

**Drafting
An
Operations & Maintenance Plan
For Your
Petroleum Storage Tank System**

(A Guidance Document for Owners & Operators of Petroleum Storage Tank Systems)



State of New Mexico Environment Department
Petroleum Storage Tank Bureau
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I. Introduction

As an owner and operator of a petroleum storage tank (PST) system that is regulated under Title 20 Chapter 5 of the New Mexico Administrative Code (NMAC), New Mexico Petroleum Storage Tank Regulations, you are required to have a written Operations & Maintenance Plan (OMP). For above ground storage tank (AST) systems the requirements for OMPs can be found in Section 1001 of 20.5.110 NMAC and for underground storage tank (UST) systems these requirements can be found in Section 701 of 20.5.107 NMAC. The Operations & Maintenance Plan shall be a written document that is drafted by the owner or by his designee and shall be kept for the life of the PST system. The OMP shall be as specific as possible to the facility and shall include not only the tank but the piping, as well as all ancillary equipment that is part of the storage tank system. In order to help owners and operators in drafting the OMP, the Petroleum Storage Tank Bureau (Bureau) has written this guidance document. Additionally, review Appendix A for two examples of an OMP. One is a facility with an aboveground storage tank system and the other is a facility with underground storage tanks. Once you have completed the OMP, please submit it to your local Bureau inspector (a list of inspectors with PSTB can be found on the Bureau's web site at https://www.env.nm.gov/petroleum_storage_tank/). After you have submitted the OMP it will be reviewed, and you will be notified by the Bureau if the OMP meets the requirements of 20.5 NMAC or whether it requires additional work.

Owners and operators of PST systems that meet the definition of temporary closure in 20.5.101 NMAC are not required to have an OMP unless one of the following conditions is present:

- A. The PST system contains greater than one inch of regulated substances; or
- B. The PST system has steel components that are in contact with an electrolyte, such as soil, water, or concrete.

II. Industry Standards, Codes, and Publications

Owners and operators may use any applicable industry standard or code in assisting them in completing the OMP, as well as publications produced by federal, state, and local government agencies that address this subject. If owners and operators reference an industry standard or code in their OMP they must maintain a copy of the industry standard or code within the OMP. Examples of industry standards, codes, and other publications that may be used by the owners and operators of petroleum storage tank systems are as follows:

- A. American Petroleum Institute Standard 570, "Pipe Inspection Code: Inspection, Repair, Alteration, and Re-rating of In-Service Piping Systems." www.api.org
- B. American Petroleum Institute Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction." www.api.org
- C. American Petroleum Institute Standard 2610, "Design, Construction, Operation, Maintenance, and Inspection of Terminal & Tank Facilities." www.api.org
- D. Steel Tank Institute Standard SP001, "Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids." www.steeltank.com

- E. The Petroleum Equipment Institute's "UST System Inspection Checklist"
www.nwglde.org/downloads/PEI_UST_Inspection_Checklist.pdf
- F. The Petroleum Equipment Institute's Recommended Practice RP-900 "UST Inspection & Maintenance." www.pei.org
- G. US Environmental Protection Agency Publication "Operating and Maintaining Underground Storage Tank Systems: Practical Help and Checklists." (EPA 510-B-00-008). September 2005.
www.epa.gov/swerust1/pubs/ommanual.htm

III. Alternate Plan

Owners and operators may opt to submit an alternate plan to satisfy this requirement for an OMP. The alternate plan must contain everything listed in Section 1001 of 20.5.110 NMAC for AST systems and in Section 701 of 20.5.107 NMAC for UST systems, and must be submitted to the Bureau as detailed in the introduction of this document. Also, the alternate plan can be a plan the owners and operators have already written in order to meet another regulatory requirement.

IV. Operations & Maintenance Plan

At a minimum, the OMP must contain the following:

A. Description of Storage Tank Systems at the Facility – The description can be in any format that can be easily read and understood by not only Bureau personnel but by employees of the owners and operators. Several of the industry standards, codes, and publications listed in section II above contain forms and checklists that can be used to describe the PST system(s) at your facility. At a minimum, the description must include the tanks, piping, associated sumps, valves, and ancillary equipment which either routinely contains regulated substances or controls the flow of regulated substances. The manufacturer and model of tanks, piping, associated sumps, valves, and ancillary equipment will be included in the description. If there are no records of the initial installation of the PST system, then state this in your description of the facility and try to estimate when the tank system was installed.

B. Release Detection Methods & Inspections –The OMP must include the methods of release detection used to monitor PST system(s) for releases. Also, you will describe the inspections you perform on your PST system(s), either: daily, monthly, quarterly, annually, or periodically. As mentioned in subsection A, several of the national standards and publication in section II contain checklists and forms that can be used to meet the requirements of this subsection. Be sure to list the forms and log sheets you use in your inspections or in your method of release detection and keep a blank copy of the forms and log sheets, either, in this portion of the OMP, or as an attachment to the plan. Check all the applicable parts of 20.5 NMAC to find out what are the minimum requirements for recordkeeping for the type of PST system(s) you own or operate.

1. Methods of Release Detection for Tanks & Piping

In subsection A you described the methods of release detection you use to monitor the tank system and now you will describe how you operate or carry out the requirements of the

method(s) used. For instance, if you use statistical inventory reconciliation for your underground tank you will describe how you measure the fuel levels in the tank daily and the number of times each day fuel levels are measured. Plus, you will describe any other actions that will need to be performed on a routine basis in order to meet all regulatory requirements for this method. If the method of release detection relies on permanently installed equipment at the facility, such as an automatic tank gauging system, you can include the manufacturer's operation or user's manual. Many manufacturers of equipment used in release detection have manuals and guides on their websites which can be downloaded and attached to your OMP.

2. Monthly, Quarterly, Annual & Periodic Inspections.

Owners and operators will need to address the periodic operation and maintenance walk-through inspections along with any other applicable inspection for your tank system. The requirements for periodic operation and maintenance walk-through inspections can be found in Section 1008 of 20.5.110 NMAC for AST systems and Section 707 of 20.5.107 NMAC for UST systems. Most tank equipment manufacturers have inspection requirements for owners for the warranty on the tank and equipment to stay valid. List and describe the inspections the manufacturers have in their warranty for your tank system, or you can use a national standard such as the Steel Tank Institute's standard SP001 for ASTs. SP001 lists in detail how these inspections will be carried out for different types of AST systems and who can perform them. Incorporate the inspection forms you will use to carry out and log these inspections in your OMP. The Petroleum Equipment Institute has developed a series of inspection checklist for UST systems that can be found at the website listed in section II above.

One type of periodic inspection that owners and operators will need to address is the periodic inspection of an impressed current system, if it is applicable to your tank system. PST systems which have metal components in contact with soil or water are required to have cathodic protection and one of the most acceptable forms of cathodic protection is an impressed current system. If you have an impressed current system installed on your tank system, then you are required to inspect it every 60 days. The inspection will be documented by keeping a log of the readings from the rectifier, which is part of the impressed current system. Attach a blank copy of the form or log sheet that you use to log rectifier readings in the OMP.

No later than July 24, 2019, owners and operators shall ensure that release detection equipment such as but not limited to tank gauge sticks and bailers are inspected every 12 months for operability and serviceability by an individual who meets the qualifications in Section 504 of 20.5.105 NMAC. The annual inspection shall be documented, and the record of these inspections shall be maintained for the operational life of the storage tank system. Owners and operators who use an automatic tank gauge (ATG) system to perform release detection on their storage tank systems have until July 24, 2021 to start performing the annual inspection of the ATG system. Keep in mind that automatic line leak detectors and sensors used for interstitial monitoring of piping are required to be functionality test on an annual basis by the current edition of 20.5 NMAC that became effective on July 24, 2018.

No later than July 24, 2021, owners and operators shall ensure that overfill prevention equipment is inspected for operability and serviceability by an individual who meets the qualifications in Section 504 of 20.5.105 NMAC. Overfill prevention equipment such as drop tube style valves, also known as flapper valves, must be removed from the tank during these

inspections and it must be verified that it has been installed at the correct height for the tank. Also, the same goes for ball float valves or flow restrictors on UST systems.

In order to ensure these required inspections of the equipment is as accurate as possible, owners and operators are required to keep tank charts for each tank at their facility. A good place to keep these tank charts would be with the OMP for the facility.

C. Routine Maintenance & Repairs – In this subsection of your OMP you will describe the routine maintenance that will be performed on your PST system on a regular basis. For example, in Part 110 of 20.5 NMAC owners and operators are required to maintain the coatings on ASTs and any aboveground steel piping and to draw off collected water from inside sumps and secondary containment within one week of a rain fall event. Also, describe the procedures on-site or maintenance personnel use when a repair is needed. Many repairs to PST systems require they be made by a certified installer in accordance with Part 105 of 20.5 NMAC. Other repairs can be made by personnel who have a specific type of training, such as a corrosion expert, who will be needed to repair a cathodic protection system. You can list specific companies or contractors you use to perform repairs if it is your preference. Make sure you refer to the recordkeeping requirements concerning routine maintenance and repairs in 20.5 NMAC.

D. Tests – In this subsection of your OMP you will describe the tests that will be performed on the PST system during its operational life. The test can be either integrity tests on the tank itself, or precision tightness testing of the piping, or a functionality test of ancillary equipment. Tests are required for different types of tanks at different time periods during their operational life at a facility. For instance, USTs that have been internally lined to meet corrosion prevention requirements are required to have the tanks internally inspected by the ten (10) year anniversary of the installation of the internal lining. Additional internal lining inspections are required every five years after the first 10-year inspection. There are some special circumstances where the internal lining inspection may or may not be required along with internal inspections every five years thereafter, but owners and operators need to consult a corrosion expert to evaluate what will be required at their specific facility.

Another type of test which could be applicable to owners and operators of ASTs is integrity testing. Integrity testing is normally required by tank manufacturers by a particular time after the tank has been installed at a facility. Consult with the manufacturer of your tank or the literature provide at installation for specific testing requirements.

Spill prevention equipment, overfill prevention equipment, and secondary containment sumps used for interstitial monitoring of underground piping will have to be inspected or tested no later than July 24, 2021. The inspection and testing requirements apply to both AST and UST systems with some variation with the requirements for different equipment and tank types. For example, if owners and operators of AST systems with spill prevention equipment where the bottom and all walls are completely visible may use monthly inspections in place of the three-year test.

A report of the required inspections and testing must be submitted to PSTB within 60 days of completion of the inspection or test, or if the result was a failure the report must be submitted within 24 hours. If the result of the inspection or testing is a failure, owners and operators need

to ensure they meet the requirements for reporting and investigating a suspected release pursuant to Section 1801 of 20.5.118 NMAC.

E. Responses to Incidents & Emergency Situations – In this subsection you will describe the responses that you and your employees will make resulting from incidents and emergency situations involving your petroleum storage tank situations. A list of contacts shall include both non-emergency and emergency contact telephone numbers. It is understood by the Bureau that you cannot make contingency plans for every possible incident or emergency, but you can plan for the most common ones. In Appendix B, there are many sample forms that have been constructed for use within the petroleum storage tank industry by either a nationally recognized institute, or a government agency, or by the Bureau. You can select those that are applicable to the tank systems at your facility and include them in your OMP and use them to meet the requirements of 20.5 NMAC. The Bureau has an Initial Incident Reporting Form on its website which can be downloaded and added to your plan just in case you ever have to report a spill or release.

A common incident that happens at PST facilities is spills of fuel during delivery to the tank system. When the delivery driver finishes dropping fuel into the tank he occasionally spills fuel and if he spills 25 or more gallons of fuel then a release has occurred. The response to this situation shall be outlined here not only for meeting the regulatory requirements of 20.5 NMAC but to serve as a reference source for your on-site personnel. A spill of 25 gallons or more of fuel shall be reported to the Bureau and you can use the previously mentioned form to accomplish this task. A list of people to contact to report a release is listed on the Bureau's website and is called the "Leak of the Week" listing. Most spills will be less than 25 gallons and will not require reporting, but you still need to write up a response plan.

Next, you shall describe your response to overfills which usually occur during fuel deliveries as well. Overfills typically result from not measuring the available space in the tank before a fuel delivery is made and then the delivery driver tries to drop as much fuel as he can in as short a period of time as possible. The result can end up being an overfill of the tank where fuel runs out the normal vent risers or any other opening in the tank that has not been properly secured. Someone may ask why this happens since overfill prevention equipment is required for both AST and UST systems; and the answer would be that in most of these cases the overfill prevention equipment was either not operational, had been bypassed, or the alarm is ignored.

Another incident or emergency that can happen is a collision of a vehicle with the dispenser, aboveground piping, the tank, or a combination of these. Your response plan shall cover what equipment needs to be shutdown or off and the location of this equipment at the facility.

One of the most dangerous situations that can occur around a PST system is fire. In your response plan you need to cover how employees and the public may safely evacuate the area or facility, and if possible, what equipment they need to shutdown or off if possible. The plan should not simply state "call 911 and run away." A site map can be included in this section or attached to the plan.

The last incident that will be covered is the suspected or confirmed release of a petroleum product from your PST system to the environment. When results from your monthly monitoring of the PST system indicate evidence that a release may have or has occurred, you will need to

report this to the Bureau. Your response plan shall help on-site personnel or yourself in properly responding to this situation. For example, when an alarm goes off on your automatic tank gauging system your on-site personnel know how to respond and evaluate the situation. Also, include how you will stop an ongoing release such as when there is evidence that there is a leak in the underground piping and your response is to shutdown the turbine or pump associated with leaking piping. You can consult with your local Bureau Inspector for how you will report suspected and confirmed releases.

F. Loading & Unloading Operations – In this subsection of the OMP you will describe the fuel loading and unloading operations at your PST system. Typically, loading and unloading operations occur at bulk plants where tankers bring fuel into tank systems and the tank systems are used to load fuel into other tankers such as bobtails. Owners and operators of bulk plants shall describe the loading and unloading procedures they have at their facilities. Retail gas stations usually don't have loading operations just unloading of fuel into the tanks by a tanker and distribution of fuel from the tanks for public refueling. Fleet management or refueling facilities such as county road departments are similar to gas stations in that they have unloading operations at the tanks.

G. Site Map – In this subsection of the OMP you will include a site map of the facility to include all of the PST systems on site. The site map shall be as specific as possible and shall correspond to the description of the facility in section A of this document.

H. Disposal of Regulated Substances, Soil, or Water – In this section of the OMP you will describe the processes you will employ for disposal of liquids removed from a PST system or split during a loading, unloading, or operating and maintaining your PST system. Water or other test fluids used to periodically test spill prevention equipment and secondary containment sumps will need to be disposed of in accordance with local, state, and federal regulations. Owners and operators shall include contact information for the local authority having jurisdiction for the disposal of liquids and soil from or around a PST system.

V. Conclusion

After you have completed your OMP you will need to submit the plan to the Bureau for approval. The plan shall be submitted to your local Bureau Inspector, who can be found on the Bureau's web site at https://www.env.nm.gov/petroleum_storage_tank. The Bureau will either approve the plan or inform you of the deficiencies found in the plan which will need to be corrected before the plan is approved. Once the OMP is approved a copy will need to be kept at the facility for the life of the PST system described herein.

Appendix A

Sample Operations & Maintenance Plans

For

**Aboveground Storage Tank Systems
&
Underground Storage Tank Systems**

Sample O&M Plan for an AST Facility

**Operations & Maintenance Plan
For
City of Cloverdale Road Department
1 West Main Street
Cloverdale, NM**



June 30, 2007

I. Facility Description

The City of Cloverdale Road Department is located at 1 West Main Street in the City of Cloverdale, New Mexico and is a fleet refueling facility with two 6,000-gallon aboveground storage tanks (ASTs) used for the refueling of all city vehicles. The two AST systems are as follows:

Tank #1

Capacity: 6,000 gallons

Contents: Diesel

Construction: Single-walled horizontal steel tank on steel saddles inside concrete secondary containment.

Date of Installation: January 2, 1993

Dimensions: 8'X16'

Manufacturer: Kohlhaas

UL Number: A123456

Piping: Single-walled black steel piping inside concrete secondary containment attached to suction dispenser also inside concrete secondary containment.

Ancillary Equipment: Anti-siphon valve. Spill containment is an OPW remote fill box and overfill prevention equipment is an OPW drop tube style valve.

Venting: The normal atmospheric vent is a 2" ID steel riser and an 8" Morrison Brothers emergency vent.

Tank #2

Capacity: 6,000 gallons

Contents: Regular Unleaded Gasoline

Construction: Double-walled rectangular tank with steel primary tank and the outer tank comprised of concrete with a geo-synthetic membrane. The tank sits on a concrete pad.

Date of Installation: October 31, 2004

Dimensions: 17'7" x 8' x 8'10"

Manufacturer: Convault

UL Number: B-654321

Piping: Single-walled aboveground galvanized steel piping that transitions to double-walled fiberglass re-enforced plastic underground piping inside a transition sump on the west side of the tank. There is 25 feet of underground piping leading to a dispenser, which has a dispenser sump liner underneath.

Ancillary Equipment: Red Jacket turbine with Red Jacket FXIV leak detector and solenoid valve. Spill containment equipment is an integral spill bucket and the overfill prevention equipment is an internal overfill prevention valve, also known as a flapper valve. OPW 444TA Tank Alarm System with two sump sensors installed, one in the transition sump at the tank, and the other in the under-dispenser containment.

Venting: The normal atmospheric vent is a 2" ID steel riser and two 8" emergency vents, one on the primary tank and the second one on the annular space.

II. Standards

Steel Tank Institute's Standard SP001-03 "Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids," has been adopted to ensure the AST systems at this facility are maintained in a proper manner. A copy of this standard was purchased from the Steel Tank Institute and is kept on file in the safety officer's office which is located at this facility.

III. Corrosion Protection

Due to the design and installation of the PST systems at this facility neither of the two systems have any metal components that routinely contain fuel in contact with soil or water. Since there are no metal components in contact with the ground or water corrosion protection is not needed for these tank systems.

IV. Release Detection Methods & Inspections

In order to meet many of the release detection and operational requirements for 20.5 NMAC, inspections must be performed on the AST systems at this facility on a routine basis as outlined in the following:

A. Daily Inspections

Inspections are to be performed daily only if there are circumstances which indicate that an incident has occurred involving the AST systems that warrant an inspection to determine if a release or damage to the AST systems has occurred. Any unusual operating conditions are to be entered into the monthly visual inspection log in Attachment A.

B. Monthly Inspections

The two ASTs at this facility are monitored monthly for releases by monthly visual inspections which are posted on the log sheet in Attachment A. Inspections will be performed by on-site personnel who are familiar with the operation and maintenance requirements for these AST systems. During the monthly inspections, personnel will inspect the exterior of the tank and associated equipment for any sign of a leak, any indication that equipment is not operating as designed and any damage that will need to be repaired.

Also, during the monthly inspection, the tanks will be checked for the presence of water. To check for water, a tank gauging stick will be used along with water finding paste. The inspector will apply several inches of water finding paste to the end of the tank gauging stick which will be placed closest to the bottom of the tank. If any water is found in the tank the volume will be entered into the inspection log and if an inch or more of water is found, then the water will be removed from the tank.

Piping for Tank #1 is aboveground with all surfaces visible so monthly visual inspection is used as the method of release detection. The inspection will include checking all the piping connections and valves for signs of a leak and if anything is found it will be entered on the log sheet in Attachment A. Any leak or damage to the piping system found will be reported to the facility's safety officer who is Mr. Blank at 575.111.1111.

The underground piping associated with Tank #2 is monitored monthly by interstitial monitoring; the transition sump and the dispenser sump each have sensors that are connected to an OPW 44TA Tank Alarm. The control box for the system is located in the northwest corner of the shop and is inspected monthly. The monthly inspection includes the checking of the alarm by placing the toggle switch on the control box in the test mode and then releasing it. The transition sump and the under-dispenser containment sump will be checked each month for the presences of regulated substances, water, and debris. If any of these things are found, they will be removed and disposed of in accordance with applicable regulations. The monthly inspection is posted on the log sheet in Attachment A.

The emergency vents on all tanks will be inspected monthly to see if they are still operational and the results will be logged onto the log sheet in Attachment A. The inspection will check that no foreign objects have been lodged in the emergency vents and that they operate in accordance with the manufacturer's guidelines.

Another inspection that will be included in the monthly inspection schedule will be to check the interstitial space of Tank #2 for water or regulated substances. The inspection will be conducted by using a tank gauging stick which has been coated with water finding paste along several inches at the end of the stick. The tank gauging stick will be placed in the interstitial monitoring port on top of the tank and lowered down until it reaches the bottom of the interstice. Next, the tank stick will be pulled out and the water finding paste will be checked to see if it has turned to the color indicating water is present. Kolor Kut Water Finding Paste will be used which comes in an orange color but if it comes in contact with water will change to red. If a regulated substance is found in the interstice, it will be reported to PSTB and the owner or operator will investigate the

source and make repairs as needed. This inspection will be posted on the form in Attachment A and shall include the level of liquid found in the interstice.

C. Quarterly Inspections

Inspections of the two AST systems will be conducted quarterly and the results of the inspections will be posted on the log sheet in Attachment A. The quarterly inspections will involve the inspection of the coatings on the tanks and all aboveground piping to check for damage or failure. Also, the inspection of the normal vent to make sure it is still operating properly, or could possibly need to be cleaned out, or repaired.

D. Annual Inspections

Annual inspections of the two AST systems at this facility will be conducted in accordance with Steel Tank Institute's Standard SP001 and the checklist on page 31 of this publication will be used to conduct the inspection. A copy of SP001 can be found in the facility's file in the safety officer's office. The OPW 444TA tank alarm will be inspected and tested by an individual who meets the qualifications in Section 504 of 20.5.105 NMAC annually along with the tank gauge stick used to check the interstice of tank #2. The inspections and testing will be documented, and the report will be submitted to PSTB within 60 days of completion of the test or within 24 hours if the result is a fail.

E. Periodic Inspections

Periodic inspections will be conducted at this facility as needed and they will be logged on the log sheet in Attachment A. For example, each time following the delivery of fuel to the ASTs the spill containment equipment will be checked to make sure it has been emptied by the delivery driver and if it has not been emptied then the person performing the inspection will take care of it.

Tank #1 will be externally inspected in accordance with Steel Tank Institute's Standard SP001 no later than the 20th anniversary of the installation of the tank at this facility by a STI certified inspector. In this case the due date for the inspection will be January 2, 2013. The results of this inspection will be kept in the facility file for the life of the tank.

V. Routine Maintenance & Repairs

Routine maintenance of the two AST systems will be conducted by on-site personnel unless otherwise directed by the facility manager or safety officer. Most of the routine maintenance tasks for these tank systems are listed below in this section. As for repairs, personnel at this facility will follow the practices outlined below.

A. Routine Maintenance

First, after every rainfall event, the secondary containment system and the sumps will be checked for water. Discovered water will be removed. All water removed from the secondary containment and sumps with a visible sheen will be properly disposed of and the volume of water removed will be recorded on the log sheet in Attachment A. A 55-gallon drum is kept at the facility which will be used to store all water with a visible sheen. When the drum is full, personnel will

inform the safety officer to contact [A company you choose] who will empty the drum and haul offsite for disposal. The contracting company will issue a shipping manifest that documents disposal to be kept on file in the facility's records.

Second, when it is found during an inspection that the secondary containment area and sumps need to be cleaned out on-site personnel will perform this task and properly dispose of all debris, liquid, and trash removed from these locations. Material discovered in these locations that is incompatible with the fuel stored in the tanks will be promptly removed and it will be reported to the safety officer. When you find these conditions add them into the comment section of the log sheet in Attachment A.

Third, when an inspection of the AST systems reveals that the coating of the tanks, piping, and/or secondary containment system needs to be repaired then it will be completed in accordance with the tank and coating manufacturer's instructions. Any new coatings will be compatible with the fuel stored in the tank system, and the specifications document will be kept on file as part of the facility's records and kept for the life of the tank system.

B. Repairs

When it is found that a repair is needed, on-site personnel will contact the safety officer who in turn will contact [A certified installer of your choice] to perform the repair. The safety officer will contact the Petroleum Storage Tank Bureau of the New Mexico Environment Department at [telephone number of local inspector] and provide proper notification and a description of the proposed repair. Repairs to dispensers which involve equipment located above the impact or shear valve does not require a notification to the Bureau. If cracks are found in the concrete walls of Tank #2, the walls will be repaired in accordance with the manufacturer's instructions and the repair will be documented and kept in the facility's file for the life of this tank system.

VI. Tests

There are several tests that are required on the tank systems at this facility on either an annual or periodic basis. The first test that will be performed is the annual test of the sump sensors which are part of the OPW 444TA system and as previously mentioned the OPW 444TA, itself. The sensors will be tested in order to ensure they still function as required and the test will be conducted by on-site personnel in accordance with the manufacturer's instructions.

The second test will be the annual test of the automatic line leak detector, which will be performed by a contractor who meets the requirements in 20.5.105 NMAC. The [person of the owner's choosing] will coordinate with a contractor to perform the test once every 12 months and the records produced by the test will be kept in the facilities files.

The secondary containment sumps associated with the underground piping on tank #2 (regular unleaded) will be integrity tested no later than July 24, 2021 and every three years, thereafter. The test will be performed in accordance with [the sump manufacturer's published testing instructions] [or Petroleum Equipment Institute Recommended Practice 1200] and the results will be submitted to the Petroleum Storage Tank Bureau within 60 days of completion or within 24 hours if the result is a fail.

VII. Responses to Incidents & Emergency Situations

A. In case of fire in or around the AST systems, the following is the response that will be made by on-site personnel. A site map can be found on page (10) and it indicates where the emergency assembly area is in case the facility has to be evacuated.

1. A fire extinguisher is located by the SW corner of Tank #2. If the fire can be put out safely then personnel will do so and report the incident to the safety officer.

2. If a fire is discovered in or around the AST systems and it is the judgment of on-site personnel that it cannot be safely put out with the fire extinguisher, then the response will be as follows:

- a. Sound an alarm to alert personnel of the fire.
- b. Go to the NW corner inside the shop and turn off the power to the AST systems at the breaker box, if possible. The two breakers are marked and located in the bottom right of the box.
- c. Evacuate personnel from the area designated as the emergency assembly area along with all other on-site personnel.
- d. Call local fire department at 575.111.1112 or at 911.
- e. Inform safety officer of Incident.
- f. Notify Bureau if a release occurred as a result of the fire.

B. In case of a leak or release of fuel from the AST systems, on-site personnel will use the AST Release Detection Response Checklist in Attachment B as an aid in determining when an incident has occurred and what needs to be done in response to these situations.

C. In case of an accident involving a vehicle impacting a dispenser or another part of the tank systems, on-site personnel will respond as follows:

- a. Go to the NW corner inside the shop and turn off the power to the AST systems at the breaker box, if possible. The two breakers are marked and located in the bottom right of the box.
- b. From a safe distance determine if there is an immediate threat of fire or explosion. If a fire breaks out as a result of the accident, then follow the responses in (A) above. If there appears to be no threat of fire or explosion, on-site personnel will determine if a release has occurred.
- c. If a leak is discovered on-site personnel will try to stop the leak as soon as possible without putting themselves and others at risk. Oil dry and absorbent blankets are located in the locker to the left of the shop bay doors in the SW corner of the shop.

- d. Notify the safety officer of the incident.
- e. Notify Bureau of incident and if 25 gallons or more of fuel is leaked onto the ground, and if the tank systems have to be repaired.

VIII. Loading & Unloading Operations

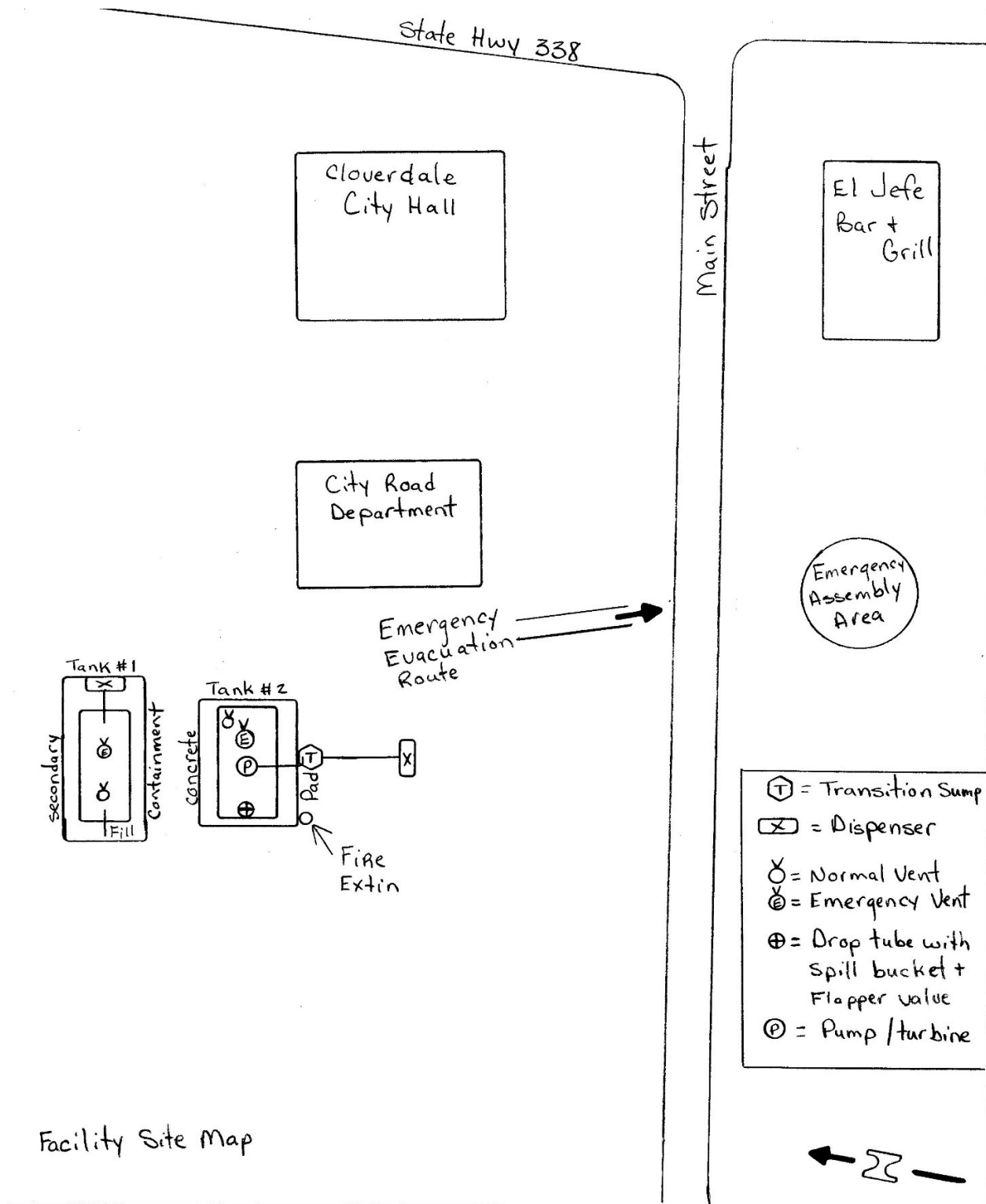
Activities at this facility will be strictly limited to the refueling of city vehicles so no loading operations will be conducted on-site. The unloading of fuel to the ASTs will be conducted on the west side of the tank system where the fill pipes and spill buckets are located. The shop manager will verify before each delivery the amount of fuel to be dropped in each tank and will measure the volume in each tank to verify they can hold the amount to be delivered. Delivery drivers will be required to monitor the transfer of fuel from their tanker to the ASTs. If during the transfer the delivery driver needs to leave the loading area he will stop dropping fuel until he can return and monitor the transfer. All loading will be done through a tight fill and not with a nozzle.

IX. Disposal of Regulated Substances, Soil, and Water

Whenever there is a need to dispose of a regulated substance, soil that is potentially contaminated with a regulated substance, or water that was used in testing of equipment on PST systems, it will be disposed of as follows:

- 1) The material to be disposed of will be collected and stored in the designated 55-gallon drum kept in the southeast corner of the garage.
- 2) Call XYZ Environmental [Insert Name of company you will call] to pick up the material in the 55-gallon drum. Ensure that a manifest for this material is received from the contractor and this manifest is kept as part of the records for this facility.

X. Site Map



Attachment A

Aboveground Storage Tank System
Monthly Inspection Checklist

Facility Name: _____

AST Number: _____

Date/Time: _____

	Yes	No	N/A
Tank visually inspected monthly. [20.5.110.1000.A NMAC]			
Piping visually inspected monthly. [20.5.110.1000.A NMAC]			
Tank monitored monthly for releases. [20.5.111.1100.A NMAC]			
Piping monitored monthly for releases. [20.5.111.1100.A NMAC]			
Release detection for underground piping is operated properly. [20.5.111.1105 thru 1107 NMAC]			
Release detection records are reviewed every 30 days. [20.5.110.1008.A NMAC]			
Operations and Maintenance Plan in place and is being followed. [20.5.110.1001 NMAC]			
Spill prevention is monitored monthly if not tested every 3 years. [20.5.110.1005 NMAC]			
Spill prevention free of fuel, water, and debris.* [20.5.110.1008 NMAC]			
Overfill alarm is operational. [20.5.110.1005 NMAC]			
Overfill prevention equipment is operational. [20.5.110.1005 NMAC]			
Normal vent(s) operational and at proper height. [20.5.110.1004 NMAC]			
Emergency vent(s) operational. [20.5.110.1004 NMAC]			
Tank coating in serviceable condition. [20.5.110.1000.B NMAC]			
Secondary containment is free of cracks, holes, tears, or other damage. [20.5.110.1002 NMAC]			
Secondary containment free of fuel, water, and debris.* [20.5.110.1002 NMAC]			
Concrete containment coating is free of cracks, flaking, or other damage. [20.5.110.1002 NMAC]			
Secondary containment drain valve is closed. [20.5.110.1002.C NMAC]			
Tank checked for water. (Height in inches, if found:) [20.5.110.1000.E NMAC]			
Interstice of double-walled tank checked for water. (Height in inches, if found:) [110.1002.I]			
Regulated substance found in interstice of tank. (Height in inches, if found:) [110.1002.I]			
Transition sump free of fuel, water, and debris.* [20.5.110.1007 NMAC]			
Transition sump liner in serviceable condition. [20.5.110.1007 NMAC]			
Transition sump sensor at proper height & orientation. [20.5.111.1106 NMAC]			
Dispenser sump free of fuel, water, and debris.* [20.5.110.1007 NMAC]			
Dispenser sump liner in serviceable condition. [20.5.110.1007 NMAC]			
Dispenser sump sensor at proper height and orientation. [20.5.111.1106 NMAC]			
Double walled containment sump is monitored monthly. [20.5.110.1007 NMAC]			
Loading rack secondary containment in serviceable condition. [20.5.110.1002 NMAC]			
Loading rack secondary containment free of fuel, water, and debris.* [20.5.110.1002 NMAC]			
Fuel in Oil/Water separator or collection sump at loading rack is properly disposed [110.1002]			
All fuel, water, and debris removed from tank system have been properly disposed. [110.1002]			

Comments and Follow Up Needed: _____

Operator Name (Print): _____

Operator Certification Class: _____

Signature _____

* Sumps must be checked within one week of a rainfall event.

Attachment B

AST System Release Detection Response Checklist

Facility Name:

Emergency Contact:

Address:

Maintenance Contact:

The following are circumstances where the method(s) of release detection used to monitor above ground storage tank systems monthly in accordance with Part 111 of 20.5 NMAC indicate that an incident has occurred. An incident can be either a suspected or a confirmed release of regulated substances to the environment. A suspected release is anything other than a "pass" result from any method of release detection plus any other condition as described in Section 1801 of 20.5.118 NMAC. Owners and operators are required to report such incidents to the Petroleum Storage Tank Bureau within 24 hours of discovery. Also, owners and operators are required to report any spills or overfills of 25 gallons or more that occur during the transfer of regulated substances either to the tank or from the tank system.

Check all of the following that apply to your petroleum storage tank system.

Release Detection Method Used.

Indicators that Incident has occurred.

<input type="checkbox"/> Automatic Tank Gauging System (ATG)	- Failed monthly 0.2gph leak test
<input type="checkbox"/> Interstitial Monitoring with ATG System	- Alarm activated or tripped due to presences of fuel or water in tank's or piping interstice. - Fuel is found in the sumps associated with underground piping.
<input type="checkbox"/> Electronic Interstitial Monitoring	- Alarm activated or tripped due to presence of fuel or water in tank's or piping interstice. - Fuel is found in the sumps associated with underground piping.
<input type="checkbox"/> Annual Line Tightness Test	- Failed annual precision test.
<input type="checkbox"/> Line Leak Detector	- Activation or tripping causing flow of fuel to be reduced to 3.0gph.
<input type="checkbox"/> Monthly Visual Inspection	- Fuel found leaking from tank and/or piping. - Fuel found inside secondary containment system. - Surface staining observed around tank, piping, or outside of secondary containment system. - Loss of 25 gallons or more of fuel.
<input type="checkbox"/> Periodic Testing	- secondary containment used for interstitial monitoring of underground piping fails an integrity test.

Investigation & Corrective Action:

The presence of a petroleum product in any or all interstices or sumps will be investigated to determine the source and if any repairs are needed. Alarms will be investigated in order to determine if the equipment has malfunctioned, an operator error has occurred, or an actual release of product is occurring. Once you have found out what happened you will need to take the appropriate corrective action, which could be repairing the equipment, or stopping and repairing the leak. As stated previously, if any of these circumstances occur at your underground storage tank facility then you are required to report them to the Petroleum Storage Tank Bureau. The Bureau has on its website at (https://www.env.nm.gov/petroleum_storage_tank/leaks-spills-and-incident-reports/) a listing of Bureau personnel who receive incident reports. Open up the “Leak of the Week” list and contact the appropriate Bureau staff person who is scheduled on the incident report date.

Sample O&M Plan for an UST Facility

**Operations & Maintenance Plan
For
Big Bob's Gas-n-More
102 Bursum Road
Collins Park, NM**



January 22, 2008

I. Facility Description

Big Bob's Gas-n-More is a retail gas station located at the intersection of Bursum Road and State Road 78 in Collins Park, NM. The station has three 8,000-gallon underground storage tank systems that have an estimated date of installation of March 1971. The original piping was single walled steel piping, but it was replaced in September of 1992 with single walled AO Smith fiberglass reinforced plastic piping. See the site map on page (x) for the layout of the facility. In the tables below, the UST systems are described in further detail.

General Facility Information					
Facility Name	Big Bob's Gas-n-More				
Facility ID #	0				
Release Detection					
A. Release Detection for Tanks					
Check at least one for each tank:		Tank #1	Tank #2	Tank #3	
<input type="checkbox"/>	Automatic Tank Gauging System				
<input type="checkbox"/>	Interstitial Monitoring (with secondary containment)				
<input type="checkbox"/>	Groundwater Monitoring				
<input type="checkbox"/>	Vapor Monitoring				
<input type="checkbox"/>	Inventory Control and Tank Tightness Testing (TTT)*				
<input type="checkbox"/>	Manual Tank Gauging Only **				
<input type="checkbox"/>	Manual Tank Gauging and Tank Tightness Testing (TTT)***				
<input type="checkbox"/>	Other Release Detection Method, such as SIR (please specify)	SIR	SIR	SIR	
<p>* Allowed only for 10 years after upgrading or installing tank with corrosion protection. TTT required every 5 years.</p> <p>** Allowed only for tanks of 1,000 gallon capacity or less.</p> <p>*** Allowed only for tanks of 2,000 gallon capacity or less and only for 10 years after upgrading or installing tank with corrosion protection. TTT required every 5 years.</p>					
B. Release Detection for Pressurized Piping					
Check at least one from A & B for each tank's piping:		Tank #1	Tank #2	Tank #3	
A (Automatic Line Leak Detectors)	Automatic Flow Restrictor	X	X	X	
	Automatic Shutoff Device				
	Continuous Alarm				
B	Annual Line Tightness Test	X	X	X	
	Monthly Monitoring*				
<p>* Monthly Monitoring for piping includes Interstitial Monitoring, Vapor Monitoring, Groundwater Monitoring, and other accepted methods (such as SIR and Electronic Line Leak Detectors)</p>					
C. Release Detection for Suction Piping					
Check at least one for each tank's piping:		Tank #1	Tank #2	Tank #3	
<input type="checkbox"/>	Line Tightness Testing Every Three Years				
<input type="checkbox"/>	Monthly Monitoring*				
<input type="checkbox"/>	No Release Detection Required For "Safe Suction" **				

<p>* Monthly Monitoring for piping includes Interstitial Monitoring, Vapor Monitoring, Groundwater Monitoring, and SIR</p> <p>** No release detection required only if it can be verified that you have a “safe suction” piping system with the following characteristics:</p> <p>1) Only one check valve per line located directly below the dispenser; 2) Piping sloping back to the tank; and 3) System must operate under atmospheric pressure.</p>				
Spill and Overfill Protection				
Check for each tank:		Tank #1	Tank #2	Tank #3
<input type="checkbox"/>	Spill Catchment Basin/ Spill Bucket	X	X	X
Check at least one overfill device for each tank:				
<input type="checkbox"/>	Automatic Shutoff Device	X	X	X
<input type="checkbox"/>	Overfill Alarm			
<input type="checkbox"/>	Ball Float Valve			
Corrosion Protection				
A. Corrosion Protection for Tanks				
Check at least one for each tank:		Tank #1	Tank #2	Tank #3
<input type="checkbox"/>	Coated and Cathodically Protected Steel			
<input type="checkbox"/>	Noncorrosive Material (such as Fiberglass Reinforced Plastic)			
<input type="checkbox"/>	Steel Jacketed or Clad with Noncorrosive Material			
<input type="checkbox"/>	Cathodically Protected Bare Steel*	X	X	X
<input type="checkbox"/>	Internally Lined Tank*			
<input type="checkbox"/>	Cathodically Protected Bare Steel and Internally Lined Tank*			
<input type="checkbox"/>	Other Method Used to Achieve Corrosion Protection (please specify):			
* These options may be used only for tanks installed before December 22, 1988.				
B. Corrosion Protection for Piping				
Check at least one for each:		Tank #1	Tank #2	Tank #3
<input type="checkbox"/>	Coated and Cathodically Protected Steel			
<input type="checkbox"/>	Noncorrosive Material (such as Fiberglass Reinforced Plastic or Flexible Plastic)	X	X	X
<input type="checkbox"/>	Cathodically Protected Bare Metal*			
<input type="checkbox"/>	Other Method Used to Achieve Corrosion Protection (please specify):			
* This option may be used only for piping installed before December 22, 1988.				

II. Standards

The US Environmental Protection Agency's publication "Operating and Maintaining Underground Storage Tank Systems: Practical Help and Checklist" (EPA 510-B-00-008) will be used by the owner as the guide for operating and maintaining the UST systems at this facility. New standards or codes will be added as needed to make sure the UST systems are operated and maintained in accordance with all the requirements in Title 20 Chapter 5 of the New Mexico Administrative Code.

III. Corrosion Protection

An impressed current system was installed on the tanks at this facility and the rectifier for the system is located on the outside of the south wall of the store. The impressed current system will be monitored by the owner and on-site personnel every 60 days. When inspecting the rectifier, use the form in Attachment A labeled "60-Day Inspection Results for Impressed Current Cathodic Protection Systems." During the inspection make sure the on/off switch is in the on position and record the number of amps from the gauge on the rectifier. If the gauge is indicating less than 0 amps, the rectifier has been turned off, indicating that the system is not operating. Notify the owner as soon as possible. Once every three (3) years the owner will have the impressed current system tested at a minimum by a certified cathodic protection tester. Typically, the 3-year cathodic protection system test is performed by XYZ Company at 505.111.1111. Copies of the impressed current system inspection results and the 3-year CP test will be kept on file in the owner's office in the back of the store.

The following will be used as guidance in properly operating & maintaining the impressed current system at this facility:

You need to have a periodic test conducted by a qualified corrosion tester to make sure your impressed cathodic protection system is adequately protecting your UST system. This test needs to be conducted:

- ☐ Within 6 months of installation.
- ☐ At least every 3 years after the previous test.
- ☐ Within 6 months after any repairs to your UST system.

☒ Make sure that the professional tester is qualified to perform the test and follows a standard code of practice to determine that test criteria are adequate.

☒ If any test indicates that your tanks are not adequately protected, you need to have a corrosion expert examine and fix your system.

☒ Testing more frequently can catch problems before they become big problems.

☐ **You need to keep the results of at least the last two tests on file. See next page for a cathodic protection test recordkeeping form.**

☐ **You need to inspect your rectifier at least every 60 days to make sure that it is operating within normal limits.**

☒ This inspection involves reading and recording the voltage and amperage readouts on the rectifier. You or your employees can perform this periodic inspection.

☐ Make sure that your cathodic protection professional provides you with the rectifier's acceptable operating levels so that you can compare the readings you take with an acceptable operating level. If your readings are not within acceptable levels, you must contact a cathodic protection professional to address the problem.

- ☐ You need to keep records of at least the last 3 rectifier readings. See page 39 for a "60-Day Inspection Results" recordkeeping form.
- ☐ You should have a trained professional periodically service your impressed current system.
- ☐ Never turn off your rectifier!

IV. Release Detection Methods & Inspections

A. Release Detection Methods

In order to meet the release detection requirements of 20.5 NMAC, the owner of this facility utilizes statistical inventory reconciliation (SIR) as the monthly monitoring method for the USTs. The monthly monitoring method used for the underground piping is the combination of annual line tightness testing and annual functionality testing of the line leak detectors. All records pertaining to release detection will be kept in the owner's files in his office at the facility.

The owner and on-site personnel will use the forms in Attachment B labeled "Daily Inventory Worksheet" and "Monthly Inventory Control" to monitor the fuel levels in the tanks on a daily and monthly basis. The fuel levels in the tanks will be checked every morning no later than 7:00 AM and again every evening no later than 6:00 PM. Also, the fuel levels will be checked by the owners or on-site personnel before and after every fuel delivery. The "Monthly Inventory Control" form will be submitted to [Your Company of Choice] at PO Box XXX, Silly, NM 88888 for analysis using SIR and the analysis must be completed within every 30 days and the report submitted to the owner within this 30-day period.

Every year, no later than June 30th (*pick a date during the year when to have this done and stick to it*), an annual line tightness test along with a function test of the line leak detectors will be performed on the UST systems at this facility. The testing will be performed by [Your Company of Choice] and as mentioned previously the records will be kept by the owner for the operational life of the PST systems.

B. Inspections

In order to meet the operation and maintenance requirements of 20.5 NMAC, and the inspections of the UST systems; the checklists on the following pages will be used to perform and record the results of all monthly, periodic, and annual inspections. The inspections will be carried out by the owner or on-site personnel and the completed checklists will be maintained in the owner's file in his office at the facility.

UST Number:

Date/Time:

	Yes	No	N/A
Tank is monitored for releases every 30 days. [20.5.108 NMAC]			
Release detection for piping is performed. [20.5.108.810 thru 813 NMAC]			
Release detection records are reviewed monthly. [20.5.107.707 NMAC]			
Operations and Maintenance Plan in place and is being followed. [20.5.107.701 NMAC]			
Monthly monitoring indicates a release may have occurred. [20.5.108.800.D NMAC]			
Automatic tank gauging system operating properly. [20.5.108.805 NMAC]			
Fill port lid is properly marked. [20.5.107.700.A NMAC]			
Spill prevention is in operational condition. [20.5.107.704 NMAC]			
Spill prevention free of fuel, water, and debris.* [20.5.107.707 NMAC]			
Double walled spill prevention is monitored every 30 days. [20.5.107.704 NMAC]			
Cap on vapor recovery riser is tight and in good condition. [20.5.107.704 NMAC]			
Cap on ATG riser is tight and in good condition. [20.5.107.704 NMAC]			
Overfill alarm is operational. [20.5.107.704 NMAC]			
Overfill prevention equipment is operational. [20.5.107.707 NMAC]			
Tank checked for water. (Height in inches, if found:) [20.5.108.802.G NMAC]			
Cathodic Protection system is properly operated & maintained. [20.5.107.705 NMAC]			
Transition sump free of fuel, water, and debris.* [20.5.107.702 NMAC]			
Transition sump liner in serviceable condition. [20.5.107.702 NMAC]			
Transition sump sensor at proper height & orientation. [20.5.108.808/811/813 NMAC]			
Turbine sump free of fuel, water, and debris.* [20.5.107.702 NMAC]			
Turbine sump liner in serviceable condition. [20.5.107.702 NMAC]			
Turbine sump sensor at proper height & orientation. [20.5.108.808/811/813 NMAC]			
Dispenser sump free of fuel, water, and debris.* [20.5.107.702 NMAC]			
Dispenser sump liner in serviceable condition. [20.5.107.702 NMAC]			
Dispenser sump sensor at proper height & orientation. [20.5.108.808/811/813 NMAC]			
Double walled containment sump is monitored every 30 days. [20.5.107.706 NMAC]			
Loading rack secondary containment is operational and properly maintained. [20.5.107.702 NMAC]			
All fuel, water, and debris removed from system have been properly disposed. [20.5.107.702 NMAC]			

Comments and Follow up Needed:

Operator Name (Print):

Operator Certification Class:

Signature

* Sumps must be checked within one week of a rainfall event.

Periodic Inspection Checklist for UST Systems

Facility Name: _____		Facility Number: _____	
Facility Address: _____		City: _____	Zip Code: _____
Owner Name: _____		Owner Number: _____	
Owner Address: _____			
Owner City: _____		State: _____	Zip Code: _____
Total Number of UST Systems at Facility: _____			

The following checklists are to be used as guidance by the owners and operators for inspections and testing that could be required by the local authority having jurisdiction on underground storage tank systems. Owners and operator may use this list to verify that required inspections and testing are performed as needed on their underground storage tank systems. Owners and operators are reminded to check with the local authority having jurisdiction as to who can perform any required tests on their underground storage tank systems. Many of the following tests are usually required to be performed by personnel certified in, have the necessary education, and experience to satisfactorily perform the tests.

Periodic Inspections/Tests Conducted by Qualified Individual.

- ☐ Yes ☐ No ☐ N/A – Ball float valve in place and set at correct height. Date of last inspection: _____.
- ☐ Yes ☐ No ☐ N/A – Drop tube overfill prevention valve in place, properly aligned, and set at required height. Date of last inspection: _____.
- ☐ Yes ☐ No ☐ N/A – Automatic overfill alarm is operational. Date of last inspection: _____.
- ☐ Yes ☐ No ☐ N/A – Underground pressured piping tightness tested. Date of last test: _____.
- ☐ Yes ☐ No ☐ N/A – Automatic line leak detectors tested. Date of last test: _____.
- ☐ Yes ☐ No ☐ N/A – Sump sensors functionality tested as required. Date of last inspection: _____.
- ☐ Yes ☐ No ☐ N/A – Secondary containment sumps used for interstitial monitoring tested. Date of last test: _____.
- ☐ Yes ☐ No ☐ N/A – Spill prevention equipment is tested. Date of last test: _____.
- ☐ Yes ☐ No ☐ N/A – Galvanic or Sacrificial Cathodic Protection System tested every three (3) years. Date of last test: _____.
- ☐ Yes ☐ No ☐ N/A – Impressed Cathodic Protection System tested every three (3) years. Date of last test: _____.

Drafting an Operations and Maintenance Plan

October 1, 2019

☐ Yes ☐ No ☐ N/A – Internally lined tanks are inspected at 10-year anniversary of installation and every 5 years, thereafter. Date of 10-year inspection: _____. Date of last 5-year internal inspection: _____.

☐ Yes ☐ No ☐ N/A – Internally lined tank is in operational condition.

☐ Yes ☐ No ☐ N/A – Underground suction piping tested every three (3) years. Date of last test: _____.

Comments on Periodic Inspections/Testing

1.	
2.	
3.	
4.	
5.	
6.	

V. Routine Maintenance & Repairs

Routine maintenance of the UST systems at this facility will be conducted by the owner, on-site personnel, or when required by an installer certified with the Petroleum Storage Tank Bureau of the New Mexico Environment Department. Certified installers will be used to perform all repairs to the tank systems as required by New Mexico Petroleum Storage Tank Regulations. A list of the certified installers who are normally used by the owner is located in the emergency contact list in section VII.

A. Routine Maintenance

The spill buckets will be checked within one week of every rainfall event, and during monthly inspections, and any water or debris found will be removed. Also, the spill buckets will be checked after every delivery of fuel to the tanks to make sure that any fuel left in the spill buckets is either dropped into the tanks or disposed of properly. All water removed from the spill buckets will be properly disposed of along with any other liquid found in the buckets.

B. Repairs

When it is found that a repair is needed, on-site personnel will contact the owner who in turn will contact [A certified installer of your choice] to perform the repair. The owner will contact the Petroleum Storage Tank Bureau of the New Mexico Environment Department at [telephone number of local inspector] and inform them as to when and what repairs will be performed. Repairs to dispensers which involve equipment located above the impact or shear valve does not require notification to the Bureau.

VI. Tests

The tests required to be performed on the UST systems at this facility are described in section III for Corrosion Protection and section IV for Release Detection Methods & Inspections.

VII. Responses to Incidents & Emergency Situations

A. Emergency Response Important Contact Information		
	Contact Name	Phone #
State AST/UST Agency:	NMED PSTB	505.476.XXXX
Local PSTB Inspector:		
Fire Department:		
Ambulance:		
Police Department:		
Repair Contractors:		
Owner's Numbers:	Robert Johansson	575.111.1111 (Home)

B. In Case of Fire Involving UST systems

- ❑ **Stop What You are Doing:** Take immediate action and turn off the power to the pumps and dispensers, if possible. The shutoff switch is marked and located in the electrical panel on the back wall of the store by the entrance to the drink's cooler in the NW corner of the store.
- ❑ **Evacuate:** Make sure all employees and customers leave the store and dispenser islands, immediately. If at all possible check the restrooms to make sure they are not occupied. The emergency assembly area is located north of the store along Bursum Road by the NE corner of the old horse corral. (See Site Map in section IX)
- ❑ **Call for help:** Contact your local fire or emergency response authority. Call owner immediately after calling for help if he is not present.
- ❑ **Call and report release:** If a release of fuel occurs because of the fire it must be reported to the Petroleum Storage Tank Bureau of the New Mexico Environment Department. The number should be located in the contacts list above.

In Case of a Leak or Release of fuel from the UST systems

An incident could be either a suspected or confirmed release of fuel to the environment and is defined by New Mexico Regulations as a leak of 25gallons or more of regulated substances to the environment. On-site personnel and the owner will use the checklist in Attachment C labeled "UST System Release Detection Response Checklist" as an aid in determining when an incident occurs. The appropriate responses to an incident can be found in the previously mentioned checklist and in the following:

Release Response Checklist

- ❑ **Stop the release:** Take immediate action to prevent the release of more fuel. Turn off the power to the dispenser and "bag" the nozzle. Make sure you know where your emergency shutoff switch is located. Empty the tank, if necessary, without further contaminating the site
- ❑ **Contain the spill or overfill:** Contain, absorb, and clean up any surface releases. Identify any fire, explosion or vapor hazards and take action to neutralize these hazards.
- ❑ **Call for help and to report suspected or confirmed releases:** Contact your local fire or emergency response authority. Contact your State's underground storage tank regulatory authority within 24 hours.

VIII. Loading & Unloading Operations

Since this facility is a retail gas station there will be no loading operations performed at this facility but unloading operations will be performed as needed to maintain fuel sales to the public. Unloading operations will be performed by delivery drivers working for [Your Distributor] and will be monitored by the owner and his employees as needed. The following checklist will be used as guidance for how unloading operations or filling of the tanks will be accomplished.

Correct Filling or Unloading Operations Checklist

<p>What To Do Before Filling Your USTs</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Post clear signs that alert delivery persons to the overfill devices and alarms in use at your facility. <input type="checkbox"/> Measure and record accurate readings for product and water in the tank before fuel delivery. <input type="checkbox"/> Order no more than the quantity of fuel that will fit into 90% of the tank. <p style="text-align: center;">REMEMBER, the formula for determining the maximum amount of gasoline to order is:</p> <p style="text-align: center;">(Tank capacity in gallons X 90%) — Product currently in tank = Maximum amount of fuel to order</p> <p style="text-align: center;">Example: (10,000-gal X 0.9) — 2,000 gal = 7,000-gal maximum amount to order</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure fuel delivery personnel know the type of overfill device present at the tank and what actions to perform if it activates. <input type="checkbox"/> Review and understand the spill response procedures. <input type="checkbox"/> Verify that your spill bucket is empty, clean, and will contain spills.
<p>What To Do While Your USTs Are Being Filled</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Keep fill ports locked until the fuel delivery person requests access. <input type="checkbox"/> Have an accurate tank capacity chart available for the fuel delivery person. <input type="checkbox"/> The fuel delivery person makes all hook-ups. The person responsible for monitoring the delivery should remain attentive and observe the entire fuel delivery, be prepared to stop the flow of fuel from the truck to the UST at any time, and respond to any unusual condition, leak, or spill which may occur during delivery. <input type="checkbox"/> Have response supplies readily available for use in case a spill or overfill occurs. <input type="checkbox"/> Provide safety barriers around the fueling zone. <input type="checkbox"/> Make sure there is adequate lighting around the fueling zone.
<p>What To Do After Filling Your USTs</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Following complete delivery, the fuel delivery person is responsible for disconnecting all hook-ups. <input type="checkbox"/> Return spill response kit and safety barriers to proper storage locations. <input type="checkbox"/> Measure and record accurate readings for product and water in the tank after fuel delivery. <input type="checkbox"/> Verify the amount of fuel received. <input type="checkbox"/> Make sure fill ports are properly secured. <input type="checkbox"/> Ensure the spill bucket is free of product and clean up any small spills.

The spill containment and overfill prevention equipment used in the unloading operations at this facility will be operated and maintained according to the manufacturer's recommendations and the following:

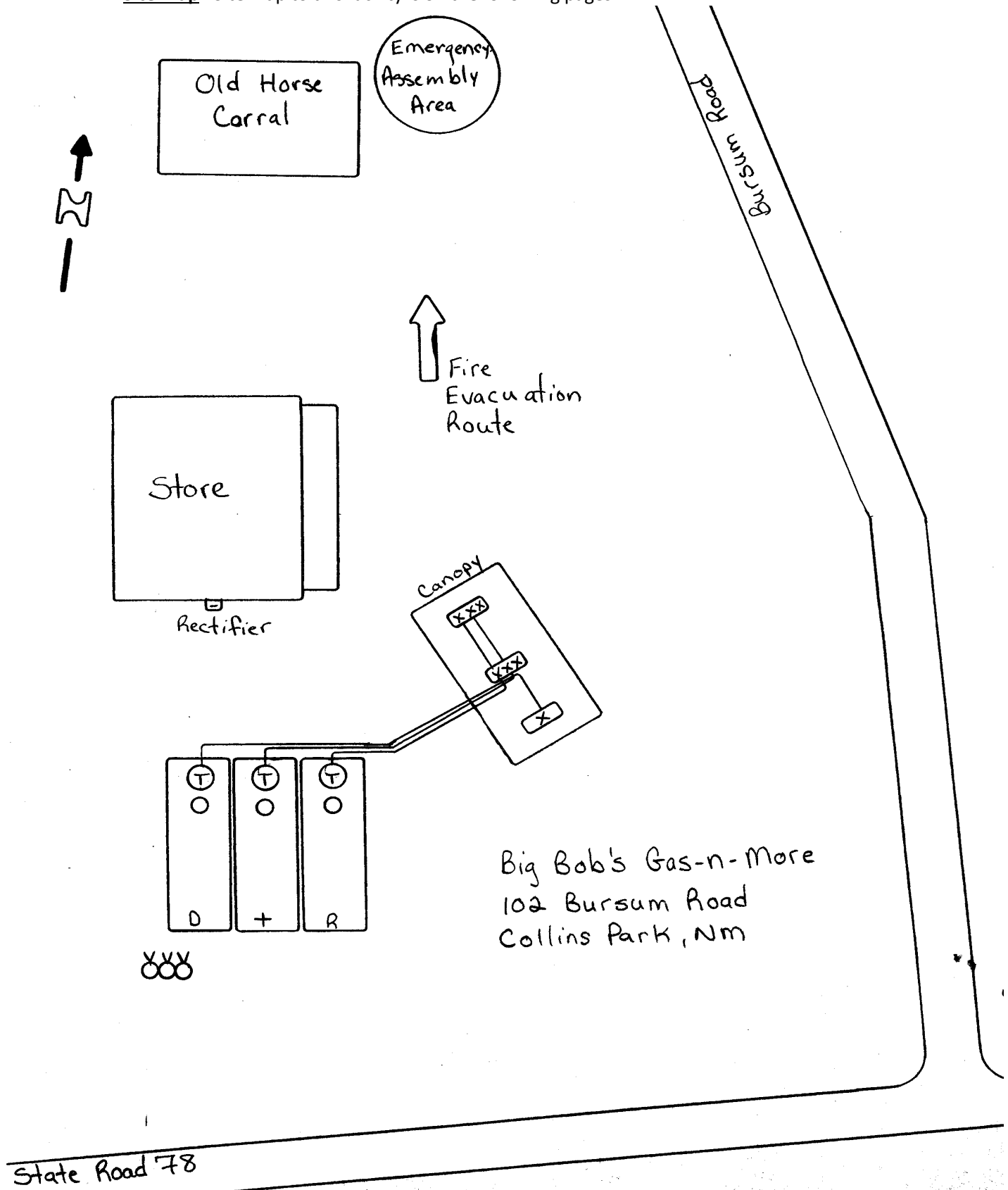
Spill Bucket O&M Checklist

- ☐ **Keep your spill bucket empty of liquids.**
Some spill buckets are equipped with a valve that allows you to drain accumulated fuel into your UST. Others may be equipped with a manual pump, so fuel can be put into your UST by pumping it through the fill pipe. However, keep in mind that when you pump out or drain your spill bucket into your UST, any water and debris may also enter the UST. If a basin is not equipped with a drain valve or pump, then any accumulated fuel or water must be removed manually and disposed of properly.
- ☐ **Periodically check your spill bucket to remove any debris.**
Debris could include soil, stones, or trash.
- ☐ **Periodically check to see if your spill bucket is still liquid tight.**
Have a qualified UST contractor inspect your spill bucket for signs of wear, cracks, or holes. Based on this inspection, the contractor may suggest a test to determine if the spill bucket is tight or needs repair or replacement.

Basic O&M Checklist for Automatic Shutoff Devices


- ☐ A qualified UST contractor periodically checks to make sure that the automatic shutoff device is functioning properly and that the device will shut off fuel flowing into the tank at 95% of the tank capacity or before the fittings at the top of the tank are exposed to fuel:
 - Make sure the float operates properly.
 - Make sure that there are no obstructions in the fill pipe that would keep the float mechanism from working.
- ☐ You have posted signs that the delivery person can easily see and that alert the delivery person to the overfill warning devices and alarms in use at your facility.

IX. Site Map - Site map to this facility is on the following pages.



Legend to Site Map

 = Single product dispenser

 = Multi-product dispenser

 = Turbine manway / sump

 = Drop Tube with spill bucket

 = Normal Vent risers

 = Rectifier

Attachment A

60-Day Inspection Results for Impressed Current Cathodic Protection Systems

FACILITY NAME: _____

AMP RANGE RECOMMENDED: _____

VOLTAGE RANGE RECOMMENDED: _____

Date	Your Name	Voltage Reading	Amp Reading	Is Your System Running Properly? (Yes/No)

- # If the rectifier voltage and/or amperage output(s) are outside the recommended operating levels, contact a cathodic protection expert to address the problem.
- # Never turn off your rectifier.
- # KEEP THIS RECORD FOR AT LEAST 6 MONTHS AFTER THE DATE OF THE LAST READING.

Attachment B

DAILY INVENTORY WORKSHEET

FACILITY NAME: _____

YOUR NAME: _____

DATE: _____

TANK IDENTIFICATION					
Type of Fuel					
Tank Size in Gallons					
END STICK INCHES					
AMOUNT PUMPED					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
TODAY'S SUM OF TOTALIZERS					
Previous Day's Sum of Totalizers					
AMOUNT PUMPED TODAY					
DELIVERY RECORD					
Inches of Fuel Before Delivery					
Gallons of Fuel Before Delivery (from tank chart)					
Inches of Fuel After Delivery					
Gallons of Fuel After Delivery (from tank chart)					
GALLONS DELIVERED (STICK) [Gallons "After" - Gallons "Before"]					
GROSS GALLONS DELIVERED (RECEIPT)					

Attachment B

MONTHLY INVENTORY RECORD

MONTH/YEAR : _____/_____/_____ TANK IDENTIFICATION & TYPE OF FUEL: _____

FACILITY NAME: _____

DATE OF WATER CHECK: _____ LEVEL OF WATER (INCHES): _____

DATE	START STICK INVENTORY (GALLONS)	GALLONS DELIVERED	GALLONS PUMPED	BOOK INVENTORY (GALLONS)	END STICK INVENTORY		DAILY OVER (+) OR SHORT (-)	INITIALS
					(Inches)	(Gallons)		
1	(+)	(-)	(=)					
2	(+)	(-)	(=)					
3	(+)	(-)	(=)					
4	(+)	(-)	(=)					
5	(+)	(-)	(=)					
6	(+)	(-)	(=)					
7	(+)	(-)	(=)					
8	(+)	(-)	(=)					
9	(+)	(-)	(=)					
7	(+)	(-)	(=)					
8	(+)	(-)	(=)					
9	(+)	(-)	(=)					
10	(+)	(-)	(=)					
11	(+)	(-)	(=)					
12	(+)	(-)	(=)					
13	(+)	(-)	(=)					
14	(+)	(-)	(=)					
15	(+)	(-)	(=)					
16	(+)	(-)	(=)					
17	(+)	(-)	(=)					
18	(+)	(-)	(=)					
19	(+)	(-)	(=)					
20	(+)	(-)	(=)					
21	(+)	(-)	(=)					
22	(+)	(-)	(=)					
23	(+)	(-)	(=)					
24	(+)	(-)	(=)					
25	(+)	(-)	(=)					
26	(+)	(-)	(=)					
27	(+)	(-)	(=)					
28	(+)	(-)	(=)					

Attachment B

29	(+)	(-)	(=)				
30	(+)	(-)	(=)				
31	(+)	(-)	(=)				
TOTAL GALLONS PUMPED >					TOTAL GALLONS OVER OR SHORT >		



LEAK CHECK:

Drop the last two digits
from the **TOTAL GALLONS**

PUMPED number and enter here: _____ + 130 = _____ gallons



Compare these numbers

Is the "TOTAL GALLONS OVER OR SHORT" **LARGER** than "LEAK CHECK" result? **YES NO** (circle one)

If your answer is "YES", **notify the regulatory agency** as soon as possible.

KEEP THIS PIECE OF PAPER ON FILE FOR AT LEAST 1 YEAR

UST Release Detection Response Checklist

The following are circumstances where the method(s) of release detection used to monitor petroleum storage tank systems monthly in accordance with Part 108 of 20.5 NMAC indicate that an incident has occurred. An incident can be either a suspected or a confirmed release of regulated substances to the environment. A suspected release is anything other than a "pass" result from any method of release detection plus any other condition as described in section 1801 of 20.5.118 NMAC. Owners and operators are required to report such incidents to the Petroleum Storage Tank Bureau within 24 hours of discovery. Also, owners and operators are required to report any spills or overfills of 25 gallons or more that occur during the transfer of regulated substances either to the tank or from the tank system.

Check all of the following that apply to your petroleum storage tank system.

<input type="checkbox"/>	Mechanical Line Leak Detector	Line leak detector trips and reduces the flow of fuel to 3.0gph (gallons per hour).
<input type="checkbox"/>	Automatic Tank Gauging System (ATG)	Monthly monitoring with 0.2gph leak tests produces no passing results within the month.
		Failed annual 0.1gph test.
		SCALD or CSLD tests within a month are all fails.
		ATG System sounds an alarm for overfill during delivery of fuel to tank and 25 gallons or more of fuel is spilled.
<input type="checkbox"/>	Electronic Line Leak Detector (ELLD)	ELLD triggers alarm in ATG and shutdown pump.
<input type="checkbox"/>	Interstitial Monitoring with sensors connected to ATG system	Interstitial sensors in tank or sumps associated with piping sounds alarm thru ATG and shuts down pump.
<input type="checkbox"/>	Electronic Monitoring of tank or piping interstice	Alarm is triggered in control box, audible, visible, or both.
<input type="checkbox"/>	Inventory Control with Monthly Reconciliation and Tank Tightness Testing*	Monthly reconciliation shows the total gallons over or short is greater than 1% of the total gallons pumped plus 130 gallons.
		Failed Tank Tightness Test
<input type="checkbox"/>	Statistical Inventory Reconciliation (SIR)	The monthly result is anything other than a pass.
<input type="checkbox"/>	Groundwater Monitoring Wells	Presence of free product or sheen.
<input type="checkbox"/>	Vapor Monitoring Wells	Presence of vapor levels at concentrations exceeding 100 ppm.
<input type="checkbox"/>	Manual Tank Gauging	Readings exceeding the standards found in 20.5.108.803 NMAC

*The use of this method is limited to the first 10 years after the tank was upgraded to meet the 12/22/98 UST requirements.

When any of the above conditions are met during monthly monitoring or conducting your method of release detection, please refer to subsection C of section VII for the proper corrective actions to take in response to an incident.

Appendix C

Extra Sample Forms

Water Disposal Form

I. Facility Information

Date: _____

Facility Name: _____

Address: _____

City: _____

Zip Code: _____

State: _____

II. Water Information

A. Water removed from the following: (Check all that apply)

☐ Concrete Secondary Containment ☐ Earthen Dike Field

☐ AST Interstice (Space in between walls of double-walled tank)

☐ Dispenser Sump ☐ Transition Sump ☐ Turbine Sump

☐ AST ☐ UST

B. Water had visible sheen? (☐ Yes) or (☐ No)

C. Water with visible sheen properly disposed of? (☐ Yes) or (☐ No)

D. Was water tested before disposal? (☐ Yes) or (☐ No)

E. Volume of water/liquid: _____ gallons.

III. Disposal Information

A. Disposal Method.

B. Disposal location and/or company.

IV. Certification

I certify that I have personally examined, and I am familiar with the information in this document, and I believe that the information is true, accurate and complete.

Owner or Owner's Authorized Representative

Date