

# **Guidance on the Proper Use of Liquid Storage Tanks on the Nez Perce Reservation**

## **Section 1 Scope and Organization**

### **Section 1-1 Scope**

**(a) General Application.** Due to the mobile nature of contaminated surface and ground water, the provisions of this Guidance apply to all above and below ground liquid-containing storage tanks containing potentially hazardous substances within the exterior boundaries of the 1863 Nez Perce Reservation (Reservation), except where otherwise stated within this Guidance.

**(b) Limitations on Application.** This Guidance is not meant to apply to:

- (1) Any storage tank under 50 gallons;
- (2) Temporary Storage Tanks, which are governed by the rules laid out in Section 6;
- (3) Gasoline or diesel storage tanks mounted to and used by motor vehicles;
- (4) Septic Tanks;
- (5) Surface impoundments, pits, ponds or lagoons;
- (6) Stormwater or wastewater collections systems;
- (7) Flow-through process tanks;
- (8) Tanks mounted to and used by motorized equipment as provided by the manufacturer (i.e. lawnmowers, backhoes. Does not apply to generators); and
- (9) Any pipes connected to any tank which is described in (2) through (8).

### **Section 1-2 Organization of this Guidance**

**(a) Section 2 New Tank Installation Guidelines.** This section discusses general provisions related to the use and maintenance of storage tanks within the Nez Perce Reservation.

**(b) Section 3 Storage Tank Inventory and Information.** This section discusses the Tribe's information needs related to qualifying storage tanks

**(c) Section 4 Recordkeeping and Reporting.** This section discusses the recordkeeping and reporting provisions for owners of any qualifying storage tanks.

**(d) Section 5 Requirements for Underground Storage Tanks.** This section discusses the

specific provisions related to the installation and maintenance of new Underground Storage Tanks.

**(e) Section 6 Temporary Storage Tanks.** This section discusses the specific provisions that apply to temporary storage tanks, defined as tanks at a facility or site for more than thirty (30) days, but less than one year.

**(f) Section 7 Stormwater Pollution Prevention.**

**(g) Section 8 Spill and Overfill Prevention.**

**(h) Section 9 Definitions**

**Section 1-3 Duties.** Owners and operators of liquid storage tanks containing potentially hazardous substances should comply with the following duties of reasonable conduct for tank owners:

**(a) General Duties.** Owners should not:

(1) Violate any duty to allow an inspection, entry or monitoring activities.

(2) Fail to inspect or monitor a storage tank or tank system as required by this Guidance or regulations promulgated hereunder.

(3) Violate any provision or duty of reasonable care under this Guidance or amendments promulgated hereto.

(4) Falsify documents or otherwise provide false information to WRD;

(5) Fail to notify the NPT Storage Tank Program of the release of a potentially hazardous substance.

**(b) Duty to Inspect Upon Delivery of Potentially Hazardous Substance**

**(1) Visual Inspection Required.** Upon delivery of a potentially hazardous substance to a storage tank covered by this Title, the owner or operator of the tank should visually inspect, to the extent visible, the entire tank system, including pipes and the surrounding area, for evidence of leaks.

**(2) Documenting Inspection Results.** Owners or operators of storage tanks receiving deliveries of potentially hazardous substances should document the findings of the visual inspection upon each delivery. These records should be kept for three years from the date of delivery, and should be made available upon inspection by the Tribe.

**(c) Duty to Maintain the Structural Integrity of the Tank System.** In order to protect against contaminated soils, groundwater and surface water as a result of leaking storage tanks, the duty of reasonable care requires all owners and operators of storage tanks covered by this Title should

maintain the structural integrity of their tank system, and not allow the system to fall into disrepair.

**(d) Duty to Have Sufficient Materials Available to Contain and Cleanup Reasonably Likely Spills.** In order to comply with the duty of reasonable care, owners and operators of storage tanks covered by this Title should have on-site, sufficient materials to contain and cleanup spills that are reasonably likely to occur given the volume of substance stored, and the frequency of deliveries of new substances.

### **Section 1-5 General Authorities; Administrative Overview**

**(a) Powers and Duties.** In carrying out the intent of this Guidance, WRD is authorized to:

(1) Propose such amendments as are necessary to carry out WRD functions under this Guidance, subject to approval by NPTEC;

(2) Make recommend to NPTEC and the Office of Legal Counsel concerning potential violations of the terms of this Guidance where use of a liquid storage tank actually or potentially causes an environmental harm within the meaning of Nez Perce Tribal Code 14-1;

(3) Monitor, sample or conduct other reasonably necessary studies;

(4) Conduct investigations, inspections and tests at storage tank sites to effectuate the purposes of this Guidance and Nez Perce Tribal Code 14-1-2-8;

(6) Provide to the public pertinent educational materials and information regarding liquid storage tank issues;

(7) Issue advice and encourage voluntary cooperation with the provisions of the Storage Tank Guidance;

(8) Work with the owner and/or operator of a storage tank covered by this Guidance to perform or cause to be performed a tank and line system test to determine compliance with the standards established by this Guidance; and

(9) Perform such other activities as WRD may find necessary to carry out its functions under this Guidance.

**(b) Delegation of Authority.** WRD may, for specific projects of limited duration, delegate to any officer or employee of the Nez Perce Tribe such powers and duties under this Guidance as necessary or expedient to effectuate the purposes of this Guidance.

### **Section 1-6 Compliance with other Laws and Regulations**

Nothing in this Guidance shall eliminate any obligations imposed by any other applicable laws or regulations, or any Tribally or federally issued permit or license.

## Section 2 New Tank Installation Guidelines

**Section 2-1 New Tank Installation.** The following guidelines should be followed in order to prevent an environmental harm caused by faulty tank installation. A new tank (include tank systems) may be deemed likely to cause an environmental harm unless:

- (a) It is designed to prevent releases due to corrosion or structural failure for the operational life of the tank;
- (b) It is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with noncorrosive material or designed in a manner to prevent the release of a potentially hazardous substance;
- (c) It is equipped with spill and overfill prevention devices;
- (d) It is correctly installed by a manufacturer trained and certified installer, and is installed in accordance with manufacture specifications and appropriate technical industry standards;
- (e) The material used in the construction or lining of the tank is compatible with the substance to be stored; and
- (f) The tank (or operation thereof) complies with all standards found in this Guidance and amendments promulgated hereto.

**Section 2-2 Requirements for Installation of New Tanks Near a Public Water System. In order to prevent environmental harm and to adequately protect human health, all new storage tanks, including pipes and lines, installed within 1000 feet of a public water system should have secondary containment systems.**

**(a) Guidelines for Secondary Containment Systems.** To be adequately protective, all new storage tanks should have a secondary containment area surrounding the tank that can hold 100 percent of the contents of the largest tank located within the containment area, plus 10 percent capacity where secondary containment areas are exposed to precipitation. Double-walled tanks are also acceptable.

**(b) Acceptable Materials for Secondary Containment Systems.** The following are acceptable impermeable materials that may be used for construction of the containment area for new storage tanks:

(1) Compacted clay (if clay is used, it must have a minimum of 12 inches compacted clay, be protected with cover material to prevent drying and erosion, be designed, inspected, and certified by a registered professional engineer, and be tested after installation to meet a permeability rate to water equal to or less than  $1 \times 10^{-7}$  cm/sec);

(2) Concrete;

- (3) A synthetic membrane;
- (4) The outer layer of a double-walled tank;
- (5) Fabricated steel; or
- (6) Fiberglass.

**(c) UST Specific Rules for Secondary Containment.** Owners and operators of underground storage tanks (USTs) need to refer to Section 5, for UST specific guidelines for secondary containment.

### **Section 3 – Storage Tank Inventory and Information**

**Section 3-1 Existing Tanks.** In order to protect against potential environmental harms the Nez Perce Tribe Storage Tank Program will, from time to time, request the following information related to storage tanks:

- (a) Age,
- (b) Size,
- (c) Type,
- (d) Location,
- (e) Uses of such tank,
- (f) The type of release detection system and the extent of any known soil or ground water contamination,
- (g) The material out of which the tank was constructed,
- (h) Factory tank design specifications,
- (i) Tank system schematic, and
- (j) Other pertinent information as may be determined by WRD.

**Section 3-2 Tanks Taken out of Operation.** The owner or operator of a storage tank covered by this Guidance taken out of operation before January 1, 2010, but not removed from the ground, should notify the Nez Perce Tribe Storage Tank Program in writing, of the existence of such tank. This allows the Tribe to maintain an inventory of all tanks on the Reservation to prevent the loss of information in the event of property transfer, death of the owner/operator, or other such event with the potential to eliminate knowledge of the existence of the tank.

**(a) Notification Contents.** In order to be of the utmost use, the following information should be

provided in any notification sent to the Tribe:

- (1) Date the tank was taken out of operation,
- (2) Age of the tank taken out of operation,
- (3) Size,
- (4) Type,
- (5) Location, and
- (6) Type and an estimate of the quantity of substance stored in such tank immediately before it was taken out of operation.

**(b) Discovery of Tanks Taken Out of Operation.** Any person who discovers the existence of a previously unknown tank should notify the Nez Perce Tribe Storage Tank Program, by phone or in writing, of the existence of such tank.

**Section 3-3 Tanks Removed from a Facility.** The notice provisions of this Section do not apply to the owner of a storage tank covered by this Guidance which has been removed from the ground, but it may be helpful for the owner of a storage tank covered by this Guidance removed from the ground to notify the Tribe's Storage Tank Program of the age, location, uses of the tank and the date of its removal.

**Section 3-4 Notification of the Installation of New Tanks.** An owner or operator who brings a storage tank covered by this Guidance into operation after the effective date of this Guidance should notify the Tribe as provided for in Section 3-1 of this chapter within 30 days, so that the Tribe may update the tank inventory.

**Section 3-5 Notification by Depositors.** After the effective date of this Guidance and for twelve (12) months thereafter, any person who deposits potentially hazardous substances in a storage tank covered by this Guidance should notify the owner or operator of the tank of the notification provisions of this Guidance.

**Section 3-6 Notification by Sellers.** Any person who sells a tank intended to be used as a storage tank covered by this Guidance should notify the purchaser of the notification provisions of this Guidance.

**Section 3-7 Inventory.** Over time, WRD shall develop and maintain an inventory of all storage tanks within the Nez Perce Reservation. The inventory shall be based on the information collected pursuant to the notification provisions of this Section.

**Section 3-8 Upgrades, Replacement Tanks and Tanks Which Change Use.** An owner or operator should notify the NPT Storage Tank Program, within 30 days, of any upgrade, storage tank replacement, or any change in the use of a storage tank covered by this Guidance.

## **Section 4 Recordkeeping, Reporting and Investigation**

**Section 4-1 Recordkeeping.** In order meet the duty of reasonable care, owners and operators need to maintain the following information:

**(a) Repair Records.** Owners and operators of storage tank systems should maintain records that identify the location and nature of any repair, including documentation related to the repair. These records need to be kept for the remaining operating life of the storage tank system. In the event of a transfer of ownership the records transfer to the new owner.

**(b) Tank Installation, Closure and Removal Records.**

(1) Owners and operators of storage tank systems need to maintain records regarding the installation of the tank system for the lifetime of the system; or, at the owner's option, give copies of installation records to WRD for retention in the files. Owners who have purchased systems should maintain the installation information if it is available.

(2) The actual location and orientation of the tanks and appurtenant piping systems should be indicated on as-built drawings of the facility. Copies of all drawings, photographs, and plans should be submitted to WRD for retention in case originals are inadvertently destroyed.

(3) Owners and operators of underground storage tank systems should continue to maintain records for tanks that are temporarily taken out of service or permanently removed. These closure and removal records should provide the results of any excavation area site assessment for permanently removed tanks. These results should be maintained for at least 3 years after removal of the tanks and permanent closure of the system in one of the following ways:

- (i) By the owner or operator who took the underground storage tank system out of service,
- (ii) By the current owner or operator of the property where the tanks were located, or
- (iii) By mailing these records to WRD.

**(c) Release Detection and Cathodic Protection Records.** In order to satisfy the duty of reasonable care, owners and operators need to maintain the following documentation concerning corrosion protection equipment.

(1) Release Detection Records: A minimum of three years.

(2) Records of Meeting Performance Standards for Underground Storage Tanks: A minimum of five years.

- (i) Records need to include the original cathodic protection design with drawings or plans depicting all of the Cathodic Protection system components, along with the credentials of the company, which designed the system.
- (ii) Rectifier readings for impressed current systems conducted at least every 60 days.
- (iii) Results of the last three inspections or Cathodic Protection system tests completed by a corrosion technician.

**(d) Spill and Overfill Records.** Owners and operators of underground storage tank systems

should keep records of spills and overfills for review and inspection by WRD for a period of 3 years.

**(e) Piping Records.** Tank owners should maintain a current map of their underground piping if that information is available to them and update it within 30 days of any changes.

**(f) Availability of Records. Periodically WRD will request inventory and monitoring records to evaluate whether owners are meeting the duty of care with respect to storage tank systems.** All leak detection records, including but not limited to, sampling, testing, inventory and monitoring records, should be available for each tank for at least the preceding 3 years. Copies of all records should be available to the inspector at the time of a facility's UST inspection. When a change in an owner or operator of a storage tank system covered by this Guidance occurs, all records need to be transferred at no cost to the new owner or operator.

## **Section 4-2 Reporting**

**(a) General Reporting Requirements.** Owners and operators need to submit the following information to WRD and the United States EPA:

(1) Reports of all releases including suspected releases (similar to requirements found at 40 CFR §280.50), spills and overfills (similar to requirements found at 40 CFR §280.53), and confirmed releases (similar to requirements found at 40 CFR §280.61);

(2) Cleanup actions planned or taken, pursuant to the Nez Perce Tribe's Site Cleanup Guidance, including initial abatement measures (similar to requirements found at 40 CFR §280.62), initial site characterization (similar to requirements found at 40 CFR §280.63), free product removal (similar to requirements found at 40 CFR §280.64), investigation of soil and ground-water cleanup (similar to requirements found at 40 CFR §280.65), and cleanup action plan (similar to requirements found at 40 CFR §280.66); and

(3) A notification before permanent closure or change-in-service (similar to requirements found at 40 CFR §280.71).

**(b) Reporting Suspected Releases. In order to protect against an environmental harm, or to limit the scope of an environmental harm, an owner or operator of a storage tank system must notify WRD within 24 hours of:**

(1) Any unauthorized release recorded or reported which the owner or operator is unable to clean up or which is still under investigation within eight hours of detection. Not limited to, the presence of free product or vapors in soils, basements, sewer or utility lines or nearby surface water or release into a secondary containment area. Additionally, an owner or operator must identify and mitigate any fire, explosion or vapor hazards at the storage tank facility.

(2) Unusual operating conditions observed by the owner or operator including erratic behavior of product dispensing equipment, the sudden loss of product from the underground storage tank, or an unexplained presence of water in the tank, unless system equipment is found to be defective, but has not leaked, and is immediately repaired or replaced; and

(3) Monitoring results or alarms from any release detection method that indicates a release may have occurred, unless the monitoring device is found to be defective and is immediately repaired, recalibrated or replaced, as well as and subsequent monitoring events after the new monitoring device is installed to determine the confirm whether the result was valid/invalid.

(4) Upon observation of any visible petroleum sheen on surface or groundwater.

**(c) Suspected Release Investigation and Confirmation Steps.** Following the discovery of a suspected release, an owner or operator must immediately initiate investigation and confirmation of a suspected release of a potentially hazardous substance, so that the extent of the environmental harm can be understood and mitigated. This investigation should be completed within seven days.

**(1) Notification of Results.** Upon expiration of the 7-day period or other period approved by WRD, an owner or operator should notify WRD of the investigation results so that WRD may offer technical advisory and oversight services. This can be accomplished by submitting to WRD:

- (i) A written description of the system test conducted confirming that a release did not occur, including any test results; or
- (ii) A written plan of action to complete the suspected release investigation system test or site assessment. Any plan of action should include a firm schedule for completion.

**(2) System Test.** In order to satisfy the duty of reasonable care, an owner or operator should conduct tightness testing to determine whether a leak exists in any portion of the storage tank system that routinely contains a potentially hazardous substance or the piping or both. An owner or operator should investigate the cause of a release into any secondary containment unit including, but not limited to, piping, turbine sumps, transition sumps and dispenser pans by conducting tests in accordance with manufacturer requirements or as directed by WRD. All potentially hazardous substances (product) and water mixture must be removed from the containment system and properly disposed in accordance with all applicable requirements.

**(3) System Test Results.** If the suspected release was not reported due to any of the conditions described in subsection (b) and the system test results do not indicate that a release has occurred, further investigation is not required. If the suspected release was reported due to any of the conditions described in subsection (b) or the system test results indicate that a release exists, an owner or operator should assess and repair, replace or modify the storage tank system and begin cleanup action in accordance with Section 4-2(d) in order to prevent and control potential environmental harms resulting from the release.

**(4) Site Assessment.** If the test results for the storage tank system, piping or secondary containment units do not indicate that a release exists, but the suspected release was reported or if directed by WRD, an owner or operator may conduct a site assessment for contaminated soil and/or groundwater in accordance with Nez Perce Tribe's Site Cleanup Guidance. An owner or operator should measure for the presence of a release where contamination is most likely to be

present based on all information available. In selecting sample types, sample locations and measurement methods, an owner or operator should consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth to groundwater and other factors appropriate for identifying the presence and source of the release. WRD may require that a sampling plan be submitted for approval before conducting any sampling on a case-by-case basis. In addition:

**(i) Site Assessment Indicates No Release.** If the site assessment results do not indicate that a release has occurred, further investigation is not required.

**(ii) Site Assessment Indicates Release.** If the site assessment results indicate that a release has occurred, an owner or operator must begin cleanup action in accordance with Section 4-2(d) in order to mitigate the environmental harm.

**(5) Release Investigation Results.** If the suspected release investigation confirms that a release has occurred, an owner or operator must report the confirmed release to WRD within 24 hours of confirmation and comply with any applicable requirements of this and other Guidances.

**(6) Additional Required Actions.** WRD may propose that an owner or operator perform additional actions not specifically listed in this Guidance on a case-by-case basis to address actual or potential threats to human health or the environment.

**(d) Cleanup of a Release of a Potentially Hazardous Substance.** Cleanup of releases of a potentially hazardous substance shall be governed by the provisions of the Nez Perce Tribal Code 14-1 *et seq.*, and the Nez Perce Tribe Contaminated Site Cleanup Guidance.

### **Section 4-3 Right to Inspect Records, Tanks and Equipment**

**(a)** In order to protect the Reservation environment and the human health of the Reservation inhabitants, the Nez Perce Tribe may request owners/operators of qualifying tank systems to:

**(1)** Furnish to the Nez Perce Tribe Storage Tank Program information relating to the tank and its associated equipment and contents.

**(2)** Permit WRD to have access to the site to conduct monitoring and testing of tanks or surrounding soils, air, surface water or ground water.

**(3)** Permit WRD to inspect and copy all records relating to tanks or which indicates that a release of a potentially hazardous substance has occurred.

**(4)** Permit WRD to inspect and obtain samples of potentially hazardous substances contained in tanks.

**(b)** WRD shall have the right to review environmental site assessments (ESAs) upon request to ensure compliance with this Guidance.

**(c)** The Nez Perce Tribe shall conduct all inspections permitted pursuant to subsection (a) at a reasonable time and complete these inspections with reasonable promptness.

**Section 4-4 Confidentiality of Records.** Records or other information furnished to or obtained by WRD concerning potentially hazardous substances are available to the public, except that any records and information which relate to the trade secrets, processes, operations, style of work or apparatus or to the identity, confidential statistical data, amount or source of any income, profits, losses or expenditures of any person are only for the confidential use of WRD in the administration of this Guidance unless the owner or operator expressly agrees in writing to their publication or availability to the public. This section does not prohibit the appropriate governmental agency from publishing quantitative and qualitative statistics pertaining to the storage of potentially hazardous substances. Notwithstanding provisions to the contrary to this section, information regarding the nature and quality of releases from underground storage tanks otherwise reportable pursuant to this Guidance shall be available to the public. Notwithstanding any provision of this section, records, reports, documents or information may be disclosed to other officers, employees, or authorized representatives of the Nez Perce Tribe or the United States government concerned with carrying out this Guidance or when relevant in any proceeding taken under Nez Perce or federal law.

## **Section 5 Requirements for Underground Storage Tanks**

**Section 5-1 Definition and Purpose.** An underground storage tank (UST) refers to any storage tank (within the meaning of this Guidance) or combination of tanks, including underground pipes connected thereto, which is used to contain an accumulation of potentially hazardous substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store potentially hazardous substances, the following provisions should be followed in order to ensure that the owner's/operator's duty of reasonable care has been met. Failing to follow the guidelines of this Section may result in liability on the part of the owner/operator in the event that a release is detected:

All new underground storage tanks including associated piping used for the storage of hazardous substances should have primary and secondary containment. Failure to install secondary containment for a new UST poses unreasonable risks to the environment and human health, and should be avoided, unless a compelling justification to the contrary can be made. Primary containment should be product-tight. Secondary containment systems should be designed and constructed such that the secondary containment system can be periodically tested.

**Section 5-2 Approved Tanks, Tank Design.** The material used in the construction of a new UST must be compatible with the potentially hazardous substance to be stored in the UST. Each tank should be double walled, properly designed and constructed, and any portion underground that routinely contains product needs to be protected from corrosion, in accordance with a standard of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(a) Fiberglass-reinforced plastic tanks need to be double walled and conform to the standards contained in UL 1316 (Underwriters Laboratories), ULC CAN4-S615-M83 (Underwriters

Laboratories Canada) or ASTM D4021-86 (American Society for Testing and Materials).

**(b)** Steel tanks clad with fiberglass-reinforced plastic need to be double walled and conform to the standards contained in UL 1746 or ACT-100 (Steel Tank Institute).

**(c)** Tanks constructed of steel and cathodically protected need to be double walled and conform to the standards in UL 1746 and NACE RP-0285 (National Association of Corrosion Engineers) and should be protected in the following manner:

**(1)** The tank should be coated with a suitable dielectric material.

**(2)** Field-installed cathodic protection systems should be designed by a corrosion expert.

**(3)** Impressed current systems should be designed to allow determination of current operating status as required by this Chapter and manufacturer's specifications.

**(4)** Cathodic protection systems should be operated and maintained according to this Chapter and manufacturer's specifications.

**(d)** The tank construction and corrosion protection are determined by WRD to be designed to prevent the release or threatened release of any stored potentially hazardous substance in a manner that is no less protective of human health and the environment than paragraphs (a) through (c) of this section.

**Section 5-3 Installation of New USTs; Procedural Requirements.** All owners and operators should ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with this section by complying with the following provisions:

**(a) Certification.** The owner or operator provides the NPT Storage Tank Program with a certification of compliance that:

**(1)** The installer has been certified by the tank and piping manufacturers; or

**(2)** The installer has been certified or licensed or

**(3)** The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or

**(4)** The installation has been inspected and approved by WRD; or

**(5)** All work listed in the manufacturer's installation checklists has been completed; or

**(6)** The owner or operator have complied with another method for ensuring compliance that is determined by WRD to be no less protective of human health and the environment.

**(b) Notification of Installation.** Two week prior to installation, the owner or operator must give notice to the NPT Storage Tank Program, so that an inspector can make a site-visit to document

that this Guidance's installation provisions are being met.

**Section 5-4 Installation and Testing Requirements for All New Underground Storage Tanks.** All tanks and piping must be properly installed in accordance with a standard of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions. API 1615 (American Petroleum Institute), PEI RP100 (Petroleum Equipment Institute), ANSI B31.3 and B31.4 (American National Standards Institute) may be used to comply with the provisions of this section.

**(a)** Primary and secondary containment systems shall be designed, constructed, tested, and certified to comply, as applicable, with all of the following terms:

**(1)** All underground storage tanks should be tested at the factory before being transported. The tests shall determine whether the tanks were constructed in accordance with the applicable sections of the industry Guidance or engineering standard under which they were built.

**(2)** The outer surface of underground storage tanks constructed of steel should be protected from corrosion as follows, except that primary containment systems installed in a secondary containment system and not backfilled, do not need cathodic protection:

**(i)** Field-installed cathodic protection systems should be designed and certified as adequate by a corrosion specialist. A cathodic protection tester should test the cathodic protection systems within six months of installation and at least every three years thereafter. The criteria that are used to determine that cathodic protection is adequate shall be in accordance with a standard of practice developed in accordance with voluntary consensus standards. Impressed-current cathodic protection systems should also be inspected no less than every 60 calendar days to ensure that they are in proper working order.

**(ii)** Underground storage tanks protected with fiberglass-reinforced plastic coatings, composites, or equivalent non-metallic exterior coatings or coverings, including coating/sacrificial anode systems, should be tested at the installation site using an electric resistance holiday detector. All holidays detected should be repaired and checked by a factory authorized repair service before installation. During and after installation, care should be taken to prevent damage to the protective coating or cladding. Pre-engineered corrosion protection systems with sacrificial anodes should be checked once every three years in accordance with the manufacturer's instructions.

**(3)** Before installation, the tank should be tested for tightness at the installation site in accordance with the manufacturer's written guidelines. If there are no guidelines, the primary and secondary containment should be tested for tightness with air pressure at not less than 3 pounds per square-inch (20.68 k Pa) and not more than 5 pounds per square-inch (34.48 k Pa). In lieu of the above, an equivalent differential pressure test, expressed in inches of mercury vacuum, in the interstitial space of the secondary containment, is acceptable. The pressure (or vacuum in the interstitial space) should be maintained for a minimum of 30 minutes to determine if the tank is tight. If a tank fails the tightness test, as evidenced by soap bubbles, or water droplets, installation shall be suspended until the tank is replaced or repaired by a factory authorized repair

service. Following repair or replacement, the tank needs to pass a tightness test.

(4) After installation, but before the underground storage tank is placed in service, a tank integrity test should be conducted to ensure that no damage occurred during installation. The tank integrity test is not necessary if the tank is equipped with an interstitial monitor certified by a third-party evaluator to meet the performance standards of a "tank integrity test", or if the tank is tested using another method deemed to be equivalent.

(5) All underground storage tanks should be installed according to a standard of practice developed in accordance with voluntary consensus standards and the manufacturer's written installation instructions. The owner or operator should certify that the underground storage tank was installed in accordance with the above requirements as required by subsection (b) of this section.

(6) All underground storage tanks subject to flotation should be anchored using methods specified by the manufacturer or, if none exist, should be anchored according to the best engineering judgment.

(7) The actual location and orientation of the tanks and appurtenant piping systems shall be indicated on as-built drawings of the facility. Copies of all drawings, photographs, and plans shall be maintained in the owner/operator's records.

(b) Owners/operators or their agents shall certify that the installation of the tanks and piping, meets the conditions in paragraph (1) through (5) below.

(1) The installer has been adequately trained as evidenced by a certificate of training issued by the tank and piping manufacturers.

(2) The installer has been certified or licensed;

(3) The storage tank, any primary piping, and any secondary containment, was installed according to applicable voluntary consensus standards and any manufacturer's written installation instructions;

(4) All work listed in the manufacturer's installation checklist has been completed; and

(5) The installation has been inspected and approved by WRD or inspected and certified by a registered professional engineer who has education and experience with storage tank system installations.

#### **Section 5-5 Underground Storage Tank Internal Lining Requirements.**

(a) Underground storage tanks may not use tank lining as a means of corrosion protection.

(b) A lined steel tank that fails precision tightness testing should not be repaired and should be removed.

(c) Within 10 years after lining, and every five years thereafter, lined USTs need to be internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(d) Standards that should be referenced during the periodic inspection of lined USTs:

(1) American Petroleum Institute (API) Publication 1631.

(2) Ken Wilcox Associates, Inc. "Recommended Practices for Inspecting Buried Lined Steel Tanks Using a Video Camera, First Edition, 1999, Methods A and D.

(e) UST owners may obtain a certificate of performance from the inspection provider attesting that the UST meets the performance requirements for the UST and lining material. Any UST failing to meet the performance requirements should be repaired and upgraded with a cathodic protection system within six months of the lining repair, or be removed. Suitability of the tanks for upgrade by adding cathodic protection must be determined prior to application.

(f) USTs upgraded by the addition of both internal lining and cathodic protection do not require internal periodic inspection if the cathodic protection system has been properly installed and maintained on the UST system.

#### **Section 5-6 Leak Prevention.**

**(a) Secondary Containment.** All USTs installed after January 1, 2010 are required to have secondary containment. This requirement is intended to protect the drinking water sources supplied by groundwater and surface water on the Reservation, and applies to all new USTs unless the owner or operator can show to the satisfaction of WRD that there is no ground or surface water within 1000 feet in all directions of the proposed tank location.

(1) Laminated, coated, or clad materials shall be considered a single wall and do not fulfill the requirements of both primary and secondary containment.

(2) Underground storage tanks with secondary containment systems shall be so designed and installed so that any leak or loss of a potentially hazardous substance from the primary containment will be detected by an interstitial monitoring device or other method and not allowed to enter the environment.

#### **(b) Secondary Containment Testing.**

(1) Secondary containment systems installed on or after January 1, 2010 should be tested upon installation, 6 months after installation, and every 36 months thereafter. Secondary containment systems installed prior to January 1, 2010 should be tested by June 1, 2010 and every 36 months thereafter.

(2) By December 31, 2009, the owner or operator of any secondary containment system that the owner or operator determines cannot be tested in accordance with this section should replace the secondary containment system with a system that can be tested in accordance with this

section. As an alternative, the owner or operator may submit a proposal and work plan for enhanced leak detection to WRD; complete the program of enhanced leak detection by June 1, 2010; and replace the secondary containment system with a system that can be tested in accordance with this section by January 1, 2012. WRD shall review the proposed program of enhanced leak detection within 45 days of submittal or re-submittal to determine if it will be adequately protective of the soil and groundwater resources of the Reservation.

(3) Periodic testing of secondary containment systems should be conducted using a test procedure that demonstrates that the system performs at least as well as it did upon installation. For example, if the secondary containment system was tested upon installation by using a test method that applied a pressure of 5 psi, then the periodic test should be conducted using a method that tests the system at an equivalent pressure. These tests shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, secondary containment systems must be tested using an applicable method specified in an industry standard or engineering standard. If there are no applicable manufacturers guidelines, industry standards, or engineering standards a test method approved by a registered professional engineer shall be used.

(4) Secondary containment testing shall be performed by either a service technician or a licensed tank tester.

(5) Underground storage tank owners and operators should submit a copy of the test report to WRD within 30 days of the completion of the test.

(6) Owners and operators of underground storage tanks should notify WRD at least 48 hours prior to conducting the test, unless this notification provision is waived by WRD.

(7) Secondary containment systems where a continuous monitoring device automatically monitors both primary and secondary containment, such as systems that are hydrostatically monitored or under constant vacuum, are exempt from periodic secondary containment testing.

### **Section 5-7 Leak Detection; Methods of Leak Detection for Tanks**

**(a) Leak Detection Systems Required.** All owners and operators of new and existing UST systems must provide a method or combination of methods of release detection that:

(1) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

(3) Includes one of the detection systems detailed in this Section.

**(b) Automatic Tank Gauges.** Equipment for automatic tank gauging that test for the loss of

product and conducts inventory control must meet the following requirements:

(1) The automatic tank gauge (ATG) shall test the tank at least once per month after product delivery or when the tank is filled to within 10 percent of the highest operating level during the previous month and shall be capable of detecting a release of 0.2 gallon per hour with a probability of detection of 0.95 and a probability of false alarm of 0.05. The automatic tank gauge shall generate a hard copy of all data reported including time and date, tank identification, fuel depth, water depth, temperature, liquid volume, and the duration of the test. Automatic tank gauge systems installed on or after January 1, 2010, shall also generate a hard copy of the calculated leak rate and leak threshold.

(2) ATG's that cannot detect a 0.1 gallon per hour leak rate monthly or perform inventory reconciliation are required to have monthly inventory reconciliation done in conjunction with them in accordance with the requirements of 40 CFR §280.43 (a).

(3) Automatic tank gauging systems must be third party certified for the size of tanks and the throughput of the system. Only third party certifications that have been reviewed and approved by the National Work Group on Leak Detection Evaluations (NWGLDE), as evidenced by their posting on the NWGLDE Web Site, will be accepted (nwglde.org).

**(c) Interstitial Monitoring.**

(1) Interstitial monitoring between the UST system and a secondary barrier immediately around it may be used such as for double walled tanks, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product. The sampling or testing method must be able to detect a release through the inner wall in any portion of the tank that routinely contains product.

(2) The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Storage Tanks" may be used as additional guidance for aspects of the design and construction of underground steel double-walled tanks.

**(d) Testing or Monitoring for Liquids on the Groundwater.** Groundwater Monitoring may be used in combination with ATG or interstitial monitoring for confirmation of a leak, but is not acceptable as an independent leak detection device.

(1) Before installing a new groundwater monitoring system, or continuing to use an existing groundwater monitoring system a site-specific site assessment should be conducted to determine the following:

(i) The exact location and total depth of the tank(s) and piping to avoid damage to the UST system during well installation and to determine the number and placement of wells.

(ii) That the backfill is sufficiently porous to allow migration of product from a release to the monitoring wells (i.e., sand, pea gravel or crushed rock).

(iii) That background levels of contamination or naturally occurring organic

hydrocarbons are low enough to allow a release from the tank(s) or piping to be detected. Groundwater monitoring may not be effective if the site has had prior spills or releases. If residual free product is discovered, it must be removed prior to initiating groundwater monitoring.

**(iv)** The location and historical levels of groundwater at the site. Groundwater monitoring cannot be used if the water table is less than three feet below ground surface or more than 20 feet below ground surface.

**(v)** Fluctuation of groundwater. The well screen must intercept the water table at both high and low elevations. Free product floating on top of the water surface cannot enter a well if the water level is higher than the well screen, nor can free product enter a well if the water level is below the bottom of the well screen. It must be determined that groundwater conditions are such that a release would not go undetected.

**(vi)** The stored product's compatibility with the monitoring device that will be used.

**(vii)** The detection device must be able to detect the presence of at least one-eighth of an inch of free product on top of the groundwater in the monitoring wells.

**(viii)** Groundwater monitoring is only effective if the stored product is lighter than water (i.e., has a specific gravity less than 1.0), which allows the product to float on the water surface. The stored product must not be soluble in water. Products that are highly soluble in water would not be detected as a separate liquid phase.

**(2)** Individuals performing this site assessment must be a professional geologist (PG) or environmental engineer.

**(3)** The groundwater monitoring wells should be installed in the tank excavation and/or piping trench backfill. In the tank excavation, wells should be spaced to cover a maximum 20-foot radius of influence. If a one-tank installation requires only one well, it should be installed on the down gradient side of the excavation. For multiple tank installations or where more than one well is installed, at least one of the wells should be placed on the down gradient side of the excavation.

**(4)** In piping trenches, groundwater monitoring wells should be placed at all piping joints and where piping changes direction, and be spaced to cover a maximum 20-foot radius of influence. A well should also be placed at each dispenser island, in backfill material and in a location least likely to be impacted by a surface spill caused by vehicle overfilling.

**(5)** Groundwater monitoring wells must meet these minimum requirements:

**(i)** Be constructed from two- or four-inch polyvinyl chloride (PVC) or stainless steel casing with factory milled 0.01-inch well screen.

**(ii)** The well screen section should begin approximately two-feet below ground surface (bgs) for tank excavations and one-foot bgs for piping trenches. The well screen must extend to a depth of two feet below the tank bottom and/or piping.

**(iii)** A filter pack of graded gravel or uncontaminated quartz sand, silica, or other material that will not affect the groundwater quality must be placed around the

entire length of the well screen unless the tank and/or piping is backfilled with pea gravel.

(iv) The well screen must terminate at least 18-inches below ground surface. The area above the well screen must be sealed (annular seal) to prevent surface spills from contaminating the well, which would result in a false indication of a release. An anti-shrink concrete or grout seal must extend at least 12 inches from within the monitoring well manhole. The remainder of the well above the well screen must be sealed with a cement-bentonite mixture or bentonite pellets.

(v) A concrete or cement surface pad must be installed around the casing at the surface with minimum dimensions of 3 feet in diameter by 3.5 inches thick. The surface pad must be sloped so to ensure that all surface water flows away from the well. The surface pad is not required if the well is completed in competent concrete or asphalt paving.

(vi) The well(s) must be installed within manholes competent to withstand the anticipated traffic flow. The well casing must be secured with a tight fitting cap and the manhole cover bolted to prevent unauthorized tampering. The manhole cover must be clearly marked with an equilateral triangle to identify the well as a monitoring well or site assessment observation well.

(6) Records demonstrating compliance with this Section should be submitted to WRD before a new groundwater monitoring system may be used. At a minimum, these records should include a site map that includes the location of tanks, piping, dispensers and all monitoring wells, and the name of the company and individual performing the assessment.

(i) Any indication of free product floating on the water table must be reported to WRD within 24 hours of the owner or operator or any of his or her employees discovering the product.

(ii) If a monitoring report under the circumstances of (6)(i) above is not made within 24 hours, the owner or operator must be prepared to show documentation or evidence that would reasonably indicate his or her knowledge of the existence of free product was delayed.

(e) **Testing or Monitoring for Vapors.** Vapor Monitoring may be used in combination with ATG or interstitial monitoring for confirmation of a leak, but is not acceptable as an independent leak detection device.

(1) Before installing a new vapor monitoring system or continuing to use an existing vapor monitoring system a site-specific site assessment should be conducted to determine the following:

(i) The exact location and total depth of the tank(s) and piping to avoid damage to the UST system during well installation and to determine the number and placement of wells.

(ii) That the backfill is sufficiently porous to allow diffusion of vapors from a release to migrate readily to the monitoring wells (i.e., sand, pea gravel or crushed rock).

(iii) That background levels of contamination or naturally occurring organic hydrocarbons are low enough to allow a release from the tank(s) or piping to be

detected. To determine background concentrations, a temporary vapor well can be installed in the UST excavation area and the device that will be used for monitoring can be used to get an initial reading.

**(iv)** The location and historical levels of groundwater at the site. If the backfill is saturated with water, because of a perched water table, fluctuating water table, rainfall, etc., a vapor monitoring system should not be used because dispersion of vapors would be restricted and a release could go undetected.

**(v)** Volatility of the stored product and its compatibility with the monitoring device that will be used.

**(2)** Individuals performing this site assessment should be a professional geologist (PG) or environmental engineer.

**(3)** The vapor monitoring wells should be installed within the tank excavation and/or piping trench backfill. In the tank excavation, wells need to be spaced to cover a maximum 20-foot radius of influence. If a one-tank installation only calls for one well, it should be installed on the down gradient side of the excavation. For multiple tank installations or where more than one well is installed, at least one of the wells should be placed on the down gradient side of the excavation.

**(4)** In piping trenches, vapor monitoring wells should be placed at all piping joints and where piping changes direction, and be spaced to cover a maximum 20-foot radius of influence. A well should also be placed at each dispenser island, in backfill material and in a location least likely to be impacted by a surface spill caused by vehicle overfilling.

**(5)** In addition vapor monitoring wells should meet these minimum requirements:

**(i)** Be constructed from two- or four-inch polyvinyl chloride (PVC) or stainless steel casing with factory milled 0.01-inch well screen.

**(ii)** The well screen section should begin approximately two-feet below ground surface (bgs) for tank excavations and one-foot bgs for piping trenches. The well screen must extend to a depth of two feet below the tank bottom and/or piping.

**(iii)** A filter pack of graded gravel or uncontaminated quartz sand, silica, or other material that will not affect the groundwater quality must be placed around the entire length of the well screen.

**(iv)** The area above the well screen must be sealed (annular seal) to prevent surface spills from contaminating the well, which would result in a false indication of a release. An anti-shrink concrete or grout seal must extend at least 12 inches from within the monitoring well manhole. The remainder of the well above the well screen must be sealed with a cement-bentonite mixture or bentonite pellets.

**(v)** A concrete or cement surface pad must be installed around the casing at the surface with minimum dimensions of 3 feet in diameter by 3.5 inches thick. The surface pad must be sloped so to ensure that all surface water flows away from the well. The surface pad is not required if the well is completed in competent concrete or asphalt paving.

**(vi)** The well(s) must be installed within manholes competent to withstand the anticipated traffic flow. The well casing must be secured with a tight fitting cap

and the manhole cover bolted to prevent unauthorized tampering. The manhole cover must be clearly marked with an equilateral triangle to identify the well as a monitoring well or site assessment observation well.

(6) Records demonstrating compliance with this Section should be submitted to WRD before a new vapor monitoring system may be used or before an existing vapor monitoring system may continue to be used after June 15, 2009. At a minimum, these records should include a site map that includes the location of tanks, piping, dispensers and all monitoring wells, and the name of the company and individual performing the assessment.

(7) The vapor monitoring equipment must be designed and operated to allow the threshold level to be preset specifically for the type of potentially hazardous substance stored in the tank system and be capable of detecting any significant increase in the concentration of potentially hazardous substance, component or components of that substance or a tracer placed in the tank system above background levels.

(8) Vapor monitoring devices must be able to read in parts-per-million. If the device has a maximum recording level below 4,000 ppm, any well that causes the meter to reach its reading limit must be reported.

(10) Monitoring well readings above 4,000 ppm for gasoline and above 1,500 ppm for diesel, or above 1,500 ppm for a tank pit containing both gasoline and diesel tanks, must be reported to WRD within 24 hours of the owner or operator or any of his or her employees knowing the reading.

(11) An increase in vapor levels of 500 ppm above background or historical levels detected by monthly monitoring, even though below the 24-hour reporting level, must be reported if the increase does not correct itself in the second month of monitoring. The report must be made within 24 hours of the owner or operator or any of his or her employees knowing the second month's monitoring results.

(12) If a monitoring report under the circumstances above is not made within 24 hours, the owner or operator must be prepared to show documentation or evidence that would reasonably indicate his or her knowledge of monitoring results or release conditions was delayed.

**Section 5-8 Underground Storage Tank Piping Materials.** Any newly installed piping that will routinely contain potentially hazardous substances and be in contact with the ground must be double walled, properly designed, constructed, and protected from corrosion in accordance with a Guidance of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(a) The piping is double walled and constructed of fiberglass-reinforced plastic and conform to the standards in UL 971, UL 567, ULC-107 and ULC-4-S633-M81; or

(b) The piping is double walled and constructed of steel, and cathodically protected in the following manner that conforms to the standards in NFPA 30 (National Fire Prevention Association), API 1615, API 1632 and NACE RP-01-69:

- (1) The piping is coated with a suitable dielectric material;
  - (2) Field-installed cathodic protection systems are designed by a corrosion expert;
  - (3) Impressed current systems are designed to allow determination of current operating status similar to the requirements in 40 CFR §280.31(c); and
  - (4) Cathodic protection systems are operated and maintained in the same manner as required in 40 CFR §280.31 or guidelines established by WRD; or
- (c) The piping construction and corrosion protection are determined by WRD to be designed to prevent the release or threatened release of any stored potentially hazardous substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (a) (1) through (2) of this section.
- (d) A tracer locator wire must be installed in all piping trenches; and
- (e) Tank and dispenser sumps must be installed water tight, and they must be monitored.
- (f) Dispenser sumps must be installed water tight and monitored by a sensor, float or similar mechanical device at each sump.
- (g) Existing facilities that are replacing metallic piping must upgrade pursuant to (a) or (b) of this Section. If the metallic line fails due to corrosion, the line must be immediately removed, and cannot be reused.
- (h) Existing facilities that are replacing dispensers where the fuel islands are not being removed, replaced, relocated, or added may add to the existing piping using the same piping material.
- (i) Existing facilities that are replacing underground storage tanks should replace all metallic piping per (a) or (b) of this section.

**Section 5-9 Design, Construction, Installation, Testing, and Monitoring Requirements for Piping.** All monitoring equipment shall be installed and maintained such that the equipment is capable of detecting a leak at the earliest possible opportunity.

(a) Except as provided below, piping connected to tanks, which were installed after January 1, 2009, shall have secondary containment. This requirement does not apply to piping described as follows:

- (1) Vent or tank riser piping, provided the primary containment system is equipped with an overfill prevention system meeting the established requirements or,
- (2) Vapor recovery piping if designed so that it cannot contain liquid-phase product; or,
- (3) Suction piping if the piping is designed, constructed, and installed as follows:

- (i) The below-grade piping operates at less than atmospheric pressure (suction piping);
- (ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released (gravity-flow piping);
- (iii) No valves or pumps are installed below grade in the suction line. Only one check valve is located directly below and as close as practical to the suction pump;
- (iv) An inspection method is provided which readily demonstrates compliance with (i) through (iii) above.

(b) All corrodible underground piping, if in direct contact with backfill material, should be protected against corrosion. Piping constructed of fiberglass-reinforced plastic, steel with cathodic protection, or steel isolated from direct contact with backfill, fulfills this corrosion protection need.

(c) New underground primary piping shall meet all of the following requirements:

(1) Primary piping in contact with hazardous substances under normal operating conditions shall be installed inside a secondary containment system, which may be a secondary pipe, vault, or a lined trench. All secondary containment systems shall be sloped so that all releases will flow to a collection sump located at the low point of the underground piping.

(2) Primary piping and secondary containment systems shall be installed in accordance with an industry Guidance of practice developed in accordance with voluntary consensus standards. The owner or operator shall certify that the piping was installed in accordance with the above requirements.

(d) Lined trench systems used as part of a secondary containment system shall be designed and constructed according to a Guidance of practice or engineering standard approved by a state registered professional engineer. The following requirements shall also apply:

(1) All trench materials shall be compatible with the substance stored and evaluated by an independent testing organization for their compatibility or adequacy of the trench design, construction, and application.

(2) The trench shall be covered and capable of supporting any expected vehicular traffic.

**Section 5-10 Leak Detection for Piping Systems.** All owners and operators of new and existing UST systems should provide a method, or combinations of methods of leak detection.

**(a) Tightness Testing.** All new primary piping and secondary containments systems shall be tested for tightness after installation in accordance with manufacturer's guidelines. Primary pressurized piping shall be tested for tightness hydrostatically at 150 percent of design operating pressure or pneumatically at 110 percent of design operating pressure. If the calculated test pressure for pressurized piping is less than 40 psi, 40 psi shall be used as the test pressure. The pressure shall be maintained for a minimum of 30 minutes and all joints shall be soap tested. A failed test, as evidenced by the presence of bubbles, shall require appropriate repairs and

retesting. If there are no manufacturer's guidelines, secondary containment systems shall be tested using an applicable method specified in an industry Guidance or engineering standard. Suction piping and gravity flow piping which cannot be isolated from the tank shall be tested after installation in conjunction with an overfilled volumetric tank integrity test or other test method meeting the requirements if approved by WRD.

**(b) Leak Monitoring Equipment.** Underground piping, including under-dispenser piping and piping secondary containment, should be equipped and monitored with leak monitoring systems as follows:

**(1) Continuous Monitoring Required.** All secondary containment, including under-dispenser containment, and under dispenser spill control or containment systems, should be equipped with a continuous monitoring system that either activates an audible and visual alarm or stops the flow of product at the dispenser when it detects a leak.

**(2) Automatic Line Leak Detectors.** Automatic line leak detectors should be installed on underground pressurized piping, and shall be capable of detecting a 3-gallon per hour leak rate at 10 psi within 1 hour with a probability of detection of at least 95 percent and a probability of false alarm no greater than 5 percent, and should restrict or shut off the flow of product through the piping when a leak is detected.

**(3) Alternative Methods Temporarily Allowed.** Other monitoring methods may be used in lieu of the provisions in paragraph (2) if it is demonstrated to the satisfaction of WRD that the alternate method is as effective as the methods otherwise provided for by this section. Continuous monitoring systems as described in paragraph (1), which shut down the pump in addition to either activating the audible and visual alarm or stopping the flow of product at the dispenser, satisfy the automatic line leak detector provision of paragraph (2).

**(4) Annual Monitoring of Pressurized Piping.** Monitoring shall be conducted on all underground pressurized piping with secondary containment at least annually at a pressure designated by the equipment manufacturer, provided that the method is capable of detecting a minimum release equivalent to 0.1 gallon per hour defined at 150 percent of the normal operating pressure of the product piping system at the test pressure with at least a 95 percent probability of detection and not more than a 5 percent probability of false alarm. This requirement is waived if the criteria in subsection (c) of this section are met.

**(5) Substitutes for Annual Monitoring.** Continuous monitoring systems as described in paragraph (b)(1) satisfy the annual tightness-testing requirement of paragraph (b)(4) if both of the following conditions are met:

- (i)** The monitoring system shuts down the pump or stops the flow of product at the dispenser when a leak is detected in the under dispenser containment.
- (ii)** The monitoring system for all product piping other than that contained in the under dispenser containment is fail safe, and shuts down the pump when a leak is detected.

**(6) Emergency Generator Tank Systems.** For emergency generator tank systems,

continuous monitoring systems as described in paragraph (1), which activate an audible and visual alarm in the event of a leak or a malfunction of the monitoring system satisfy the automatic line leak detector provision of paragraph (2), provided that the monitoring system is checked at least daily by either remote electronic access or on-site visual inspections. A log of daily checks should be available for WRD review upon request or inspection.

**(c) Substitutes for Tightness Testing for Pressurized Piping Systems.** Underground pressurized piping which meets all of the following requirements satisfies the annual tightness test requirement specified in subsection (b)(4):

(1) All secondary containment systems are equipped with continuous monitoring systems. The leak detection device may be located at the pump sump for sections of the piping that slope back to this point.

(2) All continuous monitoring systems for the piping are connected to the pumping system.

(3) All continuous monitoring systems for the piping shut down the pump and either activate an audible and visual alarm or stop the flow of product at the dispenser when they detect a leak.

(4) The pumping system shuts down automatically if any of the continuous monitoring systems for the piping fail or is disconnected.

(5) The requirements of paragraphs (3) and (4) do not apply to an emergency generator, provided the monitoring system is checked at least daily.

**(d) Under-Dispenser Containment Requirements.** Under-dispenser containment should be designed, constructed, and installed in accordance with the following:

**(1) Installation Requirements.** Owners or Operators of a UST system should have the system fitted with under dispenser containment, or an approved under dispenser spill containment or control system according to the following schedule:

(i) At the time of installation for systems installed after January 1, 2010.

(ii) By July 1, 2010, for systems installed before January 1, 2010 that are located within 1,000 feet of a public drinking water well, as identified pursuant to the Tribe's Geographic Information System mapping database.

**(2) System Approval.** A manufacturer of an under-dispenser spill containment or control system may apply to WRD for approval of the system. Owners or operators shall not install an under-dispenser spill containment or control system that has not been approved by the Tribe, EPA or any other State or Tribal entity. If relying on approval given by a party other than the US EPA or the Nez Perce Tribe, the owner must provide evidence of approval by another jurisdiction to the WRD for review. WRD may decline to allow installation of such a control-system, where approval by another jurisdiction is found to not be adequately protective of the Reservation's soils, groundwater and surface water.

(i) Applications for approval shall be submitted in writing and include the following:

(A) A description of the proposed system.

(B) Clear and convincing evidence that the system will protect the soil and beneficial uses of the waters of the tribe from unauthorized releases.

(ii) WRD shall review the application to determine if the proposed system adequately protects the soil and beneficial uses of groundwater before determining whether to approve the proposed system.

(iii) WRD may modify or revoke a previously issued approval if it finds that, based on new evidence; the approved system does not adequately protect the soil and beneficial uses of groundwater from unauthorized releases.

### **Section 5-11 Annual Certification of Monitoring Equipment for UST Systems.**

(a) All monitoring equipment used to satisfy the tank and piping requirements of this Section shall be installed, calibrated, operated and maintained in accordance with manufacturer's instructions, and certified every 12 months for operability, proper operating condition, and proper calibration. Written records shall be maintained and kept onsite.

(b) Persons performing installation, repair, maintenance, calibration, or annual certification of monitoring equipment shall meet the following requirements:

(1) Be licensed as appropriate

(2) Be trained and certified by the manufacturer of the monitoring equipment; and,

(3) Be re-certified by the manufacturer by completion of a manufacturer's refresher course. Additionally, this certification should be renewed at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.

(c) Annual monitoring equipment certification should be made for each location serviced.

(d) UST owners and operators shall submit a written acknowledgement of "Monitoring System Certification" to WRD within 30 days after completion of the inspection.

(e) The UST owner or operator should notify WRD at least 48 hours prior to conducting the installation, repair, replacement, calibration, or certification of monitoring equipment.

(f) A person conducting UST monitoring equipment certification should affix a tag/sticker on each monitoring equipment component that is being certified, repaired, or replaced. The tag/sticker should be placed in a readily visible location and should include the date the UST component was certified, repaired, or replaced, and the contractor's license number.

**Section 5-12 UST Inspection.** WRD will conduct UST inspections at least once every three

years. Owners or operators should have all UST-related documents available for review by WRD staff upon inspection.

**Section 5-13 Financial Responsibility.** All owners or operators of USTs must satisfy the requirements of Title 40 Code of Federal Regulations (CFR), § 280.90 through 280.111.

## **Section 6 – Temporary Storage Tanks**

**Section 6-1 Tanks Covered By This Chapter.** Temporary storage tanks are tanks that store product at a site for more than 30 days, but less than one year. Temporary tanks with a capacity greater than 50 gallons and within 300 feet of surface water should meet these requirements; all other temporary tanks greater than 500 gallons should also meet these requirements.

**Section 6-2 Location of Temporary Tanks – Proximity to Surface Waterbodies.** In order to minimize potential surface water contamination, temporary tanks used at sites in close proximity to surface water should be placed as far from the waterbody as practicable given the site characteristics. Unless alternate location is impossible, a temporary tank should never be placed within 100 feet of a surface waterbody.

**Section 6-3 Secondary Containment.** All temporary storage tanks covered by this Section should have a secondary containment area that contains spills and allows leaks to be more easily detected. The containment area surrounding the tank should hold 110 percent of the contents of the largest tank plus freeboard for precipitation. Secondary containment for ASTs should be impermeable to the materials being stored. Methods include berms, dikes, liners, vaults, and double-walled tanks. A manually controlled sump pump should be used to collect rainwater that may accumulate in the secondary containment area. Any discharge should be inspected for petroleum or other potentially hazardous substances prior to being dispensed.

**Section 6-4 Structural Integrity.** In order to protect against contaminated soils, groundwater and surface water, as a result of leaking storage tanks, all owners and operators of temporary storage tanks covered by this Guidance should maintain the structural integrity of their tank system, and not allow the system to fall into disrepair.

**Section 6-5 Visual Inspection.** Owners or operators of temporary storage tanks covered by this Section should visually inspect, to the extent visible, the entire tank system, including pipes and the surrounding area, for evidence of leaks on a regular basis, and make repairs if evidence of leaks is detected.

**Section 6-6 Stormwater Pollution Prevention for Temporary Tanks.** [Reserved]

**Section 6-7 Sufficient Cleanup Materials On-Hand to Cleanup Any Reasonably Likely Spills.** Facilities subject to this Section should maintain, on site, enough materials to contain and cleanup any reasonably likely spill. Facility owners and staff should be knowledgeable of procedures used to contain and cleanup reasonably likely spills.

**Section 6-8 Signage Required.** A facility that does not have a person at the site 24-hours-a-day must have a sign with the name, address, and telephone number of the facility owner, operator, or

local emergency response unit. The sign must be posted in a conspicuous place and legible from outside any secondary containment area.

## **Section 7 – Stormwater Pollution Prevention**

**[Reserved]**

## **Section 8 – Spill and Overfill Prevention**

### **Section 8-1 Overfill Prevention**

**(a)** All storage tank systems shall be equipped with a mechanical gauge or other measuring device which accurately shows the level of product in the tank and is visible to the person controlling the transfer of potentially hazardous substances.

**(b)** All storage tank systems shall have a high level warning alarm, operating independently of the tank gauge, that is both audible and visible to the person controlling the transfer of potentially hazardous substances.

**(c)** The high level warning alarm shall be activated:

**(1)** For tanks with a storage capacity of 12,000 gallons or less, when the tank is filled to 90 percent of the total capacity of the tank; or

**(2)** For tanks with a storage capacity of greater than 12,000 gallons, when the tank is filled to 3 percent less than the calculated maximum safe fill height.

**(d)** A vent alarm may be used in lieu of the requirements for subsection (b) in storage tank systems with a storage capacity of 660 gallons or less, having a tight fill connection, and where the opening for the vent pipe is located no more than 10 feet from the fill pipe connection and is audible and visible to the person controlling the transfer of potentially hazardous substances.

**(e)** The requirements of this subsection shall not apply to drums less than 60 gallons in size when not connected to other containers.

### **Section 8-2 Spill Prevention, Control and Countermeasures (SPCC)**

**(a) SPCC Plans for Oil Tanks.** An aboveground oil storage facility used in the marketing and distribution of oil to others must be operated in compliance with the federal requirements for the preparation and implementation of spill prevention control and countermeasure plans under 40 Code of Federal Regulations, Part 112. If the Nez Perce Tribe believes that a facility's plan does not satisfy those federal requirements, it shall request an opinion from the United States Environmental Protection Agency as to the legal adequacy of the plan and any amendment necessary to bring the facility into compliance with those federal requirements.

**(b) SPCC Plans for Facilities with Non-Oil Bearing Tanks.** This subsection applies to all facilities with tanks containing potentially hazardous substances and a total combined capacity of

500 gallons (or 100 gallons if the tanks are located within 300 ft of a waterway).

**(1) SPCC Plan.** All facilities subject to this subsection shall have an SPCC Plan in place that meets the following requirements:

**(i)** The Plan must describe the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container, including USTs, transfer stations and connecting pipes. The Plan must also address:

- (A)** The type of substance in each container and its storage capacity;
- (B)** Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, etc.);
- (C)** Discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge;
- (D)** Countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor);
- (E)** Methods of disposal of recovered materials in accordance with applicable legal requirements; and
- (F)** Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate agencies who must be contacted in case of a discharge.

**(ii)** Plans must provide information and procedures in your Plan to enable a person reporting a discharge to relate information on the exact address or location and phone number of the facility; the date and time of the discharge, the type of material discharged; estimates of the total quantity discharged; the source of the discharge; a description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; actions being used to stop, remove, and mitigate the effects of the discharge; whether an evacuation may be needed; and, the names of individuals and/or organizations who have also been contacted.

**(iii)** The Plan should be organized so that portions of the Plan describing procedures to be used in the event of a discharge are readily available and easily usable in an emergency, and include appropriate supporting material as appendices.

**(iv)** Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of potentially hazardous substance which could be discharged from the facility as a result of each type of major equipment failure.

**(2) Containment and Diversionary Structures.** All facilities subject to this subsection shall have containment and diversionary structures that meet the following requirements:

**(i) Facility Containment.** The facility shall provide appropriate containment and/or diversionary structures or equipment to prevent a discharge. The entire containment system, including walls and floor, must be capable of containing product and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, facilities must use one of the following prevention systems or its equivalent:

- (A) Dikes, berms, or retaining walls sufficiently impervious to contain potentially hazardous substances;
- (B) Curbing;
- (C) Culverting, gutters, or other drainage systems;
- (D) Weirs, booms, or other barriers;
- (E) Spill diversion ponds;
- (F) Retention ponds; or
- (G) Sorbent materials.

**(ii) Loading/Unloading Area Containment.** Facility tank car and tank truck loading/unloading areas should have the following containment/diversion structures in place:

- (A) Where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle discharges, a quick drainage system for tank car or tank truck loading and unloading areas should be used. Containment systems should be designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.
- (B) Tank trucks or cars should be fitted with an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed product transfer lines.
- (C) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

**(3) Training.** All facilities subject to this subsection should have the following personnel training, and discharge prevention procedures in place:

**(i)** At a minimum, train your product-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.

**(ii)** Designate a person at each applicable facility who is accountable for discharge

prevention and who reports to facility management.

**(iii)** Schedule and conduct discharge prevention briefings for your product-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known discharges or failures, malfunctioning components, and any recently developed precautionary measures.

**(4) Security.** All facilities subject to this subsection should have the following security measures in place:

**(i)** Fully fence each facility handling, processing, or storing potentially hazardous substances, and lock and/or guard entrance gates when the facility is not in production or is unattended.

**(ii)** Ensure that the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate security measures so that they remain in the closed position when in non-operating or non-standby status.

**(iii)** Lock the starter control on each product pump in the "off" position and locate it at a site accessible only to authorized personnel when the pump is in a non-operating or non-standby status.

**(iv)** Securely cap or blank-flange the loading/unloading connections of product pipelines or facility piping when not in service or when in standby service for an extended time. This security practice also applies to piping that is emptied of liquid content either by draining or by inert gas pressure.

**(v)** Provide facility lighting commensurate with the type and location of the facility that will assist in the:

**(A)** Discovery of discharges occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.); and

**(B)** Prevention of discharges occurring through acts of vandalism.

**(5) Drainage.** The following provisions related to the proper design and use of spill control systems.

**(i)** Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you should manually activate these pumps or ejectors and should inspect the condition of the accumulation before starting, to ensure no potentially hazardous substances will be discharged.

(ii) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you should inspect and may drain uncontaminated retained stormwater, provided that you do not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

- (A) Normally keep the bypass valve sealed closed.
- (B) Inspect the retained rainwater to ensure that its presence will not cause a discharge of potentially hazardous product.
- (C) Open the bypass valve and reseal it following drainage under responsible supervision; and
- (D) Keep adequate records of such events, for example, any records required under any applicable permits.

(iii) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain product or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

(iv) If facility drainage is not engineered as in paragraph (iii) of this subsection, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain product in the facility.

(v) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two “lift” pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge in case there is an equipment failure or human error at the facility.

**(c) SPCC Requirements for Small Facilities.** Facilities with storage tanks with a total combined capacity of less than 500 gallons (excluding facilities with more than 100 gallons and within 300 feet of a waterway) need only meet the following SPCC requirements:

**(1) Containment.** Facilities subject to this subsection shall meet the containment requirements of Section 8-2(b)(2).

**(2) Adequate Cleanup Materials on Hand.** Facilities subject to this section must maintain, on site, enough materials to contain and cleanup any reasonably likely spill. Facility owners and staff should be knowledgeable of procedures used to contain and cleanup reasonably likely spills.

## Section 9 – Definitions

The following definitions when used herein or in other documents related to this Guidance shall, unless the context otherwise prohibits, have the meaning set forth below:

**“Discharge”** See “Release” below.

**“Environmental Site Assessment”** (ESA) shall mean and refer to the process by which a person or entity seeks to determine if a particular parcel of property (including improvements) is subject to recognized environmental conditions.

**“Existing Tank System”** shall refer to any tanks in existence on the Nez Perce Reservation within ninety (90) days after the effective date of this Guidance.

**“Facility”** shall mean and refer to a single parcel of property or contiguous or adjacent property on which storage tanks and their associated piping are used for the storage of potentially hazardous substances. A facility may have one or more clusters of storage tanks at separate tank sites.

**“Installation”** or **“to install”** shall mean and refer to the actions involved in the placement of a storage tank system, including excavation, tank placement, and backfilling. Installation also includes repair or modification of a storage tank system through such means as tank relining or the repair or replacement of valves, fill-pipes, piping, or monitoring systems. Installation also means repair or modification of a leak detection device that is external to and not attached to the storage tank system and the installation, repair, or modification of a cathodic protection system.

**“Nez Perce Tribal Executive Committee”** (NPTEC) shall mean and refer to the official body of the Nez Perce Tribe empowered to adopt policies and enact laws governing the Nez Perce Tribe.

**“Nez Perce Tribe Storage Tank Program”** shall mean and refer to the program, including any successor program, regardless of name, within the Department of Natural Resources (DNR) that is responsible for implementing and enforcing this Guidance.

**“Nez Perce Tribe Water Resources Division”** (WRD) shall mean and refer to the division of the DNR established to carry out certain environmental laws and policies adopted by the Nez Perce Tribe.

**“Operator”** shall mean and refer to any person in control of, or having responsibility for the operation, maintenance, or management of a storage tank system.

**“Owner”** shall mean and refer to:

(1) A person who owns a storage tank or a person who owned a storage tank immediately before the storage tank was taken out of operation. A person who acquires ownership or control of property (by lease, use or other means) where a storage tank is located is the owner of the storage tank, except that the person is not an owner if the following applies:

(i) The person, after conducting a due diligence investigation immediately prior to acquiring ownership of the property, did not know and had no reason to know that the storage tank was located on the property. Due diligence shall consist of performing a phase I environmental assessment of the property which meets generally accepted commercial practices or standards for due diligence performed prior to the adoption of this standard.

(ii) A person who holds indicia of ownership primarily to protect a security interest in either the storage tank or in the property on which the storage tank is or was located but who does not participate in the management of the storage tank and who is not otherwise engaged in petroleum refining or marketing is not an owner for purposes of this Guidance.

(iii) A person who holds indicia of ownership as prescribed by subsection (ii) of this subsection and who acquires ownership or control of a storage tank through foreclosure of the property where a storage tank is located shall not be deemed an owner and shall not be required to investigate a release or take cleanup action in response to a release, if the person does all of the following:

(A) Complies with the notification requirements prescribed by Section 3.

(B) Complies with the reporting requirements prescribed by Section 4-2 to the extent that the information is known to the person at the time of the report.

(C) Temporarily or permanently closes the underground storage tank as in accordance with this Guidance and regulations promulgated hereunder.

(D) Divests itself of the property in a reasonably prompt manner using whatever commercially reasonable means are relevant or appropriate with respect to the property, taking into consideration all of the facts and circumstances.

(iv) The Nez Perce Tribe shall not be deemed an owner and shall not be required to investigate a release or take cleanup action in response to a release where it holds indicia of ownership due to bankruptcy, foreclosure, tax delinquency, condemnation, abandonment or similar means because of its status as a governmental entity (and is not otherwise operating said tank).

(v) The federal government or any of its agencies shall not be deemed an owner or operator under this Guidance if prohibited by federal law.

**“Person”** shall mean and refer to any individual, public or private corporation, company, partnership, firm, association or society of persons, the federal, state or local governments or any of their programs or agencies, any Indian tribe, including the Nez Perce Tribe, or any of its agencies, divisions, departments, programs, enterprises, companies, chapters or other political subdivisions.

**“Petroleum”** shall mean and refer to petroleum, including crude oil or any fraction thereof which is liquid at sixty (60) degrees Fahrenheit and 14.7 pounds per square inch absolute pressure.

**“Petroleum product”** shall mean and refer to petroleum, including: crude oil, and/or fraction or derivative thereof which is not otherwise specifically listed or designated as a hazardous

substance under subparagraphs (A) through (F) of 42 U.S.C. §9601(14); natural gas; natural gas liquids; liquefied natural gas; and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to *Standard definitions of Petroleum statistics*.

**“Potentially hazardous substance”** shall mean and refer to:

- (1) Petroleum and Petroleum Product; and
- (2) Any substance defined in the Comprehensive Environmental Liability Act of 1980; P.L. 96-510, 94 Stat. 2767; 42 U.S.C. §9601(14).

**“Product”** as used in this Title shall be defined in the same manner as “Potentially Hazardous Substances” above.

**“Release”** shall mean and refer to any spilling, leaking, pumping, pouring, emptying, dumping, emitting, discharging, escaping, leaching, or disposing from a storage tank into groundwater, surface water or surface or subsurface soil.

**“Should”** as used in this Guidance refers to non-mandatory provisions designed to meet the duty of reasonable care for liquid storage tanks containing potentially hazardous substances. Upon the discovery of a release of a hazardous substance from a qualifying storage tank, the failure to follow these provisions will not incur liability per se, but liability may attach where an owner/operator failed to install or conduct other adequately protective measures.

**“Site Characterization”** at a storage tank site is the investigation and reporting of detailed information about soil, ground water, geology, conductivity, contaminants and other data for the purpose of implementing a cleanup action plan (CAP).

**“Storage Tank”** shall mean and refer to any one or combination of tanks (including pipes connected thereto) which is used to contain an accumulation of potentially hazardous substances. Such term does not include any items excluded by Section 1-3(b), or otherwise specifically exempted in this Title.

**“Tank System”** shall mean and refer to a storage tank or tanks and ancillary equipment, including piping, which is used for the storage of potentially hazardous substances.

**“Temporary Storage Tanks”** shall be used as defined by Section 6.