

Storage Tank and Cleanup Regulations for Substances Commonly Encountered in Florida Storage Tank Systems

May 11, 2006

| Substance Type | Petroleum (P), Petroleum Product (PP), Excluded Petroleum Product (EPP), Solvent (S), or Non-Petroleum Derivative (NPD) ¹ | Pollutant ² | Substance on CERCLA List ³ | Storage Tank Regulations (Chapters 62-761 and 62-762, F.A.C.) ⁴ | | | | Discharge Cleanup Regulations | | |
|--|--|------------------------|---------------------------------------|--|------------------------|------------------------|--------------------------|--|--|---|
| | | | | Regulated for ASTs | Regulated for USTs | Registration Required | Financial Responsibility | Discharge Eligible for EDI, ATRP, or FPLRIP Funding ⁵ | Discharge Eligible for PCPP Funding ⁵ | Division of Waste Management Cleanup Rule for Discharge of Substance ⁶ |
| Crude Oil | P | yes | no | yes | yes | yes | yes | no | yes | CSCC or PCSCC ⁷ |
| Natural Gas | P | no | no | no | no | no | no | no | no | none ⁸ |
| Unleaded Gasoline | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Leaded Gasoline | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Gasohol (up to 10% blend ethanol or methanol with up to 90% unleaded gasoline) | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Ethanol (E85 and E100) ⁹ | PP (E85) NPD (E100) | yes (E85) no (E100) | no | yes (E85) no (E100) | yes (E85) no (E100) | yes (E85) no (E100) | yes (E85) no (E100) | yes (E85) no (E100) | yes (E85) no (E100) | PCSCC (E85) CSCC or HW (E100) ⁹ |
| Aviation Gasoline | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| White Gas (also known as camp, stove, or lantern fuel) | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Kerosene | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Jet Fuel (includes Jet A, Jet A1, Jet B, and JP-4 through JP-8) | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Diesel Fuel No. 1 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Diesel Fuel No. 2 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Diesel Fuel No. 4 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Biodiesel (B100) ¹⁰ | NPD | no | no | no | no | no | no | no | no | none |
| Biodiesel (B<100) ¹⁰ | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Fuel Oil No. 1 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Fuel Oil No. 2 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Fuel Oil No. 4 | PP | yes | no | yes | yes | yes | yes | yes | yes | PCSCC |
| Fuel Oil No. 5 | EPP | yes | no | yes | yes | yes | yes | no | yes | CSCC or PCSCC ⁷ |
| Fuel Oil No. 6 (also known as Bunker C) | EPP | yes | no | yes | yes | yes | yes | no | yes | CSCC or PCSCC ⁷ |

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| | | | | Regulated for ASTs | Regulated for USTs | Registration Required | Financial Responsibility | Discharge Eligible for EDI, ATRP, or FPLRIP Funding ⁵ | Discharge Eligible for PCPP Funding ⁵ | Division of Waste Management Cleanup Rule for Discharge of Substance ⁶ |
| Intermediate Diesel Fuel or Fuel Oil (viscosity is >30 and used for marine bunkering) ¹¹ | EPP | yes | no | yes | yes | yes | yes | no | yes | CSCC or PCSCC ⁷ |
| Oil/Water Separator (Liquid Trap) Petroleum | P, PP, EPP, or S | yes | no | no | no | no | no | no | yes | PCSCC (P or PP); CSCC (EPP); and DSCC, CSCC, or HW (S) |
| Used Oil | PP | yes | no | yes | yes | yes | yes | yes ^{12, 13} | yes | PCSCC |
| Motor Oil | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) ¹² | PCSCC |
| Gear Oil | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) ¹² | PCSCC |
| Automatic Transmission Fluid | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) ¹² | PCSCC |
| Power Steering Fluid | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) | PCSCC |
| Brake Fluid | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) | PCSCC |
| Hydraulic Oil (Hydraulic Lift Systems) | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | no | no | no | no | no | no | PCSCC ¹⁴ |

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| Hydraulic Oil (ASTs or USTs Not Associated with Hydraulic Lift Systems) | P (new) PP (used) ^{12, 13} | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) ^{12, 13} | yes (used and new) | PCSCC ¹⁴ |
| Other (Non-Automotive) Lubricating/Mineral Oils | P (new) PP (used) | yes (if derived from crude oil) | no | yes | yes | yes | yes | yes (used) no (new) | yes (used and new) | HW or CSCC ¹⁵ |
| Asphalt and Road Oils | EPP | yes | no | no | no | no | no | no | yes | CSCC or PCSCC ⁷ |
| Petrochemical Feedstocks (includes benzene, naphthalene, toluene, xylene, ethylene, propylene, and other liquid and gas substances) | EPP; S (for select liquid substances) | yes (if derived from crude oil or natural gas) | consult list | no (but yes for Rule 62-762.401, F.A.C.) | yes ¹⁶ | yes | no (but yes for a petroleum product not on the CERCLA List) | no | no | CSCC (liquids) none ⁸ (gases) |
| Liquified Petroleum Gases (principal gases are butane and propane, but also includes other gases) | EPP | no | no | no | no | no | no | no | no | none ⁸ |
| Mineral Spirits (sometimes referred to as naphtha or petroleum solvents) | S ^{1, 17} | yes | no | yes | yes | yes | yes | no | no | DSCC, HW, or CSCC ¹⁷ |
| Additives Not Blended with Petroleum Products ¹⁸ | NPD | no | consult list | no | yes (if on CERCLA List) | yes (if on CERCLA List) | no | no | no | CSCC or HW ¹⁸ |
| Liquified Ammonia-Based Fertilizers | NPD | yes | consult list | yes ¹⁹ | yes ¹⁹ | yes ¹⁹ | no | no | no | CSCC or HW |
| Liquified Ammonia Gas and Ammonia Gas Derivatives | NPD | yes | consult list | no (but yes for Rule 62-762.401, F.A.C.) | no | yes | no | no | no | none ⁸ |

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| Liquified Chlorine Gas and Chlorine Gas Derivatives | NPD | yes | consult list | no (but yes for Rule 62-762.401, F.A.C.) | no | yes | no | no | no | none ⁸ |
| Sodium Hypochlorite | NPD | yes | yes | no | yes | no (ASTs) yes (USTs) | no | no | no | CSCC or HW |
| Phosphoric Acid ²⁰ | NPD | no | yes | yes | yes | yes | no | no | no | CSCC or HW |
| Hydrobromic Acid ²⁰ | NPD | no | no | yes | no | yes (ASTs) no (USTs) | no | no | no | CSCC or HW |
| Hydrochloric Acid ²⁰ | NPD | no | yes | yes | yes | yes | no | no | no | CSCC or HW |
| Hydrofluoric Acid ²⁰ | NPD | no | yes | yes | yes | yes | no | no | no | CSCC or HW |
| Sulfuric Acid ²⁰ | NPD | no | yes | yes | yes | yes | no | no | no | CSCC or HW |
| Acetone | NPD | no | yes | no | yes | yes | no | no | no | CSCC or HW |
| Antifreeze ²¹ | NPD | no | no | no | no | no | no | no | no | CSCC or HW |
| CERCLA Hazardous Substances | EPP and S (petrochemical feedstocks and mineral spirits) or NPD | yes (if derived from crude oil or natural gas) | yes | no (but yes for mineral acids) | yes | yes | no | no | no | CSCC or HW |
| Citrus Oil (100% citrus oil derived from citrus peels; includes d-Limonene) | NPD | no | no | no | no | no | no | no | no | none |
| Citrus Oil (pesticide applications consisting of citrus oil mixed with diesel or citrus oil mixed with hazardous substances) | P (diesel and citrus oil mixture) or NPD (hazardous substance and citrus oil mixture) | yes | no (P); consult list (NPD) | yes (P); no if on list (NPD) | yes (P); yes if on list and liquid at STP (NPD) | yes (P); yes if on list (NPD) | yes (P); no (NPD) | yes (P); no (NPD) | yes (P); no (NPD) | PCSCC (P); CSCC or HW (NPD) |
| Select Liquid Pesticides | NPD | yes | consult list | no (if on list) | yes (if on the list and liquid at STP) | yes (if on list) | no | no | no | CSCC or HW |

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LIST OF ABBREVIATIONS AND ACRONYMS USED IN THE TABLE

AST - Aboveground Storage Tank
ATRP - Abandoned Tanks Restoration Program
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CSCC - Contaminated Site Cleanup Criteria (Chapter 62-780, F.A.C.)
DSCC - Drycleaning Solvent Cleanup Criteria (Chapter 62-782, F.A.C.)
EDI - Early Detection Incentive Program
EPP - Excluded Petroleum Product
F.A.C. - Florida Administrative Code
FPLRIP - Florida Petroleum Liability and Restoration Insurance Program
F.S. - Florida Statutes
HW - Hazardous Waste (Chapter 62-730, F.A.C.)
NPD - Non-Petroleum Derivative
P - Petroleum
PCPP - Petroleum Cleanup Participation Program
PCSCC - Petroleum Contamination Site Cleanup Criteria (Chapter 62-770, F.A.C.)
PP - Petroleum Product
S - Solvent
STP - Standard Temperature and Pressure
UST - Underground Storage Tank

FOOTNOTES

¹ Section 376.301(30), F.S., defines "petroleum" as all crude oil that is produced at the well in liquid form and natural gas, and all other hydrocarbons. Section 376.301(31), F.S., defines "petroleum product" as "any liquid fuel commodity made from petroleum" and specifically excludes as petroleum products liquified petroleum gas, no. 5 and no. 6 residual oils, bunker C residual oils (bunker C and fuel oil no. 6 are synonymous), intermediate fuel oils used for marine bunkering with a viscosity of 30 and higher, asphalt oils, and petrochemical feedstocks. All of the petroleum products listed in this table can be classified as petroleum, but only the petroleum substances that can be used for fuel and are not specifically excluded from the petroleum product definition in Section 376.301(31), F.S. can be classified as petroleum products. Section 206.9926(6), F.S. defines the substances that can be classified as solvents. Substances classified in this table as non-petroleum derivatives are not derived from crude oil or natural gas.

² A "pollutant", as defined in Section 376.301(34), F.S., includes any "product" that is defined in 377.19(11), F.S., pesticides, ammonia, chlorine, and derivatives thereof, excluding liquified petroleum gas.

³ List of hazardous substances, as defined in Section 376.301(20), F.S.

⁴ The substances listed in this table may or may not be regulated by Chapters 62-761 and 762 F.A.C. depending on whether the substance is being stored in an aboveground or underground storage tank and the size of the tank. Underground storage tanks \leq 110 gallons and aboveground storage tanks \leq 550 gallons are not regulated by Chapters 62-761 and 762, F.A.C. Agricultural underground storage tanks of <550 gallons and any residential storage tank system are also exempted from Chapter 62-761, F.A.C. The petroleum products listed in this table that are stored in a tank of < 30,000 gallons and are used for the sole purpose of heating on the site premises are not regulated by Chapters 62-761 and 762, F.A.C. Pipeline facilities and any tank that is directly related to oil and gas production are also not regulated by Chapters 62-761 and 762, F.A.C. Other exemptions apply and are stated in Chapters 62-761 and 762, F.A.C.

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⁵ For EDI, ATRP, and FPLRIP funding, program eligibility applies to petroleum products that were stored in a petroleum storage tank and dispensing system. For PCPP funding, program eligibility applies to petroleum and petroleum products that were stored in a petroleum storage tank and dispensing system. The determination of whether or not a particular petroleum or petroleum product is eligible for a particular program depends on the date of the discharge, location of the discharge, type of the discharge, amount of the discharge, whether the particular petroleum product was or was not stored in a petroleum storage tank and dispensing system, whether the petroleum substance was intended to be used as a fuel or for another use (i.e., lubricating oils), and other factors.

⁶ Chapter 62-785, F.A.C. (Brownfields Cleanup Criteria rule) could apply to all of the substances listed in this table because the rule could address any contaminant discharged within a brownfield area regardless of whether it is a petroleum, drycleaning, or hazardous waste substance. A non-petroleum derivative discharge should be cleaned up using the Contaminated Site Cleanup Criteria rule (Chapter 62-780, F.A.C.) instead of the Hazardous Waste rule (Chapter 62-730, F.A.C.) if the discharge does not exceed the hazardous waste characteristic criteria or if the discharge resulted from a substance that is not specifically listed as a hazardous waste.

⁷ If the discharge has been determined by the FDEP to be eligible for the PCPP, then the discharge should be cleaned up using the Petroleum Contamination Site Cleanup Criteria (Chapter 62-770, F.A.C.). If the discharge is not eligible for PCPP, then the discharge should be cleaned up using the Contaminated Site Cleanup Criteria (Chapter 62-780, F.A.C.).

⁸ Contact the local Fire Marshal.

⁹ Ethanol is an alcohol-based fuel that is derived by fermenting and distilling starch crops such as corn. E85 is composed of 85% ethanol and 15% unleaded gasoline. E100 is not used as a motor fuel, but storage tanks can contain pure ethanol prior to having the ethanol mixed with unleaded gasoline. E100 can also be utilized for non-fuel uses. Discharges that include E85 should be regulated by the Petroleum Contamination Site Cleanup Criteria (Chapter 62-770, F.A.C.). Discharges of E100 should be regulated by Hazardous Waste (Chapter 62-730, F.A.C.) or by the Contaminated Site Cleanup Criteria (Chapter 62-780, F.A.C.).

¹⁰ Biodiesel can contain no petroleum or it can consist of a blend of petroleum and fatty acids derived from the refining of vegetable oils. Biodiesel that does not contain any petroleum (biodiesel B100) is not considered a petroleum product. Biodiesel that contains any petroleum (i.e., biodiesel B20, which contains 20% biodiesel and 80% petroleum diesel) is considered a petroleum product.

¹¹ Heavy diesel fuel/fuel oil no. 4, fuel oil no. 5, and fuel oil no. 6 are often blended with lighter diesel fuel and fuel oils to make the petroleum product less viscous and easier to flow. The degree of blending and temperature will determine the viscosity of the petroleum product. Section 376.301(31), F.S., excludes as a petroleum product intermediate (blended) fuel oils that are used for marine bunkering if the viscosity is greater than 30.

¹² In *Ober versus the Department of Environmental Protection*, 688 So.2d 435 (Fla.App.5 Dist. 1997), the Fifth District Court of Appeal determined that waste oil (used oil) and used transmission fluid are petroleum products, the products were stored in a petroleum storage system (used oil tank), and that Ober was eligible for ATRP funding. The court further stated that waste oil and used transmission fluid are utilized in Florida as a boiler fuel and that Ober did not need to demonstrate that the waste oil and the used transmission fluid at his facility were recycled for use as a fuel in order to be eligible for ATRP. Gear oil is also known as manual transmission oil.

¹³ The determination of whether or not an automotive petroleum-based lubricating oil meets the definition of a petroleum product (as defined in Section 376.301(31), F.S.) is based on whether the petroleum-based lubricating oil can be used as a fuel. Any petroleum-based automotive lubricant oil can potentially be used as a fuel after the product has been used for its initial purpose. For example, used oil tanks at service stations may contain a mixture of used motor oil, used automatic transmission fluid, used gear oil, and used brake fluid that can be recycled for use as a fuel in industrial burners. The determination as to whether the automotive-type lubricating oils should be eligible for EDI, ATRP, or FPLRIP depends on whether the intended use of the lubricating oil will be for a fuel or a non-fuel source and whether the used automotive type lubricating oil was located in a storage tank. Automotive type lubricating oil discharges at petroleum storage and dispensing facilities are often associated with other petroleum product discharges and should be regulated by the Petroleum Contamination Site Cleanup Criteria (Chapter 62-770, F.A.C.).

¹⁴ Applies only to hydraulic oils that are petroleum-based. Hydraulic oils that are composed entirely of vegetable-based substances are not regulated by the Division of Waste Management.

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¹⁵ Non-automotive type lubricating oils (such as electrical oils, manufacturing process oils, metalworking oils, and other non-automotive miscellaneous oils) are often associated with hazardous waste substances and cleanups of discharges associated with non-automotive lubricating oils should be regulated by Hazardous Waste (Chapter 62-730, F.A.C.) or by the Contaminated Site Cleanup Criteria rule (Chapter 62-780, F.A.C.).

¹⁶ If a "Regulated Substance" as defined in Rule 62-761.200(53), F.A.C.

¹⁷ Mineral spirits consist of a variety of products that are often used as solvents. Section 206.9925(6), F.S., includes mineral spirits as one of the group of organic compounds that are listed in the definition of solvents. In Section 376.301(31), F.S., mineral spirits are not specifically excluded from the definition of a petroleum product; however, Section 376.3071(4)(o), F.S., states that solvent contamination is not eligible for funding under the Inland Protection Trust Fund. Depending on the particular type and use, mineral spirits should be regulated by either the Drycleaning Solvent Cleanup Criteria (Chapter 62-782, F.A.C.), the Hazardous Waste rule (Chapter 62-730, F.A.C.), or the Contaminated Site Cleanup Criteria rule (Chapter 62-780, F.A.C.).

¹⁸ Applies to various chemicals that are stored at manufacturing sites, oil refineries, oil terminals, and other bulk storage facilities. Tanks at oil terminals are sometimes labeled as "Exxon Additive", "Techron", etc. The additives are blended with the gasoline at the refinery or at the terminals before it is delivered to the retail station. If the additives have already been blended into the gasoline or the fuel oil, then the cleanup of the gasoline or the fuel oil discharge is regulated by Chapter 62-770, F.A.C.. If the additives have not been blended into the gasoline or the fuel oil, then the discharge of the additive should be regulated by the Hazardous Waste rule (Chapter 62-730, F.A.C.) or by the Contaminated Site Cleanup Criteria rule (Chapter 62-780, F.A.C.).

¹⁹ Applies only to $\geq 2\%$ of free ammonia and ammonium ion content. Less than 2% is considered de minimus, as per Chapter 62-761.300(2)(a)9., F.A.C.

²⁰ Mineral acids are defined in Rule 62-761.890(1)(j), F.A.C., as consisting of either phosphoric acid, hydrobromic acid, hydrochloric acid, hydrofluoric acid, and sulfuric acid, provided that at least 20% by weight of the solution consists of one of the five listed acids.

²¹ Applies to antifreeze composed of ethylene glycol or propylene glycol.