measurements or use temporary field test stations for annual testing in accordance with Subsection 13.01(b)(2)a.

- 1 (3) Storage tank systems with cathodic protection systems that cannot achieve  
2 or maintain protection levels in accordance with the design criteria shall:  
3  
4 a. Be repaired in accordance with Subsection 13.01(b)(2)a, or  
5  
6 b. Be placed out-of-service in accordance with Subsection 15.02.  
7  
8 (4) Records of the continuous operation of impressed current systems and all  
9 cathodic protection inspection and testing activities shall be maintained in  
10 accordance with Subsection 14.03.  
11  
12 (c) Operation and maintenance.  
13  
14 (1) Spill containment devices, dispenser liners, and piping sumps shall be  
15 maintained to provide access for monthly examination and water removal  
16 as necessary. Water collected in spill containment devices, or in piping  
17 sumps and dispenser liners that is above the opening of the integral piping  
18 connection, or any regulated substances collected in these storage tank  
19 system components shall be removed and be either reused or properly  
20 disposed of.  
21  
22 (2) Owners or operators shall ensure that the volume available in the tank is  
23 greater than the volume of regulated substances to be transferred to the  
24 tank before the transfer is made and shall ensure that any transfer is  
25 repeatedly monitored to prevent overfilling and spilling.  
26  
27 (3) All release detection devices shall be tested annually to ensure proper  
28 operation. The test shall be conducted according to manufacturer's  
29 specifications, and shall include, at a minimum, a determination of  
30 whether the device operates as designed.  
31  
32 (4) Petroleum contact water from storage tank systems shall be managed in  
33 accordance with Chapter 62-740, F.A.C.  
34  
35 (5) Exterior Coatings may be maintained in accordance with SSPC PA-1.  
36  
37 (6) Regardless of the method of release detection used, inventory control shall  
38 be performed for USTs and ASTs that contain vehicular fuel and that do  
39 not have secondary containment. One of the following methods of  
40 inventory control shall be used:  
41  
42 a. Inventory control in accordance with Subsection 12.03(b);  
43  
44 b. Statistical inventory reconciliation in accordance with Subsection  
45 12.03(c)(3);  
46  
47 c. Automatic tank gauging in accordance with Subsection  
48 12.03(c)(2); or  
49  
50 d. Manual tank gauging in accordance with Subsection 12.03(c)(1).  
51  
52 13.02 Underground storage tank systems.  
53  
54 (a) Single-walled storage tank systems that have been upgraded with cathodic  
55 protection or internally lined before June 30, 1992, may be repaired in accordance  
56 with this section until the storage tank system is upgraded with secondary  
57 containment in accordance with Section 9. Storage tank systems with secondary  
58 containment may be repaired in accordance with this section at any time during  
59 the operational life of the storage tank system.

- 1 (b) Tanks shall be tightness tested before being placed back in service, unless another  
2 testing method has been approved in accordance with Rule 62-761.850(2), F.A.C.  
3 Small diameter piping shall be tightness tested before being placed back into  
4 service whenever dispensers connected to that piping are replaced or whenever  
5 the piping has been disconnected and then reconnected.  
6
- 7 (c) Tanks may be repaired with internal lining if;  
8
- 9 (1) The internal lining is installed in accordance with API RP 1631, and  
10 documentation is available from the installer that demonstrates these  
11 requirements have been met; and  
12
- 13 (2) Within 10 years after the installation of internal lining, and every five  
14 years thereafter, the internally lined tank is:  
15
- 16 a. Inspected internally in accordance with NLPA 631, Chapter B and  
17 found to be structurally sound with the internal lining still  
18 performing in accordance with original design specifications, or  
19 repaired to original design specifications in accordance with API  
20 RP 1631. If the tank fails to meet these criteria, the owner or  
21 operator shall close the storage tank system in accordance with  
22 Subsection 15.03; or  
23
- 24 b. Evaluated in accordance with ASTM Designation ES40-94 and  
25 determined by a Corrosion Professional to be suitable for the  
26 installation of cathodic protection. If a determination is made that  
27 the system is suitable, cathodic protection shall be designed by a  
28 Corrosion Professional, installed by a Certified Contractor, and  
29 operated in accordance with Section 8. If the system is determined  
30 to be unsuitable, it shall be closed in accordance with Subsection  
31 15.03; and  
32
- 33 c. Tightness tested in accordance with Subsection 12.03, before the  
34 tank is placed back into service and every five years after  
35 installation of the internal lining.  
36
- 37 (d) Tanks may be repaired with internal lining and cathodic protection if:  
38
- 39 (1) The internal lining is installed in accordance with API RP 1631;  
40
- 41 (2) The cathodic protection system meets the requirements of Subsection  
42 8.01(f)(2); and  
43
- 44 (3) A tightness test that meets the requirements of Subsection 12.03, is  
45 performed before the tank is placed back into service and every five years  
46 after installation of the internal lining.  
47
- 48 (e) UST Category-A tanks that were upgraded with internal lining or cathodic  
49 protection, or both, shall be internally inspected or tightness tested, as applicable,  
50 in accordance with Subsection 13.02(c)(2).  
51
- 52 13.03 Aboveground storage tank systems.  
53
- 54 (a) Stormwater management for secondary containment systems.  
55
- 56 (1) The removal or release of stormwater from a facility should be performed  
57 in accordance with all applicable Department rules (for example, Chapter  
58 62-25, F.A.C., Regulation of Stormwater Discharge). Owners and  
59 operators are advised that other federal and state requirements may apply  
60 to these activities.  
61

- 1 (2) Accumulated stormwater shall:  
2  
3 a. Be drawn off within one week after a rainfall event unless another  
4 frequency is allowed by the facility's stormwater discharge permit  
5 or by another instrument, such as a Spill Prevention Control  
6 Countermeasure Plan or a Department permit; and  
7  
8 b. Not be discharged without treatment if it has a visible sheen.  
9  
10 (3) If gravity drain pipes are used to remove water from the dike field areas,  
11 all valves shall be kept closed except when the operator is in the process  
12 of draining water.  
13  
14 (b) API 653 inspections. Field-erected tanks shall be evaluated and the re-testing  
15 frequency established and implemented in accordance with API Standard 653.  
16 AST Category-B and Category-C tanks shall be evaluated at the time of  
17 installation. Initial examinations for AST Category-A and Category-B tanks shall  
18 have been completed by the effective date of this Ordinance. Evaluations shall be  
19 certified by a professional engineer registered in the State of Florida, or approved  
20 by an API 653 inspector. Non-destructive testing shall be performed by qualified  
21 personnel as specified in API 653 and API 650. All field-erected tanks shall be  
22 repaired in accordance with API Standard 653.  
23  
24 (c) Testing for piping in contact with soil.  
25  
26 (1) Small diameter piping shall be tightness tested before being placed back  
27 into service whenever dispensers connected to that piping are replaced or  
28 whenever the piping has been disconnected and then reconnected.  
29  
30 (2) Hydrant piping and bulk product piping shall be pressure tested in  
31 accordance with Subsection 12.03(e), before being placed back into  
32 service.  
33  
34 (d) Bulk product piping extending over surface water shall:  
35  
36 (1) Be tested annually in accordance with Title 33, Part 156.170, Code of  
37 Federal Regulation; and  
38  
39 (2) Be maintained and operated in accordance with Title 33, Part 154, as  
40 applicable.  
41  
42 (e) Secondary containment systems shall be repaired as necessary to maintain  
43 product tightness and containment volume of the system, including sealing cracks  
44 in concrete, repairing punctures, and maintaining containment walls. If the  
45 storage tank secondary containment system has a crack, puncture, or other defect  
46 that compromises the system's product tightness, the system shall be repaired in  
47 accordance with Subsection 8.01(e).  
48  
49 (f) Overfill protection shall be performed in accordance with API RP 2350 and  
50 NFPA 30, Section 2-10, for each field-erected AST that receives fuel by mainline  
51 pipeline or marine vessels.  
52

53 **Section 14 RECORDKEEPING**

- 54  
55 14.01 All records shall be dated, maintained in permanent form, and available for inspection by  
56 ERM. If records are not kept at the facility, they shall be made available at the facility or  
57 another agreed upon location upon five working days notice. Site access to the facility  
58 shall be provided for compliance inspections conducted at reasonable times.

- 1 14.02 Records of the following are required to be kept for two years:  
2  
3 (a) Measurements and reconciliations of inventory, as applicable;  
4  
5 (b) Repair, operation, and maintenance records;  
6  
7 (c) Release detection results, including electronic test results, regardless of the  
8 frequency, and monthly visual inspections performed in accordance with  
9 Subsection 12.02(e). The presence of a regulated substance's odor, sheen, or free  
10 product shall be recorded for each sampling event;  
11  
12 (d) Release detection response level descriptions;  
13  
14 (e) A copy of all test data and results gathered during tightness tests, pressure tests,  
15 and breach of integrity tests, and the name and type of the test approved under  
16 Rule 62-761.850, F.A.C. ;  
17  
18 (f) Certification of Financial Responsibility on Form 62-761.900(3);  
19  
20 (g) Records of types of fuels stored per tank; and  
21  
22 (h) The repair or replacement of gaskets, valve packings, valves, flanges, and  
23 connection/disconnection fittings for bulk product piping if the repair or  
24 replacement is performed in response to a discharge or loss of regulated  
25 substances.

- 26  
27 14.03 Records of the following shall be maintained for the life of the storage tank system:  
28  
29 (a) Results of internal inspections and non-destructive testing;  
30  
31 (b) Any performance claims for release detection equipment described in writing by  
32 the equipment manufacturer or installer;  
33  
34 (c) Records of storage tank system installations, replacements, and upgrades;  
35  
36 (d) Records of installation, maintenance, inspections, and testing of cathodic  
37 protection systems in accordance with NACE standards;  
38  
39 (e) Site suitability determinations in accordance with Subsection 12.02;  
40  
41 (f) Vapor monitoring plans and all records kept pursuant to the plan;  
42  
43 (g) Closure assessment reports if the location continues as a facility; and  
44  
45 (h) Verification from a Certified Contractor of the existence of a single check valve  
46 beneath the suction pump for suction piping systems.

47  
48 **Section 15 OUT-OF-SERVICE AND CLOSURE REQUIREMENTS**

- 49  
50 15.01 Temporary out-of-service.  
51  
52 Field-erected storage tank systems taken temporarily out-of-service shall:  
53  
54 (a) Continue to operate and maintain corrosion protection in accordance with  
55 Subsection 13.01(b);  
56  
57 (b) If the tank system has an external release detection method, perform release  
58 detection monthly in accordance with applicable provisions of Sections 10-12;  
59 and  
60  
61 (c) Leave venting systems open and functioning.

- 1 15.02 Out-of-service storage tank systems.  
2  
3 (a) General.  
4  
5 (1) Storage tank systems that are taken out-of-service, as defined in  
6 Subsection 3.56, shall:  
7  
8 a. Continue to operate and maintain corrosion protection in  
9 accordance with Subsection 13.01(b);  
10  
11 b. Perform external release detection for sites without contamination,  
12 as applicable, every six months in accordance with provisions of  
13 Subsection 12.02;  
14  
15 c. Leave vent lines open and functioning;  
16  
17 d. Empty the system and cap or secure all lines, pumps, manways,  
18 and ancillary equipment, as applicable; and  
19  
20 e. Secure or close off the system to outside access.  
21  
22 (2) If the storage tank system is required to be upgraded during the time that it  
23 is out-of-service, it shall be upgraded or replaced in accordance with this  
24 Section before it is returned to service.  
25  
26 (3) Systems with secondary containment installed and operated in accordance  
27 with this chapter may remain in a continuous out-of-service status for ten  
28 years. After this period, the system shall be returned to service or closed  
29 in accordance with Subsection 15.03.  
30  
31 (4) Tightness, pressure, or other tests shall be performed in accordance with  
32 Subsection 12.03, as applicable, on any systems being returned to service.  
33  
34 (b) Underground storage tank systems.  
35  
36 (1) Before being returned to service, the following tests shall be performed in  
37 accordance with Subsection 12.03, for systems that are taken out-of-  
38 service for more than 180 days:  
39  
40 a. A tightness test for single-walled systems; or  
41  
42 b. A breach of integrity test for double-walled Category-C systems.  
43  
44 (2) Single-walled systems that are taken out-of-service shall not be kept out-  
45 of-service longer than two years for corrosion-protected systems or one  
46 year for unprotected bare steel systems. After the end of these time  
47 periods, the systems shall either be upgraded or permanently closed.  
48  
49 (c) Aboveground storage tank systems.  
50  
51 (1) Systems without secondary containment shall not remain in a continuous  
52 out-of-service status for more than five years. Before the expiration of  
53 this five year time period, any remaining product and sludges shall be  
54 removed, and a closure assessment shall be performed in accordance with  
55 Subsection 15.04, for AST Category-A and Category-B systems,  
56 regardless of when taken out-of-service.  
57  
58 (2) Out-of-service tanks that are returned to service shall be:  
59  
60 a. Inspected and evaluated in accordance with Subsection 8.03(b)(1),  
61 for shop-fabricated tanks; or



- 1 15.04 Closure assessment of storage tank systems.  
2
- 3 (a) At time of closure, replacement, installation of secondary containment, or change  
4 in service from a regulated substance to a non-regulated substance, an assessment  
5 shall be performed to determine if a discharge from the system or system  
6 components has occurred  
7
- 8 (1) If a Site Rehabilitation Completion Order (SRCO) or a Monitoring Only  
9 Plan (MOP) Approval Order has been issued by the Department for a  
10 contaminated area of a site, a closure assessment shall be performed for  
11 any subsequent storage tank system removal, replacement, or installation  
12 of secondary containment.  
13
- 14 (2) Tanks, pipes, or other system components in contact with soil at any site  
15 are subject to closure assessment requirements.  
16
- 17 (b) A closure assessment is not required for:  
18
- 19 (1) Sites with documented contamination requiring a site assessment in  
20 accordance with Chapter 62-770, F.A.C., including those that are eligible  
21 for the Early Detection Incentive Program (EDI), the Florida Petroleum  
22 Liability and Restoration Insurance Program (FPLRIP), and the Petroleum  
23 Cleanup Participation Program (PCPP), pursuant to Sections 376.3071  
24 and 376.3072, F.S. Nevertheless, documentation of procedures followed  
25 and results obtained during closure shall be reported in a Limited Closure  
26 Summary Report, Form 62-761.900(8), and in accordance with Section A  
27 of the Department's "Storage Tank System Closure Assessment  
28 Requirements";  
29
- 30 (2) Systems initially installed with secondary containment, provided that no  
31 unexplained positive response of an interstitial release detection device or  
32 method occurred during the operational life of the system, or the  
33 secondary containment passed a breach of integrity test prior to closure;  
34
- 35 (3) Systems upgraded with secondary containment that have closed interstitial  
36 spaces, where a closure assessment was performed prior to installation of  
37 secondary containment, provided that the secondary containment passed a  
38 breach of integrity test in accordance with Subsection 12.03(a);  
39
- 40 (4) Double-walled shop-fabricated aboveground tanks; and  
41
- 42 (5) Aboveground systems with storage capacities less than 1,100 gallons that  
43 are upgrading with secondary containment, and that are elevated from and  
44 not in contact with the soil. Instead of performing a closure assessment, a  
45 visual inspection may be performed of the system and the ground surface  
46 underneath it for signs of a discharge. Written certification shall be  
47 provided to ERM within 10 days after installation of the secondary  
48 containment, documenting that there has been no discharge.  
49
- 50 (c) Closure assessment sampling and analysis shall be conducted according to the  
51 Department's "Storage Tank System Closure Assessment Requirements."  
52
- 53 (d) A closure assessment report shall be submitted to ERM within 60 days of  
54 completion of any of the activities listed in Subsection 15.04(a). The report shall  
55 include sample types, sample locations and measurement methods, a site map,  
56 methods of maintaining quality assurance and quality control, and any analytical  
57 results obtained during the assessment in accordance with the Department's  
58 "Storage Tank System Closure Assessment Requirements."

- 1 (e) Persons are advised that contaminated soil excavated, disposed of, or stockpiled  
2 on site during the closure of a storage tank system is regulated by Chapter 62-770,  
3 F.A.C.  
4

5 **Section 16 INCIDENT AND DISCHARGE RESPONSE**  
6

7 16.01 Incident response.  
8

- 9 (a) If an incident occurs at a facility, actions shall be taken promptly to investigate  
10 the incident to determine if a discharge has occurred. Notification of the incident  
11 shall be sent to ERM on Form 62-761.900(6). A discharge shall be reported in  
12 accordance with Subsection 7.03, if one is discovered during the incident  
13 investigation.  
14  
15 (b) If the investigation indicates that the incident was not a discharge, a written  
16 confirmation and explanation shall be submitted to ERM. Test results or reports,  
17 which support the findings, shall be maintained on site as records.  
18  
19 (c) The investigation shall be completed within two weeks of the date of discovery of  
20 the incident. At the end of this time period, either a discharge report form or a  
21 written confirmation and explanation that the release was not a discharge shall be  
22 submitted to ERM.  
23  
24 (d) Any spill or loss of regulated substance into secondary containment shall be  
25 removed within three days of discovery.  
26

27 16.02 Discharge response.  
28

- 29 (a) If a discharge of a regulated substance occurs at a facility, actions shall be taken  
30 immediately to contain, remove, and abate the discharge under all applicable  
31 Department rules (for example, Chapter 62-770, F.A.C., Petroleum  
32 Contamination Site Cleanup Criteria). Owners and operators are advised that  
33 other federal and state requirements may apply to these activities. If the  
34 contamination present is subject to the provisions of Chapter 62-770, F.A.C.,  
35 corrective action, including free product recovery, shall be performed in  
36 accordance with that chapter.  
37  
38 (b) When evidence of a discharge from a storage tank system is discovered and  
39 reported in accordance with Subsection 7.03, the following actions shall be taken:  
40  
41 (1) If the source or cause of the discharge is unknown, the discharge shall be  
42 investigated in accordance with NFPA 329, Chapters 3 and 5;  
43  
44 (2) The regulated substance shall be removed from the system as necessary to  
45 prevent further discharge to the environment. Notice of the need to take  
46 the system out-of-service on an emergency basis shall be made to ERM in  
47 accordance with Subsection 7.01;  
48  
49 (3) Fire, explosion, and vapor hazards shall be identified and mitigated; and  
50  
51 (4) The system shall be repaired in accordance with Section 13. If the system  
52 cannot be repaired, it shall be closed in accordance with Subsection 15.03.  
53  
54 (c) The system shall be tested if ERM determines that:  
55  
56 (1) There has been a failure to comply with the release detection requirements  
57 of Sections 10-12;  
58  
59 (2) A release detection device, well, or method indicates that a discharge of a  
60 regulated substance has occurred, and the discharge was not previously  
61 reported; or

- 1 (3) Groundwater contamination that is not associated with previously known  
2 contamination is present in the vicinity of the system and the system is  
3 likely to be a source of the contamination.  
4
- 5 (d) Within three days of the discovery of a discharge, the following steps shall be  
6 initiated:  
7
- 8 (1) A test on the system in accordance with Subsection 12.03, if the test is  
9 necessary to confirm a discharge; and  
10
- 11 (2) If found to be leaking, placement of the system out-of-service in  
12 accordance with Subsection 15.02, until repaired, replaced or closed.  
13
- 14 (e) Contaminated soil excavated, disposed of, or stockpiled on site during the closure  
15 of a storage tank system shall be managed in accordance with Chapter 62-770,  
16 F.A.C.  
17

18 **Section 17 EQUIPMENT APPROVAL**

19  
20 17.01 Equipment approval

- 21
- 22 (a) Storage tank system owners or operators in Palm Beach County must provide to  
23 ERM proof of equipment approval by the Department in accordance with Rule  
24 62-761.850(2), F.A.C., before installation or use, with the exception of:  
25
- 26 (1) Dispensers, dispenser islands, nozzles, and hoses;  
27
- 28 (2) Monitoring well bailers;  
29
- 30 (3) Manhole and fillbox covers;  
31
- 32 (4) Valves;  
33
- 34 (5) Cathodic protection test stations;  
35
- 36 (6) Metallic bulk product piping;  
37
- 38 (7) Small diameter piping not in contact with soil, unless the piping extends  
39 over or into surface waters;  
40
- 41 (8) Vent lines; and  
42
- 43 (9) AST vents.  
44

45 **Section 18 MINERAL ACID STORAGE TANK REQUIREMENTS**

46  
47 18.01 Definitions.

48  
49 The following words, phrases, or terms used in this section, unless the context indicates  
50 otherwise, shall have the following meaning:

- 51
- 52 (a) "Aboveground" means that more than 90 percent of a tank volume is not buried  
53 below the ground surface. An aboveground tank may either be in contact with or  
54 elevated above the ground.  
55
- 56 (b) "Containment and integrity plan" or "CIP" means a document designed, created,  
57 and maintained at a facility, which shall be considered a public record and made  
58 available pursuant to the provisions of Chapter 119, F.S. The CIP establishes  
59 procedures for the inspection and maintenance program for tanks storing mineral  
60 acids at that facility. The inspection and maintenance program shall be designed  
61 for the chemical and physical characteristics of the specific mineral acid stored,

- 1 and for the specific materials of construction of the tank. The CIP shall be  
2 designed to ensure control of the specific mineral acid for the expected lifetime of  
3 the tank.  
4
- 5 (c) "Discharge" includes, but is not limited to, any spilling, leaking, seeping, pouring,  
6 misapplying, emitting, emptying, or dumping of any mineral acid which occurs  
7 and which affects lands and the surface and ground waters of the state.  
8
- 9 (d) "Discovery" means, as related to a discharge, initial detection of mineral acids in  
10 ground water or surface water, or the initial detection of soil contamination,  
11 resulting from the discharge of mineral acids in quantities greater than the  
12 amounts reportable in Section 18.  
13
- 14 (e) "Existing storage tank" means a tank that was installed on or before January 7,  
15 1992. Installation is considered to have begun if:  
16
- 17 (1) The owner or operator has obtained, or has applied for, all federal, state,  
18 and local approvals or permits necessary to begin physical construction of  
19 the site or installation of the tank; and  
20
- 21 (2) Either a continuous on-site physical construction or installation program  
22 has begun or the owner or operator has entered into contractual  
23 obligations which cannot be canceled or modified without substantial  
24 economic loss.  
25
- 26 (f) "Facility" means any non-residential location or part thereof containing an  
27 aboveground tank or tanks that contain specified mineral acids that have an  
28 individual storage capacity greater than 110 gallons.  
29
- 30 (g) "Flow-through process tank" means an aboveground tank that contains hazardous  
31 substances or specified mineral acids and that forms an integral part of a  
32 production process through which there is a steady, variable, recurring, or  
33 intermittent flow of materials during the operation of the process. Flow-through  
34 process tanks include, but are not limited to, seal tanks, vapor recovery units,  
35 surge tanks, blend tanks, feed tanks, check and delay tanks, batch tanks, oil-water  
36 separators, or tanks in which mechanical, physical, or chemical change of a  
37 material is accomplished.  
38
- 39 (h) "Inspection and maintenance plan" means a plan that establishes the procedures  
40 used to prevent releases of mineral acids.  
41
- 42 (i) "Liner" means an artificially constructed material of sufficient thickness, density,  
43 and composition that will contain the discharge of any specified mineral acid  
44 from an aboveground tank until such time as the mineral acid can be neutralized  
45 and/or removed. The liner shall prevent any escape of specified mineral acids or  
46 accumulated liquid to the soil, surface water, or groundwater (except through  
47 secondary containment as provided in Subsection 18.01(p)).  
48
- 49 (j) "Mineral acids" means hydrobromic acid (HBr), hydrochloric acid (HCl),  
50 hydrofluoric acid (HF), phosphoric acid (H<sub>3</sub>PO<sub>4</sub>), and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>),  
51 including those five acids in solution, if at least 20% by weight of the solution is  
52 one of the five listed acids.  
53
- 54 (k) "New tank" means a tank that was installed after January 7, 1992.  
55
- 56 (l) "Non-residential" means that the tank is not used at a private dwelling.  
57
- 58 (m) "Operator" means any person operating a facility, whether by lease, contract, or  
59 other form of agreement.

- 1 (n) "Owner" means any person owning an aboveground tank subject to Sections  
2 376.320-376.326, F.S.  
3
- 4 (o) "Permitted wastewater treatment system" means a facility to which the  
5 Department has issued a permit to treat wastewater and release the treated  
6 product into the environment.  
7
- 8 (p) "Secondary containment" means a system that is used for release prevention, and  
9 may include one or more of the following devices:  
10
- 11 (1) A double-walled tank;  
12
- 13 (2) An external liner; or  
14
- 15 (3) A system or structure constructed such that accidental releases from a tank  
16 would be collected by a drainage system within the system or structure  
17 and routed to a permitted wastewater treatment system, plant recirculating  
18 process system, or alternative containment system approved by the  
19 Department in accordance with Rule 62-761.850, F.A.C.  
20
- 21 (q) "Stationary" means a tank or tanks not meant for multiple site use or that remain  
22 in one location at the facility site for a period of 180 days or longer.  
23
- 24 (r) "Tank" means an aboveground stationary device that is constructed primarily of  
25 non-earthen materials (e.g., concrete, metal, plastic, glass) that provides structural  
26 support and is designed primarily to contain mineral acids. Connected piping  
27 from the tank to and including the nearest cutoff valve shall be considered part of  
28 the tank for purposes of this definition. "Tank" does not include flow-through  
29 process tanks.  
30
- 31 (s) "Upgrade" means the replacement of a tank or the installation of secondary  
32 containment.  
33

34 18.02 Applicability.  
35

- 36 (a) The requirements of this section apply to owners and operators of a facility with  
37 an aboveground storage tank with a storage capacity of more than 110 gallons  
38 that contains mineral acids.  
39
- 40 (b) The following systems are exempt from the requirements of this section:  
41
- 42 (1) Any mobile or skid tank that is moved at least every 180 days;  
43
- 44 (2) Any tank containing mineral acids that are less than 20% by weight of the  
45 solution;  
46
- 47 (3) Any tank of 110 gallons or less capacity that contains mineral acids;  
48
- 49 (4) Any flow-through process tank; and  
50
- 51 (5) Any tank containing mineral acids that are regulated as hazardous wastes  
52 under Subtitle C of the Resource Conservation and Recovery Act.  
53

54 18.03 Registration.  
55

- 56 (a) The owner or operator of any tank containing mineral acids shall provide to ERM  
57 proof that the owner or operator has complied with the Department's registration  
58 requirements as specified in Rule 62-761.890(3), F.A.C., no later than 30 days  
59 after mineral acids are put into the storage tank.

1 (b) The registration placard shall be available for inspection by ERM and filed with  
2 records maintained in accordance with Section 18.

3  
4 18.04 Notification.

- 5  
6 (a) The owner or operator shall notify ERM of the following items by submitting a  
7 copy of the Storage Tank Registration Form 62-761.900(2):  
8  
9 (1) The date and method of closure, at least 30 days before closure of a tank;  
10  
11 (2) Any change in ownership of a tank, no later than 30 days after ownership  
12 has been transferred. The notice of change of ownership shall be provided  
13 by the transferor. The notice shall include a copy of the bill of sale or a  
14 letter of acceptance by the new owner;  
15  
16 (3) Upgrading of a tank, at least 10 days before upgrading occurs, except for  
17 emergency replacements of tanks or connected piping required by an  
18 actual or anticipated discharge. Notification of emergency replacement  
19 shall be provided within 10 days after the emergency replacement.  
20  
21 (4) Any change in registration form information, including any change in the  
22 identity of the material being stored.  
23  
24 (b) ERM shall be notified of the certification of the CIP or the secondary  
25 containment system on Form 62-761.890(1) within 10 days of the completion of  
26 the form. The Containment and Integrity Plan Certification Form shall be signed  
27 by a professional engineer registered in the State of Florida.  
28  
29 (c) Within three working days of discovery, ERM shall be notified of any release into  
30 a secondary containment system of a mineral acid in excess of 110 gallons, or the  
31 reportable quantity in effect on July 1, 1991, under the Comprehensive  
32 Environmental Response Compensation and Liability Act of 1980, whichever is  
33 greater.  
34

35 18.05 Reporting of discharges.

36  
37 Within 24 hours of discovery, or before the close of the next business day, Form 62-  
38 761.900(1) shall be used to report any discharge exceeding:

- 39  
40 (a) 100 pounds of hydrobromic or hydrofluoric acid;  
41  
42 (b) 1000 pounds of sulfuric acid; or  
43  
44 (c) 5000 pounds of hydrochloric or phosphoric acid.  
45

46 18.06 Performance standards for mineral acid tanks.

- 47  
48 (a) General.  
49  
50 (1) Existing mineral acid storage facilities that were in operation after January  
51 1, 1992, shall have either a CIP or secondary containment.  
52  
53 (2) New or replacement mineral acid tanks installed after July 1, 1992, shall  
54 have secondary containment.  
55  
56 (b) Containment and Integrity Plans. The CIP shall include procedures and  
57 requirements to minimize the risk of spills, releases, and discharges from tanks.  
58 The CIP shall be reviewed and updated at least every two years by a professional  
59 engineer registered in the State of Florida. The CIP shall be made available for  
60 inspection by ERM, and shall address:  
61

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- (1) An inspection and maintenance program detailing:
    - a. The qualifications of the person providing the inspection;
    - b. The inspection and routine maintenance procedures;
    - c. Schedules used to evaluate and maintain the integrity of the tank, and secondary containment (if applicable);
    - d. Release detection procedures; and
    - e. Frequency of inspections and proper response to inspection findings.
  - (2) Materials of construction for each tank and compatibility of the mineral acid with the construction materials;
  - (3) Secondary containment of tanks, if applicable;
  - (4) Location of surface water bodies near the tank and the potential for discharges to enter the surface water body or to move off-site;
  - (5) Discharge response procedures for containment and abatement;
  - (6) Cleanup procedures; and
  - (7) For tanks without secondary containment, the CIP shall also address:
    - a. Procedures and equipment for treating spill wastes;
    - b. Procedures for disposing of spill wastes;
    - c. Containment and diversionary structures to prevent discharges from entering the nearby surface water bodies or moving off-site; and
    - d. A demonstration of corrosion protection of the tank if the tanks are in contact with the soil.
- (c) Containment and Integrity Plan alternatives. In place of the CIP, a certification may be provided to ERM by a professional engineer registered in the State of Florida that:
- (1) No mineral acid tank at the facility is in direct contact with the ground; and
  - (2) A secondary containment system has been placed under and around each tank, and sealed to its supports. Secondary containment shall be either:
    - a. Designed and built to contain in excess of 110% of the capacity of the largest tank within the containment; or
    - b. Equipped with a drainage system routed to a permitted wastewater treatment system that is capable of containing any accidental release from the tank.

1 (d) Secondary containment. Tanks installed after July 1, 1992, shall have secondary  
2 containment and meet the requirements of this section before the tank is placed  
3 into active service. Liners used for secondary containment that are installed after  
4 July 13, 1998 shall meet the requirements of Subsections 8.01(e)(1)-(3).  
5

6 (e) Certification. A professional engineer registered in the State of Florida shall  
7 certify that:  
8

9 (1) The tanks covered by the CIP for that facility have been inspected and  
10 maintained in accordance with the CIP and that the integrity and  
11 containment of the tanks has not been compromised. For purposes of this  
12 certification, maintenance will be presumed to have been performed if the  
13 professional engineer verifies that records demonstrating compliance with  
14 this subsection are available, complete, and indicate proper maintenance;  
15 or  
16

17 (2) The tank or tanks have secondary containment in accordance with this  
18 subsection.  
19

20 18.07 Recordkeeping.

21  
22 Copies of the following shall be maintained and made available for inspection by ERM  
23 at reasonable times:  
24

25 (a) The Containment and Integrity Plan; or  
26

27 (b) The certification of secondary containment.  
28

29 18.08 Discharge response.

30  
31 (a) When evidence of a discharge from a tank is discovered and reported in  
32 accordance with Subsection 18.06, the owner or operator shall:  
33

34 (1) Remove as much of the mineral acid from the tank as necessary to prevent  
35 further discharge;  
36

37 (2) Repair the tank in accordance with original design specifications; and  
38

39 (3) If the storage tank cannot be repaired, all mineral acid shall be removed  
40 from the tank and the tank shall be permanently closed.  
41

42 (b) Any owner or operator of a facility discharging mineral acids shall immediately  
43 undertake to contain, remove, neutralize, or otherwise abate the discharge.  
44

45 18.09 Forms.

46  
47 Copies of forms may be obtained by writing to the Administrator, Storage Tank  
48 Regulation Section, Florida Department of Environmental Protection, 2600 Blair Stone  
49 Road, Tallahassee, Florida 32399-2400 or the Department of Environmental Resources  
50 Management, 3323 Belvedere Road Bldg. 502, West Palm Beach, Florida 33406-1548.  
51 The following forms shall be used for mineral acid tanks:  
52

53 (a) Discharge Report Form 62-761.900(1), July 13, 1998.  
54

55 (b) Storage Tank Facility Registration Form 62-761.900(2), July 13, 1998.  
56

57 (c) Containment and Integrity Plan Certification Form 62-761.890(1), July 13, 1998.

1 **Section 19** **STORAGE TANK FORMS**

2  
3 The forms used by the Department in the Storage Tank System Program are adopted and  
4 incorporated by reference in this section. The forms are listed by rule number, which is also the  
5 form number, and with the subject title and effective date. Copies of forms may be obtained by  
6 writing to the Administrator, Storage Tank Regulation Section, Division of Waste Management,  
7 Florida Department of Environmental Protection, 2600 Blair Stone Road, M.S. 4525,  
8 Tallahassee, Florida 32399-2400 or the Palm Beach County Department of Environmental  
9 Resources Management, 3323 Belvedere Road, Bldg. 502, West Palm Beach, Florida 33406-  
10 1548.

11  
12 62-761.900(1) Discharge Report Form, July 13, 1998.

13 62-761.900(2) Storage Tank Facility Registration Form, July 13, 1998.

14 62-761.900(3) Certification of Financial Responsibility, July 13, 1998.

15 62-761.900(4) Alternative Requirement or Procedure Form, July 13, 1998.

16 62-761.900(5) Underground Storage Tank Installation and Removal Form for Certified  
17 Contractors, July 13, 1998.

18 62-761.900(6) Incident Notification Form, July 13, 1998.

19 62-761.900(7) Monthly Statistical Inventory Reconciliation (SIR) Report, July 13, 1998.

20 62-761.900(8) Limited Closure Summary Report Form, July 13, 1998.

21  
22 **Section 20** **FEES**

23  
24 There are no fees required to be paid to ERM for the administration of this Ordinance.  
25

26 **Section 21** **VIOLATIONS; ENFORCEMENT; PENALTIES**

27  
28 21.01 Failure to comply with the requirements of this Ordinance shall constitute a violation of a  
29 County Ordinance, and may be punished as provided by Section 125.69, F.S.

30  
31 21.02 Violations of the provisions of this Ordinance may also be punished, pursuant to Section  
32 162.21, F.S., as a civil infraction with a maximum civil penalty not to exceed five  
33 thousand dollars (\$5,000) per day, per violation.

34  
35 21.03 Each day in violation of the provisions of this Ordinance is a separate violation.  
36

37 21.04 In addition to the sanctions contained herein, the County may take any other appropriate  
38 legal action, including but not limited to emergency injunctive action, to enforce the  
39 provisions of this Ordinance.  
40

41 21.05 If the owner of property which is subject to a violation of this Ordinance transfers the  
42 ownership of such property between the time the notice of violation was served and the  
43 time of the hearing, and the alleged violator fails to make disclosure of said violation, the  
44 transfer creates a rebuttable presumption of fraud.  
45

46 21.06 Violations of this Ordinance may also be referred by ERM to the Groundwater and  
47 Natural Resources Protection Board (GNRPB) for corrective actions and civil penalties.  
48 Any person who is party to the proceeding before the GNRPB may appeal a final  
49 decision of the GNRPB to the Circuit Court of Palm Beach County in accordance with  
50 Florida Appellate Rules. Funds collected pursuant to administrative penalties levied by  
51 the GNRPB for violations of this Ordinance shall be deposited in the Palm Beach County  
52 Pollution Recovery Trust Fund, or such other place as may be designated by Resolution  
53 of the Board of County Commissioners.  
54

1 21.07 In order to provide an expeditious settlement that would be beneficial to the enforcement  
2 of this Ordinance and be in the best interest of the citizens of Palm Beach County, the  
3 Director of ERM is authorized to enter into voluntary consent (settlement) agreements  
4 with alleged violators. Any such agreement shall be a formal written consent agreement  
5 between ERM on behalf of Palm Beach County, by and through its Director, and any  
6 such alleged violators, and shall be approved as to form and legal sufficiency by the  
7 County Attorney's Office. The agreement can be entered into at any time prior to the  
8 hearing before the GNRPB.  
9

10 (a) Conditions. Such consent agreements may be conditioned upon a promise by the  
11 alleged violator to:

- 12
- 13 (1) Bring the parcel into compliance with this Ordinance and maintain it in  
14 that condition, and
  - 15
  - 16 (2) Remit payment of a monetary settlement not to exceed the maximum  
17 amount allowed per violation, as set forth in this Ordinance, and
  - 18
  - 19 (3) Remit payment for costs and expenses of the County for investigation and  
20 enforcement, and.
  - 21
  - 22 (4) Any other remedies and corrective action deemed necessary and  
23 appropriate by the director of ERM to ensure compliance with this  
24 Ordinance.  
25

26 (b) The consent agreement shall not serve as evidence of a violation of this  
27 Ordinance and shall expressly state that the alleged violator neither admits nor  
28 denies culpability for the alleged violations by entering into such agreement. In  
29 addition, prior into entering into any such consent agreement, each alleged  
30 violator shall be apprised of the right to have the matter heard by the GNRPB in  
31 accordance with the provisions of this Ordinance, and that execution of the  
32 agreement is not required.  
33

34 (c) The consent agreement shall be valid and enforceable in a court of competent  
35 jurisdiction in Palm Beach County and shall abate any enforcement proceedings  
36 available to ERM for so long as the terms and conditions of such agreement are  
37 complied with. In the event the alleged violator fails to comply with the terms  
38 and conditions set forth in the executed agreement, the Director of ERM may  
39 either:  
40

- 41 (1) Consider the consent agreement void and pursue any remedies available  
42 for enforcement of the applicable provisions of the Ordinance; or
- 43
- 44 (2) Initiate legal proceedings for specific performance of the consent  
45 agreement.  
46

47 21.08 Funds collected pursuant to a consent agreement shall be deposited in the Palm  
48 Beach County Pollution Recovery Trust Fund.  
49

50 **Section 22 REPEAL OF LAWS IN CONFLICT**

51  
52 All local laws and ordinances applying to the unincorporated areas of Palm Beach County in  
53 conflict with any provisions of this Ordinance are hereby repealed to the extent of such conflict.  
54

55 **Section 23 SEVERABILITY**

56  
57 If any section, paragraph, sentence, clause, phrase or word of this Ordinance is for any reason  
58 held by the Court to be unconstitutional, inoperative or void, such holding shall not affect the  
59 remainder of this Ordinance.

1 **Section 24** **INCLUSION IN THE CODE OF LAWS AND ORDINANCES**

2

3 The provisions of the Ordinance shall become and be made a part of the code of laws and  
4 ordinances of Palm Beach County, Florida. The Sections of this Ordinance may be renumbered  
5 or relettered to accomplish such, and the word "ordinance" may be changed to "section",  
6 "article," or any other appropriate word.

7

8 **Section 25** **EFFECTIVE DATE**

9

10 The provisions of this Ordinance shall become effective upon filing with the Department of  
11 State.

12

13 APPROVED AND ADOPTED by the Board of County Commissioners of Palm Beach

14

15 County, Florida, on the \_\_\_\_\_ day of \_\_\_\_\_, 2002

16

17

PALM BEACH COUNTY, FLORIDA, BY ITS  
BOARD OF COUNTY COMMISSIONERS

18

19

20

21

By \_\_\_\_\_

22

Chairman

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**EFFECTIVE DATE:** Filed with the Department of State on the \_\_\_\_\_ day of  
\_\_\_\_\_, 2002.