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NEW YORK CITY FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

STUDY MATERIAL FOR THE CERTIFICATE OF FITNESS FOR:

GENERIC PRECISION TESTING

P-02

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NOTICE OF EXAMINATION

Title: **Examination for Certificate of Fitness for Generic Precision Test (P-02).**

Date of Test: Written tests are conducted Monday through Friday (except legal holidays) 8:00 AM to 2:30 PM.

QUALIFICATION REQUIREMENTS

1. Applicants must be at least 18 years of age.
2. Applicants must have a reasonable understanding of the English language.
3. Applicant must provide two forms of identifications; at least one form of identification must be government issued photo identification, such as a State-issued Drivers' License or Non Driver's License or a passport.
4. Applicants must present a letter of recommendation from his/her employer. The letter must be on official letterhead, and must state the applicant's full name, experience and the address where the applicant will work. If the applicants are self-employed or the principal of the company, they must submit a notarized letter attesting to their qualifications. For more info:
   - Sample of recommendation letter:
   http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-samplerec-letter.pdf
   - Sample of self-employed letter:
   http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-sample-selfrec-letter.pdf
5. Applicants must present a completed application for certificate of fitness (A-20 Form). http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-application-form.pdf
6. Applicants not currently employed may take the exam without the recommendation letter. If the applicants pass the exam, FDNY will issue a temporary letter with picture for the job seeking purpose. The C of F card will not be issued unless the applicants are employed and provide the recommendation letter from his/her employer.
7. Special requirements for P-02 test:
   Applicants must have manufacture's certificate attesting that they were properly trained and are qualified to perform precision testing by the specific manufacturer's equipment and test method.
8. **APPLICATION FEE:**
   Pay the **$25** application fee in person by one of the following methods:
   - Cash
   - Credit card (*American Express, Discover, MasterCard, or Visa*)
   - Debit card (*MasterCard or Visa*)
   - Personal or company check or money order (*made payable to the New York City Fire Department)*

   For fee waivers submit: ***(Only government employees who will use their C of F for their work- related responsibilities are eligible for fee waivers.)***
   - A letter requesting fee waiver on the Agency's official letterhead stating applicant full name, exam type and address of premises; ***AND***
   - Copy of identification card issued by the agency

   A convenience fee of 2.49% will be applied to all credit card payments.

9. **EXAM INFORMATION**

The **P-02** exam will consist of **30** multiple-choice questions, administered on a "touch screen" computer monitor. It is a time-limit exam. Based on the amount of the questions, you will have 45 minutes to complete the test. A passing score of at least 70% is required in order to secure a Certificate of Fitness.

Call (718) 999-1988 for additional information and forms.

Please always check for the latest revised booklet at FDNY website before you take the exam.

http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-p02-noe-study-materials.pdf

10. If all the requirements are meet and pass the exam a certificate will be issued the same day. Applicant who fails the exam will receive a failure report. To retake the exam applicants will need to submit a new application and payment.

RENEWAL REQUIREMENTS

This Certificate of Fitness must be renewed every ***THREE YEARS***. The renewal fee is **$15**. FDNY also reserves the right to require the applicants to take a re-examination upon submission of renewal applications.

You will receive a courtesy notice of renewal 90 days before the expiration date. However, it is your responsibility to renew your Certificate. It is very important to renew your C of F before it expires. Renewals submitted 90 days (up to one year) after the expiration date will incur a $25 penalty in addition to the renewal fee. Certificates expired over one year past expiration date will not be renewed. New exams will be required.

To change a mailing address:

- Submit a letter requesting the change of mailing address and a copy of your C of F with $5.00 fee.

To change a work location,

- Submit a letter from your current employer (on company letterhead) confirming that you are an employee and stating your new work location with a copy of your C of F and a $5.00 fee

To request a replacement certificate:

- Submit a driver's license or passport, social security number, mailing address and a $5.00 fee.

The certificate can be renewed On-line, by Mail or in Person.

- **Renewal online**

If you are an individual, make sure you have your 12 digit Certificate of Fitness Access ID. This can be found on your Renewal Notice. If you do not have your Renewal Notice, your Access ID is your 8 digit Certificate of Fitness number and the last four digits of your social security number. If you are submitting renewals on behalf of a company's employees, the

company must be approved by FDNY and have an 8 digit Company Code. To request approval, email pubrenew@fdny.nyc.gov.

Renewal fee can be paid by one of the following methods:

- Credit card (American Express, Discover, MasterCard, or Visa)
- Debit card (MasterCard or Visa)
- E-check

A fee exempted applicants cannot renew online only by mail or in person.

If all the requirements are met, the certificate of fitness will be mailed out within 10 days.

For online renewal go to: **https://a836-citypay.nyc.gov/citypay/FDNYCOF**

- **Renewal by mail**

Mail your Renewal Notice (or if you did not receive a Renewal Notice, a copy of your certificate), along with your fee payment, Personal or company check or money order (made payable to the New York City Fire Department)

For fee waivers submit: ***(Only government employees who will use their C of F for their work- related responsibilities are eligible for fee waivers.)***

- A letter requesting fee waiver on the Agency's official letterhead stating applicant full name, exam type and address of premises; ***AND***
- Copy of identification card issued by the agency and if applicable, supporting documents to:

NYC Fire Department (FDNY)
Cashier's Unit
9 MetroTech Center, 1st Floor
Brooklyn, NY 11201

If all the requirements are met, the certificate of fitness will be mailed out within four to six weeks.

- **Renewal in person**

Submit your Renewal Notice (or if you did not receive a Renewal Notice, a copy of your certificate), along with your fee payment by one of the following methods:

- Cash
- Credit card (*American Express, Discover, MasterCard, or Visa*)
- Debit card (*MasterCard or Visa*)
- Personal or company check or money order (*made payable to the New York City Fire Department)*

For fee waivers submit: ***(Only government employees who will use their C of F for his or her work-related responsibilities are eligible for fee waivers.)***

- A letter requesting fee waiver on the Agency's official letterhead stating applicant full name, exam type and address of premises; ***AND***
- Copy of identification card issued by the agency and if applicable, your supporting documents to:

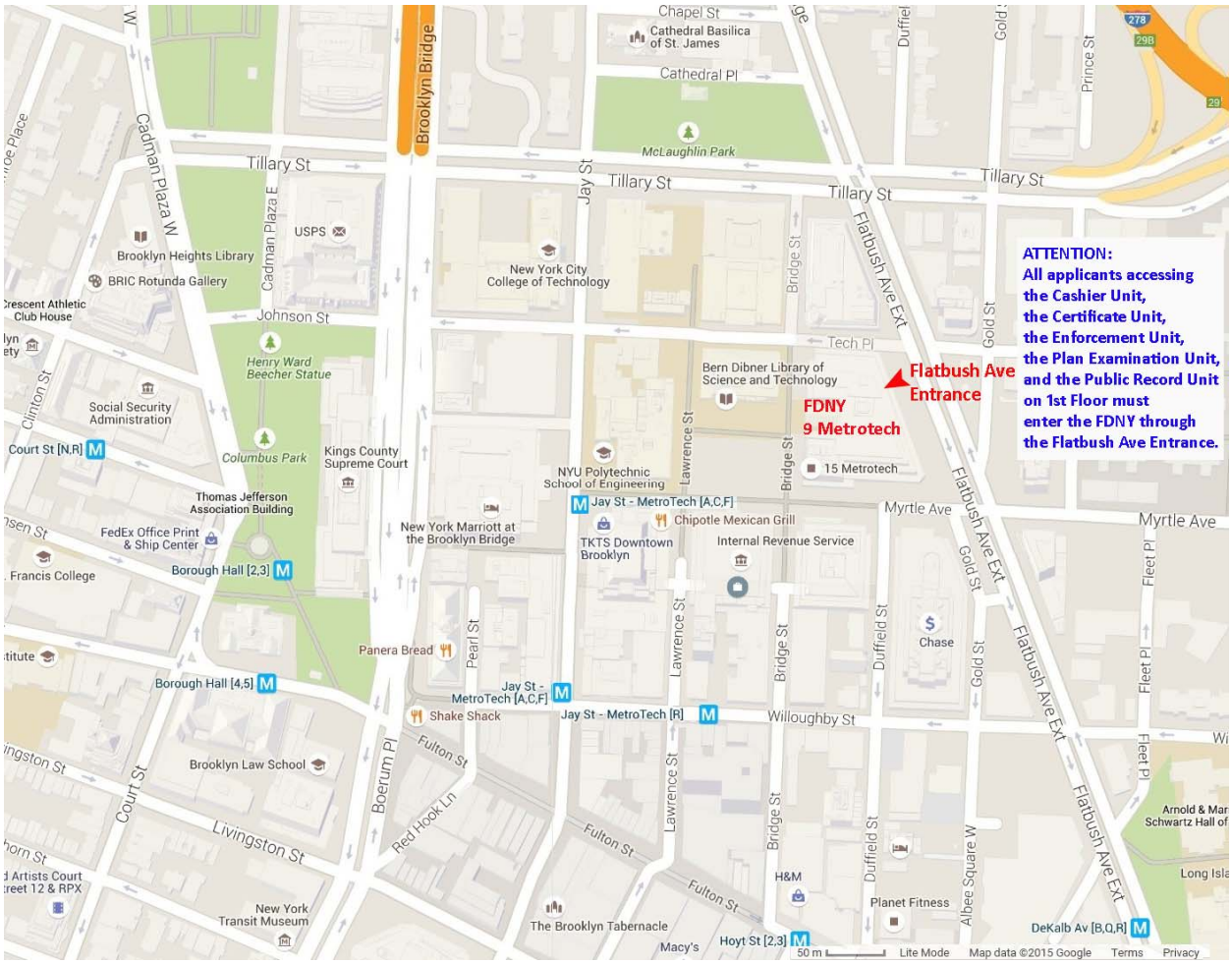
NYC Fire Department (FDNY)

Cashier's Unit
9 MetroTech Center, 1st Floor
Brooklyn, NY 11201

If all the requirements are met, the certificate of fitness will be issued the same day.

A convenience fee of 2.49% will be applied to all credit card payments for original or renewal certificates.

EXAM SITE: **FDNY Headquarters,** 9 MetroTech Center, Brooklyn, NY. Enter through the **Flatbush Avenue entrance (between Myrtle Avenue and Tech Place)**.



STUDY MATERIAL AND TEST DECRIPTION

This study material contains the information you will need to prepare for the examination for the Certificate of Fitness for Generic Precision Test. **It will not be provided to you during the test. It is critical that you read and understand this booklet to help increase your chance of passing this exam.** The study material does not contain all of the information you need to know to supervise automotive service stations. It is your responsibility to become familiar with all applicable rules and regulations of the City of New York, even if they are not covered in this study material. You need to be familiar with the Fire Code Chapter 22, Chapter 34, Fire Rule Section §3404-02 and NFPA 329 (2005 edition) which regulate the precision tests for the motor fuel storage and dispensing system in order to adequately prepare for the exam.

About the Test

All questions on the Certificate of Fitness examination are of the multiple choice type with four alternative answers to each question. Only one answer is most correct for each question. If you do not answer a question, or if you mark more than one alternative your answer will be scored as incorrect. A score of 70% is required on the examination in order to qualify for the Certificate of License. Read each question carefully before marking your answer. There is no penalty for guessing.

SAMPLE QUESTIONS

1. The P-02 Certificate of Fitness is issued by _____

(A) New York City Buildings Department
(B) New York City Fire Department
(C) New York City Department of Environment Protection
(D) New York City Department of Electricity

The correct answer is "B". You would press "**B**" on your computer terminal.

2. What is the minimum age at which you can get the P-02 Certificate of Fitness?

(A) 21 years old
(B) 16 years old
(C) 18 years old
(D) 20 years old

The correct answer is "C". ". You would press "**C**" on your computer terminal.

PART 1. INTRODUCTION

Leaking motor fuel storage systems represent a significant public health hazard and also present the risk of fire and explosion because vapors from leaking system can travel through sewer lines into buildings. In order to prevent the hazards caused by the release of flammable or combustible liquids, accurate daily inventory records or a leak detection program should be maintained on the storage systems for indication of leakage from the tanks or associated piping.

The leak detection system shall provide continuous monitoring of the tank's interstitial space, the pump sumps, the inventory, and the dispenser pans. The system must be inspected daily for proper operation by the P-15 Certificate of Fitness holder and it must be tested at the time of installation and at least every 2 years by a person who is employed and trained by a W-16 Certificate of License holder.

Besides leak detection system, any underground single-walled flammable or combustible liquid storage tank existing prior to the effective date of this code that is **single-walled** or is **not provided with a leak detection system** meeting the requirements of Fire Code section 3404.2.11.5 shall be precision tested **at least once every 5 years**.

The commissioner may also require a tank and piping system to be precision tested, pressure tested or tested by other approved method to determine the condition of the tank or piping or when the commissioner has good cause to believe that a leak exists (For example, if a release is indicated by the leak detection system, further investigation might be required by testing). Such tests shall be conducted at the owner's risk by his or her representative. **Storage systems that may contain flammable or combustible liquid vapor shall not be tested pneumatically.**

1.1 Certificate of Fitness

Precision testing of underground storage systems shall be conducted by a person who holds a certificate of fitness for such precision test (e.g. P-02 C of F) and under the general supervision of a W-16 certificate of license holder. Such person shall be trained and knowledgeable in the use of the precision test equipment and procedures for the conduct of the particular precision test.

The P-02 certificate holder conducting the precision test shall remain on the premises while such test is being conducted and until the system has been returned to good working order in accordance with the Fire Rule requirements.

P-02 Certificate of Fitness is only valid along with the manufacture's certification. Both Certificates of Fitness and manufacture's certification shall be readily available on the premises for inspection by Fire Department representatives.

1.2 Notification of Tests.

Prior to conducting a precision test of a underground storage system, notification shall be made to the Bureau of Fire Prevention by calling the telephone number designated by the Bulk Safety Fuel Unit (telephone: 718-999-2460). Tests may be witnessed by a Department representative. Tanks located within buildings shall not be tested unless prior Department approval is received.

1.3 Definition

BOILING POINT. The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch (psia) (101 kPa) or 760 mm of mercury. Where a boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for the purposes of this classification, the 20-percent evaporated point of a distillation performed in accordance with ASTM D 86 shall be used as the boiling point of the liquid.

CARGO TANK. A vehicle other than a railroad tank car or marine vessel, with a tank mounted thereon or built as an integral part thereof, used for the transportation of flammable or combustible liquids, LPG or other hazardous materials, including self-propelled vehicles and full trailers and semi-trailers, with or without motive power, and carrying part or all of the load.

CLOSED CONTAINER. A container sealed by means of a lid or other device capable of preventing the escape of liquid, vapor or dusts in the ordinary course of storage, handling or use.

CLOSED SYSTEM. The use of any compressed gas, and the use of a solid or liquid hazardous material in equipment or a vessel or system that remains closed during normal operation, such that vapors emitted during the operation of such equipment, vessel, or system are not liberated outside of the equipment, vessel or system and the gas or hazardous material is not exposed to the atmosphere during such operation. Examples of closed systems include hazardous materials conveyed through a piping system into closed equipment or a closed vessel or system.

COMBUSTIBLE LIQUID. For purposes of transportation, a combustible liquid, as defined in the regulations of the United States Department of Transportation, as set forth in 49 CFR Section 173.120. For all other purposes, a liquid, other than a compressed gas or cryogenic fluid, having a closed cup flash point at or above 100°F (38°C), classified as follows:

Class II. Liquids having a closed cup flash point at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA. Liquids having a closed cup flash point at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB. Liquids having closed cup flash points at or above 200°F (93°C).

CONTAINER. For solid and liquid hazardous materials, a vessel of 60 gallons (227 L) or less in capacity used for storage or transportation. For compressed gases, a cylinder, pressure vessel or tank designed for pressures greater than one atmosphere at 68°F (20°C). Pipes, piping systems, engines and engine fuel tanks associated with solid or liquid hazardous materials or compressed gases, shall not be deemed to be containers if in active use.

DISPENSING. The pouring or transferring by other means of any material from a container, tank or similar vessel, which would release dusts, fumes, mists, vapors or gases to the atmosphere, unless such release is prevented by a device, equipment or system designed for that purpose.

EXPLOSION. An effect produced by the sudden violent expansion of gases, whether or not accompanied by a shock wave or disruption, of enclosing materials, including the effects of the following sources of explosion:

1. Chemical changes such as rapid oxidation, deflagration or detonation, decomposition of molecules and runaway polymerization (usually detonations).
2. Physical changes such as pressure tank ruptures.

3. Atomic changes (nuclear fission or fusion).

FLAMMABLE AND COMBUSTIBLE LIQUID STORAGE SYSTEM. A flammable or combustible liquid storage tank and all devices, equipment and systems associated with such tank, including the tank, piping, valves, fill connection, vent lines, pumps and any other ancillary equipment, except liquid motor fuel storage and dispensing systems and flammable and combustible liquid storage systems at a bulk plant or terminal used for bulk transfer operations.

FLAMMABLE LIQUID. For purposes of transportation, a flammable liquid defined in the regulations of the United States Department of Transportation, as set forth in 49 CFR Section 173.120. For all other purposes, a liquid, other than a compressed gas or cryogenic fluid, having a closed cup flash point below 100°F (38°C), classified as follows:

Class IA. Liquids having a flash point below 73°F (23°C) and having a boiling point below 100°F (38°C).

Class IB. Liquids having a flash point below 73°F (23°C) and having a boiling point at or above 100°F (38°C).

Class IC. Liquids having a flash point at or above 73°F (23°C) and below 100°F (38°C).

FLAMMABLE VAPORS OR FUMES. The concentration of flammable constituents in air that exceeds 25 percent of their lower flammable limit (LFL).

FLASH POINT. The minimum temperature in degrees Fahrenheit at which a liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The flash point of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D 56, ASTM D 93 or ASTM D 3278.

GENERAL SUPERVISION. Supervision by the holder of any department certificate who is responsible for performing the duties of the certificate holder but need not be personally present on the premises at all times.

HANDLING. The movement of a material in its container, the removal of the material from its container, or any other action or process that may affect the material, other than its storage or use.

HAZARDOUS MATERIALS. Those chemicals or substances that are physical hazards or health hazards as defined and classified in this chapter, whether the materials are in usable or waste condition.

HEALTH HAZARD. A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term “health hazard” includes chemicals that are toxic, highly toxic and corrosive.

INCOMPATIBLE MATERIALS. Materials that, if mixed or combined, could explode, generate heat, gases or other byproducts, or react in a way hazardous to life or property.

INERT GAS. For the purpose of handling releases of flammable and combustible liquids and gases, a gas that is nonflammable, chemically inactive, noncontaminating for the use intended, and oxygen-deficient to the extent required.

INERTING. For the purpose of handling releases of flammable and combustible liquids and gases, a technique by which the atmosphere of a tank or container is rendered nonignitible or nonreactive by the addition of an inert gas.

LIQUID. A material having a melting point that is equal to or less than 68°F (20°C) and a boiling point that is greater than 68°F (20°C) at 14.7 psia (101 kPa). When not otherwise identified, the term “liquid” includes both flammable and combustible liquids.

LOWER EXPLOSIVE LIMIT (LEL). See "Lower flammable limit."

LOWER FLAMMABLE LIMIT (LFL). The minimum concentration of vapor in air at which propagation of flame will occur in the presence of an ignition source. The LFL is sometimes referred to as LEL or lower explosive limit.

MATERIAL SAFETY DATA SHEET (MSDS). A document prepared in accordance with the regulations of the United States Department of Labor, as set forth in 29 CFR Part 1910.1200 or a federally approved state OSHA plan which sets forth information concerning a hazardous material.

NORMAL TEMPERATURE AND PRESSURE (NTP). A temperature of 70°F (21°C) and a pressure of 1 atmosphere.

OPEN SYSTEM. The use of a solid or liquid hazardous material in equipment or a vessel, or system that remains open during normal operation, such that vapors are emitted during the operation of such equipment, vessel or system and the material is exposed to the atmosphere during such operation. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.

PERSONAL SUPERVISION. Supervision by the holder of any department certificate who is required to be personally present on the premises, or other proximate location acceptable to the department, while performing the duties for which the certificate is required.

SAFETY CAN. An approved container with a capacity of not more than 5-gallons (19 L) and equipped with a spring-closing lid and spout cover designed to relieve internal pressure when exposed to fire.

SECONDARY CONTAINMENT. A device, equipment or system designed to contain liquid or solid, that is external to and separate from the primary containment device, equipment or system.

PART 2. TESTING REQUIREMENTS

2.1 Testing Equipment Requirements

Only precision testing systems that are accepted by the New York State Department of Environmental Conservation shall be used for precision testing of underground storage systems. Such testing systems, including hoses and other devices and components, shall be designed for twice the maximum operating pressures of the pressures generated by the precision test system, and shall be compatible with the hazardous material stored in the tank to be precision tested.

All testing equipment to be placed in the storage tank, or used in the vicinity of the test area, shall be intrinsically safe or suitable for use in hazardous locations.

Interlocks shall be provided for all electrical connections to ensure that **the system is grounded before power can be supplied**.

2.2 Action Preliminary to Release Detection or Precision Testing.

Certain methods can reveal a leak prior to conducting a precision test.

2.2.1 Underground Tanks

The following should be identified before performing the precision test for underground tanks:

(1) Inventory control records: A check of inventory records should be made to ensure that a loss of inventory is not due to one of the following:
   a. Meters that are not correctly calibrated
   b. Contraction due to low temperature
   c. Theft
   d. Use of a conversion chart that does not conform to actual tank geometry
   e. Malfunctioning automatic tank gauging probe

(2) Whether the tank is of secondary containment–type design. Secondary containment–type tanks have a port or access opening for monitoring releases and should be one of the first areas checked to see if a release has occurred.

(3) Review the filling of the tanks: Damaged fill pipes, poorly maintained tight-fill connections or hose couplings, driver carelessness, or even overfilling the tank can cause product to be spilled around the pipe when a delivery is made.

(4) Any sign of work that might have damaged the tank or its fittings

(5) History of past or recent work on the tanks or attached piping

(6) Presence of excessive amounts of water in the underground tank and any history of past water removal.

(7) The age of the facility

(8) The location and flow of liquid found underground by gas sensors or visual inspection

(9) Type of tank gauge system and whether the gauge system was in operation at the time the release was first detected

2.2.2 Piping systems

The following should be identified before performing the precision test for underground piping systems.

(1) Recent excavation, digging, pavement repair, or other work in the area that might have damaged underground piping
(2) Any recent repairs that might have created a leak due to faulty workmanship or that might indicate a previous leak
(3) Any evidence of shifting ground, such as a frost heave or settlement, that might have damaged piping or pipe supports
(4) Deteriorated asphalt paving or distressed vegetation that indicates a spill or solvent action of liquids or vapor
(5) Evidence of abandoned, capped, or disconnected piping, such as unused dispensing islands or other unused ancillary facilities
(6) Correct operation of in-line leak detection devices and evidences of release from them
(7) Type of underground piping
(8) Type of corrosion control system, if present
(9) Pipe integrity test records

If the supply piping operates under vacuum or suction, evidence of a leaking check valve or a leak in the piping should be checked.

2.3 General Testing Procedures

The test area shall be cordoned off by portable barricades, signs, rope or tape to prevent unauthorized persons and motor vehicles from entering the area. Signs posted at the barricade perimeter shall be provided to read "NO SMOKING-NO OPEN FLAMES". All sources of ignition, including all motor vehicles, shall be removed from the testing area.

(An example of the acceptable sign)

All means and methods of testing should be performed in accordance with the manufacturer's recommended procedures. The Certificate of Fitness holder should be trained to perform the tests used. Documentation of test procedures and results should be provided. Methods of testing should comply with applicable local, state, and federal environmental regulations and should be documented with respect to accuracy.

Approved procedures shall be used in filling tanks and piping for precision testing, to ensure safety and prevent overfilling. Filling of tanks shall only be conducted through approved fill boxes from approved cargo tanks and/or approved safety cans. For purposes of topping off the tank or the test equipment, flammable and combustible liquids shall be drawn from an approved storage system on the premises into an approved safety can not exceeding a capacity of 2½ gallons. Flammable and combustible liquids may not be withdrawn from the fuel tanks of motor vehicles.

To avoid erroneous results, each precision test shall compensate for temperature changes, tank-end deflection, air pockets, water tables and other variables to avoid erroneous results. Tests shall be conducted for the period of time recommended by the manufacturer of the particular precision testing system, or until accurate results can be obtained.

When underground storage systems storing liquid of varying or unknown coefficients of thermal expansion are to be tested, the liquid shall be removed, the tank cleaned, and the test conducted using a material of similar viscosity and a known coefficient of expansion.

Power to electrical equipment shall not be turned on until all electrical connections have been made. The connection to the power source shall be the final connection made. Precision testing systems shall be arranged such that rain water cannot enter the tank through the tank openings.

2.4 Testing of Underground Tanks and Piping.

Both volumetric and nonvolumetric precision testing methods can be used for underground tanks. Additional information on volumetric and nonvolumetric test methods is provided in EPA 530/UST-89 1012, *Detecting Leaks: Successful Methods Step-by-Step*.

2.4.1 Volumetric method

When volumetric tightness testing is performed, the method should be capable of detecting a leak of as little as 380 mL/hr (0.10 gal/hr), with a probability of detection of 0.95 and a probability of false alarm of 0.05. This detection capability is a performance standard to determine the detection capabilities of the testing device and procedure. The detection threshold for declaring a leak will vary based on the individual manufacturer's specifications.

Inert gases can be used for the purpose of detecting a leak for both tank and piping systems. The pressure exerted by both the product and the inert gas should not exceed the limits recommended by the tank manufacturer. The use of pressure-limiting devices is required in this application.

2.4.2 Nonvolumetric methods

Nonvolumetric tightness tests are capable of leak detection; however, they do not quantify a leak rate. Vacutect method is one of the popular non-volumetric methods.

An approved precision testing system for tanks and piping (vacuum test).

This system works by introducing a vacuum into the tank and piping to create a slight negative pressure, so that any leak is shown by an ingress of air or water. The probe contains a hydrophone which listens for sounds. A bubbling sound indicates that air is being drawn in and bubbling up through the product. Leaks above the fluid level produce a whistling sound.

The water level of the tank is monitored to a resolution of .5 MM. An increase would indicate that water was being drawn in through a leak. The pressure in the tank is monitored to see if the tank is holding vacuum. A constant loss of vacuum indicates a leak.

The procedure does not require empty or full tank and piping system for test.

PART 3. RECORDS AND REPORT

3.1 Tests Results

A report of the results of the precision test shall be signed and submitted by the **W-16** Certificate of License holder to the Bulk Fuel Unit of the Bureau of Fire Prevention on an approved form (i.e. **BT_3 form,** see Appendix A) **no later than 30 days after conducting the test**. Such test report shall include the name and certificate of fitness number of the person who conducted the test, as well as the name and signature of the certificate of license holder under whose supervision the test was conducted.

Records of all inspections and testing shall be kept in a bound log book or other approved recordkeeping, maintained on the premises for a minimum of 5 years, and made available for inspection by a representative of the department.

3.2 Defective Storage Systems

If the results of precision test indicate the probability of a leak, either corrective action or additional testing to confirm the leak should be performed.

Underground storage systems shall be returned to service in good working order upon completion of the precision testing. Storage systems determined to be defective shall be removed from service in accordance with applicable laws, rules and regulations. Defective systems must not be returned to the service until it is tested by the presence of the Fire Department representatives. If hazardous material has been released to the environment, notification shall be immediately made to the Fire Department and the New York State Department of Environmental Conservation.

3.3 Reporting of Spills and Discharges

The results of any inventory record, test or inspection which shows a facility is leaking must be reported to Bulk Fuel Safety Unit of FDNY and Department of Environmental Conservation (DEC) within 2 hours of the discovery.

All petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362) **within 2 hours of discovery**, except spills which meet **ALL of the following criteria**:

1. The quantity is known to be less than 5 gallons; and
2. The spill is contained and under the control of the spiller; and
3. The spill has not and will not reach the State's water or any land; and
4. The spill is cleaned up within 2 hours of discovery.

A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. Small spills can be cleaned up by properly trained employees with the appropriate spill response supplies and dispose of all wastes properly. **A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable**.

More details on notification and reporting requirements can be found in the document posted by the Department of Environmental Conservation
(http://www.dec.ny.gov/docs/remediation_hudson_pdf/1x1.pdf).
(The spill responses can be referred to http://www.dec.ny.gov/chemical/8692.html)

PART 4. SAFETY REGULATIONS AND FIRE CONTROL

4.1 Labeling and Signage

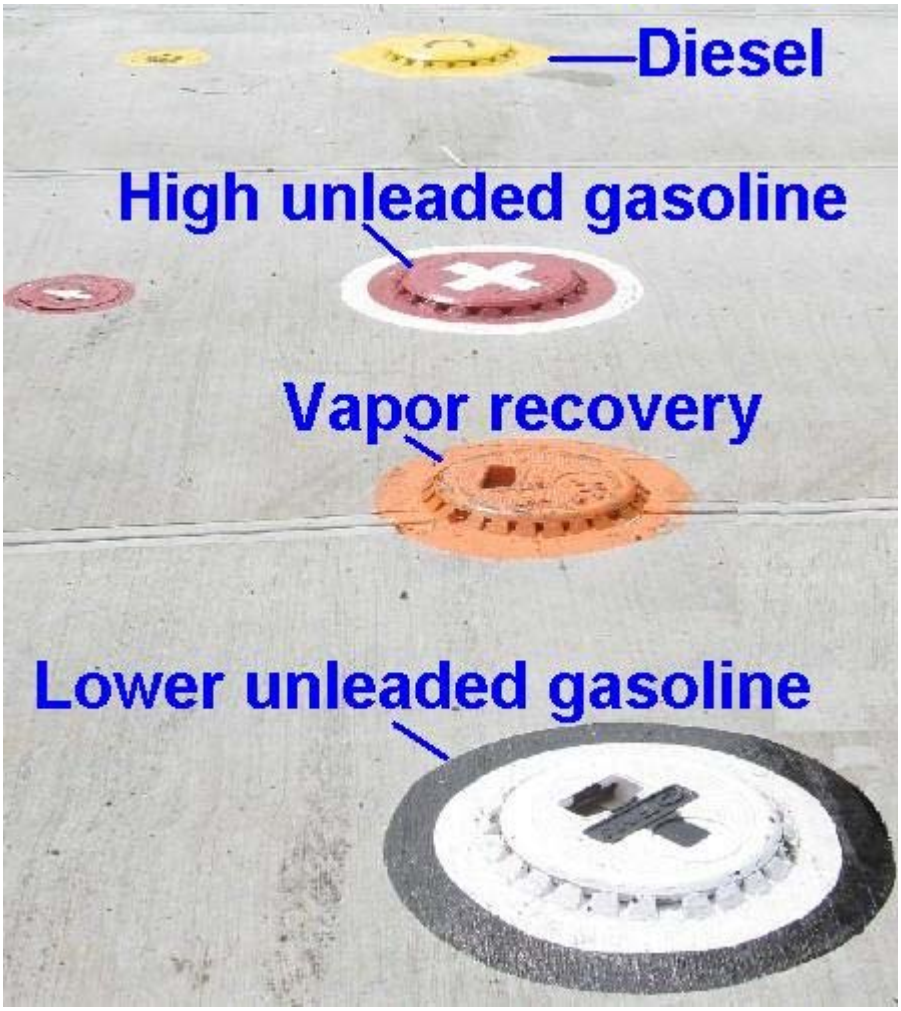
4.1.1 Color coding and symbols of fill ports

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 which follows. The colors to be used are:

(i)	High gasoline	Red
(ii)	Middle gasoline	Blue
(iii)	Lower gasoline	White
(iv)	High 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

The symbols to be used are:

(i) a circle for gasoline products and vapor recovery lines;
(ii) hexagon for other 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.



4.1.2 <u>No-Smoking sign</u>

Motor fuels are flammable and easily ignited. For this reason no smoking is permitted anywhere on the premises. This applies to customers as well as employees.

The material should be made of heavy cardboard stock or other approved durable material for indoor locations. For outdoor locations, or indoor locations where the signs may be exposed to conditions that will accelerate deterioration, metal or other approved durable material that is water-resistant. The signs must be posted indicating that no smoking is permitted on the premises and must include procedures to be followed in case of a fire emergency. An example of a No Smoking sign is shown below:

There will be no servicing or repair of motor vehicles in areas used for dispensing. Safety regulations must be posted in visible locations in the gas station. A sign displaying the name and address of the owner of service station must be displayed in a visible location. This sign must also give the name of the person responsible for testing the fuel dispensing system. Phone numbers where these people can be reached 24 hours a day, 7 days a week must be included on the sign. The Certificate of Fitness holder must make sure that this sign is visible at all times.

4.2 Control of Ignition, Brush and Debris

Motor fuel should never be used to wash or clean automobile engines. This is extremely dangerous as the motor fuels are easily ignited by the heat generated by the engine.

Oily rags are also a potential fire hazard. The oily rags may be easily ignited by a spark or an open flame. Oily rags used in the service station should be stored in a listed disposal container. This container should have a self-closing lid. Oily rags should be replaced daily with clean rags. This container should not be stored close to any possible sources of ignition. All oil drained from vehicles must be stored in tanks or drums. These tanks and drums should be stored outdoors. The oils are combustible and should not be exposed to sparks or open flames. They must be removed only by an approved liquid waste removal agency. Never dump any of these oils into a sewer, stream or anywhere on the property. Severe penalties will be levied against anyone who illegally dumps waste oil. The booth and dispensing islands must be kept clean and orderly access to the controls in the booth and pumps on the islands must be kept clear and unobstructed by equipment, merchandise or litter.

Smoking materials, including matches and lighters, must not be used within 20 ft of areas used for fueling, servicing fuel system of internal combustion engines, or receiving or dispensing of motor fuel liquids. The motors of all equipment being fueled must be shut off during the fueling operation except for emergency generators, pumps and so forth, where continuing operation is essential.

Brush, grass, vines or other vegetation and combustible waste shall be kept not less than 10 feet from the tank and dispensing location.

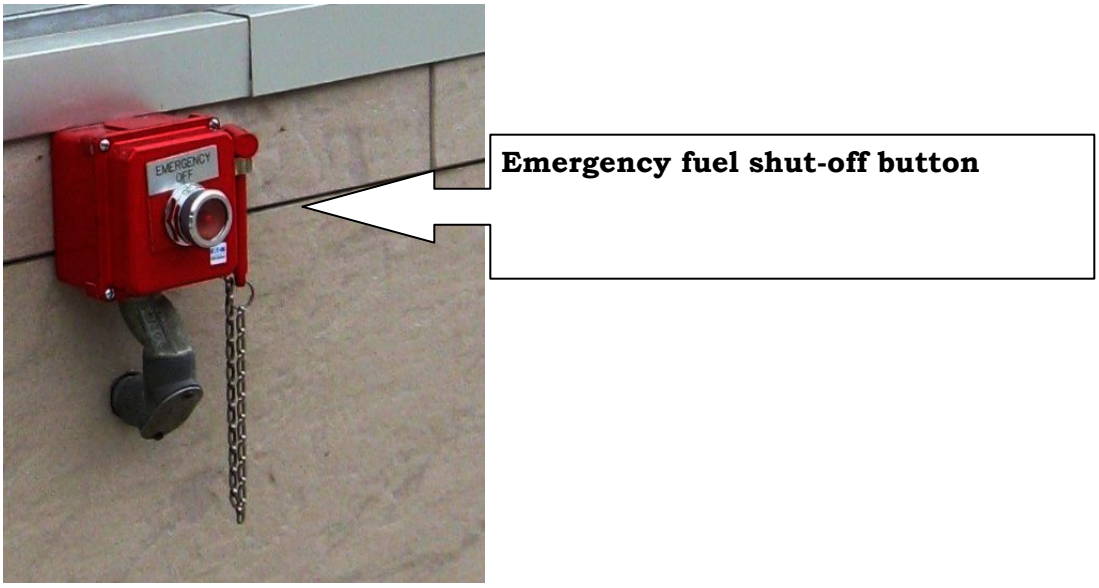
4.3 Emergency Procedure

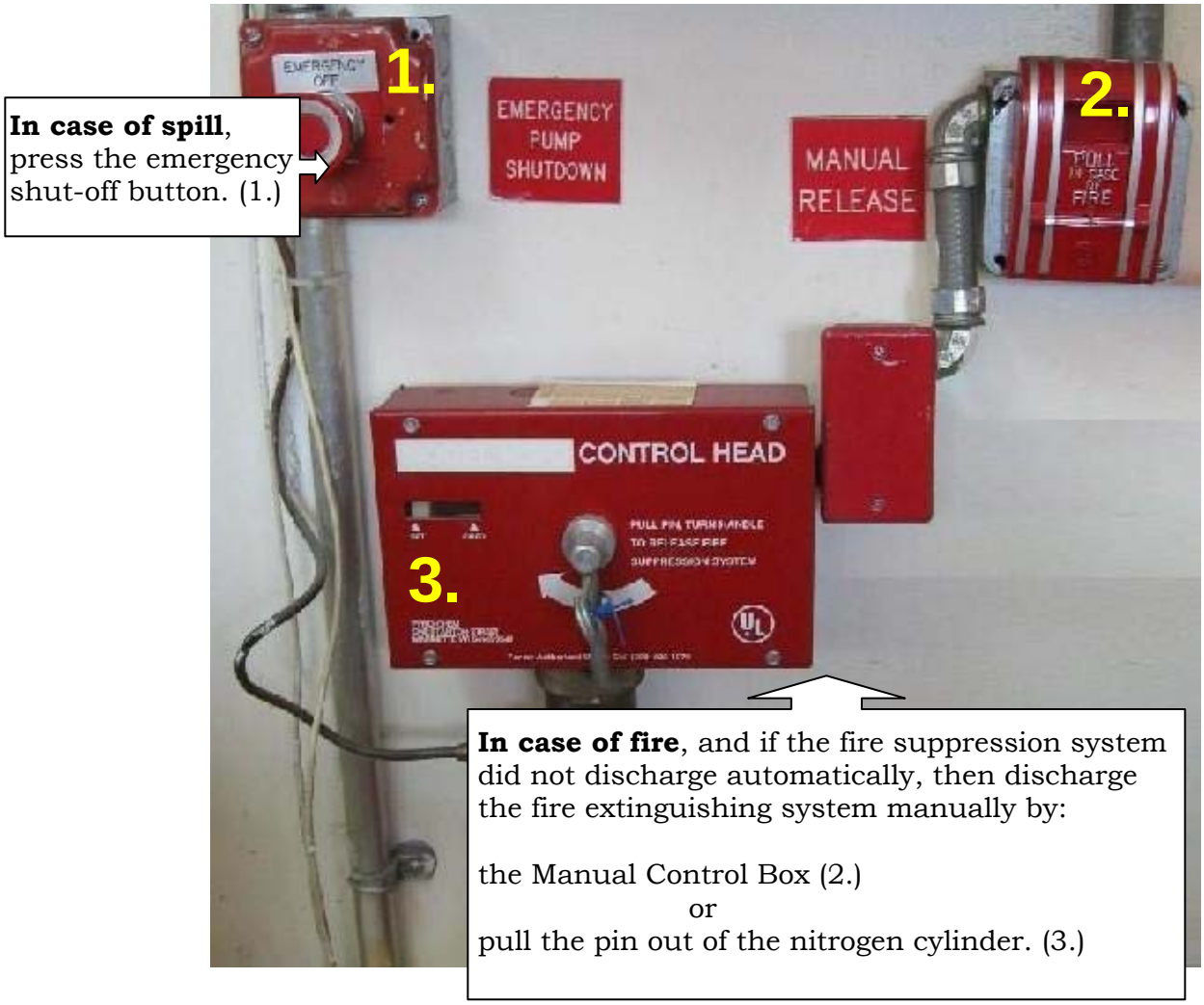
The Certificate of Fitness holder must know where all control devices and fire extinguishers are located in the station. The Certificate of Fitness holder should know how to operate the control devices and extinguishers in emergency situations.

An approved, clearly identified and readily accessible emergency disconnect switch shall be provided at an approved location, to immediately shut down the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. An emergency disconnect switch for exterior fuel dispensers shall be located within 100 feet of, but not less than 20 feet from, the fuel dispensers. For interior fuel-dispensing operations, the emergency disconnect switch shall be installed at an approved location. An approved sign shall be posted on or immediately adjacent to such devices and shall read: EMERGENCY FUEL SHUTOFF. Such emergency disconnect switches shall be of a type that is reset manually.

If a fire occurs within the service station, the Certificate of Fitness holder must **activate the fire suppression system FIRST** and then push **the emergency fuel shut-off button** to stop the dispensing of motor fuel. The Fire department/911 should be notified immediately. Efforts should be made to extinguish the fire with the approved fire extinguishing materials. Approved materials include sand pails, ansul powder and CO_2 fire extinguishers. These steps may prevent a major explosion.

The Certificate of Fitness holder should know how to operate the fire extinguishing systems for the fuel pumps. The system is designed to activate automatically in case of emergency. The system can also be operated manually. The primary method is to pull the lever on the **Manual Control Box**. If the manual pull lever does not function, the attendant should **pull the pin on the nitrogen cylinders** that are located in or near the booth.





The 911 call to the Fire Department shall be followed upon noticing an emergency. The Fire Department should always be notified in case of a fire and a large spill of fuel (e.g. equal to or more than 5 gallons).

The Certificate of Fitness holder should pour sand or other absorbing material on a motor fuel spill to stop the flow and soak up the fuel on pavement. "Speedy Dry" (like cat litter) is commonly used to contain and soak up motor fuel spills. Not all absorbents can make petroleum nonflammable. The area should then be cleaned up using approved materials. Brooms can be used to sweep up the absorbent material and put it into buckets, garbage cans or barrels. Remember to control ignition sources. If a large spill or leak occurs (e.g. more than 5 gallons), the local Fire Department must be notified immediately. If the fire suppression system or portion of the fire suppression system has been discharged or is inoperative, it must be the responsibility of the attendant to ensure that the Bulk Fuel Safety Unit of the Fire Department (telephone: 718-999-2460) is notified.

4.4 Fire Extinguishers

A portable fire extinguisher having **at least a 40-B:C rating** shall be readily accessible during testing. The maximum travel distance to the fire extinguisher shall be **30 feet** and the portable fire extinguisher shall be positioned at a safe location within the testing area.

Fire extinguishers must be used in accordance with the instructions painted on the side of the extinguisher. They clearly describe how to use the extinguisher in case of an emergency. The Certificate of Fitness holder should become familiar with the instructions for the extinguisher at his/her work site. When it comes to using a fire-extinguisher just remember the acronym P.A.S.S. to help make sure you use it properly. P.A.S.S. stands for Pull, Aim, Squeeze, Sweep. An example of these instructions is depicted in the picture.

All fire extinguishers must be installed so that the top of the extinguisher is not more than 5 ft above the floor and the clearance between the bottom of the extinguisher and the floor is not less than 4 in. In other words, **no fire extinguisher is allowed to be on the floor.**

(1) The top of the fire extinguishers must not be more than 5 ft above the floor.
(2) The fire extinguishers must be accessible and unobstructed.

The bottom of the fire extinguisher must be at least 4 inches above the floor.

4.4.1 Different types of fire extinguishers

The Certificate of Fitness holder must be familiar with the different types of fire extinguishers available at the work site. The Certificate of Fitness holder must know how to operate the extinguishers in a safe and efficient manner. The Certificate of Fitness holder must also know the difference between the various types of extinguishers and when they may be used. A description of the classes of fires and the appropriate extinguishers are described below.

Class A fires are caused by ordinary combustible materials (such as wood, paper, and cloth). To extinguish a Class A fire, these extinguishers utilize either the heat-absorbing effects of water or the coating effects of certain dry chemicals.

Class B fires are caused by flammable or combustible liquids and gases such as oil, gasoline, etc. To extinguish a Class B fire, the blanketing-smothering effect of oxygen-excluding media such as CO_2, dry chemical or foam is most effective.

Class C fires involve electrical equipment. These fires must be fought with fire extinguishers that do not conduct electricity. Foam and water type extinguishers must not be used to extinguish electrical fires. After shutting off the electrical equipment, extinguishers for Class A or B fires may be used.

Class D fires are caused by ignitable metals, such as magnesium, titanium, and metallic sodium, or metals that are combustible under certain conditions, such as calcium, zinc, and aluminum. Generally, water should not be used to extinguish these fires.

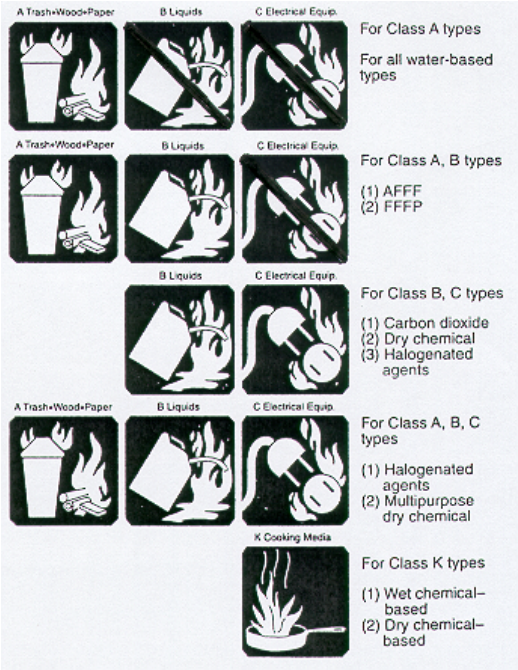
A multi-purpose dry chemical fire extinguisher may be used to extinguish more than 2 Classes fires. Examples of some fire extinguishers are shown below.

Examples of fire extinguishers

10-B:C (10BC)	3-A:40-B:C(3A40BC)

Symbols may also be painted on the extinguisher. The symbols indicate what kind of fires the extinguisher may be used on. Examples of these symbols are shown below.

CLASSES OF FIRES	TYPES OF FIRES	PICTURE SYMBOL
A	Wood, paper, cloth, trash & other ordinary materials.	
B	Gasoline, oil, paint and other flammable liquids.	
C	May be used on fires involving live electrical equipment without danger to the operator.	
D	Combustible metals and combustible metal alloys.	D
K	Cooking media (Vegetable or Animal Oils and Fats)	



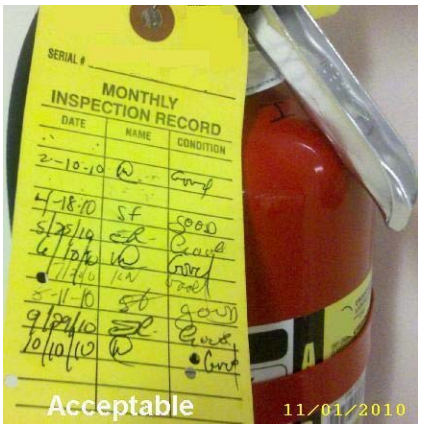
Fire Extinguisher Identification Symbols

The symbol with the shaded background and the slash indicates when the extinguisher must not be used. The Certificate of Fitness holder must understand these symbols. All fire extinguishers should be kept in good working order at all times.

4.4.2 Fire extinguisher inspections

The extinguishers are required to be inspected monthly. The owner of the premises is responsible to designate a person to perform a monthly inspection. This inspection is a "quick check" that a fire extinguisher is available and will operate. It is intended to give reasonable assurance that the fire extinguisher is fully charged and operable. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious or physical damage or condition to prevent its operation. The information of the monthly inspection record must include the date the inspection was performed, the person performing the inspection, and those portable fire extinguishers found to require corrective action. Such recordkeeping must be either attached to the extinguisher or on an inspection checklist maintained on file. Labels or markings indicating fire extinguisher use, or classification, or both shall be placed on the front of the fire extinguisher. At least once per year, all fire extinguishers must be maintained by a FDNY approved company and a W-96 Certificate of Fitness holder.

Monthly inspection tag.



Appendix A: BT-3 Form

To: **FDNY, Bureau of Fire Prevention**
Bulk Fuel Safety Unit, Rm. 3E-78-K
9 Metro-Tech Center
Brooklyn, N.Y. 11201-3857

Test Date:_____

From: _____
FDNY LICENSED CONTRACTOR

Test Location: _____

Grade	Size	Tank Results		Line results		Comments	Date
		Inner	Outer	Inner	Outer		

Those indicated as "tight" meet the criteria established by NFPA pamphlet 329, NYSDEC regulations Part 613.5.6 and NYC FC Chapter 2206.9.6.

I _____ **hold License #** _____**and hereby affirm**
Print name
The above information to be true and accurate_____
Signature of FDNY licensed contactor

Precision test co._____

C of F holder name _____**C of F #**_____**Exp. Date**_____
Contractor's Tank Sketch

FDNY DO #_____**Acct.#**_____

FDNY DO # 32 Acct.#_____

Comments: _____

FDNY USE ONLY DATA ENTRY (FPIMS)
5 year test credit: gasoline_____**diesel**_____

Entered by BFSU _____
Title name date

Approved ☐ **Disapproved** ☐

BT-3 (Rev.03/06/2011)