

ARTICLE XI

**NASSAU COUNTY PUBLIC HEALTH
ORDINANCE**

**TOXIC AND HAZARDOUS MATERIALS
STORAGE, HANDLING
AND CONTROL**

REGULATIONS

Effective August 1, 1986
(Amended September 16, 1986
Amended October 7, 1986
Amended May 10, 1989
Amended December 15, 1989
Amended January 12, 1990
Amended April 1, 1992
Amended October 1, 1998)

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Section 1.0 Definitions

1.1 Toxic or Hazardous Materials

Toxic or hazardous materials shall include but not be limited to the following:

- (i) Each and every substance, material or waste found listed in either 40 CFR Part 261, or 40 CFR Part 302, or 6 NYCRR Part 371;
- (ii) Acids, alkalis and solutions having a pH range less than or equal to 2.0 or greater than or equal to 12.5;
- (iii) All materials which exhibit the characteristics of hazardous waste (ignitability, corrosivity, reactivity and EP toxicity) as identified in 40 CFR Part 261 or 6 NYCRR Part 371;
- (iv) Petroleum products, including fuels and waste oils;
- (v) Organic chemical solvents, including petroleum solvents, halogenated, and non-halogenated hydrocarbons;
- (vi) Any solution of materials listed in Schedule I of 6 NYCRR 703.6 in excess of the concentration standards thereof, except for iron, manganese, foaming agents and pH unless otherwise provided elsewhere in this definition or this Article and its requirements;
- (vii) Regulated medical wastes as described in Section 1.2;
- (viii) Heavy metal sludges, mixtures and solutions;
- (ix) Any solid or semisolid material which, if left to stand or if exposed to water will leach out or wholly or partially dissolve forming a toxic or hazardous material as defined in subdivisions (i) through (viii) of this subsection;
- (x) Any substance not included within subdivisions (i) through (ix) of this subsection subsequently declared to be a toxic or hazardous material by the Commissioner.

1.2 Regulated Medical Waste

Regulated Medical Waste shall be defined as:

- (i) Cultures and stocks of infectious agents and associated biologicals, including cultures from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate and mix cultures;
- (ii) Pathological wastes, including tissues, organs and body parts that are removed during surgery or autopsy;
- (iii) Liquid waste human blood and products of blood; items saturated and/or dripping with human blood; or items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma and other blood components and their containers which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also included in this category;
- (iv) Sharps that have been used in animal or human patient care or treatment or in medical, research or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, broken glass and scalpel blades;
- (v) Contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals, or testing of pharmaceuticals.
- (vi) Wastes from surgery or autopsy that were in contact with infectious agents, including soiled dressings, sponges, drapes, lavage tubes, drainage sets, underpads, and surgical gloves.
- (vii) Laboratory wastes from medical, pathological, pharmaceutical, or other research, commercial, or industrial laboratories that were in contact with infectious agents, including slides and cover slips, disposal gloves, laboratory coats and aprons.
- (viii) Dialysis wastes that were in contact with the blood of patients undergoing hemodialysis or renal dialysis including contaminated disposable equipment and supplies such as tubing, filters, disposable sheets, towels, gloves, aprons and laboratory coats.

- (ix) Biological waste and discarded materials contaminated with blood, excretion exudates, or secretion from humans who are isolated to protect others from certain highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.
 - (x) The following unused, discarded sharps; hypodermic needles, suture needles, syringes and scalpel blades.
 - (xi) Mixtures of refuse and/or nonregulated medical waste and regulated medical waste are considered to be regulated medical wastes.
- 1.3 Carrier means a person who transports and transfers toxic or hazardous material from one pipe, tank or storage area to another.
- 1.4 Cathodic Protection means corrosion protection for a metal tank or pipe by causing a continuous electric current to flow from one or more electrodes or a sacrificial anode to the protected structure.
- 1.5 Combined Storage Capacity or Total Storage Capacity means the sum of the design storage capacity of each tank at a facility which has not been permanently closed.
- 1.6 Corrodible Tank or Unprotected Tank means any underground tank which does not meet standards specified in Section 3.0 of these Regulations. Examples of corrodible tanks include but are not limited to bare steel tanks; steel tanks which have been rehabilitated with an interior lining; steel tanks with exterior coatings of paint, asphaltum or other similar material, steel tanks which have been retrofitted with cathodic protection; and permeable concrete encased bare steel tanks.
- 1.7 Corrosion Resistant or Noncorrodible when referring to an underground tank means any tank which meets standards for new underground tanks specified in section 3.0 of these Regulations. When referring to a pipe it means any pipe which meets standards for new underground pipe specified in section 19.0 of these Regulations.
- 1.8 Lining means a coating of a non-corrodible material resistant to the product stored and bonded firmly to the interior surface of the tank.
- 1.9 Spill or spillage means any escape of toxic or hazardous materials from the ordinary containers employed in the normal course of storage, transfer, processing or use.
- 1.10 Stationary Tank means all underground tanks or any aboveground tank which is non-mobile. Examples of stationary aboveground tanks include tanks which may rest on the ground or may be fixed or permanently in place on foundations, racks, cradles, or stilts.

- 1.11 "Waters" or "waters of the state" shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals. The Atlantic Ocean within the territorial limits of the State of New York and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the State or within its jurisdiction.
- 1.12 Working Capacity means total capacity of the tank less an allowance for expansion and freeboard.
- 1.13 Leak Monitoring System means a leak detection system as required in Sections 5.1.5, 5.1.6, 5.1.7, 5.1.8, 5.1.9, 5.1.10 and 5.2.1 of these Regulations.
- 1.14 Non-regulated medical waste means any waste generated from the treatment of patients which is not defined as regulated medical waste. This is not to include office or cafeteria waste.

Section 2.0 Storage of Toxic or Hazardous Waste

2.1 Storage Requirements

- 2.1.1 All storage areas shall have secondary containment provisions in accordance with Sections 8.0, 14.0 and 16.0 of these Regulations.
- 2.1.2 Any open tanks in a facility equipped with a sprinkler system shall be provided with head deflectors or automatic covers or the equivalent to prevent the overflow of the tanks.
- 2.1.3 All applicable building and fire codes must be met. Where there is a conflict between these requirements and any building or fire code the more stringent requirement shall apply.
- 2.1.4 Wastes are to be stored in tanks meeting the requirements of Article XI for new and existing tanks or in leakproof containers. All tanks or containers shall be compatible with the materials stored therein. Containers shall not be corroded or leaking and shall be tightly closed.
- 2.1.5 Wastes which deleteriously react with each other must not be stored or mixed together.
- 2.1.6 Waste containers or tanks must be labeled, numbered and distinctly coded and identified as to contents in accordance with the applicable Federal Department of Transportation regulations on hazardous materials under 49 CFR Part 172.
- 2.1.7 Drums containing waste must not be stacked more than two drums high and aisles must be provided so that all drums are accessible and visible for inspection.
- 2.1.8 Drums containing waste are to be stored a minimum of two inches off the ground to facilitate detection of bottom leaks.
- 2.1.9 Wastes which are stored outdoors shall comply with Section 7.0, Weather and Moisture Protection, of these Regulations, and shall be secured to prevent unknowing and unauthorized entry.

2.2 Removal of Wastes

Transportation of wastes off-site is to be done only by a New York State Registered Industrial Waste Transporter.

2.3 Records and Reports

2.3.1 Records must be kept on the premises and made available to the Department upon request. The records are to include:

- (i) Quantity and type of waste generated;
- (ii) Waste container inventory and identification, including starting date of collection for each tank or container;
- (iii) Waste removals by the Industrial Waste Transporter including container I.D. numbers and Industrial Waste Transporter I.D. numbers, final disposal site and copies of the manifest;
- (iv) Spill records including the date and time of the spill, persons notified, method of cleanup, material and spill residues, and method of disposal of all materials and residues.

The Department and other agencies must be notified of all spills or discharges in accordance with the provisions of Article XI and these Regulations, and

- (v) Sampling results when required by permit.

2.3.2 All records shall be kept by the permittee for a minimum of three years.

2.3.3 An operating report summarizing the wastes generated and removed each year shall be prepared on a form satisfactory to the Department and shall be submitted to the Department no later than the fifteenth day of February of the following year.

2.4 Storage Tanks

Underground and aboveground storage tanks shall be in conformance with the provisions of Article XI and all applicable requirements of these Regulations.

2.5 Special Requirements for Regulated Medical Wastes

Regulated Medical wastes must be stored, handled and disposed of as described herein. All regulated medical wastes shall be segregated from non hazardous waste streams at all times with the exception of on site incineration at the generator.

2.5.1 Handling

- (i) All regulated medical wastes except sharps, shall be placed into plastic bags that are seamless, impervious, tear-resistant, and red in color labeled or imprinted with the name and address of the generator. All wastes and/or materials placed in red bags are presumed to be regulated medical wastes.
- (ii) Sharps shall be discarded directly into impervious, rigid, puncture-proof containers that are red in color and are marked with the universal biohazard symbol.
- (iii) Handling of regulated medical wastes shall be done in a manner to minimize the number of persons in contact with or exposed to those wastes.
- (iv) Regulated medical wastes or packages of same may not be compacted prior to final treatment.
- (v) Liquids, including blood, urine, etc. may be discharged into the sewer system if the facility is connected to a public sewer system and providing that the discharge will not be in violation of the sewer use ordinance. If liquids are not discharged into a public sewer system, they must be placed in a container and packaged with sufficient absorbent material to prevent the contents from discharging or leaking if the container is broken. After placement into the container with absorbent material, this package shall be placed into a red bag.
- (vi) Spills, leaks, broken bags, etc. of regulated medical wastes shall be immediately cleaned up and repackaged, and all surfaces which come into contact with the regulated medical wastes shall be disinfected in an approved manner.
- (vii) Laboratory wastes, serums, and vaccines (except sharps) may be autoclaved and disposed of in the nonhazardous waste stream provided a record is maintained of all autoclaved wastes, and autoclave test strips have been included with each batch of autoclaved wastes.

2.5.2 Storage

- (i) The area where regulated medical waste is stored, including refrigerators and freezers, shall have limited access and be posted with the universal biohazard symbol.

- (ii) The bagged wastes must be placed within a rigid or semirigid container. All containers must be weathertight, rodent-proof and labeled with the universal biohazard symbol. The containers must be securely closed and sealed.
- (iii) All unpreserved pathological wastes and animal carcasses must be stored under refrigeration (1° - 7°C, 34° - 45°F) up to a period of 72 hours. For storage time which exceeds 72 hours, these wastes must be stored in a freezer (at -10°C, 14°F or lower.) These wastes must not be removed from storage until immediately before disposal or treatment.
- (iv) All regulated medical wastes may be stored on-site unrefrigerated for a period up to 72 hours, with the exception described in 2.5.2 (iii). If storage time exceeds 72 hours, the regulated medical wastes must be refrigerated.

2.5.3 Transportation Within the Facility and Off-Site

- (i) Carts which are used to move regulated medical waste within the facility must be labeled with the universal biohazard symbol, frequently cleaned and disinfected and may not be used for other purposes.
- (ii) For movement within the facility, the waste must be double-bagged (red bags) or the bagged waste must be placed within a rigid or semirigid container.
- (iii) The time and route of transport within the facility should be selected to limit exposure to a minimum number of people.
- (iv) Generators with on-site incineration must provide contingency plans acceptable to the Department for alternatives in the event of equipment failure.
- (v) Any person who transports regulated medical wastes must have a valid and appropriate New York State Department of Environmental Conservation waste transporter's permit for that purpose and be in compliance with all provisions of that permit.

A generator of less than 50 pounds per month of regulated medical waste (or an employee of the generator) who is transporting that waste to a registered disposal facility is exempt from this requirement. That generator must have on file with the New York State Department of Health an agreement with the disposal site to accept the generator's waste.

No vehicle used for the transportation of regulated medical wastes shall be leased or used for other purposes unless specifically approved by this Department.

- (vi) Transportation off-site of packaged regulated medical wastes to a disposal facility permitted or approved by the New York State Department of Environmental Conservation must be in closed, leakproof containers or vehicles which have been labeled with the universal biohazard symbol. For disposal at a facility outside of New York State, proof of authorization to accept these wastes shall be provided to the Department.
- (vii) Breakage or leaks which occur during transportation must be handled in accordance with Section 2.5.1 (vi).

2.5.4 Disposal

All regulated medical wastes must be incinerated at the generating facility unless otherwise approved by the Department.

Section 3.0 Materials of Construction for New Storage Facilities

3.1 Underground Tanks

Tanks that are part of a new facility, replacements in an existing facility, or are part of a substantially modified portion of an existing facility must be made of fiberglass reinforced plastic, or steel which is clad with fiberglass.

3.1.1 Fiberglass reinforced plastic tanks

All fiberglass reinforced plastic underground storage tanks must be designed and manufactured in accordance with one of the following standards:

- (i) UL No. 1316; or,
- (ii) CAN4-S615-M83; or,
- (iii) ASTM D 4021

Fiberglass reinforced plastic tanks must be of sufficient structural strength to withstand normal handling and underground use and must be chemically compatible with the products, stored product additives and corrosive soils. Materials must be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

3.1.2 Steel tanks clad with fiberglass reinforced plastic

Underground storage tanks constructed of steel clad with fiberglass reinforced plastic must meet or exceed one of the following design and manufacturing standards:

- (i) ULC-603; or,
- (ii) UL-58

Tanks must be electrically insulated from the piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to products stored, product additives, or corrosive soils.

Tanks must have an exterior fiberglass reinforced plastic shell bonded firmly to the steel. This must consist of a base coat of resin five (5) to eight (8) mils (0.005 to 0.008 inches) in thickness overlaid by two layers of resin with fiberglass reinforcement with a thickness of at least eighty-five (85) mils (0.085 inches) after rolling.

A final coat of resin must be applied to a thickness of ten (10) to fifteen (15) mils (0.01 to 0.015 inches). The thickness of the completed coating must be a minimum of one hundred (100) mils (0.1 inches) after curing. The coating's coefficient of thermal expansion must be compatible with steel so that stress due to temperature changes will not be detrimental to the soundness of the coating and a permanent bond between coating and steel is maintained.

The coating must be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate and which must be capable of containing the product under normal service conditions in the event the steel wall is perforated. The coating must be noncorrodible under adverse underground electrolytic conditions and must be chemically compatible with products and product additives.

The coating must be factory inspected for air pockets, cracks, blisters, pinholes and electrically tested at ten thousand (10,000) volts for coating short circuits or coating faults. Any defects must be repaired. The coating must be factory checked with a Barcol Hardness Tester or equivalent to assure compliance with the manufacturer's minimum specified hardness standard for cured resin.

3.1.3 Double-walled tanks

Tanks may be fabricated in double-walled construction in accordance with acceptable engineering practices. A double-walled tank must be designed and manufactured in accordance with all of the following standards:

- (i) The interstitial space of the double-walled tank can be monitored for tightness;
- (ii) Outer jackets made of steel must have a minimum thickness of ten (10) gauge and be coated as prescribed in Section 3.1.2 of these Regulations;
- (iii) There are no penetrations of any kind through the jacket to the tank except top entry manholes and fittings required for filling the tank, venting the tank, or monitoring the interstitial space;
- (iv) The jacket must be designed to contain an inert gas or liquid at a pressure greater than the maximum internal pressure or be able to contain a vacuum for a period of one (1) month.

3.1.4 Incompatibility

Waivers will be considered from the above requirements if it can be demonstrated beyond any reasonable doubt that the products or product additives stored are incompatible with any of the above tank materials or coatings. In such cases, equivalent protection must be provided.

3.1.5 Piping

Underground pipes must be made of fiberglass reinforced plastic or otherwise suitably protected against corrosion. Piping used in conjunction with double walled tanks shall be double walled or equivalent.

3.1.6 Labeling

All new underground tanks must bear a permanent label or plate affixed to the top of the tank near a lifting lug with the following information:

- (i) The standard of design by which the tank was manufactured;
- (ii) The types of products and volume of additives which may be stored permanently and compatibly within the tank or reference provided to a list available from the manufacturer which identifies products compatible with all tank materials;
- (iii) The year in which the tank was manufactured;
- (iv) A unique identification number;
- (v) The dimensions, design and working capacity and model number of the tank;
- (vi) The name of the manufacturer;
- (vii) Underwriters Laboratory identification number and
- (viii) A statement that the tank conforms to the requirements of 6 NYCRR 614 (for petroleum tanks only). A second permanent label which shows all of the information required above, and which also shows the date of installation must be conspicuously displayed and permanently affixed at the fill port. It must be readily visible to the carrier and may be imbedded in concrete, welded to the fill port, or otherwise permanently affixed.

The ends of the tank shall be stenciled with the following information and all letters and numbers to be a minimum of 1 1/2 inches high

- (i) Tank manufacturer;
- (ii) Working capacity of the tank;
- (iii) Underwriters Laboratory identification number and;
- (iv) A statement that the tank conforms to the requirement of 6 NYCRR 614 as well as to the Nassau County Public Health Ordinance, Article XI (for petroleum tanks only).

3.1.7 Wear Plates

All tanks must have a ten (10) gauge or thicker steel wear plate on the floor of the tank under each tank opening. Each plate must cover an area of at least one hundred and forty-four (144) square inches and must be installed in a manner which avoids crevice corrosion.

3.1.8 Testing

All new tanks, their welds, seams and connecting fittings must be factory tested for tightness using standard engineering practices. All tanks sold for use in Nassau County must be guaranteed by the manufacturer to be tight.

3.2 Aboveground Tanks

New aboveground storage tanks must be constructed of steel, and meet one of the following design and manufacturing standards:

- (i) UL 142;
- (ii) UL 58;
- (iii) API Standard No. 650;
- (iv) API Standard No. 620;
- (v) CAN4-S601-M84; *or*
- (vi) CAN4-S630-M84.

Any aboveground storage tanks which are not constructed of steel or do not comply with the above requirements may not be installed unless previously approved by the Department in writing.

The exterior surfaces of all new aboveground storage tanks must be protected by a primer coat, a bond coat and at least two final coats of paint or have an equivalent surface coating system designed to prevent corrosion and deterioration.

Any new tank which is designed to rest on the ground must be constructed with a double bottom or underlain by an impervious barrier which has a permeability rate to water equal to or less than 1×10^{-6} cm per sec. and must not deteriorate in an underground environment or in the presence of the product stored.

Bottoms of new steel tanks which rest on or in the ground must be cathodically protected. Cathodic protection must be in accordance with the requirements of Section 6.0, Subsections 6.2.; 6.3.; 6.4. and 6.5. of these Regulations.

Section 4.0 Spill and Overfill Protection

4.1 Flood Protection

Any facility located within the 100 year flood plain, or on a site which may be subject to flooding, must be safeguarded against buoyancy and lateral movement by flood or high ground waters in accordance with operating standards set forth in NFPA No. 30, and in accordance with good engineering practice and any state or local flood plain regulations. If such safeguards include ballasting of tanks with water during flood warning periods, tank valves and other openings must be closed and secured in a locked position in advance of the flood. Ballast water removed from the tank after the flood must not be discharged to any surface or groundwaters in contravention of any state or county requirements.

4.2 Responsibility for Transfer

The owner or other person in possession or control of any storage or transfer facility shall be responsible for all transfer activities and must employ practices for preventing transfer spills and accidental discharges. Prior to the transfer, the person performing or causing the transfer must determine that the receiving tank has available capacity and capability to receive the volume of product to be transferred. The person performing or causing the transfer must monitor every aspect of the delivery or transfer, and must take immediate action to stop the flow of product when the working capacity of the tank has been reached or should an equipment failure or emergency occur.

4.3 Drainage

Storm water drainage systems shall be designed and constructed so as to eliminate or minimize the discharge of storm water contaminated because of spills or leaks. Storm water or any other discharge at a facility must be uncontaminated and free of sheen prior to discharge and comply with the provisions of Section 5(a) of Article XI.

4.4 Color Coding of Fill Ports

Beginning one (1) year from the effective date of Article XI, the owner or operator must permanently mark all fill ports to identify the product inside the tank. These markings must be consistent with the color and symbol code of the American Petroleum Institute as follows:

Colors

(i)	High gasoline	Red
(ii)	Middle gasoline	Blue
(iii)	Lower gasoline	White
(iv)	Higher unleaded gasoline	Red w/white cross
(v)	Middle unleaded gasoline	Blue w/white cross
(vi)	Lower unleaded gasoline	White w/black cross
(vii)	Vapor recovery	Orange
(viii)	Diesel	Yellow
(ix)	#1 Fuel oil	Purple w/yellow bar
(x)	#2 Fuel oil	Green
(xi)	Kerosene	Brown

Symbols

- (i) a circle for gasoline products and vapor recovery lines;
- (ii) a hexagon for distillates; and
- (iii) a border must be painted around fuel products containing extenders such as alcohol. The border will be black around a white symbol and white around all other colors.

4.4.1 Monitoring wells must be permanently marked and identified as a "monitoring well."

4.5 Gauges for aboveground storage tanks

All aboveground tanks must be equipped with a gauge which accurately shows the level of product in the tank. The gauge must be accessible and be installed so it can be conveniently read.

4.5.1 The design capacity, working capacity and identification number of the tank must be clearly marked on the tank and at the gauge.

4.5.2 A high level warning alarm, a high level liquid pump cutoff controller or equivalent device may be used in lieu of the gauge required in section 4.5.

4.6 Check valve for pump filled tanks

All fill pipes leading to a pump filled tank must be equipped with a properly functioning check valve or equivalent device which provides automatic protection against backflow. A check valve is required only when the piping arrangement of the fill pipe is such that backflow from the receiving tank is possible. New underground piping systems employing a suction pump must not be equipped with more than one check valve.

4.7 Operating valves for gravity drained tanks

Each tank connection through which product can normally flow must be equipped with an operating valve to control the flow. A valve which meets the standards set forth in NFPA No. 30, meets the requirements of this paragraph.

4.8 Level alarm systems for overfill

All tanks must be equipped with a positive means of detecting an overfill condition before any spillage can occur. The detection system shall include, but not necessarily be limited to, both visual and audible alarms.

4.8.1 Exemptions

All tanks which meet any of the following criteria are exempt from the audible and visual alarm system requirement:

- (i) Aboveground and underground tanks manually filled at the tank; or;
- (ii) Open top tanks whose liquid level is clearly visible to the operator filling the tank at all times, or;
- (iii) Translucent or transparent tanks whose liquid level is clearly visible to the operator filling the tank at all times.

4.8.2 Components

The level alarm systems shall consist of, but not be limited to, a liquid level sensing unit and alarm panel. The level sensing element may be any type mechanical float, optical, ultrasonic, capacitance, conductance, etc. which is compatible with the material being stored. The liquid level sensor will be mounted in the storage tank in order to provide overflow warning at the tank level corresponding to between 90% and 95% capacity. Systems with a float vent valve must be installed with an extractable tee and may only be used on tanks that are limited to gravity fill.

The alarm panel shall be equipped with the audible and visual warning devices. The audible element may be a horn or bell which can be heard by the operator filling the storage tank. The visual element may be a steady burning or flashing light which can be seen in daylight by the operator filling the tank. The alarm panel must be equipped with a reset button which will deactivate the audible alarm at high liquid level indication, but the visual alarm must remain on until the liquid level drops below the high level. Subsequent high level conditions must activate both the audible and visual alarms.

The alarm panel must be equipped with a self-checking system capable of monitoring the circuitry as well as the working condition of the audible and visual alarms. This self-checking feature may be either an automatic or manual operation. Should a malfunction be detected by this check system the alarms should activate. The alarm panel must be located where it will be seen and heard by the operator filling the tank. For multiple tank installations, one visual alarm must be furnished for each tank. One audible alarm for the entire facility is acceptable but it must be independently activated by each tank probe.

All electrical wiring and components shall conform to all applicable electrical and buildings codes and U.L. standards. Electrical enclosures mounted on the tanks must be explosion proof where dictated by the tank contents. Outdoor electrical enclosures must be weatherproof. Power on/off switches on the level sensor or alarm panel or any other component of the level alarm system are not acceptable. All components must be hard wired; plug-in type cords are not acceptable. Upon high liquid level the audible and visual alarm must activate. On pressure fed tanks, the high level alarm system must be interlocked with on-site pumps used to fill tanks. The high level alarm system must shut down the pumps and activate the audible/visual alarms upon high level. The pump starter and level alarm system must be interlocked such that the pump filling the tank cannot be restarted until the liquid level drops below the high level alarm condition. Pumps incorporated into the

delivery tanker truck need not be integral with the tank's high level alarm system.

4.9 Maintenance of spill prevention equipment

The owner and operator must keep all gauges, valves and other equipment for spill prevention in good working order.

Section 5.0 Monitoring and Leak Detection

5.1 Underground Tanks

5.1.1 Inventory Tank Records

The operator of an underground storage tank must keep daily inventory records for the purpose of detecting leaks. Records must be kept for each tank (or battery of tanks if interconnected) and shall include measurements of bottom water levels, sales, use, deliveries, inventory on hand and losses or gains. Reconciliation of records must be kept current, must account for all variables which could affect an apparent loss or gain and must be in accordance with generally accepted practices.

If the tank is unmetered or if the tank contains petroleum for consumptive use on the premises where stored, the operator may detect inventory leakage by an alternative method. This method shall include an annual tightness test or other method acceptable to the Department.

5.1.2 Exemptions

No inventory monitoring is required where the operator can demonstrate to the satisfaction of the Department that it is technically impossible to perform inventory monitoring for the purpose of leak detection.

5.1.3 Maintenance of Inventory Records

Inventory monitoring records must be maintained by the operator and made available for department inspection for a period of not less than five (5) years.

Failure to maintain and reconcile such records constitutes cause for Department-ordered tests and inspections of the facility at the operator's expense.

5.1.4 Reporting of Inventory Losses

If inventory monitoring required above shows: an inventory loss; a recurring accumulation of water in the bottom of the tank during any ten day period; apparent product losses or gains exceed three-quarters (3/4) of one (1) percent of the tank volume; or apparent losses or gains exceed seven and one-half (7.5) gallons per one thousand (1,000) gallons delivered, the operator must initiate an investigation into the possible causes. If the causes cannot be explained by inaccurate recordkeeping, temperature variations or other factors not related to leakage within forty-eight (48) hours, the operator must notify the owner and the Department and must take the tank out of service in

accordance with Article XI and Section 12.0 of these Regulations until such time that inspection and/or tightness tests are performed, the cause is determined and necessary repairs or replacements are made.

5.1.5 Leak Detection

All underground storage facilities or parts thereof must be provided with a means of monitoring frequently and accurately for any leakage and spillage that might occur. All leak detection systems and tanks shall be monitored by the facility operator at least on a weekly basis and the results recorded and kept with the inventory tank records. Leak detection and monitoring can be provided by an electrical continuous leak detection system; visually operated or float operated alarms for tanks in vaults and pressure, vacuum or fluid level detectors for double walled tanks. Observation wells and collection barriers in high groundwater areas may be permitted for petroleum products. Permanent records of all monitoring shall be retained for a period of five (5) years.

5.1.6 Monitoring at New Underground Storage Tanks

All new tanks must have one of the following leak monitoring systems:

- (i) A double-walled tank with monitoring of the interstitial (annular) space; or;
- (ii) An in-tank monitoring system; or;
- (iii) Observation wells (See Section 5.1.5), or;
- (iv) In-vault monitoring system.

5.1.7 Monitoring of Double-walled Tanks

If a double-walled tank is used, the interstitial space must be monitored for tightness using pressure monitoring, vacuum monitoring, electronic monitoring, manual sampling once per week or an equivalent method.

5.1.8 Maintenance of Monitoring Equipment

The owner or operator must monitor for traces of product at least once per week. All monitoring systems must be inspected monthly. Monitoring systems must be kept in proper working order. If at any time the monitoring system fails to function effectively, it must be repaired within thirty (30) days. Monitoring records for leak detection systems must be maintained on the premises for a period of at least five (5) years.

5.1.9 Leak Detection for Underground Tanks Without Double Walls

All new petroleum underground tanks not of double walled construction shall be provided with the following means of leak detection or approved equivalent if the groundwater level is above the bottom of the tank excavation. A minimum of (one) 1 driven monitoring well consisting of a 4-inch diameter SCH. 40 PVC pipe. The well is to be constructed with a well screen long enough to provide a length of at least 5 feet above the water table (or to the well cap) and extending a minimum of 5 feet into groundwater or 2 feet below the bottom of the tank, whichever is greater. The well screens are to have a slot size of .020. Monitoring wells are to be brought to grade and must be sealed or capped with a waterproof cap so as to preclude liquid from entering the well from the surface and clearly marked as a monitoring well to prevent accidental delivery of product. Monitoring well locations are to be approved by the Department.

Monitoring wells must be protected from damage if located in a traffic area by means of a manhole frame and cover or other means acceptable to the Department.

For single walled tanks in areas of high groundwater where the water level is above the bottom of the excavation a cut-off wall in conformance with Section 8.3.3 of these Regulations shall be installed around the entire perimeter of the excavation. All leak detection systems are to be located within the confines of the enclosure formed by the cut-off wall.

5.1.10 In-Tank Monitoring Systems

If an in-tank monitoring system is used, it must consist of in-tank equipment which provides continuous monitoring of any leakage from the tank of two-tenths (0.2) of a gallon per hour or larger.

5.2 Aboveground Tanks

All applicable requirements as contained in Sections 5.1.1, 5.1.2, 5.1.3, 5.1.4, and 5.1.5 of these Regulations shall apply to all aboveground tanks.

5.2.1 Monitoring Systems for Aboveground Tanks

All new aboveground tanks sitting on a barrier must have equipment for monitoring between the tank bottom and the impermeable barrier. This includes, but is not limited to, perforated gravity collection pipes or channels in a concrete pad which may be monitored for the presence of product visually, electronically or by other satisfactory methods. Observation wells or other systems which monitor the soil or groundwater beneath the impermeable barrier do not satisfy the leak detection requirements.

5.2.2 Monthly Inspections

The owner or operator of an aboveground storage facility must inspect the facility at least monthly. This inspection must include:

- (i) Inspecting exterior surfaces of tanks, pipes, valves and other equipment for leaks and maintenance deficiencies, and
- (ii) Identifying cracks, areas of wear, corrosion and thinning, poor operating and maintenance practices, excessive settlement of structures, separation or swelling of tank insulation, malfunctioning equipment and structural and foundation weaknesses.

5.2.3 Weekly Inspections

The owner or operator of an aboveground storage facility must inspect and monitor on a weekly basis all leak detection systems, cathodic protection monitoring equipment, or other monitoring or warning systems which may be in place at the facility.

5.2.4 Records

Monthly and weekly inspection records must be maintained on the premises for a period of five (5) years.

Section 6.0 Cathodic Protection

6.1 Cathodic protection shall consist of sacrificial anodes or an impressed current system which is designed, fabricated and installed in accordance with one of the following standards:

- (i) API Publication No 1632;
- (ii) ULC S603.1;
- (iii) Steel Tank Institute Standard No. sti-P3; or
- (iv) NACE Standard RP-01-69

6.2 The cathodic protection system must be designed to provide a minimum of thirty (30) years of protection.

6.3 A licensed professional engineer proficient in such matters must design and supervise the installation of the cathodic protection system. The design must be approved by the Department prior to installation.

Certification by the engineer must be provided to the Department within thirty (30) days of the completion of the installation indicating that the installation was in complete conformance with the approved plans.

6.4 Each cathodic protection system shall have a Protection Prover 1 test station or other approved equivalent monitor which enables the owner or operator to check on the adequacy of the cathodic protection.

The system shall be monitored weekly and records of the monitoring shall be kept on the premises in accordance with Article XI and these Regulations.

6.5 Cathodically protected steel tanks must be electrically insulated from the piping system and other underground metallic structures with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable to the product stored, product additive or corrosive soils.

Section 7.0 Weather and Moisture Protection

7.1 Outdoor Storage Areas

All outdoor storage areas and transfer areas must be roofed and suitably protected from the weather.

7.1.1 Roofs must be pitched for drainage. Roof drains shall not drain onto the storage pad or into the secondary containment system. If roof drains lead to an underground leaching facility, they must be hard piped. All storm water leaching facilities must be equipped with a manhole cover at grade.

7.1.2 Where fencing is used in place of walls the roof must overhang the fence and berm by a minimum of two (2) feet six (6) inches on all sides.

7.1.3 Fencing or walls are required around all storage areas. Walls or fencing shall be a minimum of six (6) feet high. A locking gate or door to the storage area shall be provided.

7.1.4 No drains or drainage systems will be allowed within the enclosure. Where possible, the floor shall be pitched toward a sump to facilitate collection of spilled materials. The sump shall be cast integrally with the floor. Pumps shall be hand operated or if electrical shall operate by a switch, which must be held manually in the on position. Automatic float switches or standard on-off switches for electric pumps will not be permitted.

7.2 Drainage

All stormwater drainage for any outdoor storage area shall be contained on the site to the extent possible. Any stormwater which is discharged off-site shall be tested periodically by the owner or operator in accordance with procedures approved by the Department. Constituents to be tested shall include all products and degradation products thereof stored or handled on the site. If any constituent is found in sufficient quantity to degrade ground or surface waters the owner or operator shall cease the discharge and apply for a New York State Pollutant Discharge Elimination Permit or other permit acceptable to the Department and shall be in accordance with all requirements, conditions and provisions of that permit.

All on-site stormwater disposal facilities including sumps, recharge basins and underground leaching pools shall be accessible for inspection and sampling.

7.3 Equivalent Designs

Alternate methods of construction that are equivalent to the requirements of this section may be submitted for review and approval.

Section 8.0 Secondary Containment

8.1 Secondary Containment System for Aboveground Tanks

A secondary containment system must be installed around and under any aboveground storage tank. This system must be constructed so that spills or leaks of products stored will not permeate, drain, infiltrate or otherwise escape to the groundwater or surface waters before cleanup occurs. This system may consist of a combination of dikes, liners, pads, impoundments, curbs, ditches, sumps, receiving tanks and other equipment capable of containing the product stored.

8.1.1 For petroleum products, construction of diking and the storage capacity of the diked area must be in accordance with NFPA No. 30 unless otherwise approved by the Department in writing. In no instance will earthen dikes, in whole or part, be acceptable.

8.1.2 For chemicals, the secondary containment system and the entire area enclosed by the system, including the area under the tanks shall be made permanently impervious to the types of products expected to be stored in the tanks. A tank cannot be switched from one product to another unless the secondary containment system is impervious to the new material stored.

The volume of the diked area shall be at least 110% of the volume of the largest tank contained therein excluding the volume below the diked level occupied by other tanks.

8.1.3 The secondary containment system shall be constructed of reinforced concrete unless other materials of construction are specifically approved.

8.1.4 Stormwater which collects within the secondary containment system must be controlled by a manually operated pump or siphon. Sump pumps which are electrically operated shall be equipped with a switch which must be held manually in the on position. Automatic float switches or standard on-off switches for electric pumps will not be permitted.

8.1.5 Stormwater discharge shall meet all the provisions of Section 7.2 of these Regulations.

8.2 Secondary Containment for Bulk Storage and Container Storage Facilities

A secondary containment system must be installed for all bulk storage and container storage facilities. The secondary containment system shall be constructed of reinforced concrete unless other materials of construction are specifically approved. The secondary containment system shall comply with the construction and storage capacity requirements of Section 14.0 of these Regulations for bulk storage areas and Section 16.0 of these Regulations for container storage areas.

8.3 Secondary Containment for Underground Storage Tanks

All new underground storage tanks must have a secondary containment system which collects and contains a leak. This must consist of one of the following:

- (i) A double-walled tank; or,
- (ii) A vault; or,
- (iii) Cut-off walls (fresh petroleum products only).

8.3.1 Double-walled tanks

If the secondary containment system consists of a double-walled tank, the tank must be constructed and have a monitoring system in accordance with Section 5.0 and all applicable requirements of these Regulations.

8.3.2 Vaults

If a vault is used for secondary containment, the vault must be water tight, impervious to leakage of product and able to withstand chemical deterioration and structural stresses from internal and external causes. The vault must be a continuous structure with a chemical resistant water stop used at any joint. There must be no drain connections or other entries through the vault except that there may be top entry manholes and other top openings for filling and emptying the tank, venting and for monitoring and pumping of products which may leak into the vault. The tank or tanks within the vault must be encased or bedded in a manner consistent with acceptable engineering practices.

8.3.3 Cut-off Walls (fresh petroleum products only)

Cut-off walls may be used where the lowest possible groundwater levels are above the bottom of the tank excavation. Cut-off walls are only allowed for fresh petroleum product storage.

A cut-off wall must consist of an impermeable barrier which has a permeability rate to water equal to or less than 1×10^{-6} cm/sec. It must not deteriorate in an underground environment and in the presence of any product or product additive.

A cut-off wall must extend around the perimeter of the excavation and to an elevation below the lowest groundwater level.

If a synthetic membrane is used for a cut-off wall, any seams, punctures or tears in the membrane must be repaired and made leak tight prior to backfilling. No penetrations of the cut-off wall are allowed. Synthetic membranes must be installed under the supervision of the manufacturer's representative and in accordance with all manufacturer's recommendations.

Anchoring or weighing to resist buoyancy forces is required where groundwater and floods may affect the tank.

Section 9.0 Testing - Underground Tanks

9.1 Tightness Test

A tightness test is a test acceptable to the Department which will determine if a tank and piping system is tight or not tight. The test must be capable of detecting a tank or piping leak as small as five hundredths (0.05) of a gallon in one hour accounting for variables such as vapor pockets, thermal expansion of product, temperature stratification, groundwater level, evaporation, pressure and end deflection. Test methods must be acceptable to the New York State Department of Environmental Conservation under Petroleum Bulk Storage regulations before being considered for approval by the Nassau County Department of Health.

9.2 Exemption

No periodic tightness test is required where the size and/or normal contents of the tank is such that it is technically impossible to perform a meaningful tightness test. In this case, an alternative test or inspection which is acceptable to the Department must be conducted, or the tank and piping systems must meet the requirements for new construction.

9.3 Qualifications of the tester

Qualifications indicating that the person performing the test has received training and/or certification from a recognized school or agency or other proof of training, experience or expertise in testing underground tanks must be submitted in writing to the Department 30 days prior to the commencement of the test.

9.4 Test reports

A test report must be sent by the tester to the Department no later than thirty (30) days after performance of the test, except any test or inspection which shows the facility is leaking must be reported by any person with knowledge of such leak to the Department within two (2) hours of the discovery of such leak and in the case of a tank containing petroleum products as defined in section 3(q) of Article XI a report must also be made to New York State Department of Environmental Conservation Hotline (1-800-457-7362) within two (2) hours.

All test reports must be in a form satisfactory to the Department and must include the following information:

- (i) Tank registration number and facility number;
- (ii) Date of test;

- (iii) Results of test;
- (iv) Test method;
- (v) Certification by the tester that test complies with criteria for a tightness test;
- (vi) Address of tester, and
- (vii) Signature of tester.

A copy of the test report(s) must be maintained by the owner of the facility for at least five (5) years.

9.5 Notification

The Department must be notified at least 2 working days prior to any testing.

Section 10.0 Inspection, Cleaning, Repair and Coating of Aboveground Tanks

10.1 Monthly Inspections

All new and existing aboveground storage facilities must be inspected at least monthly. This must include the following:

10.1.1 Exterior Inspection

Exterior surfaces of tanks, pipes, valves and other equipment must be inspected for leaks and maintenance deficiencies

10.1.2 Inspection for Structural, Mechanical and Other Deficiencies

The facility must be inspected to identify cracks, areas of wear, corrosion and thinning, poor maintenance and operating practices, excessive settlement of structures, separation or swelling of tank insulation, malfunctioning equipment and structural and foundation weaknesses.

10.1.3 Inspection of Monitoring Systems

All leak detection systems, cathodic protection monitoring equipment, and other monitoring and warning systems must be inspected and monitored at the facility.

10.1.4 Repair of Deficiencies

All repairs of deficiencies must comply with the requirements of Section 10.4. of these Regulations.

10.2 Five Year Inspections

In addition to monthly inspections required in Section 10.1 above, all aboveground storage facilities sitting on the ground and making contact with the ground must be drained, cleaned, [sand blasted], inspected, tested, repaired and coated in accordance with the following requirements:

10.2.1 Schedule

All aboveground storage facilities must be inspected in accordance with the time schedule established in the permit, but in no event less than once every five (5) years.

10.2.2 Exemptions

Five year inspections are not required for tanks which are entirely aboveground, such as tanks on racks, cradles or stilts.

Five year inspections are not required for tanks which are constructed and installed in conformance with the requirements for new storage facilities.

10.2.3 Draining

Liquid and any residue must be removed from the tank and connecting lines during draining. Any wastes removed shall be disposed of in accordance with all applicable federal, state and local laws.

10.2.4 Cleaning

The tank and all difficult to reach areas within the tank shall be cleaned in accordance with accepted practices. Wash water must not be discharged to the ground or surface waters in contravention of any federal, state or local laws and/or requirements.

10.2.5 Inspection and Testing

The tank shell shall be inspected and tested for soundness. All welds and seams on the tank bottom shall be tested for porosity and tightness. All testing shall be consistent with generally accepted industry testing and inspection practices. This may include one or a combination of the following: a tightness test, an air pressure, hydrostatic or vacuum test a penetrant dye test, a nondestructive test to detect thinning of the tank or hammering to detect weak areas.

All internal surfaces of the tank and difficult to reach areas shall be visually inspected for corrosion or failure.

All connecting piping shall be tested for tightness.

10.2.6 Coating

Interior coatings shall be inspected for any signs of failure of the coating system such as cracks, bubbles, blisters, peeling, curling or separation. If the coating has failed in any area, or if the coating is over ten (10) years old, the inside of the tank must be sand blasted and a new coating applied in conformance with Section 10.8. of these Regulations.

10.2.7 Repair of Deficiencies

All repairs of deficiencies must comply with the requirements of Section 10.4. of these Regulations.

10.3 Uninspected Facilities

If any portion of a facility is not inspected as required, the uninspected portion of the facility must be taken out-of-service.

10.4 Repairs

If any inspection reveals a leak, a tank or equipment deficiency, a deficiency in monitoring equipment, excessive thinning of the tank shell which would indicate structural weakness when the tank is filled with product, or any other deficiency which could result in failure of the facility to function properly or store and contain the product in storage, remedial measures must be promptly taken to eliminate the leak or deficiency.

All repairs must be permanent in nature and equal to or better than the standards of original construction. On steel tanks such repairs must consist of steel welds or steel patches which are welded in place in accordance with accepted practices. All welds must be inspected and tested for tightness before the tank is returned to service. All repairs must be made with materials which are chemically compatible with the product being stored. Linings, coatings, grouts and other sealing materials may be used in conjunction with permanent repairs but by themselves are not acceptable permanent repairs.

All repairs must comply with the requirements of Sections 10.5 and 10.6. of these Regulations.

10.5 Interior Coatings

All tanks must have an approved coating over all interior surfaces below the level of the ground.

10.5.1 If the tank has an existing coating, it must be inspected for any signs of failure of the coating system such as cracks, bubbles, blisters, peeling, curling or separation. If the coating has failed in any area, or if the coating is over ten (10) years old the inside of the tank must be sand blasted and a new coating applied.

10.5.2 Sandblasting shall be done so that the entire internal surface of the tank is completely free of scale, rust and foreign matter.

10.5.3 Any noncorrodible epoxy-based resins, isophthalic polyester-based resins or equivalent coating may be used for reconditioning a steel tank if the coating is of sufficient thickness, density and strength to form a hard impermeable shell which will not leak, crack, wear, soften or separate from the interior surface of the tank.

The coating when applied to properly prepared steel as required in paragraph 10.5.2 must maintain a permanent bond to the tank.

The coating's coefficient of thermal expansion must be compatible with the tank material so that stress due to temperature changes will not be detrimental to the soundness of the coating. The coating must be chemically compatible with the products stored. The coating must be applied and cured in strict accordance with manufacturer's specifications.

The coating must be applied as soon as possible but not later than eight (8) hours after sandblasting and cleaning of the internal surface. Visible rust, moisture or foreign material must not be present. The coating must be checked to assure compliance with manufacturer's specifications and any defects must be repaired.

10.6 Exterior Coatings

Exterior surfaces of tanks shall be coated in an approved manner, and must comply with the requirements of Section 3.2 of these Regulations.

10.7 Inspection Reports

Reports for each inspection must be maintained and made available to the Department upon request for a period of at least five (5) years. The reports must include the following information:

- (i) Facility number;
- (ii) Registration number for tank inspected;
- (iii) Date of inspection;
- (iv) Results of inspection including a report on the need for repair and/or coating;
- (v) Certification that all repairs and/or coating have been made in accordance with these requirements, and
- (vi) Certification that the inspection was made in accordance with these requirements.

(vii) Address and signature of inspector.

10.8 Notification

The Department must be notified at least 2 working days prior to the inspection or testing of any aboveground tank.

Section 11.0 Certifications

11.1 Qualifications

Persons submitting certifications to the Department must:

- (i) Be a licensed professional engineer in New York State unless otherwise exempted herein and,
- (ii) Have witnessed the construction or the construction was witnessed by a direct employee of the person submitting the certification and,
- (iii) Sign and seal all papers submitted and,
- (iv) Upon request submit evidence of expertise in the type of work being certified and,
- (v) Upon request submit field notes, diary records, or such other supplementary information as may be needed.

11.2 Exemptions

A licensed professional engineer will not be required for:

- (i) Exempt storage areas indicated in Section 22.6 of these Regulations.
- (ii) The person submitting the certification has been accepted by the Department prior to the commencement of construction.

11.3 Submissions

Submissions shall consist of a set of As-Built drawings along with a statement indicating that all construction is in accordance with the approved plans. Any minor deviations shall be explained. Major deviations or nonconformance must be approved in writing by the Department prior to construction. All plans and statements must be signed and sealed by a licensed professional engineer unless specifically exempted by the Department.

All submissions shall be made in duplicate.

11.4 Acceptance

Acceptance of certifications will be made in writing by the Department after submission of the certification papers and a final inspection by a representative of the Department.

Section 12.0 Abandonment/Out of Service

12.1 Out of Service

Storage tanks or facilities which are out of service for thirty (30) or more days must comply with the following:

- (i) All products must be removed from the tank and piping system to the lowest drawoff point;
- (ii) All manways must be locked or bolted securely and fill lines, gauge openings or pump lines must be capped or plugged to prevent unauthorized use or tampering;
- (iii) Vent lines must be left open;
- (iv) Underground tanks must be filled with water, and
- (v) The maximum time limit that a tank or facility can remain out of service is one year.

12.2 Abandonment of Underground Facilities

Any underground tank or facility that is abandoned must be removed from the ground unless such removal would result in damage to structures and abandonment in place is approved by the Department. Tanks, attested to by the owner as not known to be leaking, storing oil used solely for on site space heating and/or water heating however, may be abandoned in place at the option of the owner. All tanks or facilities abandoned must comply with the following:

- (i) Liquid and any residue must be removed from the tank or facility and all connecting lines. Any waste products removed must be disposed of in accordance with all applicable federal, state and local regulations;
- (ii) All connecting lines must be disconnected and removed or securely capped or plugged;
- (iii) All tanks removed from the ground must be visually inspected and all holes or rust penetrations noted. The tank must remain at the site until removal is approved by the Department. The tank may be removed from the site if no Department response is received by the end of the next business day after which the removal has been scheduled with the Department. In lieu of inspection by the Department and after prior written notice, certification by a licensed Professional Engineer as to the condition of the tank will be accepted;
- (iv) Tanks abandoned in place must be filled to capacity with a solid inert material (such as clean sand or concrete slurry). All voids within the tank must be filled;

- (v) Written notification of removal/abandonment in place must be submitted to the Department detailing tank size, location, and date of removal/abandonment at least seven (7) days in advance of removal and
- (vi)(1) Where a tank is abandoned in place, a minimum of one observation well, consisting of a 4-inch PVC pipe with ten (10) feet of factory slotted screen, shall be installed five (5) feet into the groundwater table (or as determined by the Department) adjacent to the abandoned tank (or as determined by the Department). This well shall be monitored by the owner on a weekly basis for a minimum of four months and monthly for an additional eight months and readings sent to the Department at the end of a one year period. Observation of product in the well at any time shall result in immediate reporting to the Department. The Department must receive written notification of intent to perform a tightness test in lieu of installing a well. The use of this test in lieu of a well must be approved in writing by this Department and must be performed within three (3) months prior to the abandonment. This tightness test shall include the tank, piping, fittings, valves and connections and be conducted in accordance with this Article and the applicable Regulations. If the system does not pass the tightness test the installation of an observation well will be required;
- (vi)(2) In the case of a facility storing 1,100 gallons or less of petroleum for on site heating, requirements of Sect. 12.2 (vi)(1) shall not apply. The Commissioner of Health shall conduct a study and evaluate the groundwater contamination implications of leaking residential fuel oil tanks and prepare a report of the findings together with appropriate recommendations for revisions to this Article, such report to be completed and submitted to the Board of Health within two years after adoption;
- (vii) If a tank is to be disposed of as junk, it must be retested for vapors, rendered vapor free if necessary, and punched with holes to make it unfit for storage of liquids;
- (viii) The excavation must remain open for examination by the Department and not backfilled with any material unless permission to backfill is first obtained from the Department. The excavation may be backfilled if no Department response is received by the end of the next business day providing that the Department was notified of the proposed excavation date seven days prior and there is no visible sign of contamination. In lieu of inspection by the Department and after prior written notice, certification by a licensed Professional Engineer as to the condition of the excavation will be accepted. If visible contamination is noted it must be reported to the Department as required in Section 15 a. of the Ordinance.

12.3 Abandonment of Aboveground Facilities

Any aboveground tank or facility that is abandoned must be removed and must comply with items i, ii, iii, vi, and vii below. Any facility that is granted an approval by the Commissioner to abandon in place must comply with all items below except vii:

- (i) Liquid and any residue must be removed from the tank and connecting lines. Any waste products removed must be disposed of in accordance with all local, state, and federal regulations;
- (ii) All connecting lines must be disconnected and removed or securely capped or plugged. Manways must be securely fastened in place;
- (iii) Tanks must be rendered free of all vapors. Provisions must be made for natural breathing of the tanks to ensure that the tanks remains vapor free;
- (iv) Tanks must be stenciled with the date of abandonment in place;
- (v) Tanks must be protected from floatation in accordance with good engineering practice;
- (vi) Written notification of removal or abandonment in place must be submitted to the Department detailing tank size, location, and date of abandonment at least seven (7) days in advance of such action;
- (vii) If a tanks is to be disposed of as junk, it must be retested for vapors, rendered vapor free if necessary, and punched with holes to make it unfit for storage of liquids.

12.4 General

- (i) Abandoned storage facilities may not be returned to service unless all requirements for new facilities are met.
- (ii) Storage tanks removed from the ground may not be reused in Nassau County unless they meet all requirements for new storage facilities.

Section 13.0 New Storage or Transfer Facilities

13.1 General Requirements for Construction and Installation of New Storage and Transfer Facilities

All new storage and transfer facilities must comply with the requirements of Sections 2.1, 2.4, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 11.0. 14.0, 15.0, 16.0 and 19.0 of these Regulations.

13.2 Installation of Underground Facilities

In addition to the applicable requirements of Section 13.1 above, underground tanks must be installed in a manner consistent with the provisions of the following:

- (i) Nassau County Fire Prevention Ordinance;
- (ii) New York State Uniform Fire Prevention and Building Code, 10 NYCRR, sections 1002.2 and 1002.5.
- (iii) NFPA No. 30, sections 2-3.1, 2-3.2, 2-5.6.1, 2-5.6.3, 2-5.6.4, 2-5.6.5, and 2-7.

13.2.1 In addition to the above requirements, all tanks must be installed in strict accordance with manufacturer's recommendations and any damage to the tank or tank coating repaired prior to backfilling.

13.2.2 Any person installing a new storage facility or substantially modifying a facility must notify this Department in writing at least 48 hours prior to commencement of excavation and backfilling.

13.2.3 No underground tanks shall be installed beneath an existing or proposed structure.

13.2.4 Separation Distances

- (i) There shall be at least a ten (10) foot horizontal separation between existing or proposed water lines and product storage tanks and product piping. This distance shall be measured edge to edge.

Product pipes crossing water lines shall be laid to provide a minimum vertical distance of 18 inches between the outside of the product pipe and the outside of the water line. This shall be the case where the water line is either above or below the product pipe. At crossings, one full length of water line shall be located so both joints will be as far from the product piping as possible.

Special structural support for the water line and product piping may be required.

- (ii) Storage tanks and product piping must be at least 100 feet from any water supply well.
- (iii) Stormwater basins, drywells and sanitary leaching pools must be at least 20 feet from the nearest edge of any underground storage tank.

13.3 Installation of Aboveground Facilities

On addition to the applicable requirements of Section 13.1 above, aboveground tanks and appurtenances must be installed in a manner consistent with the following:

- (i) Nassau County Fire Prevention Ordinance;
- (ii) New York State Uniform Fire Prevention and Building Code, 10 NYCRR, sections 1002 and 1171.2;
- (iii) NFPA No. 30, sections 2-5.1, 2-5.2, 2-5.3, 2-5.4, and 2-5.5.

13.3.1 New aboveground tanks must be supported on a stable, well drained foundation which prevents movement, rolling or settling of the tank and is designed to minimize corrosion of the tank bottom.

13.3.2 New aboveground tanks, pipes and distribution equipment must not be located along road curves or otherwise exposed to traffic hazards.

13.3.3 New aboveground tanks and product piping must comply with the additional minimum requirement separation distances contained in 13.2.4(i) and (ii).

13.4 Testing

Before being placed in service, all new tanks must be tested for tightness and inspected in accordance with requirements outlined in Sections 9.0 and/or 10.0 of these Regulations.

Section 14.0 Bulk Storage

14.1 Enclosures

All enclosures for bulk storage facilities shall be weathertight and shall be capable of being secured by locked door or such other means as to prevent vandalism or accident.

14.2 Floors

Floors shall be of reinforced concrete without any floor drains. Construction and expansion joints shall be provided with a continuous water stop. The water stop shall be of a material to prevent reaction or deterioration from any accidental spills or discharges of the stored materials.

14.3 Curbs

A curb or retention wall shall be constructed completely around the entire storage area, so as to retain spills or contaminated water created during firefighting. The curb or wall shall be of reinforced concrete poured integrally with the floor slab or bonded to the floor slab. Doors and other openings shall be similarly protected.

No openings will be permitted in either the floor slab, curb or retention wall that will in any way permit the escape of liquids.

14.4 Storage

All materials shall be stored in a manner to permit the rapid detection of leaks or spills.

Section 15.0 Road Deicing Bulk Storage

15.1 Permit for Operation Required

No municipality, person, group of persons, firm, corporation, organization or institution shall operate or maintain a road deicing salt storage facility without a permit from the Department. The permit shall be posted conspicuously at the facility.

15.2 New Road Deicing Storage Facilities

15.2.1 Plan and Specification Requirements

All plans and specifications shall comply with Section 22 of these Regulations and, in addition, shall include the following:

- (i) Pad details such as surface (wearing, leveling) and base course shall be specified on plans and/or specifications;
- (ii) The distance and location of the nearest public water supply well must be listed on the plan;
- (iii) A detailed description of the facility operation shall be included in the plans or specifications, and
- (iv) Plans must be submitted to the Department by a Professional Engineer or a Registered Architect.

15.2.2 Detail Requirements

- (i) All lumber used must be treated lumber and all hardware used must be galvanized or of a noncorrosive material.
- (ii) Ventilation of the storage building must be provided to permit escape of moisture and vehicle exhaust.
- (iii) Floors must be constructed of materials which are impervious. Roofs and walls must be weathertight. Walls in contact with deicing material must be impervious.
- (iv) All joints in the floor and walls must act as waterstops. Such waterstops must be constructed of a noncorrosive material.
- (v) Exterior and interior lighting must be provided for nighttime operations.

- (vi) Concrete used in all areas subjected to deicing material shall contain air entrainment.
- (vii) Minimum slope inside storage building of floor shall be 1/4 inch per foot toward center of facility.
- (viii) A slight pitch ($1/2^\circ$) is required out of the entrance opening.
- (ix) The exterior grade to the storage building must be sloped away from the building.
- (x) All entrances without permanent doors must be covered with a properly secured, waterproof material and situated in such a manner so as to protect the road deicing material from exposure to the weather.
- (xi) Lightning protection must be provided for all facilities and installed in accordance with all applicable codes.

15.3 Existing Road Deicing Storage Facilities

An existing enclosed road deicing storage facility must be constructed with at least the following items to comply with the requirements of Article XI for the issuance of a permit:

- (i) Floors, walls and roofs must comply with section 15.2.2(iii) of these Regulations;
- (ii) Entrances without permanent doors must comply with section 15.2.2(x) of these Regulations;
- (iii) Lightning protection must be provided for all facilities and installed in accordance with all applicable codes, and
- (iv) Upgrading of existing facilities must include the submission of plans and specifications to this Department and must conform to Section 15.2.1 and other applicable sections of these Regulations.

15.4 Decks, Grades and Mixing Pads

Any areas used for the mixing of road deicing salt with abrasives or other materials must be constructed of impervious concrete or asphalt, sealed, and diked in such a manner as to prevent the spilled or excess road deicing material from dissolving and seeping into surrounding unprotected areas. Pads must be treated with antispalling compound.

15.5 Drainage Waiver

The drainage provisions of Section 13(c) Article XI, pertaining to outside areas used for the mixing of road deicing salts with abrasives may be waived provided that the agency responsible for the storage of the road deicing material submits to the Commissioner, in writing, a request for a waiver outlining the steps or procedures that will be used to prevent spilled or excess road deicing material from dissolving and seeping into the surrounding area and insures that these steps or procedures are implemented during the operation at the facility. Periodic inspections will be conducted by the Department to verify that these steps or procedures are being performed.

15.6 Flood Protection

No new road deicing storage facility shall be constructed in any area subjected to fresh water flooding. No new road deicing storage facility shall be constructed in the 100 year flood plain without the prior approval of the Department.

Section 16.0 Container Storage

16.1 General Requirements for All Storage Areas

Drums and other portable containers of toxic and hazardous materials must at all times be stored on an impervious, chemically resistant to and nonreactive with the materials being stored. The storage area shall be completely enclosed with a berm or dike of impermeable construction in compliance with these specifications.

Where possible, dry fire extinguishing systems are to be used in lieu of water sprinkler systems in storage areas to prevent the generation of a large volume of contaminated water in case of a fire.

Drums and other portable containers shall be stored indoors unless prevented by pertinent fire regulations. Outdoor storage for other than fire safety reasons shall only be allowed on written permission of the Department. Heat shall be provided for storage of materials with freezing points above 20°F.

Every container on each site must be available for inspection at any time.

16.2 Required Floor Area

All sides of any stored supply of containers shall be easily accessible for handling and inspection. The minimum required floor area for fifty five (55) gallon drum storage is based upon the total number of drums stacked two high according to the following table (see explanation of table below).

TABLE I

<u>Total No. of Drums (stacked two high)</u>	<u>Required Area (sq. ft.)</u>
4	25
10	50
14	75
18	100
36	200
54	300
72	400
90	500
180	1000
198	1100
272	1500
362	2000
452	2500

Explanation of Table I

For interpolations, use 100 square feet of floor area for 18 drums. Required floor area for containers other than 55-gallon drums is based upon equivalent volumes. In rooms where fire sprinklers are installed, storage capacity in excess of minimum will be required. Minimum berm height is 6 inches unless otherwise approved.

Drums shall not be stacked more than two high and only on their ends unless approved storage racks are provided. Where approved racking systems are installed, which may increase the total number of drums over that described in Table I, the berm size or storage area must be increased to retain a minimum of 30 percent of the total drum volume.

Allowance for protection of larger areas in lieu of specific locations within the floor area of industrial buildings will be considered on a case-by-case basis.

16.3 Berms and Floors shall meet the following requirements:

- (i) Minimum berm height is 6 inches above finished floor grade unless otherwise approved;
- (ii) Minimum floor thickness is 6 inches;
- (iii) Berms may be included as an integral part of building walls and door openings;
- (iv) Berms and floor shall be constructed of materials impervious to attack by the chemicals being stored;
- (v) Berms shall be cast integrally with the floor where possible - if not possible, berms shall be tied into the floor with steel reinforcing and sealed with compounds chemically resistant to and nonreactive with materials being stored;
- (vi) No wall scuppers are allowed below the top of the berm;
- (vii) Ramps for access are required unless otherwise approved;
- (viii) If expansion joints are installed, they must be made impervious to the materials being stored;
- (ix) Surface preparation and finishing shall be consistent with recommendations of the coating manufacturer.

16.4 Doorways

Door openings in storage rooms shall be fitted with liquid-tight raised sills or ramps suitable for passage of fork lift trucks. The height of sills or ramps shall be the same as or higher than the berm height.

16.5 Alternatives

In place of or supplemental to berming, floor drains leading to a holding tank may be installed within the storage room. The floor shall be pitched to the floor drains. The holding tank may be of single-wall construction if kept for emergency use only. Such tanks shall be impervious to the chemicals stored and shall be constructed in accordance with Article XI requirements for single-walled tanks in Section 3.1. Each tank shall be fitted with alarms which will meaningfully announce when liquid has entered the tank.

Tanks intended to store drippings or waste products on a day-to-day basis must be of double-walled construction in accordance with the requirements of Article XI and these Regulations for new storage facilities.

Minimum tank sizing shall be equivalent to storage volume lost through reduction in berm size or by fire insurance regulations, whichever is greater. Manways shall be provided for all tanks greater than 1,000 gallons and shall be fitted with gasketed manhole covers with access to grade.

16.6 Upgrading of Existing Storage Areas

Bermed storage areas or storage rooms existing prior to promulgation of these standards must be modified to conform to all of the above requirements of sections 16.0 through 16.5 of these Regulations.

16.7 Storage of Materials in Other Structures

Storage in truck bodies, residential-type garden sheds or other unapproved facility is prohibited unless incorporated into an area which meets the criteria described above.

Section 17.0 Records, Reporting, and Standard Operating Procedures

17.1 Records of Disposal or Other Transfer In or Out of Storage Facilities

Records reflecting the disposal of toxic or hazardous wastes must comply with the requirements of Section 2.3 of these Regulations. Operating reports summarizing yearly generation and disposal of wastes shall be submitted once per year to the Department. Operating Report forms are available from the Department.

17.2 Standard Operating Procedures for Handling of Materials

No person shall store toxic or hazardous materials without first having a standard operating procedure (SOP) for handling of said materials acceptable to the Department. The SOP's must be posted and made readily accessible during each work shift to employees when they are in their work areas.

SOP's shall include measures employees can take to protect themselves from chemical hazards including procedures to be implemented to protect employees from exposure to hazardous chemicals including appropriate work practices, emergency procedures and personal protective equipment to be used.

SOP's may contain Material Safety Data Sheets (MSDS) or may be designed to cover groups of hazardous chemicals in areas where it may be more appropriate to address the hazards of a process rather than individual chemicals.

SOP's shall be kept up to date, and include the location and accessibility of specific information including the identity of the chemicals, material safety data sheets, physical and health hazards.

17.3 Maintenance of Records

Except as otherwise specified in Article XI, records shall be kept for a minimum of five (5) years.

17.4 Reporting

In addition to the requirements of Section 15.a of Article XI, all incidents described in Section 15.a of Article XI pertaining petroleum products as defined in the definition of petroleum contained in Section 3.q. of Article XI must be reported to the New York State Department of Environmental Conservation Hotline (1-800-457-7362) within two (2) hours.

Section 18.0 Posting and Labeling

18.1 Posting Notice of the Presence of Toxic or Hazardous Materials and Providing Safety Information

18.1.1 Warning Signs

A sign with the legend, "Danger - Toxic and Hazardous Materials - Unauthorized Personnel Keep Out" shall be posted at each entrance to the storage or transfer facility. The legend must be written in English. Employers having employees who speak other languages should add the information in those languages.

18.1.2 Safety Information

Safety information identifying the chemicals in use and warning of the physical and health hazards shall be posted at each entrance to the storage or transfer facility. The purpose of providing this information is to protect the public and assist emergency personnel in carrying out their responsibilities.

At a minimum, the type of safety information that should be posted or be made accessible to emergency personnel is that required to be provided by material safety data sheets pursuant to the Occupational Safety and Health Administration (OSHA) Hazard Communication Rule, Part 1910 Title 29 CFR, and such portions of the standard operating procedures as may be applicable.

18.2 Labeling of Containers

Toxic and Hazardous material containers labeled in compliance with the OSHA Hazard Communication Rule, Part 1910 Title 29 CFR or the Department of Transportation (DOT) rules, Part 171 and Part 172 Title 49 CFR shall be deemed to fulfill the requirements of this section.

18.3 Labeling of Aboveground Tanks

The technical name of the contents shall be conspicuously lettered on the exterior surface and be of sufficient size to be discernible from grade level. The date of construction of the tank and the date of the most recent internal inspection shall be stenciled on or near the manhole cover in the tank wall.

Toxic and hazardous material tanks labeled in compliance with the OSHA Hazard Communication Rule Part 1910 Title 29 CFR shall be deemed to fulfill the requirements of this section.

18.4 Labeling of Piping

The technical name of the materials carried by the piping shall be conspicuously lettered on the exterior surface.

Section 19.0 Piping

19.1 New Installations

All new installations shall:

- (i) Be fabricated, constructed and installed in a manner that will prevent the escape of the toxic or hazardous materials contained therein to the ground, groundwater or surface waters of Nassau County;
- (ii) Be protected against corrosion by the use of noncorrodible materials, cathodic protection with approved coatings, or the functional equivalent of the foregoing options;
- (iii) Be designed, constructed and installed with access points to permit periodic pressure testing of all underground piping without the need for extensive excavation;
- (iv) Be designed, constructed and installed with simple, effective, reliable means of monitoring the new installation for leakage including a warning device to indicate the presence of a leak, spill or other failure or breach of integrity for piping installed underground or in areas where piping is not clearly visible;
- (v) Be constructed of double-walled pipe or equivalent be constructed in product-tight trenches or galleries where the piping is buried or below grade except where single wall tanks will be allowed;
- (vi) Cathodic protection when utilized, must be provided by the use of one or a combination of the following: galvanic coatings, sacrificial anodes, or impressed current. Except where cathodic protection is provided by impressed current, underground piping systems must have dielectric bushings, washers, sleeves or gaskets installed at the end to electrically isolate the piping system from the tank and termination. These dielectric connectors must be chemically compatible when exposed to the product stored.

19.2 Existing Installations

All existing installations shall:

- (i) Be replaced or modified so as to be in compliance with all of the provisions of Section 19.1 above in accordance with the schedules established in Article XI for underground and aboveground facilities;
- (ii) Be tested whenever the associated storage facility or part thereof is tested;
- (iii) Be tested by a person whose qualifications are acceptable to the Department;
- (iv) Be tested in a manner acceptable to the Department;
- (v) Be tested in accordance with a written protocol submitted to the Department prior to said test;
- (vi) Submit to the Department within thirty (30) days of said test a Certificate of Test Completion.

19.3 General Provisions

19.3.1 Whenever an existing or new installation or part thereof is found to be leaking, it must immediately be emptied of all contents therein contained and removed from service.

19.3.2 Before reusing or causing the reuse of any new or existing installation or part thereof which had leaked or otherwise failed, the owner must:

- (i) Perform repairs in a manner acceptable to the Department;
- (ii) Have the installation inspected subsequent to the completion of any repairs by a person whose qualifications are acceptable to the Department;
- (iii) Provide a Proof of Inspection, prior to reuse.

19.3.3 New piping systems must meet the applicable subsection of Section 6.0 (Cathodic Protection) of these Regulations.

19.3.4 All underground piping systems must be installed in accordance with recognized engineering practices. All joints must be liquid and air tight. All piping systems must be tested for tightness before being covered, enclosed or placed in use.

Section 20.0 Registration of Toxic and Hazardous Materials Storage Tanks

20.1 Applicability

These requirements apply to all new, existing, out of service or abandoned toxic or hazardous material storage tanks not specifically exempted in Section 7 of Article XI or Section 20.2 of these Regulations.

20.2 Exemptions

All tanks which meet the following criteria are exempt from the registration requirement.

- (i) Chemical storage tanks containing pressurized gases such as chlorine, propane, hydrogen and nitrogen need not be registered.
- (ii) Petroleum storage tanks which are used solely for on-site heating at a facility and whose total storage capacity is less than 1100 gallons need not be registered.

20.3 Procedures and Criteria for Registration of Tanks

20.3.1 Existing Tanks

The owner of any toxic or hazardous material storage tank must register the tank with the Department within 12 months of the effective date of these Regulations except as otherwise stated in the Article. Registration is required for:

- (i) Chemical storage tanks - for each process or storage tank that contains toxic or hazardous materials (raw and waste) including all processing baths and tanks, dip tanks, rinse tanks and tanks associated with wastewater treatment.
- (ii) Petroleum storage tanks - including both raw and waste petroleum or petroleum and water mixtures.
- (iii) Out of service and abandoned tanks - for all types of aboveground and belowground storage tanks.

20.3.2 New or Replacement Tanks

The owner of any new or replacement toxic or hazardous material storage tank must register it with the Department before it is placed in service.

20.3.3 Change of Ownership

If ownership of the tanks changes, the new owner must reregister the tanks within 30 days of the ownership transfer.

20.4 Application Forms for Tank Registration

Tanks must be registered on application forms provided by the Department. Forms are available at the Department office in Mineola or by writing the Nassau County Department of Health, 240 Old Country Road, Mineola, New York 11501.

An application submitted by a corporation must be signed by a principal executive officer of at least the level of vice-president or a duly authorized representative who is responsible for the operation of the facility. An application submitted by a partnership or a sole proprietorship must be signed by a general partner or proprietor. An application submitted by a municipal or other public facility must be signed by either a principal executive officer, ranking elected official or other duly authorized employee.

20.5 Registration Fee

The owner must submit with each application for registration a fee adopted by the Nassau County Board of Health.

Section 21.0 Permits

21.1 Procedures

21.1.1 Construction and Modification Permits

Prior to the construction or substantial modification of a storage or transfer facility or part thereof, the owner must submit a complete application package to the Department for a construction permit.

The application must be submitted 3 months prior to the construction or modification on forms supplied by the Department.

The application must include submission of:

- (i) Application form for a permit to construct, signed by the owner;
- (ii) A list of all the toxic and hazardous materials that will be stored at the facility including the chemical names of all substances or combinations or mixtures by container and tank and quantity;
- (iii) Plans for the construction of a new facility or substantial modification of an existing facility to be prepared in accordance with the requirements of Section 22.0 of these Regulations, and
- (iv) The registration of any new tanks to be constructed or installed in accordance with Section 20.0 of these Regulations.

Upon approval of the plans submitted to the Department, a construction permit will be issued for a specified duration of time not to exceed one year from the effective date of issuance.

After completion of construction or substantial modification of a facility, the owner must provide proof of compliance with the plans submitted to and approved by the Department. Proof of compliance shall include a certification by a licensed professional engineer or facility owner in accordance with Section 11.0 of these Regulations, stating that the construction is in complete compliance with the approved plans.

Upon receipt of the proof of compliance with the plans submitted and approved by the Department, and written proof that the facility is in compliance with all of the provisions of Article XI, the Department will issue a Permit to Operate the facility or part thereof.

21.1.2 Permits to Operate

The owner of an existing storage or transfer facility must submit a complete application for a permit to this Department within 30 days of receiving notice from the Department that a permit is necessary.

The complete application package shall include submission of:

- (i) An application form for a permit to operate signed by the owner, and;
- (ii) A list of all the toxic and hazardous materials that will be stored at the facility including the chemical names of all substances or combination or mixtures by container and tank and quantity;
- (iii) Record of registration of all tanks and;
- (iv) Written proof that the facility is in compliance with all provisions of Article XI applicable to the facility.

Upon receipt and approval of a complete application, the Department will issue a Permit to Operate which will be effective only for the specified duration of time indicated thereon, not to exceed five (5) years from the effective date of issuance.

21.2 Application Forms for Permits

Application forms are available at the Department's office in Mineola, or by writing the Nassau County Department of Health, 240 Old Country Road, Mineola, New York 11501

An application submitted by a corporation must be signed by a principal executive officer of at least the level of vice president, or a duly authorized representative who is responsible for the operation of the facility. An application submitted by a partnership, or a sole proprietorship must be signed by a general partner or proprietor. An application submitted by a municipal or other public facility must be signed by either a principal executive officer, ranking elected official or other duly authorized employee.

21.3 Fees

Prior to the issuance of any permit, all applicable fees as adopted by the Nassau County Board of Health must be paid.

21.4 Change of Ownership

If ownership of the facility changes, the new owner must apply for a new permit within 30 days of ownership transfer.

21.5 Renewals

Applications for renewal must be submitted 3 months prior to expiration of the permit on forms supplied by the Department.

Section 22.0 Submission of Plans for the Construction or Substantial Modification of a Storage or Transfer Facility

22.1 General

Article XI requires that no person shall construct, install or modify a storage or transfer facility for toxic and hazardous materials without previously having submitted plans to the Department and without having received approval of said plans.

A permit to construct issued by the Department must be obtained prior to the installation or modification of any facility or part thereof for the storage of toxic and hazardous materials.

No person shall use or cause to be used any facility for the storage of toxic and hazardous materials until a permit to operate issued by the Department has been obtained.

22.2 Application Procedures for Approval to Construct

Written approval of plans and a permit to construct issued by the Department are required before start of construction of a storage facility.

Instructions for applying for a permit to construct a storage facility are detailed in Section 21.0 of these Regulations and requires submission of a complete application for a permit to construct which includes:

- (i) Application form for a permit to construct, signed by the owner of the storage facility, officer of the corporation or general partner;
- (ii) A list of all toxic and hazardous materials that will be stored at the facility;
- (iii) Plans for the construction or substantial modification of the storage facility in accordance with Section 22.3 of these Regulations, and
- (iv) The registration of any new tanks to be constructed or installed (see Section 20.0 of these Regulations).

22.3 Submission of Plans

22.3.1 Content and Format of Plans

Plans submitted shall:

- (i) Bear the seal and signature of a Professional Engineer licensed in the State of New York on each drawing (See Section 22.6 of these Regulations for exemptions).
- (ii) Be submitted in quadruplicate.
- (iii) Be drawn to scale 1" = 10' to 100' for plot plan, depending upon area covered and a suitable scale for details of the storage area.
- (iv) Be of standard drawing sizes of 18" x 24" or 24" x 36".
- (v) Show the following:
 - 1) Plot plan and key map;
 - 2) Buildings;
 - 3) Sewage and industrial disposal system(s);
 - 4) Location of all storm drains including dry wells, water supply lines, water supply wells, or other utilities which are contained on the property or are within 100 ft. of the property line;
 - 5) Details of construction of the proposed storage location including plan cross section and elevation;
 - 6) Depth to groundwater and anticipated maximum and minimum groundwater levels;
 - 7) Proposed finished grading;
 - 8) Description of materials of construction for all standard aspects of the storage area including but not limited to roofing, flooring, foundation, piping and methods of sealing;
 - 9) Location of any surface waters within 100 ft. of the property.
- (vi) Include a schedule for installation and operational status.

22.3.2 The following information shall be supplied for underground tanks in addition to the Requirements of Section 22.3.1 of these Regulations:

- (i) Details of the proposed tank installation and piping system in plan view, cross-section and elevation;
- (ii) Elevation of the existing groundwater level and of the maximum and minimum groundwater levels on the site. Existing groundwater levels shall be based on a test hole where the groundwater level is less than four (4) feet from the bottom of the tank. Maximum and minimum groundwater levels shall be based on monitoring well(s) in proximity to the site;
- (iii) Cross-section of test hole and its location. Test holes shall be carried down at least four (4) feet beyond the bottom of the tank or to groundwater if encountered;
- (iv) Material of construction of the tank and piping system and other related information to show conformance to these requirements;
- (v) Secondary containment system including all monitoring wells. If monitoring wells are required and no groundwater was encountered, an additional test boring will be needed down to groundwater. The cross section of this test boring must be shown on the plan including existing, maximum and minimum groundwater levels as noted previously;
- (vi) Leak detection system;
- (vii) Overfill protection provision.

22.3.3 The following information shall be supplied for aboveground tanks in addition to the Requirements of Section 22.3.1 of these Regulations:

- (i) Details of the proposed tank installation and piping system in plan view, cross-section and elevation;
- (ii) Depth to groundwater. If four (4) feet or less to the bottom of the tank a test hole must be dug and the cross-section shown on the plans along with maximum and minimum groundwater levels;
- (iii) Material of construction of the tank and piping system and other related information to demonstrate compliance with these Requirements;
- (iv) Secondary containment system;

- (v) Leak detection system;
- (vi) Overfill protection provisions.

22.4 Approval of Plans

Upon review of a completed application (application forms, plans, specifications, fee, etc.) and approval of the plans, a permit to construct will be issued by the Department. The permit will be valid for a period not to exceed one year from date of issuance. After one year (365 days) new applications, plans and fees are required if work covered in the previously approved plans has not been completed unless a waiver granted by the Commissioner has been applied for and granted prior to the expiration of the original permit.

22.5 Procedure for Final Approval of Installation

22.5.1 Permit to Operate

A permit to operate will be issued for a period not to exceed 5 years for each storage area after the following procedures have been completed:

- (i) A preconstruction meeting where required by the Department attended by the owner (or authorized representative) and contractor to discuss the Department's requirements for inspection;
- (ii) Submittal to the Department of a letter from a licensed Professional Engineer, certifying that construction has been completed according to approved plans. (See Section 11.0 of these Regulations for details and Section 22.6 of these Regulations for exemptions);
- (iii) Approval of the completed facility after inspection by a representative of the Department;
- (iv) Registration of all storage tanks installed or modified.

22.6 Exemptions

22.6.1 Exempt Storage Areas

The following storage areas are exempt from the requirement of submission by a licensed Professional Engineer of plans and certification:

- (i) Storage areas with a total capacity of less than twenty (20) 55 gallon drums or equivalent;
- (ii) Tanks with a capacity of 250 gallons or less.

22.6.2 For exempt storage areas indicated in section 22.6.1 above, sketches of planned construction shall be submitted with the application for a permit to construct by the owner in lieu of a Professional Engineer. A final permit to operate will not be issued until these facilities meet or are upgraded to meet the requirements of Article XI and these Regulations.

References

Referenced Material

Citations used in these Regulations refer to the publications listed below. These publications are available for copying and inspection at the Nassau County Department of Health, 240 Old Country Road, Mineola, N.Y. 11501.

- (1) "UL No. 58" means Underwriters Laboratories, Standard For Steel Underground Tanks For Flammable And Combustible Liquids, No. 58, April 10, 1981, Underwriters' Laboratories, 333 Pfingston Rd., Northbrook, Illinois, 60062.
- (2) "UL No. 142" means Underwriters Laboratories, Standard For Steel Aboveground Tanks For Flammable and Combustible Liquids, No. 142, January 16, 1985, Underwriters' Laboratories, 333 Pfingston Rd., Northbrook, Illinois, 60062.
- (3) "UL No. 1316" means Underwriters Laboratories, Standard For Glass-Fiber Reinforced Plastic Underground Tanks For Petroleum Products, No. 1316, July 1, 1983, Underwriters' Laboratories, 333 Pfingston Rd., Northbrook, Illinois, 60062.
- (4) "ULC-S603" means Underwriters Laboratories of Canada, No. ULC-S603-M1981 Standard For Steel Underground Tanks For Flammable and Combustible Liquids, 1981, Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario, Canada MIR349.
- (5) "ULC-S603.1" means Underwriters Laboratories of Canada, No. ULC-S603.1-M 1982, Standard For Galvanic Corrosion Protection Systems For Steel Underground Tanks For Flammable And Combustible Liquids, 1982, Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario, Canada MIR349.
- (6) "CAN4-S601-M84" means Underwriters Laboratories of Canada, No. CAN4-S601-M84, Standard for Shop Fabricated Steel Aboveground Horizontal Tanks for Flammable and Combustible Liquids, 1984, Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario, Canada MIR349.
- (7) "CAN4-S630-M84", means Underwriters Laboratories of Canada, No. CAN4-S630-M84, Standard for Shop Fabricated Steel Aboveground Vertical Tanks for Flammable and Combustible Liquids, 1984, Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario, Canada MIR349.
- (8) "ULC No. CAN 4-S615-M83" means Underwriters Laboratories of Canada, No. CAN 4-S615-M83, Standard For Reinforced Plastic Underground Tanks for Petroleum Products, 1983, Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario, Canada MIR349.

- (9) "API Standard No. 620" means American Petroleum Institute, Standard No. 620, Recommended Rules For Design And Construction Or Large, Welded, Low Pressure Storage Tanks, April 1985, American Petroleum Institute, 1220 L. St., NW, Washington, D.C., 20005
- (10) "API Standard No. 650" means American Petroleum Institute, Standard No. 650, Welded Steel Tanks For Oil Storage, February 1984, American Petroleum Institute, 1220 L. St., NW, Washington, D.C., 20005
- (11) "API Publication No. 1632" means American Petroleum Institute, Publication No. 1632, Cathodic Protection of Underground Petroleum Storage Tanks And Piping Systems, 1983, American Petroleum Institute, 1220 L. St., NW, Washington, D.C., 20005
- (12) "Steel Tank Institute Standard No. sti-P₃" means Specifications for sti-P₃ System For Corrosion Protection of Underground Steel Storage Tanks, July 1983, Steel Tank Institute, 666 Dundee Rd., Suite 705, Northbrook, Illinois, 60062.
- (13) "NACE Standard RP-01-69" means National Association of Corrosion Engineers, Recommended Practice - Control Of External Corrosion On Underground Or Submerged Metallic Piping Systems RP-01-69, (January 1983 Revision) National Association of Corrosion Engineers, Box 218340, Houston, Texas, 77218.
- (14) "NFPA 30" means National Fire Protection Association, Flammable And Combustible Liquids Code, No. 30, July 5, 1984, NFPA, Batterymarch Park, Quincy, Massachusetts, 02269, pgs. 30-17, 30-18, 30-20 and 30-21.
- (15) "NFPA No. 30A" means National Fire Protection Association, Automotive and Marine Service Station Code, No. 30A, July 5, 1984, NFPA, Batterymarch Park, Quincy, Massachusetts, 02269, pages 30A-7 and 30A-8.
- (16) "Nassau County Fire Prevention Ordinance" means The Nassau County Fire Prevention Ordinance, Article III, Flammable and Combustible Liquids, 1981, and as amended.
- (17) "40 CFR Part 261" means Part 261-Identification and Listing of Hazardous Waste, Title 40 of the Code of Federal Regulations, Code of Federal Regulations, Title 40- Protection of Environment, Parts 190-399, Revised as of July 1, 1985, Office of the Federal Register, National Archives and Records Administration, US Printing Office, Washington, D.C. 20402, pgs. 351-395.
- (18) "40 CFR Part 302" means Part 302-Designation, Reportable Quantities and Notification, Title 40 of the Code of Federal Regulations, Federal Register, Volume 50, Number 65, Thursday, April 4, 1985, pgs. 13474-13513, and as amended.

- (19) "49 CFR Part 172" means Part 172-Hazardous Materials Tables and Hazardous Materials Communications Regulations, Title 49 of the Code of Federal Regulations, Code of Federal Regulations, Title 49-Transportation, Parts 100-177, Revised as November 1, 1985, Office of the Federal Register, National Archives and Records Administration, US Printing Office, Washington, D.C. 20402, pgs. 71-342, and as amended.
- (20) "6 NYCRR Part 371" means Part 371-Identification and Listing of Hazardous Wastes, Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, effective July 14, 1985, and as amended.
- (21) "Schedule I of 6 NYCRR 703.6" means Schedule I of Section 703.6- Effluent Standards and/or Limitations for Discharges to Class GA Waters, Part 703 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, effective September 1, 1978, and as amended.