SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

NAVAL AIR STATION CORPUS CHRISTI

Corpus Christi, Texas

Under Contract to:

Naval Facilities Engineering Systems Command

Naval Facilities Engineering Systems Command
Southeast Region Headquarters
PO Box 30, Bldg. 135 North, Ajax Street
NAS Jacksonville, FL 32212

Navy Contract
N69450-14-D-0029

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Prepared by:

JACOBS ch2m

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Acronyms and Abbreviations

API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
ATG	Automatic Tank Gauging
BUMED	Bureau of Medicine
CBP	Customs and Border Patrol
CCAD	Corpus Christi Army Depot
CDO	Command Duty Officer
CFR	Code of Federal Regulations
CNATRA	Chief of Naval Air Training
CNIC	Commander of Naval Installations Command
CP	Cathodic Protection
CRDM	Continuous Release Detection Method
DCRF	Dynamic Component Repair Facility
DHS	Department of Homeland Security
DLA	Defense Logistics Agency
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
DSA	Drum Storage Area
ELMR	Enterprise Land Mobile Radio
EPA	Environmental Protection Agency
FRP	Facility Response Plan
ft	Feet
gal/ft^3	Gallons Per Cubic Feet
GOV	Government Operated Vehicle
gpm	Gallons per Minute
GRI	Guidance for Regional Inspectors (EPA)
GSE	Ground Support Equipment
HQ	Headquarters
HW	Hazardous Waste
ID	Identification
KVA	Kilovolt Ampere
ME	Mobile Equipment
MWR	Morale, Welfare, and Recreation
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NAS	Naval Air Station
NATOPS	Naval Air Training and Operating Procedures Standardization
NAVAIR	Naval Air Systems Command

NAVFAC-SE	Naval Facilities Engineering Systems Command – Southeast
NEC	Nueces Electric Cooperative
NEX	Navy Exchange
NFPA	National Fire Protection Association
NRC	National Response Center
OFOE	Oil-Filled Operational Equipment
OLF	Out-Lying Field
OPNAV M	Navy Operations Manual
OPV	Overfill Prevention Valve
OS	Out of Service
OWS	Oil Water Separator
PAR	Precision Approach Radar
PE	Professional Engineer
PEI	Petroleum Equipment Institute
PIV	Post Indicator Valve
POL	Petroleum, Oil, and Lubricant
PWD	Public Works Department
SAA	Satellite Accumulation Area
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
TAC	Texas Administrative Code
TACAN	Tactical Air Navigation System
TCEQ	Texas Commission on Environmental Quality
TRDI	Training, Rehabilitation, and Development Institute
TWC	Texas Water Code
UCO	Used Cooking Oil
UFC	Unified Facilities Criteria
UL	Underwriters Laboratories
U.S.	United States
UST	Underground Storage Tank
UT	Ultrasonic Testing
WWTP	Wastewater Treatment Plant

SECTION 1

Plan Administration

1.1 Executive Summary

Title 40 in Code of Federal Regulations (CFR) section 112.1(d)(2)(ii), requires a Spill Prevention Control and Countermeasure (SPCC) plan to be written and maintained if the facility has greater than 1,320 gallons of total aboveground fuel/oil storage capacity. This includes all fixed position tanks, integral generator tanks, mobile refueler trucks, cooking oil tanks, portable containers, drums, and Oil-Filled Operational Equipment (OFOE), such as transformers and hydraulic elevator tanks, with at least a 55-gallon capacity. Naval Air Station (NAS) Corpus Christi exceeds the 40 CFR 112 threshold capacity as detailed in **Table 2-3**, and so is required to maintain a SPCC plan.

The purpose of this SPCC plan is to identify all tanks, containments, procedures, methods and equipment used at NAS Corpus Christi, to prevent the discharge of oil into the environment. This plan is applicable to all facilities and tenant organizations located at NAS Corpus Christi that store or handle new or used fuel or oil products in aboveground tanks and equipment. NAS Corpus Christi previously maintained an SPCC Plan in accordance with these regulations. This revised plan is a technical update to address facility oil storage changes during the past five years and to maintain compliance with 40 CFR 112 regulations.

Naval Facilities Engineering Systems Command – Southeast (NAVFAC-SE) Region provided oversight and technical assistance with the preparation of this document through NAVFAC-SE Contract N69450-14-D-0029, Task Order 17F0163. Jacobs Engineering Group (formerly CH2M) performed evaluations at NAS Corpus Christi in July 2018 and collected available information and data for inclusion in the SPCC Plan. This included the visual evaluation of all aboveground storage tanks (AST), visible portions of underground storage tanks (UST), and connected fuel piping. In addition to container inspections, oil water separators (OWS), refueler truck parking and transfer locations, drum storage areas (DSA), other mobile/portable oil tanks and inspection procedures were evaluated for effectiveness and industry best management practices.

NAS Corpus Christi manages three Out-Lying Fields (OLF) named Cabaniss, Goliad, and Waldron, which are used for aircraft training operations. These are non-contiguous, Navy owned properties, which do not exceed the 40 CFR 112 threshold capacity for oil storage, so they are not required to have a SPCC plan. NAVFAC-SE previously prepared a non-regulated, short format, SPCC plan for each OLF site separately, as a good management practice to document the generator fuel tanks located there. The OLF sites tank inventory data is not included in this SPCC plan update.

NAS Corpus Christi has an inspection program for oil storage tanks and fuel transfer areas. If needed, deficiencies are noted, and funding is requested for correction. NAS Corpus Christi, with assistance from NAVFAC-SE, has a program for improving regulatory compliance through tank repairs or replacements and equipment upgrades to meet industry standards. NAS Corpus Christi maintains a Facility Response Plan (FRP) to address discharges of oil per 40 CFR 112.20, and discharge of hazardous substances in accordance with Navy Operations Manual (OPNAV M-) 5090.1, Chapter 39.

The Environmental office ensures NAS Corpus Christi meets federal, State of Texas Administrative Code (TAC), and local regulations. Appropriate personnel have been designated and trained for spill prevention and response, and written procedures guide personnel who perform inspections and monitor regulated activities. Due to periodic changes occurring at NAS Corpus Christi, it is important to continue the practices of training and monthly inspections for spill prevention as equipment degrades and personnel rotate through the facility.

NAS Corpus Christi is presently in substantial conformance with SPCC requirements. However, there are a few existing conditions that should be addressed in order to ensure full compliance with 40 CFR 112. Refer to **Table 3-1,** for a list of regulatory deficiencies and best engineering practice recommendations. The NAS Corpus Christi, Public Works Department (PWD), Environmental office (Building 19), maintains a current file or database of SPCC inspection reports and corrective action status.

The Environmental Protection Agency (EPA) definition of "Facility" is subject to interpretation, but it usually includes all buildings, structures, or properties, which are contiguously located, and owned or operated by the same organization (such as a Navy base). Corpus Christi Army Depot (CCAD), Defense Logistics Agency (DLA), and Department of Homeland Security (DHS) Customs and Border Patrol (CBP) are tenant commands that operate oil containing tanks and equipment located on Navy-owned properties at NAS Corpus Christi. Each tenant organization and contractor is responsible for their own environmental compliance, equipment management, training, and recordkeeping, in regard to oil storage and transfer operations. Although some equipment may be owned by non-Navy tenant organizations, this SPCC plan is intended to document a full inventory of all oil containing tanks and equipment at NAS Corpus Christi.

1.2 Cross-Reference with SPCC Provisions

"112.7: If you do not follow the sequence specified in this section for the Plan, you must prepare an equivalent Plan acceptable to the Regional Administrator that meets all of the applicable requirements listed in this part, and you must supplement it with a section cross-referencing the location of requirements listed in this part and the equivalent requirements in the other prevention plan."

TABLE 1-1
Regulatory Cross-Reference Matrix

Regulation Citation (40 CFR 112)	Regulatory Requirement Description	SPCC Plan Section
112.3(d)	Professional Engineer (PE) Certification	Section 1.4
112.3(e)(1)	Location of SPCC Plan	Section 1.5
112.4	Amendments by Regional Administrator	Section 1.7
112.5(a)	Amendments	Section 1.7, Appendix E
112.5(b)	SPCC Plan Review	Section 1.7
112.7	Management Approval	Section 1.3
112.7	Facilities or Equipment Not Yet Fully Operational	Section 3.3
112.7(a)(1)	Conformance with Requirements	Section 3.1

TABLE 1-1
Regulatory Cross-Reference Matrix

Regulation Citation (40 CFR 112)	Regulatory Requirement Description	SPCC Plan Section
112.7(a)(2)	Environmental Equivalence	Section 3.2
112.7(a)(3)	Facility Description	Section 2.1, Appendix B
112.7(a)(3)(i)	Oil Storage Containers	Section 2.2
112.7(a)(3)(ii)	Discharge Prevention Measures	Section 9, Appendix A
112.7(a)(3)(iii)	Discharge or Drainage Controls	Section 4.3
112.7(a)(3)(iv)	Discharge Discovery Countermeasures	Section 4.1
112.7(a)(3)(v)	Disposal of Recovered Materials	Section 4.4, FRP
112.7(a)(3)(vi)	Contact List	Section 4.1, FRP
112.7(a)(4)	Discharge Notification	Section 4.1, FRP
112.7(a)(5)	Discharge Response Procedures	Section 4.1, FRP
112.7(b)	Predicted Spill Scenarios	Section 4.2, Appendix F
112.7(c)	Secondary Containment Requirements	Section 5.1
112.7(d)	Impracticability of Secondary Containment	Section 5.8
112.7(e)	Inspections Schedule and Recordkeeping	Section 6.1
112.7(f)(1)	Initial SPCC Training	Section 7.1, 7.2
112.7(f)(2)	Designated Person	Section 1.6
112.7(f)(3)	Discharge Prevention Briefings	Section 7.2
112.7(g)	Security	Section 8
112.7(h)(1-3)	Transfer Procedures for Loading and Unloading Racks	Section 9.1
112.7(i)	Brittle Fracture Evaluation	Section 10
112.7(j)	Conformance with Applicable State and Local Requirements	Section 11
112.7(k)	Oil-Filled Operational Equipment (OFOE)	Section 5.7

TABLE 1-1
Regulatory Cross-Reference Matrix

Regulation Citation (40 CFR 112)	Regulatory Requirement Description	SPCC Plan Section
112.8(b)(1-2)	Containment Dike Inspections	Section 6.6
112.8(b)(3-4)	Facility Drainage: Design and Equipment	Section 12.10
112.8(b)(5)	Facility Drainage: Pump Transfer	Section 12.10
112.8(c)(1)	Container Construction	Section 12.1
112.8(c)(2)	Secondary Containment for Stationary Bulk Storage Tanks	Section 5.2
112.8(c)(3)(i-iv)	Containment Dike Inspections	Section 6.6
112.8(c)(4 - 5)	Corrosion Protection for Buried, Partially Buried, and Bunkered Storage Tanks	Section 12.2
112.8(c)(6)	Stationary Bulk Storage Tank Inspections	Section 6.2, 6.3
	Mobile and Portable Container Inspections	Section 6.3
112.8(c)(7)	Heating Coils	Section 12.4
112.8(c)(8)(i-v)	Liquid Level Sensing Device, Overfill Prevention	Section 6.4, 12.5
112.8(c)(9)	Effluent Treatment Facilities	Section 12.6
112.8(c)(10)	Correct Visible Discharges	Section 4.3
112.8(c)(11)	Secondary Containment for Mobile or Portable Containers	Section 5.3
112.8(d)(1)	Corrosion Protection for Buried Piping	Section 12.3
112.8(d)(2)	Terminal Connections	Section 12.7
112.8(d)(3)	Pipe Supports	Section 12.8
112.8(d)(4)	Aboveground Piping Inspections	Section 6.5
112.8(d)(5)	Vehicle Warning	Section 12.9

1.3 Management Approval

"112.7: The Plan must have the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan."

This SPCC Plan has the full approval of management at NAS Corpus Christi, at a level of authority to commit the necessary resources for full implementation of the Plan. Management will use personnel, equipment, and materials necessary to prevent and control spills, and to implement SPCC requirements set forth in this Plan. By virtue of my office, I have authority to approve this document on behalf of the facility, and to commit resources to implement the corrective actions and improvements needed, to comply with applicable federal and state laws.

The implementation of and compliance with this SPCC Plan are subject to the provisions of the Anti-Deficiency Act, as amended, 31 United States Code section 1341 et seq, and requisite regulations that control funding of operations and activities. Nothing in this plan is intended to make or authorize an expenditure or obligation, exceeding an amount or purpose available in a U.S. Government appropriation or fund, for an expenditure or obligation in violation of the Anti-Deficiency Act. Further, this plan is not intended to involve the U.S. Government in a contract or obligation for payment or any other expense, before an appropriation is adopted, unless otherwise authorized by law.

CAPT Christopher Jason Commanding Officer, NAS Corpus Christi	Date Signed

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1.4 Professional Engineer Certification

"112.3(d): Except as provided in §112.6, a licensed Professional Engineer must review and certify a Plan for it to be effective to satisfy the requirements of this part. (1) By means of this certification the Professional Engineer attests: (i) That he is familiar with the requirements of this part ; (ii) That he or his agent has visited and examined the facility; (iii) That the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part; (iv) That procedures for required inspections and testing have been established; and (v) That the Plan is adequate for the facility. (vi) That, if applicable, for a produced water container subject to §112.9(c)(6), any procedure to minimize the amount of free-phase oil is designed to reduce the accumulation of free-phase oil and the procedures and frequency for required inspections, maintenance and testing have been established and are described in the Plan. (2) Such certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such Plan in accordance with the requirements of this part."

In accordance with 40 CFR 112.3(d), I hereby certify that I or my agent has visited and examined the facility, and being familiar with the provisions of 40 CFR 112, attest that the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part, the procedures for required inspections and testing have been established, and that the Plan is adequate for the facility.

This certification in no way relieves the owner or operator of the Facility of his duty to prepare and fully implement this Plan in accordance with the requirements of 40 CFR 112. This Plan is valid only to the extent that the Facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Signature

105128
License Number

JARAH REDWINE
Name

September 9, 2021
Date

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1.5 Location of SPCC Plan

"112.3(e)(1): Maintain a complete copy of the Plan at the facility, if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended, and have the Plan available to the Regional Administrator for on-site review during normal working hours."

A complete copy of the most current SPCC plan is maintained and available for review during normal working hours at the PWD Environmental office, 8851 Ocean Drive, Building 19, Naval Air Station Corpus Christi, Texas, 78419.

The CO signature should be obtained in **Section 1.3**, and then copied into each SPCC plan prior to distribution as listed below. Representatives from the organizations listed in Table 1-2 should provide their name, signature, phone number, and date of receipt of the updated SPCC plan binder. Plan holders should become familiar with the contents and SPCC requirements herein. The Environmental Director may change the list of plan recipients as needed and insert into the plan.

TABLE 1-2
List of SPCC Plan Recipients

Organization	Printed Name	Signature	Phone Number	Date Received
Fire & Emergency Services	Jeff Hawkins		361-961-1707	2 Dec 2021
Emergency Operations Center	John Hoffman		361-961-2385	2 Dec 2021
PWD Environmental	Bill Pandissell		361-961-5353	26 OCT 2021
Security Forces	Angelo Andrea		361 961 1738	12 02 2021
Fuels Management	Seymour Douglas		361-961 3265	25 OCT 21
Corpus Christi Army Depot	Donna Kraidy		361-961-0176	10-22-21

1.6 Designated Person

"112.7(f)(2): Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management."

The PWD Environmental Director, located in Building 19, telephone (361) 961-5353, is the primary Designated Person, described in 40 CFR 112.7(f)(2), who reports to NAS Corpus Christi management and is accountable for discharge prevention.

The first backup designated person is the Environmental SPCC/Tank Manager, telephone (361) 961-5355.

The second backup person to call, in case of a spill emergency, is the 24-hour Command Duty Officer (CDO), telephone (361) 534-9093.

1.7 Amendments of SPCC Plans

1.7.1 Five Year Plan Reviews

"112.5(b): Notwithstanding compliance with paragraph (a) of this section**, complete a review and evaluation of the SPCC Plan at least once every five years from** the date your facility becomes subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, "I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result."

The Designated Person identified in **Section 1.6** is responsible for initiating and coordinating the SPCC Plan reviews. The Facility Owner/Operator, Designated SPCC person, NAVFAC-SE region, or authorized contractor firm, must complete a review of the SPCC plan and on-site evaluation of the facility oil storage tanks at least once every five (5) years or when significant changes in the Facility occur. The completed review and evaluation must be followed by a signed statement as to whether the Plan will be amended. The record of the SPCC Plan Five-Year Reviews and Amendments is contained in **Appendix E**. 40 CFR 112.3(d) requires that SPCC plan five-year updates and technical amendments must be reviewed and certified by a licensed Professional Engineer (PE).

The SPCC Plan must be amended within six (6) months of the review and evaluation to include all identified facility changes, and more effective field-proven prevention and control technology, that will significantly reduce the likelihood of a discharge from regulated oil tanks and oil transfers. The site must implement any SPCC plan update or amendment as soon as possible, but not later than six (6) months following the preparation and PE certification of any amendment.

1.7.2 Facility Change Amendments

"112.5(a): Amend the SPCC Plan for your facility in accordance with the general requirements in §112.7, and with any specific section of this part applicable to your facility, when there is a **change in the facility design, construction, operation, or maintenance** that materially affects its potential for a discharge as described in §112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment."

The SPCC plan must be amended when there is a change in the Facility design, construction, operation, or maintenance that materially or significantly affects the Facility's potential for an oil discharge, in quantities that may be harmful, into or upon navigable or surface waters, or adjoining shorelines, or into a drainage system that may connect to open waters, or an oil discharge that may seriously affect natural resources. Examples of changes include, but are not limited to, the following:

- Commissioning or decommissioning containers
- Replacement, reconstruction, or movement of containers
- Reconstruction, replacement, or installation of piping systems
- Construction or demolition that might alter secondary containment structures
- Changes of product or service
- Revision of standard operation, inspection, or maintenance procedures

A plan technical amendment to include any of these changes must be prepared within six (6) months after the change occurs and must be implemented as soon as possible, but not later than six (6) months following preparation of the amendment. 40 CFR 112.3(d) requires that SPCC plan 5-year updates and technical amendments must be reviewed and certified by a licensed PE.

Non-technical amendments can be made by the Designated SPCC person and are documented in the appropriate plan section. Non-technical amendments can include administrative updates, such as changing facility or person names and telephone numbers, correcting data errors, and noting that ancillary tanks were removed or taken out of service (OS).

The record of SPCC Plan Five-Year Reviews and Amendments is contained in **Appendix E**.

1.7.3 Spill Reports & EPA Directed Amendments

"112.4(a): Notwithstanding compliance with §112.3, whenever your facility has discharged **more than 1,000 U.S. gallons of oil in a single discharge** as described in §112.1(b), or discharged **more than 42 U.S. gallons of oil in each of two discharges** as described in §112.1(b), occurring **within any twelve-month period**, submit the following information to the Regional Administrator **within 60 days** from the time the facility becomes subject to this section:

- Name of the facility.
- Name of the owner or operator of the facility.
- Location of the facility.
- Date of initial facility operation.
- Maximum storage or handling capacity of the facility and current normal daily throughput.
- Description of the facility, including maps, flow diagrams, and topographical maps.
- A complete copy of the SPCC Plan with any amendments.
- The cause of such spill, including a failure analysis of the system or subsystem in which the failure occurred.
- The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements.

- Additional preventive measures taken or contemplated to minimize the possibility of reoccurrence.
- Such other information as the EPA Regional Administrator may require."

If any spill were to occur at the facility that meets the criteria of 40 CFR 112.4(a), which is listed above, then a written spill report must be submitted to the EPA Regional Administrator within 60 days. Following receipt of the facility spill report, the EPA may decide to require an amendment to the SPCC Plan, and the facility will be notified by certified mail. EPA will specify the terms of such a plan amendment.

Within 30 days from receipt of the notice, the facility may submit written information, views, and arguments on the proposed amendment. After considering all material presented, EPA will either notify NAS Corpus Christi that an amendment is required or will rescind the notice.

Any EPA proposed amendment becomes a part of the SPCC Plan 30 days after such notice unless NAS Corpus Christi appeals. The amendment should be implemented as soon as possible, but not later than six months after the amendment becomes a part of the SPCC Plan.

NAS Corpus Christi **did not** discharge more than 1,000 United States (U.S.) gallons of oil in a single discharge as described in §112.1(b), or discharge more than 42 U.S. gallons of oil in each of two discharges as described in §112.1(b), occurring within any twelve-month period. As such, NAS Corpus Christi **was not required** to submit their SPCC Plan with any amendments to the EPA for review. The NAS Corpus Christi list of reportable spills is maintained at the PWD Environmental office.

SECTION 2

General Facility Information

Facility Owner/Operator: Commanding Officer

Address: Naval Air Station Corpus Christi
11001 ‘D’ Street, Suite #101
Corpus Christi, Texas 78419

Telephone: CDO (361) 534-9093

2.1 Facility Description

“112.7(a)(3): Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes.”

NAS Corpus Christi is located 10 miles southeast of downtown Corpus Christi, in Nueces County, Texas. The station is situated on 2,844 acres of land on the northern end of the Encinal Peninsula. NAS Corpus Christi was commissioned in 1941 and has served as headquarters for the Naval Air Advance Training since 1948. The station is headquarters for Chief of Naval Air Training (CNATRA) and Training Air Wing FOUR, which provides training to potential Naval and Marine aviators as well as students from other allied nations. Currently, the station produces approximately 500 newly qualified aviators each year. The station is also home to the CCAD, one of the Army’s major repair depots for rotary wing aircraft, and the CBP, Air and Marine P-3 Operations facility.

The mission of NAS Corpus Christi is to provide support to aviation facilities and units of CNATRA and other tenant activities. This station is a well-developed military facility, with most areas containing structures, impervious paved roads, and parking lots. However, there are also natural land areas within the station, with grass and trees, and a coastal waterfront. The station has an approximate elevation of 15 feet above mean sea level, located adjacent to Corpus Christi Bay. The station has a large and varied drainage system, including interconnected ditches and swales, infiltration areas, storm water inlets, culverts, and other flow structures; OWS; and storm water ponds. The station is divided into 47 storm water drainage basins. Industrial areas are drained through storm water basins and eventually into Corpus Christi Bay. In the event that oil is released into navigable waters, the NAS Corpus Christi **FRP** describes the process to hire a spill response contractor, who has the equipment and trained personnel to perform the cleanup actions.

Figure 2-1 shows the NAS Corpus Christi location and **Appendix B** includes a facility diagram.

FIGURE 2-1
Location Map

2.2 Oil Storage Containers

"112.7(3)(i): You must also address in your Plan the type of oil in each fixed container and its storage capacity. For mobile or portable containers, either provide the type of oil and storage capacity for each container or provide an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities;
(**capacities of 55 gallons or greater**)"

NAS Corpus Christi stores a variety of Petroleum, Oils, and Lubricants (POL) for use in ground vehicles, aircraft, marine vessels, as well as fuel for back-up emergency electricity generation. These POLs are stored in a variety of ASTs, USTs, DSAs, and mobile/portable equipment throughout the Station. In addition, ASTs containing used engine oils, Used Cooking Oils (UCO), and various types of OFOE (including electrical transformers and hydraulic oil reservoir tanks) are found throughout the station. DSAs with 55-gallon drums containing new and used lubricating oils are located throughout the station. Other oil storage tanks or transport areas such as mobile equipment, loading areas, OWS, and facility piping are found at NAS Corpus Christi, and are also discussed in this Plan, where appropriate.

The total oil storage capacity is summarized in **Table 2-1**. Information on OWS units at NAS Corpus Christi is found in **Table 2-2**. Information pertaining to ASTs, and mobile/portable equipment that meet the criteria specified in 40 CFR 112 can be found in **Table 2-3**. Information pertaining to OFOE can be found in **Table 2-4**. USTs are counted separately as discussed in **Section 2.2.7**.

TABLE 2-1
Summary of Oil Storage Containers & Capacities

Container Type	Quantity	Total Oil Storage Capacity (gallons)	Additional Details
NAS			
Bulk Field-Erected ASTs	2	492,231	See Appendix A
Shop-Fabricated ASTs	37	35,679	See Appendix A
Out of Service ASTs	5	3,500	See Appendix AB
Mobile / Portable Storage	10	29,449	See Appendix AB
Drum Storage Areas	26	4,895	See Appendix AB
OFOE (Pad-mounted Transformers)	158	28,910	See Table 2-4
OFOE (Hydraulic Containers)	19	2,230	See Table 2-4
UCO	2	588	See Appendix AB
Total NAS Aboveground Oil Storage Capacity		**597,482**	
USTs	3	30,000	See Appendix A
Out of Service USTs (not Fillable)	9	210,000	See Appendix AB
Total NAS Oil Storage Capacity (with USTs)		**627,482**	
CCAD			
Shop-Fabricated ASTs	17	43,808	See Appendix A
Out of Service ASTs	3	4,150	See Appendix AB
Mobile / Portable Storage	4	260	See Appendix AB
Drum Storage Areas	26	10,285	See Appendix AB
OFOE (Pad-mounted Transformers)	68	21,010	See Table 2-4
OFOE (Hydraulic Containers)	62	11,462	See Table 2-4
Total CCAD Aboveground Oil Storage Capacity		**90,975**	
Total Aboveground Oil Storage Capacity (NAS + CCAD)		**688,457**	

Each of the items listed in **Table 2-1** is addressed in this Plan, in the following order:

1. High-Risk Oil Storage Facilities
    - Aviation Fuel Facility 1717
    - Government Operated Vehicle (GOV) Gas Station – Facility 154
    - Navy Exchange (NEX) Gas Station – Facility 1290
    - CCAD Fuel Farm – Facility 8
2. Ancillary Aboveground Storage Tanks
3. Mobile Refueler Trucks and Portable Containers
4. Used Cooking Oil Containers
5. Drum Storage Areas
6. Facility Piping
7. Underground Storage Tanks
8. Oil-Filled Operational Equipment
    - Elevator Hydraulic Oil Tanks
    - Electrical Transformers
9. Oil Water Separators
10. Out of Service or Permanently Closed Containers

2.2.1 High-Risk Oil Storage Facilities

High-risk oil storage sites at NAS Corpus Christi were established based upon review of both the volume of oil stored at each location and the frequency of transfer operations completed at that facility. The sites are listed below.

2.2.1.1 Aviation Fuel Facility 1717

Detailed information for tanks at the Aviation Fuel Facility is included in **Table 2-3** and **Appendix A,** Tank Data sheets. See **Figure 2-2** and **Appendix B** for diagram and location of this area.

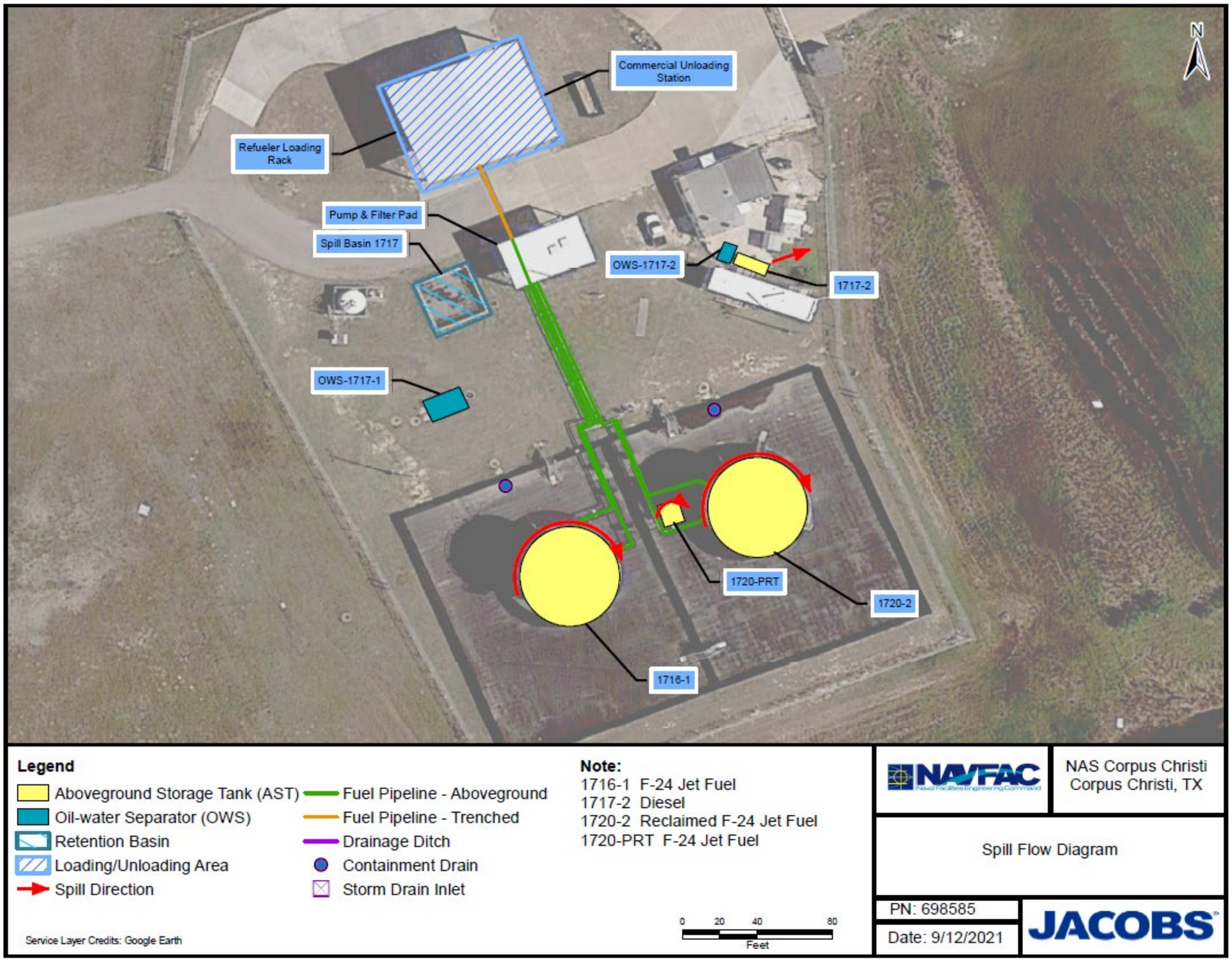
The Aviation Fuel Facility 1717 is located at the south end of the airfield on First Street. This facility is a government-owned, contractor-operated facility. LB&B Associates operates the bulk fuel storage and transfer services at NAS Corpus Christi, under a contract with DLA.

There are two single walled, carbon steel, field-erected ASTs, 1716-1 and 1720-2, installed in 1987 that store 244,604-gallons and 247,627-gallons of F-24 jet fuel, respectively. The bulk storage ASTs are equipped with leak detection, automatic tank gauging (ATG), and high-level alarms. Both ASTs have automatic high-level control, overfill prevention valves (OPV) installed on fuel receipt inlet pipelines. The bottom plating of ASTs 1716-1 and 1720-2 (in contact with sand) is provided with cathodic protection (CP) using an impressed-current system. Each tank has a fixed, cone shaped roof. Secondary containment is provided by individual dikes, with vertical concrete walls and sloped earthen floors, all covered with a flexible membrane liner. Each containment has a normally closed drain with post indicator valve (PIV) that controls flow to OWS-1717-1 (3,450-gallons).

The piping associated with the bulk ASTs is aboveground, single walled, stainless steel. The section of piping from the containment dike walls to the pump/filter pad is out of containment. Then it travels to the loading/unloading station, Facility 1719, directly north of the ASTs, in a covered concrete trench, which is supported above the trench bottom surface (not in contact with soil). The loading/unloading station contains an unloading area (not considered a rack) for commercial fuel truck deliveries to the bulk ASTs. There is also a loading rack for filling military refueler trucks, using a flexible hose attached to a mechanical swivel arm. Each side of the loading/unloading station has a concrete containment area, which is curbed and sloped towards the mid-point, with a center trench drain between the two sides. The drain flows into a remote spill basin (11,316 gallons) with a dual PIV that can be used to control flow into either OWS-1717-1 (3,450 gallons) or the sanitary sewer. The bulk ASTs are electronically gauged during filling and continuously monitored via the ATG system installed in each tank.

There is one shop-fabricated AST generator, 1717-2, that stores 1,000-gallons of diesel. The generator provides backup power to the Fuels operation office and fuel sampling lab. The lab drains into OWS-1717-2 for grey water pretreatment. The spill basin also serves as secondary containment for DSA-1719, which stores two 55-gallon drums for F-24 waste fuel recovery, and for storm drains located around the fuel facility.

FIGURE 2-2
Aviation Fuel Facility



2.2.1.2 GOV Gas Station – Facility 154

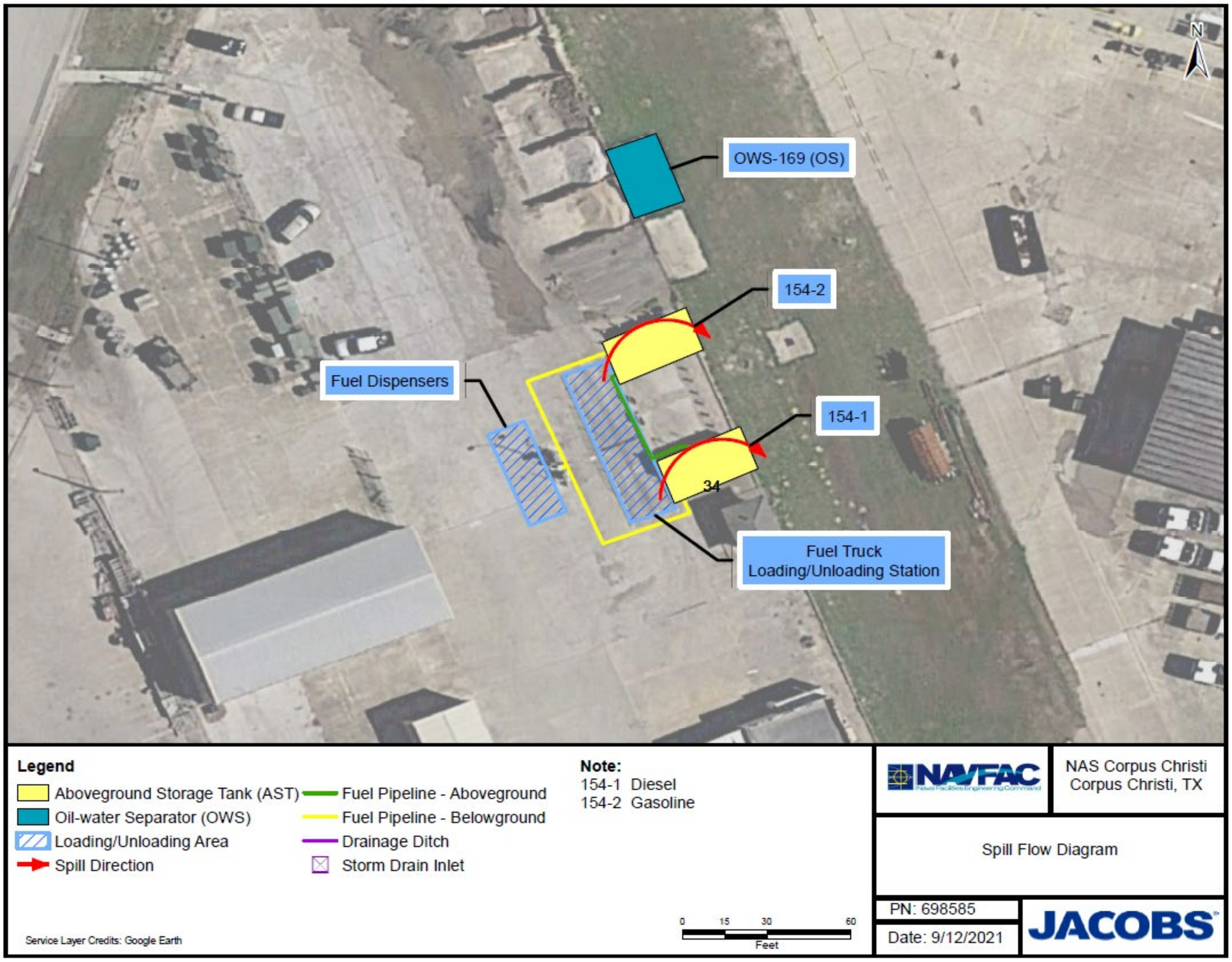
Detailed information for tanks at the GOV Gas Station is included in **Table 2-3** and **Appendix A,** Tank Data sheets. See **Figure 2-3** and **Appendix B** for diagram and location of this area.

The GOV Gas Station, Facility 154, is located at the North end of the airfield off Second Street. It operates 24 hours per day, 7 days per week, but is unmanned and unassisted. This facility is a government-owned, contractor-operated facility, used to store fuel products and fill GOVs. LB&B Associates (DLA contractor) fills and operates military refueler trucks (2,000-gallon capacity) that are used to deliver gasoline and diesel products to generators and ASTs throughout the station.

There are two shop-fabricated, concrete encased, double-walled ASTs, 154-1 and 154-2, which were both installed in 2005. AST 154-1 stores 8,000-gallons of diesel, and AST 154-2 stores 4,000-gallons of gasoline. The ASTs are equipped with leak detection, ATG system, low- and high-level alarms, and manual shut-off valves. The ATG system is monitored at the Aviation Fuel Facility office. There are automatic high-level control OPVs installed on fuel receipt inlet pipeline. The ASTs are installed on a concrete slab adjacent to a loading/unloading station.

The section of piping from the ASTs to the piping transition sumps are coated carbon steel, single walled, which then changes to fiberglass/plastic, double-walled, for the underground portion to the dispensers. Commercial delivery trucks off-load fuel into the ASTs at the loading/unloading station directly west of the ASTs, by standard camlock fitting on a flexible hose. The ASTs are electronically gauged during filling, and continuously monitored via the ATG system installed in each tank. The loading/unloading station has the ability to fill military refueler trucks, by use of a flexible transfer hose and camlock fitting, or to fill smaller sized vehicles through the use of two standard fuel nozzle dispenser pumps. The driveway for the loading/unloading station has a containment area, which is curbed and sloped towards the mid-point, with a trench drain and normally closed PIV. This containment area has a volume of 7,050 gallons. The PIV can be used to control flow to OWS-169 (OS), but it is currently out of service. A project is planned to replace the OWS with a remote spill basin of 3,340-gallon capacity. Additional details on this project can be found in **Section 3.3**.

FIGURE 2-3
GOV Gas Station



2.2.1.3 NEX Gas Station – Facility 1290

Detailed information for tanks at the NEX Gas Station is included in **Table 2-3** and **Appendix A,** Tank Data sheets. See **Figure 2-4** and **Appendix B** for diagram and location of this area.

The NEX Gas Station, Facility 1290, is located near the south entrance of the base, at the corner of Lexington Boulevard and First Street. This facility provides retail sales and motor vehicle fuel to authorized personnel. A NEX attendant is on duty to monitor fuel dispensing operations, but only during hours when the Mini-Mart is open. The dispensers remain open after hours for credit card sales only. There is an emergency shut-off switch, located next to the Mini-Mart entry door. This facility is considered a higher risk due to the frequency of vehicle fuel transfers at the dispensers by untrained personnel and the large quantity commercial fuel deliveries by trained personnel into the USTs.

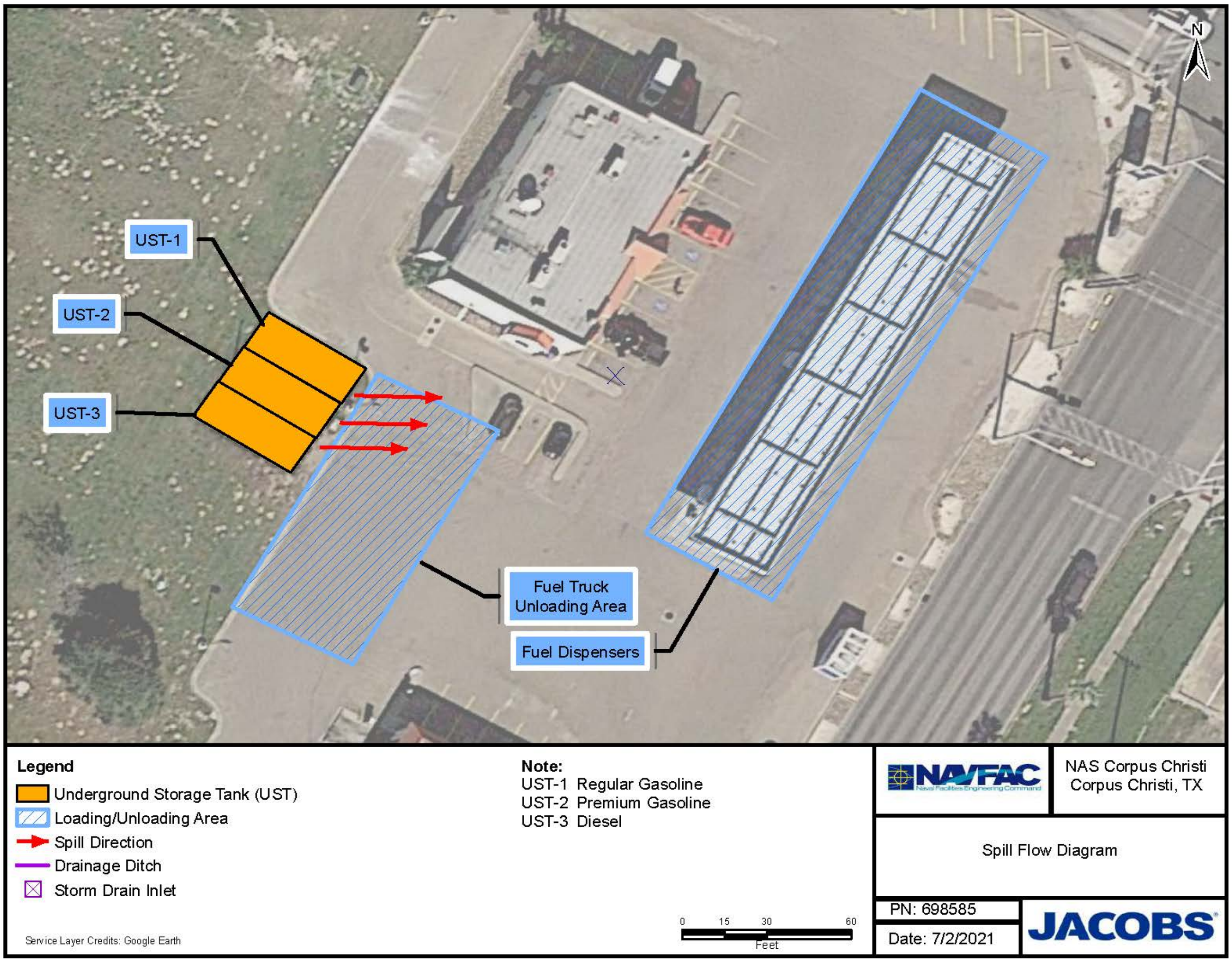
The NEX Gas Station has three 10,000 gallon, fiberglass reinforced plastic, single-walled USTs, which were installed in 1986. UST-1 stores regular gasoline, UST-2 stores premium gasoline, and UST-3 stores diesel. The USTs are monitored by a Veeder Root TLS 350 ATG, which includes a leak detection system. The ATG is automatically updated after each receipt of fuel, and the leak detection system cycles every 24 hours with a print-out. The NEX Mini-Mart manager verifies and files the leak detection slips daily. The ATG system is tested for proper operation annually.

The USTs are filled by commercial fuel delivery trucks, via a transfer hose with camlock connections into the UST fill ports, located within containment sumps on top of each UST. These sumps are intended to capture any minor spills during fuel transfer. There is no secondary containment berm around the fuel truck unloading area. The operation is monitored by NEX personnel to verify that standard operating procedures (SOPs) are followed, which address equipment usage, spill response, security, and inventory control. Fuel transfers should also follow the procedures outlined in **Section 9.**

The fuel is dispensed to motor vehicles by standard suction dispensing pumps. The piping is underground, fiberglass/plastic, double-walled, from the USTs to the dispenser pump sumps. Any leak within the underground piping would flow in a downward slope through the interstitial space and collect in the dispenser sump. The sumps are checked monthly by visual inspection. Currently, there are no leak detection sensors in the sumps, but funding was requested to make sump repairs and install sensors. The dispensers are constructed with compliant breakaway hose fittings, automatic shutoff nozzles, and fire-rated shutoff shear valves.

Fuel dispensers are maintained by the NEX Command, and the USTs with underground piping are maintained by Commander of Naval Installations Command (CNIC) / PWD, using off-site contractors on an as-needed basis. Active containment measures are provided by spill kits, located in the fuel delivery trucks and at the dispenser area, which is composed of absorbent materials.

FIGURE 2-4
NEX Gas Station



2.2.1.4 CCAD Fuel Farm – Facility 8

Detailed information for tanks at the CCAD Fuel Farm is included in **Table 2-3** and **Appendix A,** Tank Data sheets. See **Figure 2-5** and **Appendix B** for diagram and location of this area.

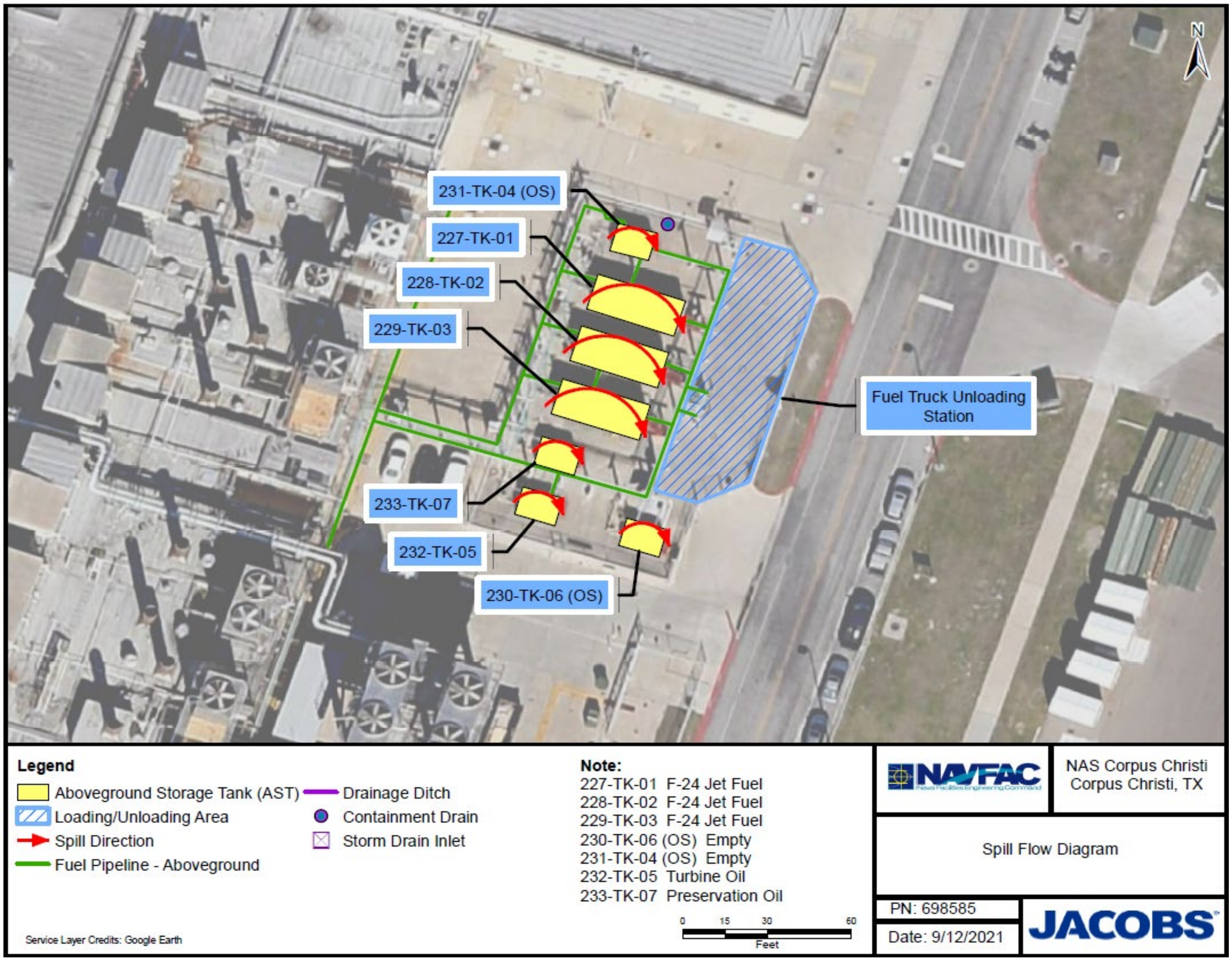
The CCAD Fuel Farm is located on the east side of Building 8 next to Fourth Street. The Fuel Farm is comprised of seven concrete encased, double-walled ASTs. The Fuel Farm supplies F-24 jet fuel, fuel additives, and various lubricating oils, through overhead pipelines to the CCAD Jet Engine Test Cells. The ASTs are equipped with an ATG and leak detection system. The ASTs were installed in 1996 and hold the following list of volumes and products.

- 227 (TK-01): 10,000-gallons, F-24 Jet Fuel
- 228 (TK-02): 10,000-gallons, F-24 Jet Fuel
- 229 (TK-03): 10,000-gallons, F-24 Jet Fuel
- 230 (TK-06) (OS): 2,000-gallons, Empty
- 231 (TK-04) (OS): 2,000-gallons, Empty
- 232 (TK-05): 2,000-gallons, Turbine Oil
- 233 (TK-07): 2,000-gallons, Preservation Oil

The Fuel Farm area is surrounded by a concrete curbed area for containment of piping and fuel deliveries, with a total volume of 36,134 gallons. Flow from the containment area is controlled by a normally closed drain valve, which goes to an industrial wastewater sump, leading to the wastewater treatment plant. The piping network for ASTs is aboveground, single-walled, coated carbon steel, with fuel or oil going into Building 8, Jet Engine Test Cells, through overhead piping.

The ASTs are filled at a manifold with collocated remote tight fill ports for each AST, which is within the curbed containment area. Each fill port has a digital meter connected to the ATG system, which is visible to the fuel truck drivers. F-24 Jet fuel is delivered to ASTs 227 (TK-01), 228 (TK-02), 229 (TK-03), by the DLA contractor, LB&B Associates, using military refueler trucks that were filled at the Aviation Fuel Facility loading rack. ASTs 232 (TK-05) and 233 (TK-07), are filled with various lube oils by commercial fuel delivery trucks.

FIGURE 2-5
CCAD Fuel Farm



2.2.2 Ancillary Aboveground Storage Tanks

NAS Corpus Christi has numerous shop-fabricated ASTs (including integral generator tanks) as listed in **Table 2-3.** Data sheets, photos, and spill flow diagrams for the ASTs are shown in **Appendix A**. Locations of these ASTs are shown in **Appendix B**.

These ASTs support a wide range of purposes including ancillary generator supply, dispensing fuel for vehicles, fuel and lube oil supply to CCAD jet engine test cells, and storing used oil. The shop-fabricated ASTs are typically built to Underwriters Laboratories (UL) 142 or UL 2085 (concrete protected) Standards.

The shop-fabricated ASTs are inspected monthly by either a tank owner custodian, tenant organization employees who are trained and experienced in tank inspection, or the PWD Environmental Tank Manager. Shop-fabricated ASTs are manned during fuel transfers to fill or empty the tank. Shop-fabricated ASTs used for generator support are also manned during startup and inspection periods. Inspections occur monthly for standard checks and during use. Generator tanks should be inspected regularly per the relevant NAS Corpus Christi SOPs during periods of operation to minimize leaks under pressure.

The shop-fabricated ASTs use several types of fuel level sensing equipment ranging from dial gauges, liquid level floats, sight glass and electronic sensor probes, which are detailed in **Section 6.4.2**. In cases where double-walled ASTs have sealed interstitial spaces, manual visual checks are performed, or leak detection probes monitor the space for fuel or water. Integral generator tanks that use fuel compatible rubber hoses should utilize factory approved clamping systems to ensure tight connections from the tank to the generator. Some ASTs are equipped with integral fuel pumps and dispenser hoses.

The shop-fabricated ASTs are filled by military refueler trucks operated by DLA contractor, LB&B Associates, that were loaded with fuel at the GOV gas station, Facility 154. Tanks holding used oil are emptied by a contractor. Personnel transferring regulated oil to or from a shop-fabricated tank are required to follow established SOPs and, as a minimum, use procedures in **Section 9.**

2.2.3 Mobile Refueler Trucks and Portable Containers

Information for the mobile containers is included in **Table 2-3.** Photos of the mobile containers are shown in **Appendix AB**. The locations of these mobile containers can be found in **Appendix B**.

The DLA Fuels contractor at NAS Corpus Christi, LB&B Associates, currently operates five 5,000-gallon F-24 mobile refueler trucks, one 2,000-gallon F-24 mobile refueler truck, and one 2,000-gallon compartmented mobile refueler truck that holds gasoline and diesel. The refueler truck parking area is Facility 28, located at north end of the airfield. The truck parking is located within a concrete containment area, which is sloped into a drainage spill basin attached to OWS-28-1; the containment area and OWS have a combined capacity of 17,928 gallons. This containment area is sufficiently sized to contain the most-likely sized spills that may occur from a refueler truck.

The Navy owns three mobile generators for backup power supply, MG-1 with 250 gallons, MG-4 with 84 gallons, and G-70 with 115 gallons of diesel fuel capacity. When not in temporary use at another facility, they are staged at Facility 305, PWD Equipment Storage Area. The generators are parked on top of flexible vinyl dikes when they are holding fuel. These containments are sufficiently sized to provide at least 110 percent spill volume for the generators.

CCAD owns four mobile generators for backup power supply, AMC 209, 219, 220, 221, each with 65 gallons of diesel fuel capacity. When not in temporary use at another facility, they are staged at Hangar 44. The generators are parked on top of plastic spill pallets when they are holding fuel. These containments are sufficiently sized to provide at least 110 percent spill volume for the generators.

2.2.4 Used Cooking Oil Containers

"112.12: If you are the owner or operator of an onshore facility, you must: (a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed in this section."

Information for each UCO container is listed in **Table 2-3**. Photos of the UCO containers are shown in **Appendix AB**. The diagrams in **Appendix B** include the location of UCO containers.

UCO containers with at least a 55-gallon capacity, are considered a type of portable container for inspection purposes. NAS Corpus Christi generates UCO at dining facilities and other food service establishments, which is stored in UCO containers at the following locations:

- Catalina Consolidated Club (Facility 1283)
- Golf Course Grill (Facility 1735)

The UCO containers are inspected by designated Morale, Welfare, and Recreation (MWR) personnel on a monthly basis. UCO containers are provided, owned, and maintained by the off-site contractor that empties them, under an exclusive contract with NAS Corpus Christi. This contractor is required to use the applicable oil transfer procedures outlined in **Section 9.**

2.2.5 Drum Storage Areas

Information for each DSA is listed in **Table 2-3**. Photos of the DSAs are shown in **Appendix AB**. The diagrams in **Appendix B** include the location of DSAs.

Steel drums or plastic containers with a capacity of at least 55 gallons are considered a type of portable container for inspection purposes. NAS Corpus Christi has 26 DSAs managed by the Navy, DLA, or DHS, and CCAD manages 26 DSAs, for the storage of used or new POL in drums.

Most DSAs are provided with adequate secondary containment, via the use of drum spill pallets, metal dikes, flammable lockers, or rolling carts inside shops, over-pack containers, spill basins, or concrete containment berms. DSAs are inspected at least monthly by the PWD Hazardous Waste (HW) Manager or designated DSA custodian.

Those DSAs that store used engine oil or waste fuel are also referred to as Satellite Accumulation Areas (SAA) in the HW Management plan. However, the SPCC plan inventory and location map will use the DSA acronym (not SAA). The reason is that SAA numbers do not apply to the storage of new POL products, so this will not satisfy 40 CFR 112. DSA numbers apply to both used and new POL, but only if stored in 55-gallon drums or larger. If used POL is stored in containers less than 55-gallon capacity, then it is not regulated by 40 CFR 112, and it will not have a DSA number in the SPCC plan, but it may have a SAA number. Therefore, the DSA and SAA inventories are usually not the same. DSA identification (ID) # in **Table 2-3** will include the Building # plus SAA # (if applicable).

2.2.6 Facility Piping

At NAS Corpus Christi, higher risk, large diameter, aboveground F-24 Jet fuel transfer piping is found at the Aviation Fuel Facility. The aboveground piping is single-walled, stainless steel, and is partially located in containment dikes around the field-erected ASTs. The section of piping from containment dike walls to the pump/filter pad is out of containment. Then it travels to the loading/ unloading station, in a covered concrete trench, which is above the trench bottom surface (not in contact with dirt). American Petroleum Institute (API) 570 inspections and pressure tests have been performed on the bulk fuel pipelines at the Aviation Fuel Facility and GOV Gas Station.

Lower risk, small-diameter, aboveground piping is installed from shop-fabricated stand-alone ASTs, going to generators without integral base tanks, CCAD jet engine test cells, or fire pumps. Aboveground piping is also installed at the GOV Gas Station, going from ASTs to underground piping transition sumps. All the smaller aboveground piping is single-walled, coated carbon steel, with some or no secondary containment; active measures are needed for spill control when outside of containment. POLs transferred within this piping include F-24 Jet fuel, gasoline, diesel fuel, and lube oils.

Lower risk, small-diameter, underground piping is installed at the NEX gas station, going from USTs to transition sumps under the vehicle fuel dispensers. Underground piping is also installed at the GOV Gas Station, going from AST piping transition sumps to the loading/ unloading/ dispensing station. Underground piping is installed at the Marina Boat House, going from the AST piping transition sump towards the pier dispenser. The Marina fuel system is temporarily out of service, pending completion of repairs. All the underground piping is double-walled, fiberglass/plastic with interstitial monitoring. POLs transferred within this piping include gasoline and diesel fuel.

Generators with integral base tanks normally have single-walled rubber hoses for diesel fuel supply and return, which are located inside generator enclosures, and have no secondary containment, so active measures are needed for spill control.

2.2.7 Underground Storage Tanks

Information for each UST is listed in **Table 2-3.** Data sheets, photos, and spill flow diagrams for the USTs are shown in **Appendix A**. Location of each UST is shown in **Appendix B**.

NAS Corpus Christi has three USTs (10,000 gallons each) at the NEX Gas Station, that are made of fiberglass reinforced plastic, single-walled, which were installed in 1986. UST-1 stores regular gasoline, UST-2 stores premium gasoline, and UST-3 stores diesel.

Though the USTs are exempt from the SPCC rules, because they meet the requirements of 40 CFR 280, the transfer of oil aboveground during the UST fill process is regulated by 40 CFR 112, which requires their inclusion in the SPCC plan. The USTs are filled by commercial fuel delivery trucks, via a transfer hose connected to UST fill ports, located within containment sumps on top of each UST. These sumps are intended to capture minor spills when the transfer hoses are connected or disconnected. Each UST fill port sump has a release valve that allows spilled fuel to drain back into the tank. There is no curbed containment area for fuel delivery trucks when they transfer fuel into the USTs. Active containment measures are provided by spill kits (composed of absorbent materials), located in the fuel trucks and at the dispensing area.

Continuous inventory control of the fuel in each UST is maintained by a Veeder Root ATG with leak detection monitoring system, with high-level alarm. Records of fuel receipt, inventory control, and reconciliation are kept at the NEX Mini-Mart in Building 1290. ATG is automatically updated after each receipt of fuel, and leak detection system cycles every 24 hours with a print-out. The NEX Mini-Mart manager verifies and files the leak detection slips. The ATG system is tested for proper operation annually. Fuel dispensers are maintained by the NEX Command, but the USTs with underground piping are maintained by CNIC/ PWD, using off-site contractors on an as-needed basis. Records of UST system inspections and repairs are kept at the PWD Environmental office.

All transfer of fuel into the USTs and fuel dispensing operations are monitored by NEX personnel to verify that SOPs are followed; fuel transfers should be completed in accordance with **Section 9.**

2.2.8 Oil-Filled Operational Equipment

2.2.8.1 Hydraulic Oil Tanks

NAS Corpus Christi utilizes 19 and CCAD utilizes 23, hydraulic oil operated elevator tanks, with greater than 55 gallons capacity. CCAD also has 39 miscellaneous hydraulic oil containing equipment for use throughout their industrial shops. These tanks meet the EPA definition of OFOE and are regulated by the SPCC Rule in 40 CFR 112. All regulated hydraulic oil containers are listed in **Table 2-4.**

The locations of the hydraulic elevator tanks are shown in **Appendix B**. For most of the elevator hydraulic oil tanks, visual inspection is necessary to confirm the exact oil capacity.

After an elevator hydraulic oil tank is put into operation by an outside contractor, there is no reason for base personnel to refill it with oil during normal usage because it is a closed system and the oil is not consumed during operation.

For NAS Corpus Christi hydraulic oil operated elevators (also known as vertical transportation equipment), the PWD Facilities Maintenance office performs the elevator machinery inspections semi-annually. This inspection will identify any leaks in the hydraulic oil system. An off-site elevator service contractor, Inspection Experts, performs maintenance and repairs when requested by PWD. The inspection and repair records are maintained at the PWD Facilities Maintenance office. CCAD conducts their own elevator inspection and maintenance program.

Secondary containment for all the hydraulic elevator tanks is typically provided by concrete floors in enclosed machinery rooms, with doors and installed door thresholds. Some vehicle maintenance facilities have hydraulic oil operated lifts, but typically the oil tank capacity is less than 55 gallons. Therefore, the lift tanks are not regulated and not included in the SPCC plan.

2.2.8.2 Electrical Transformers

NAS Corpus Christi has 158 pad-mounted transformers, and CCAD has 68 transformers, with greater than 55 gallons capacity of non-polychlorinated biphenyl mineral oil. These transformers meet the EPA definition of OFOE and are regulated by the SPCC Rule in 40 CFR 112. All regulated transformers are listed in **Table 2-4**. The locations of the transformers are shown in **Appendix B**.

In addition, there are 6 pad-mounted transformers at NAS Corpus Christi with only 40 gallons of oil that are associated with a building or structure, which were included in **Table 2-4** and the location map for the Tank Manager's information (but they are not regulated). Pole-mounted transformers have an oil capacity that is typically less than 55 gallons, and are therefore not regulated by 40 CFR 112 and not part of this Plan.

The PWD Utilities office oversees a maintenance and inspection program for transformers located at NAS Corpus Christi and CCAD facilities. Annual inspections, repairs as needed, and general servicing of transformers is performed as scheduled by a contractor, Nueces Electric Cooperative (NEC). Any leaks or spills of oil, documented with unsatisfactory conditions, are promptly corrected. Should a transformer leak, oil spillage would be localized and easily contained. Analytical testing and excavation of soil would be conducted to remediate the spill site as needed. More thorough transformer inspections are performed every 5 years by a third-party contractor named URS. Inspection and repair records are maintained at the PWD Utilities office. CCAD conducts their own transformer inspection and maintenance program. Response procedures are located in the **NAS Corpus Christi FRP**.

2.2.9 Oil/Water Separators

Active OWS systems at NAS Corpus Christi are included in this plan for Navy inventory and management purposes. Refer to **Table 2-2** below for an inventory. If any OWS or other type of collection basin is used for spill control purposes, then the secondary containment volume of the OWS shall be listed in **Appendix AB**, along with OWS photos. The locations of these OWS are shown in **Appendix B**.

OWS are utilized throughout NAS Corpus Christi as pre-treatment devices for wastewater or storm water. Some of the OWS listed in **Table 2-2** may function as a spill basin or drain sump, which does not separate the oil from water. Any OWS used only for water treatment, but not as a secondary containment, and not as an oil storage tank, is not regulated by 40 CFR 112. However, a spill basin is required to be listed in the SPCC Plan, if used as a secondary containment for possible oil spills. This applies to Fuel Truck Parking Area 28 and the Aviation Fuel Facility 1717.

The OWS systems and spill basins at NAS Corpus Christi are inspected by PWD Facilities, contractor, or tenant command staff. To ensure they function properly, each OWS or spill basin will be pumped out and cleaned as required, to remove accumulated oil and sludge, with a vacuum/used oil truck for disposal.

TABLE 2-2
Oil Water Separators

OWS #	Location
Spill Basin 28 + OWS-28-1 (combined)	Fuel Truck Parking Area
Spill Basin-1717	Aviation Fuel Facility
OWS-28-2 (OS)	Fuel Truck Parking Wash Pad
OWS-50	Customs Aircraft Wash Rack
OWS-51	Hangar 51 Navy Ground Support Equipment (GSE)
OWS-57	Hangar 57 Aircraft Wash Rack
OWS-169 (OS)	GOV Gas Station
OWS-305 (OS)	PWD Equipment Storage Wash Pad

TABLE 2-2
Oil Water Separators

OWS #	Location
OWS-344	Dyn-Corp Wash Pad
OWS-388 (OS)	PWD Transportation Wash Pad
OWS-1281 (OS)	BOQ Car Wash Pad
OWS-1291	NEX Car Wash Pad
OWS-1717-1	Aviation Fuel Facility
OWS-1717-2	Aviation Fuel Facility
OWS-1742	Fire Department Wash Rack
OWS-1857 (OS)	DLA Hazmat Storage
OWS-4146	Marina Boat Wash Rack
OWS-Dimmit (OS)	Family Housing Car Wash Pad
OWS-Taxiway-W	Runway Aircraft Wash Rack
OWS-45	CCAD Aircraft Wash Rack
OWS-4090	CCAD Motor Pool Wash Rack

2.2.10 Out of Service or Permanently Closed Containers

"112.2: Permanently closed means any container or facility for which:
(1) All liquid and sludge has been removed from each container and connecting line; and
(2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure."

"112.1(b)(3): [The SPCC Rule also applies to] Any container that is used for standby storage, for seasonal storage, or for temporary storage, or not otherwise "permanently closed" as defined in 112.2"

NAS Corpus Christi has five ASTs that are OS: 41-1 (OS) (moved to Building 305), 62-G (OS), 254-G (OS), 1215-G (OS), and 4006-T (OS) (moved from Building 1743). CCAD has three ASTs that are OS: 35-1 (OS), 230-TK-06 (OS), and 231-TK-04 (OS). The three NEX Gas Station USTs and Marina AST 1758-T (1757) are temporarily OS, pending completion of repairs. They are intended to be put back into service, so this plan will maintain Tank Data sheets with Spill Flow diagrams for them. There are two sites with closed or abandoned USTs: UST-12 (OS) at CCAD Maintenance Shop was abandoned under a concrete pad and is waiting to be permanently closed; UST-217 (OS) at the Old Underground Navy Fuel Farm includes 8 USTs filled with concrete, buried under a grassy field at the north end of First street.

These tanks are either empty or contain residual amounts of fuel. Information for these OS tanks is listed in **Table 2-3**, which can include the following status: good condition tanks that are currently not being used (inactive), out of compliance tanks that are waiting to be repaired, poor condition tanks that are waiting to be dispositioned, or on-site Permanently Closed / abandoned tanks. All formerly documented tanks that were previously removed from the Navy property are not listed in this plan. Photos of the OS tanks are shown in **Appendix AB**. Location of these tanks are shown in **Appendix B**.

If an aboveground or underground tank is taken out of service temporarily because it needs to be repaired but funding is not currently available, and there is no intent to permanently close or dispose the tank, then it is allowable for monthly, annual, and other inspections to be put on hold, provided the following actions are taken. As much fuel as possible must be removed from the tank and piping system, so there is no risk of undetected leakage. The tank fill port must be locked, and it must be clearly marked as “OUT of SERVICE” (weather proof) to ensure that nobody will accidentally add fuel to the tank, until all repairs have been completed. Inspections must be performed when the tank is put back into service, which starts when fuel is added to the tank.

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TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
NAS Aboveground Storage Tanks												
AST	7	Central Fire Station	7-G	Diesel	4,500	Double-Walled	CNIC / PWD	2005	Carbon Steel	Dial Gauge	No	Yes
AST	10	Fire Pump Room in Multi-Purpose Warehouse	10-2	Diesel	180	Double-Walled	CNIC / PWD	2014	Carbon Steel	Mechanical Gauge	No	No
AST	30	Generator House for Multi-Purpose Warehouse	30-G (10-1)	Diesel	2,000	Double-Walled	CNIC / PWD	2006	Carbon Steel & Concrete	Dial Gauge	Yes	No
AST	78	Fire Pump House for Hangar 42	42-1	Diesel	300	Double-Walled	CNIC / PWD	2015	Carbon Steel	Mechanical Gauge	Yes	No
AST	50-G	Customs Fire Pump House	50-1	Diesel	359	Double-Walled	DHS / CBP	2017	Carbon Steel	Mechanical Gauge	Yes	No
AST	50-G	Customs Fire Pump House	50-2	Diesel	359	Double-Walled	DHS / CBP	2017	Carbon Steel	Mechanical Gauge	Yes	No
AST	50	Customs Aircraft Hangar	50-3	Diesel	660	Double-Walled	DHS / CBP	2005	Carbon Steel	Dial Gauge	Yes	No
AST	50	Customs Aircraft Hangar	50-4	Diesel	357	Double-Walled	DHS / CBP	2006	Carbon Steel	Dial Gauge	Yes	No
AST	68	Air Traffic Control Tower	68-G	Diesel	300	Double-Walled	CNIC / PWD	2014	Carbon Steel	Dial Gauge	Yes	No
AST	104	Security Police	104-G	Diesel	80	Double-Walled	CNIC / PWD	2009	Carbon Steel	Dial Gauge	No	No
AST	111	Generator House for CNATRA Headquarters (HQ) 1	111-G (1742)	Diesel	250	Double-Walled	CNIC / PWD	2011	Carbon Steel & Concrete	Dial Gauge	No	No
AST	114	Fire Pump House for Hangar 55	114-T (55-1)	Diesel	280	Concrete Dike	CNIC / PWD	2000	Carbon Steel	Dial Gauge	Visual	No
AST	118	PWD Maintenance Shops Generator House	118-G (236)	Diesel	250	Double-Walled	CNIC / PWD	1992	Carbon Steel & Concrete	Dial Gauge	Yes	No
AST	121	Enterprise Land Mobile Radio (ELMR) Communication Tower	121-G	Diesel	217	Double-Walled	CNIC / PWD	2009	Carbon Steel	Dial Gauge	Yes	No
AST	155	GOV Gas Station	154-1	Diesel	8,000	Double-Walled	DLA	2005	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	155	GOV Gas Station	154-2	Gasoline	4,000	Double-Walled	DLA	2005	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	258	Fire Pump Room for < 90 Day HW Storage Area	258-1	Diesel	119	Double-Walled	CNIC / PWD	2020	Carbon Steel	Mechanical Gauge	Yes	No
AST	1099	Precision Approach Radar (PAR) Generator House	1099-G (PAR-1)	Diesel	211	Double-Walled	CNIC / PWD	2010	Carbon Steel	Dial Gauge	Yes	No

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
AST	1236	Tactical Air Navigation System (TACAN) Radar Generator House	1237-G (2607)	Diesel	500	Double-Walled	CNIC / PWD	1998	Carbon Steel	Mechanical Gauge	Yes	No
AST	1238	Hangar 58 Generator House	1238-G	Diesel	1,000	Double-Walled	CNIC / PWD	2006	Carbon Steel	Dial Gauge	Yes	No
AST	1241	Airfield Power Distribution	1241-G	Diesel	500	Double-Walled	CNIC / PWD	2012	Carbon Steel & Concrete	Dial Gauge	Yes	No
AST	1289	Sanitary Lift Station	1289-G	Diesel	134	Double-Walled	CNIC / PWD	2016	Carbon Steel	Dial Gauge	Yes	Yes
AST	1292	Sanitary Lift Station	1292-G	Diesel	60	Double-Walled	CNIC / PWD	2005	Carbon Steel	Dial Gauge	Yes	No
AST	1717	Aviation Fuel Facility	1716-1	F-24 Jet Fuel	244,604	Lined Earthen & Concrete Dike	DLA	1987	Carbon Steel	Automatic Tank Gauging	Visual	Yes
AST	1717	Aviation Fuel Facility	1717-2	Diesel	1,000	Double-Walled	CNIC / PWD	2017	Carbon Steel	Dial Gauge	Yes	No
AST	1717	Aviation Fuel Facility	1720-2	F-24 Jet Fuel	247,627	Lined Earthen & Concrete Dike	DLA	1987	Carbon Steel	Automatic Tank Gauging	Visual	Yes
AST	1717	Aviation Fuel Facility	1720-PRT	Reclaimed F-24 Jet Fuel	55	Lined Earthen & Concrete Dike	DLA	Unknown	Stainless Steel	Automatic Tank Gauging	Visual	No
AST	1758	Marina Boat House	1758-T (1757)	Gasoline	2,000	Double-Walled	CNIC / PWD	2012	Carbon Steel	Mechanical Gauge	No	No
AST	1794	Pass and Tag	1797-G	Diesel	209	Double-Walled	CNIC / PWD	2020	Carbon Steel	Dial Gauge	Yes	Yes
AST	1846	DLA Distribution Center	1846-1	Diesel	115	Double-Walled	DLA	2014	Carbon Steel	Dial Gauge	Yes	Yes
AST	1846	DLA Distribution Center Forklift Fueling	1846-2 (11-1)	Diesel	500	Double-Walled	DLA	2007	Carbon Steel & Concrete	Dial Gauge	Yes	No
AST	1848	Generator House for Navy Training Center	1848-G	Diesel	425	Double-Walled	CNIC / PWD	2004	Carbon Steel	Mechanical Gauge	No	No
AST	1870	Wastewater Treatment Plant (WWTP) Generator House	1870-G	Diesel	2,644	Double-Walled	CNIC / PWD	2020	Carbon Steel	Dial Gauge	Yes	Yes
AST	1870	WWTP Generator House	1870-T (1833)	Diesel	2,000	Double-Walled	CNIC / PWD	2011	Carbon Steel & Concrete	Dial Gauge	Yes	No
AST	4008	NEX & MWR Auto Repair	4008-1 (1737)	Used Oil	500	Double-Walled	CNIC / PWD	1992	Carbon Steel	Mechanical Gauge	No	No
AST	53	Defense Reutilization and Marketing Office (DRMO) Grounds Maintenance	GM-1	Diesel	500	Double-Walled	Training, Rehabilitation, & Development Institute (TRDI)	1998	Carbon Steel	Mechanical Gauge	Yes	No

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
AST	53	DRMO Grounds Maintenance	GM-2	Gasoline	500	Double-Walled	TRDI	2000	Carbon Steel	Mechanical Gauge	Yes	No
AST	H-107	Fire Pump House for Navy Hospital	H-100-A	Diesel	115	Double-Walled	Bureau of Medicine (BUMED)	2014	Carbon Steel	Mechanical Gauge	Yes	No
AST	W-1	Water Pumping Station	W-1-1	Diesel	500	Double-Walled	CNIC / PWD	2011	Carbon Steel & Concrete	Dial Gauge	Yes	Yes
NAS Out of Service Tanks												
OS AST	305	PWD Equipment Storage Area	41-1 (OS)	Empty	1,000	Double-Walled	CNIC / PWD	2002	Carbon Steel	Dial Gauge	None	No
OS AST	62	Generator House for Electronic Maintenance Shop 60	62-G (OS)	Empty	1,000	Double-Walled	CNIC / PWD	1984	Concrete / Carbon Steel	Mechanical Gauge	Yes	No
OS AST	254	Generator House for Detention Facility	254-G (252) (OS)	Empty	250	Double-Walled	CNIC / PWD	1998	Concrete / Carbon Steel	None	Yes	No
OS AST	1215	Generator House for Flight Simulator Training	1215-G (89) (OS)	Empty	1,000	Double-Walled	CNIC / PWD	2005	Carbon Steel	Dial Gauge	Yes	No
OS AST	4006	Golf Course Grounds Maintenance	4006-T (1743) (OS)	Empty	250	Double-Walled	CNIC / PWD	2002	Carbon Steel	Mechanical Gauge	Yes	No
OS UST	12	CCAD Maintenance Shop	UST-12 (OS)	Empty	10,000	None	CNIC / PWD	1940	Carbon Steel	None	None	No
OS UST	N/A	Old Underground Navy Fuel Farm	UST-217 (OS)	Filled with Concrete	8 x 25,000	None	CNIC / PWD	1950s	Carbon Steel	None	None	No
NAS Underground Storage Tanks												
UST	1290	NEX Gas Station	UST-1	Regular Gasoline	10,000	None	CNIC / PWD	1986	Fiberglass	Automatic Tank Gauging	Veeder Root System	Yes
UST	1290	NEX Gas Station	UST-2	Premium Gasoline	10,000	None	CNIC / PWD	1986	Fiberglass	Automatic Tank Gauging	Veeder Root System	Yes
UST	1290	NEX Gas Station	UST-3	Diesel	10,000	None	CNIC / PWD	1986	Fiberglass	Automatic Tank Gauging	Veeder Root System	Yes

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
NAS Drum Storage Areas												
DSA	20	PWD Transportation	DSA-20-30	Used Oil Hydraulic Fluid	1 x 55 2 x 55	Spill Pallet	CNIC / PWD	Not Applicable (N/A)	Steel	None	None	N/A
DSA	27	Naval Supply Haz Mart	DSA-27	New Oil Products	6 x 55	Spill Pallet	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	28	Refueler Truck Maintenance	DSA-28-A	Used Oil	1 x 55	Metal Containment	DLA	N/A	Steel	None	None	N/A
DSA	28	Refueler Truck Parking Area	DSA-28-B	Waste Fuel	2 x 55	Spill Basin	DLA	N/A	Steel	None	None	N/A
DSA	50	Customs Aircraft Hangar	DSA-50-33-A-C	Waste Fuel/Oil Waste PD680 Used Oil	2 x 55 1 x 55 1 x 55	Locker / Hangar Floor	DHS / CBP	N/A	Steel	None	None	N/A
DSA	50	Customs Aircraft Hangar Prop Shop	DSA-50-33-B	Waste Hydraulic New Hydraulic	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	DHS / CBP	N/A	Steel	None	None	N/A
DSA	50	Customs Aircraft Hangar	DSA-50-33-E	Turbine Oil Waste Fuel/Oil Used Oil	1 x 55 1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	DHS / CBP	N/A	Steel	None	None	N/A
DSA	50-A	Customs GSE	DSA-50-A-33-O	Engine Oil Waste Fuel/Oil	1 x 55 1 x 55	Drum Overpack	DHS / CBP	N/A	Steel	None	None	N/A
DSA	51	Navy GSE Maintenance	DSA-51-22-C-R	Used Oil	2 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	51	Navy GSE Maintenance	DSA-51-22-S	Oil Water New Oil	1 x 55 3 x 55	Spill Pallet	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	55	Dyn-Corp Aircraft Maintenance	DSA-55-26-D-12	Waste Oil	1 x 55	Locker / Hangar Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	56	Dyn-Corp Aircraft Maintenance	DSA-56-26-C-8-14	Used Oil Waste Fuel/Oil New Oil	1 x 55 2 x 55 2 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	57	Dyn-Corp Aircraft Maintenance	DSA-57-26-B-1-9	Waste Fuel/Oil New Oil	3 x 55 2 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	58	Airfield Services	DSA-58-23-A	Waste Fuel	1 x 55	Locker / Hangar Floor	CNIC / PWD	N/A	Steel	None	None	N/A

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
DSA	58	Dyn-Corp Aircraft Maintenance	DSA-58-26-A-3-17	Used Oil Waste Fuel/Oil	1 x 55 1 x 55	Locker / Hangar Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	257	Main < 90 Day HW Storage Area	DSA-257-21	Used/Waste Oil	25 x 55	Rollover Pig Berm	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	363	Auxiliary < 90 Day HW Storage Area	DSA-363-22	Used/Waste Oil	6 x 55	Concrete Curbing	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	365	Dyn-Corp Support Equipment	DSA-365-26-B-16	Used Oil New Oil	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	1216	Flight Simulator HW Storage Area	DSA-1216	Waste Hydraulic Oil	1 x 55	No Containment	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	1719	Aviation Fuel Facility Truck Loading Rack	DSA-1719	Waste Fuel	2 x 55	Spill Pallets	DLA	N/A	Steel	None	None	N/A
DSA	1846	DLA Distribution Center	DSA-1846-76-C-V-W	Used Oil Oily Water	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	DLA	N/A	Steel	None	None	N/A
DSA	1869	DLA Packing Center	DSA-1869-76-H-N	Waste Fuel/Oil Oily Water	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	DLA	N/A	Steel	None	None	N/A
DSA	4006	Golf Course Grounds Maintenance	DSA-4006-18-B-15	Used Oil	1 x 55	Spill Pallet	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	4008	MWR Auto Repair Shop	DSA-4008-MWR	Waste Fuel Used Oil	1 x 55 2 x 55	Spill Pallet / Shop Floor	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	4008	NEX Auto Repair Shop	DSA-4008-NEX	Used Oil	1 x 55	Spill Pallet	CNIC / PWD	N/A	Steel	None	None	N/A
DSA	53	DRMO Grounds Maintenance	DSA-GM-1	Used Oil	1 x 55	Spill Pallet	CNIC / PWD	N/A	Steel	None	None	N/A
NAS Mobile Equipment												
Fuel Trucks	28	Refueler Truck Parking Area	N/A	F-24 Jet Fuel	5 x 5,000	Spill Basin	DLA	N/A	Steel	Mechanical Gauge	Visual	N/A
Fuel Trucks	28	Refueler Truck Parking Area	N/A	F-24 Jet Fuel	1 x 2,000	Spill Basin	DLA	N/A	Steel	Mechanical Gauge	Visual	N/A
Fuel Trucks	28	Refueler Truck Parking Area	N/A	Gasoline/Diesel	1 x 2,000	Spill Basin	DLA	N/A	Steel	Mechanical Gauge	Visual	N/A
Mobile Generator	305	PWD Equipment Storage Area	G-70	Diesel	115	Vinyl Dike	CNIC / PWD	N/A	Steel	Unknown	Visual	N/A

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
Mobile Generator	305	PWD Equipment Storage Area	MG-1	Diesel	250	Vinyl Dike	CNIC / PWD	N/A	Steel	Dial Gauge	Visual	N/A
Mobile Generator	305	PWD Equipment Storage Area	MG-4	Diesel	84	Vinyl Dike	CNIC / PWD	N/A	Steel	Dial Gauge	Visual	N/A
NAS Used Cooking Oil												
UCO	1283	Catalina Consolidated Club	1283-1-UCO	Cooking Oil	294	Double-Walled	Darling Ingredients	2019	Steel	Manual	Visual	None
UCO	1735	Golf Course Grill	1735-1-UCO	Cooking Oil	294	Double-Walled	Darling Ingredients	2019	Steel	Manual	Visual	None
Aboveground Storage Tanks – CCAD												
AST	8	CCAD Repair Center	8-TK-16	Diesel	758	Double-Walled	CCAD	2020	Carbon Steel	Dial Gauge	Yes	No
AST	47	CCAD Aircraft Ramp	47-1 / 2	Preservation Oil	500 / 500 Dual compart	Double-Walled & Concrete Curb	CCAD	2012	Carbon Steel & Concrete	Mechanical Gauge	Yes	No
AST	47	CCAD Aircraft Ramp	47-3 / 4	Preservation Oil	500 / 500 Dual compart	Double-Walled & Concrete Curb	CCAD	2012	Carbon Steel & Concrete	Mechanical Gauge	Yes	No
AST	47	CCAD Aircraft Ramp	47-5	F-24 Jet Fuel	3,000	Double-Walled & Concrete Curb	CCAD	2012	Carbon Steel & Concrete	Mechanical Gauge	Yes	No
AST	8	CCAD Fuel Farm	227-TK-01	F-24 Jet Fuel	10,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	8	CCAD Fuel Farm	228-TK-02	F-24 Jet Fuel	10,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	8	CCAD Fuel Farm	229-TK-03	F-24 Jet Fuel	10,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	8	CCAD Fuel Farm	232-TK-05	Turbine Oil	2,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	8	CCAD Fuel Farm	233-TK-07	Preservation Oil	2,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
AST	340	CCAD Metal Plating Shop	340-TK-09	Diesel	200	Double-Walled	CCAD	1992	Carbon Steel	Dial Gauge	No	Yes
AST	1260	CCAD Training Center	1260-TK-10	Diesel	600	Double-Walled	CCAD	2012	Carbon Steel	Dial Gauge	Yes	Yes
AST	1700	Dynamic Component Repair Facility (DCRF) Phase 1 Generator	1700-TK-11	Diesel	450	Double-Walled	CCAD	2013	Carbon Steel	Dial Gauge	Yes	Yes

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
AST	1700	DCRF Phase 1 Fire Pump Room	1700-TK-12	Diesel	250	Double-Walled	CCAD	2013	Carbon Steel	Mechanical Gauge	No	No
AST	1700	DCRF Phase 2 Generator	1700-TK-15	Diesel	1,000	Double-Walled	CCAD	2020	Carbon Steel	Mechanical Gauge	Yes	Yes
AST	1700	DCRF Phase 2 Fire Pump Room	1700-TK-17	Diesel	300	Double-Walled	CCAD	2020	Carbon Steel	Mechanical Gauge	No	No
AST	1804	Generator House for CCAD Repair Center	1804-TK-08	Diesel	1,000	Concrete Dike	CCAD	2017	Carbon Steel	Mechanical Gauge	Visual	No
AST	1804	Generator House for CCAD Repair Center	1804-TK-14	Diesel	250	Double-Walled	CCAD	2017	Carbon Steel	Dial Gauge	Yes	Yes
Out of Service Tanks – CCAD												
OS AST	35	Generator House for CCAD Administration	35-1 (OS)	Empty	150	Double-Walled	CCAD	2002	Carbon Steel	Dial Gauge	None	No
OS AST	8	CCAD Fuel Farm	230-TK-06 (OS)	Empty	2,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Automatic Tank Gauging	Yes	Yes
OS AST	8	CCAD Fuel Farm	231-TK-04 (OS)	Empty	2,000	Double-Walled & Concrete Curb	CCAD	1996	Carbon Steel & Concrete	Dial Gauge	Yes	No
Drum Storage Areas – CCAD												
DSA	8	CCAD Transmission Shop	DSA-8-16-C	Used Oil	1 x 55	Spill Pallet	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Jet Engine Test Cell	DSA-8-16-F	Used Oil Transmission Fluid	1 x 55 2 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Machine Shop	DSA-8-17-A-B	Grinding Fluid Waste Fuel Oil Coolant Water	2 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Hydraulic Shop	DSA-8-28-A	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Jet Engine Test Cell	DSA-8-34-A-B	Used Oil Waste F-24	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Engine Drain	DSA-8-76-E	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	DLA	N/A	Steel	None	None	N/A

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
DSA	8	CCAD Engine Disassembly	DSA-8-204-A	Waste Fuel/Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD T-55 Engine Assembly	DSA-8-229	Used Oil Turbine Oil	1 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Transmission Test Cell	DSA-8-900-A	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Jet Engine Test Cell	DSA-8-900-B	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Hydraulic Shop	DSA-8-900-D	Waste Hydraulic Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	8	CCAD Fuel Control	DSA-8-900-F	Used Oil Calibrating Fluid Turbine Oil	1 x 55 1 x 55 2 x 55	Spill Pallet	CCAD	N/A	Steel	None	None	N/A
DSA	43	CCAD Aircraft Hangar	DSA-43-51	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	44	CCAD Aircraft Hangar	DSA-44-207-A	Turbine Oil Waste Fuel/Oil	3 x 55 1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	45	CCAD Aircraft Hangar	DSA-45-14-A	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	77	CCAD Whirl Tower	DSA-77-238-Y	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
DSA	339	CCAD Motor Pool	DSA-339-25-A	Used Oil	1 x 55	Spill Pallets	CCAD	N/A	Steel	None	None	N/A
DSA	339	CCAD Motor Pool	DSA-339-B	New Oil	7 x 55	Spill Pallet	CCAD	N/A	Steel	None	None	N/A
DSA	341	CCAD Oil Storage Shed	DSA-341	New Oil	30 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A
DSA	353	CCAD Oil Storage Shed	DSA-353	New Oil	20 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A

TABLE 2-3
Container Inventory and Summary of Conditions

Container Type	Facility Number	Facility Name	Tank ID	Contents	Tank Capacity (Gallons)	Secondary Containment	Maintenance Responsibility	Year Installed	Tank Material	Level Gauge	Leak Detection	Level Alarm
DSA	356	CCAD Oil Storage Shed	DSA-356	New Oil	20 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A
DSA	358	CCAD Oil Storage Shed	DSA-358	New Oil	20 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A
DSA	359	CCAD Oil Storage Shed	DSA-359	New Oil	30 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A
DSA	360	CCAD Oil Storage Shed	DSA-360	New Oil	30 x 55	Concrete Curb	CCAD	N/A	Steel	None	None	N/A
DSA	1700	CCAD Gearbox Output	DSA-1700-707-N	Used Oil	1 x 55	Spill Pallet	CCAD	N/A	Steel	None	None	N/A
DSA	1880	CCAD Rotating Electric	DSA-1880-220	Used Oil	1 x 55	Rolling Cart (or Spill Pallet) / Shop Floor	CCAD	N/A	Steel	None	None	N/A
Mobile Equipment – CCAD												
Mobile Generator	44	CCAD Aircraft Hangar	AMC-209, 219, 220, 221	Diesel	4 x 65	Spill Pallet	CCAD	N/A	Steel	Dial Gauge	Visual	N/A

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TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
NAS Hydraulic Elevator Tanks					
1	CNATRA HQ	E-1	Hydraulic Oil	60	NA
7	Central Fire Station	E-7	Hydraulic Oil	70	NA
10	Multi-Purpose Warehouse	E-10-1	Hydraulic Oil	160	NA
10	Multi-Purpose Warehouse	E-10-2	Hydraulic Oil	160	NA
10	Multi-Purpose Warehouse	E-10-3	Hydraulic Oil	160	NA
10	Multi-Purpose Warehouse	E-10-4	Hydraulic Oil	160	NA
19	PWD	E-19	Hydraulic Oil	80	NA
50	U.S. Customs Aircraft Hangar	E-50	Hydraulic Oil	100	NA
51	Aircraft Hangar	E-51	Hydraulic Oil	100	NA
68	Air Traffic Control Tower	E-68	Hydraulic Oil	100	NA
99	Navy Lodge	E-99	Hydraulic Oil	100	NA
1281	Navy Gateway Inn	E-1281-1	Hydraulic Oil	100	NA
1281	Navy Gateway Inn	E-1281-2	Hydraulic Oil	100	NA
1744	Navy Exchange Store	E-1744	Hydraulic Oil	120	NA
1846	DLA Distribution Center	E-1846	Hydraulic Oil	140	NA
H-100	Navy Hospital	E-H100-1	Hydraulic Oil	130	NA
H-100	Navy Hospital	E-H100-2	Hydraulic Oil	130	NA

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
H-100	Navy Hospital	E-H100-3	Hydraulic Oil	130	NA
H-100	Navy Hospital	E-H100-4	Hydraulic Oil	130	NA
NAS Pad-Mounted Transformers					
1	CNATRA HQ	T-27645	Mineral oil	280	500
2	NAS Administration	T-27528	Mineral oil	250	300
3	USO / Applied Instruction	T-27578	Mineral oil	160	150
7	Central Fire Station	T-27606	Mineral oil	280	500
10	Multi-Purpose Warehouse	T-27599	Mineral oil	250	300
10	Multi-Purpose Warehouse	T-29659	Mineral oil	280	500
10	Multi-Purpose Warehouse	T-29660	Mineral oil	340	1,000
10	Multi-Purpose Warehouse	T-30785	Mineral oil	160	150
11	DLA Warehouse	T-27135	Mineral oil	280	500
18	Electronics Shop	T-27519	Mineral oil	250	300
19	Public Works Department	T-27572	Mineral oil	280	500
20	PWD Transportation	T-27573	Mineral oil	280	500
22	Multi-Purpose Warehouse	T-28570	Mineral oil	250	300
28	Refueler Truck Parking Area	T-27630	Mineral oil	160	150
33	Electrical Switch Station	T-27560	Mineral oil	100	75

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
34	Defense Printing Shop	T-28341	Mineral oil	100	75
41	Former Aircraft Hangar Site	T-27533	Mineral oil	280	500
42	Navy Aircraft Hangar	T-20865	Mineral oil	400	1,500
50	U.S. Customs Aircraft Hangar	T-27603	Mineral oil	340	1,000
50A	U.S. Customs Aircraft Hangar	T-27598	Mineral oil	100	75
51	Aircraft Hangar	T-29665	Mineral oil	280	500
51	Aircraft Hangar	T-29666	Mineral oil	250	300
51	Aircraft Hangar	T-29670	Mineral oil	310	750
55	Aircraft Hangar	T-30211	Mineral oil	310	750
56	Aircraft Hangar	T-27633	Mineral oil	310	750
57	Aircraft Hangar	T-29646	Mineral oil	250	300
57	Aircraft Hangar	T-29647	Mineral oil	280	500
58	Aircraft Hangar	T-27631	Mineral oil	250	300
58	Aircraft Hangar	T-28834	Mineral oil	200	225
58	Aircraft Hangar	T-29664	Mineral oil	200	225
60	Electronic Maintenance Shop	T-27627	Mineral oil	200	225
68	Air Traffic Control Tower	T-27632	Mineral oil	200	225
83	Aviation Training	T-31916	Mineral oil	440	2,000

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
89	Flight Simulator Training	T-29671	Mineral oil	340	1,000
92	Swimming Pool Bath House	T-27539	Mineral oil	160	150
99	Navy Lodge	T-27582	Mineral oil	280	500
100	Auditorium	T-27942	Mineral oil	250	300
102	Gymnasium	T-27541	Mineral oil	100	75
102	Gymnasium	T-27617	Mineral oil	160	150
103	Fitness Center	T-33176	Mineral oil	280	500
114	Fire Pump House Hangar 55	T-27609	Mineral oil	310	750
117	Protestant Chapel	T-27551	Mineral oil	200	225
121	ELMR Communication Tower	T-27137	Mineral oil	80	50
125	Navy Army Credit Union	T-27520	Mineral oil	140	112.5
149	MWR Food Service	T-27848	Mineral oil	160	150
163	Transformer Vault	T-29667	Mineral oil	160	150
249	Fitness Center	T-27618	Mineral oil	100	75
252	Detention Facility	T-27656	Mineral oil	250	300
259	Hazardous Waste Office	T-27581	Mineral oil	160	150
332	Catholic Chapel	T-27552	Mineral oil	200	225
335	Panda Express	T-27587	Mineral oil	160	150

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
337	Defense Commissary	T-27554	Mineral oil	340	1000
344	Vehicle Maintenance Shop	T-27611	Mineral oil	100	,75
345	Golf Course Public Toilet	T-27571	Mineral oil	140	112.5
380	Nueces Electric Shop	T-19418	Mineral oil	40	25
1099	PAR Generator House	T-27637	Mineral oil	100	75
1202	Transformer Vault	T-27665	Mineral oil	100	75
1218	Multi-Purpose Warehouse	T-24074	Mineral oil	160	150
1218	Multi-Purpose Warehouse	T-29462	Mineral oil	340	1,000
1236	TACAN Radar	T-28336	Mineral oil	80	50
1241	Airfield Power Distribution	T-27635	Mineral oil	250	300
1241	Airfield Power Distribution	T-32667	Mineral oil	250	300
1259	Liquid Oxygen Storage	T-29661	Mineral oil	160	150
1281	Navy Gateway Inn	T-27548	Mineral oil	250	300
1281	Navy Gateway Inn	T-27549	Mineral oil	310	750
1281	Navy Gateway Inn	T-27550	Mineral oil	250	300
1283	Catalina Consolidated Club	T-29951	Mineral oil	280	500
1289	Sewage Lift Station	T-27567	Mineral oil	100	75
1290	NEX Gas Station	T-27556	Mineral oil	160	150

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
1290	NEX Gas Station	T-27557	Mineral oil	250	300
1291	NEX Car Wash	T-27555	Mineral oil	160	150
1701	Skeet Range Club House	T-27640	Mineral oil	40	25
1707	Bowling Alley	T-27658	Mineral oil	250	300
1717	Aviation Fuel Facility	T-27602	Mineral oil	140	112.5
1721	Navy Operation Support Center	T-27596	Mineral oil	250	300
1728	Mechanical Steam Plant	T-27065	Mineral oil	280	500
1730	Navy Personnel Office	T-27652	Mineral oil	140	112.5
1731	Navy College	T-27546	Mineral oil	160	150
1733	Mechanical Cooling System	T-27659	Mineral oil	250	300
1733	Mechanical Cooling System	T-27661	Mineral oil	280	500
1733	Mechanical Cooling System	T-28835	Mineral oil	200	225
1735	Golf Course Grill	T-27950	Mineral oil	250	300
1736	Bachelor Enlisted Quarters	T-27648	Mineral oil	250	300
1740	Community Recreation Center	T-27585	Mineral oil	100	75
1740	Community Recreation Center	T-27586	Mineral oil	100	75
1742	Airfield Fire & Crash Station	T-27600	Mineral oil	140	112.5
1744	NEX Store	T-27813	Mineral oil	280	500

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
1745	Fire Extinguisher Repair	T-27535	Mineral oil	100	75
1749	Marina Boat Storage	T-28494	Mineral oil	80	50
1757	Marina Support	T-27544	Mineral oil	160	150
1758	Marina Boat House	T-29775	Mineral oil	120	100
1759	RV Park Public Toilet	T-27524	Mineral oil	80	50
1766	Recreation Pavilion	T-27538	Mineral oil	40	25
1767	RV Park Community Center	T-27525	Mineral oil	180	167
1770	Post Office	T-27540	Mineral oil	100	75
1783	Marina Boat Storage	T-14874	Mineral oil	80	50
1785	NEX Services	T-27579	Mineral oil	100	75
1788	RV Park Recreation Center	T-30015	Mineral oil	250	300
1790	Racquetball Court	T-26170	Mineral oil	100	75
1791	Youth Activities Center	T-27529	Mineral oil	200	225
1793	Vehicle Garage	T-27597	Mineral oil	100	75
1794	Security Pass & Tag	T-27594	Mineral oil	120	100
1799	Military Dog Kennel	T-27595	Mineral oil	100	75
1824	Academic Instruction	T-27662	Mineral oil	280	500
1843	CNATRA Training	T-28347	Mineral oil	280	500

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
1846	DLA Distribution Center	T-29673	Mineral oil	340	1,000
1846	DLA Distribution Center	T-29674	Mineral oil	340	1,000
1857	DLA Distribution Center	T-29672	Mineral oil	280	500
1863	Armory	T-27536	Mineral oil	100	75
1870	WWTP	T-27593	Mineral oil	250	300
1872	Library / Conference Center	T-32090	Mineral oil	250	300
3600	Housing Welcome Center	T-29590	Mineral oil	120	100
4006	Golf Course Grounds Maintenance	T-32809	Mineral oil	140	112.5
4008	NEX & MWR Auto Repair	T-26152	Mineral oil	250	300
4105	Environmental Monitoring	T-30989	Mineral oil	80	50
4139	RV Park Storage Area	T-31634	Mineral oil	80	50
H-100	Navy Hospital	T-27615	Mineral oil	440	2,000
H-107	Navy Hospital Fire Protection	T-27532	Mineral oil	100	75
H-109	Navy Hospital Storage	T-27531	Mineral oil	160	150
W-1	Water Pumping Station	T-31314	Mineral oil	250	300
NA	Airfield Weather Station	T-30224	Mineral oil	40	25
NA	Airfield Weather Station	T-30226	Mineral oil	40	25
NA	First Street Pier	T-27868	Mineral oil	40	25

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
NA	Residential Housing	T-20870	Mineral oil	120	100
NA	Residential Housing	T-26534	Mineral oil	120	100
NA	Residential Housing	T-26536	Mineral oil	120	100
NA	Residential Housing	T-26537	Mineral oil	120	100
NA	Residential Housing	T-27521	Mineral oil	100	75
NA	Residential Housing	T-27584	Mineral oil	100	75
NA	Residential Housing	T-27619	Mineral oil	100	75
NA	Residential Housing	T-27620	Mineral oil	100	75
NA	Residential Housing	T-27621	Mineral oil	120	100
NA	Residential Housing	T-27622	Mineral oil	100	75
NA	Residential Housing	T-27623	Mineral oil	100	75
NA	Residential Housing	T-27624	Mineral oil	120	100
NA	Residential Housing	T-27625	Mineral oil	120	100
NA	Residential Housing	T-27642	Mineral oil	120	100
NA	Residential Housing	T-27643	Mineral oil	120	100
NA	Residential Housing	T-27646	Mineral oil	100	75
NA	Residential Housing	T-27647	Mineral oil	120	100
NA	Residential Housing	T-27664	Mineral oil	100	75

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
NA	Residential Housing	T-27666	Mineral oil	100	75
NA	Residential Housing	T-27667	Mineral oil	100	75
NA	Residential Housing	T-27668	Mineral oil	100	75
NA	Residential Housing	T-27836	Mineral oil	120	100
NA	Residential Housing	T-27837	Mineral oil	120	100
NA	Residential Housing	T-27838	Mineral oil	120	100
NA	Residential Housing	T-27839	Mineral oil	120	100
NA	Residential Housing	T-27840	Mineral oil	120	100
NA	Residential Housing	T-27841	Mineral oil	120	100
NA	Residential Housing	T-27842	Mineral oil	100	75
NA	Residential Housing	T-27843	Mineral oil	120	100
NA	Residential Housing	T-27844	Mineral oil	100	75
NA	Residential Housing	T-27845	Mineral oil	120	100
NA	Residential Housing	T-27846	Mineral oil	120	100
NA	Residential Housing	T-27851	Mineral oil	120	100
NA	Residential Housing	T-27855	Mineral oil	120	100
NA	Residential Housing	T-27856	Mineral oil	120	100
NA	Residential Housing	T-27857	Mineral oil	120	100

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
NA	Residential Housing	T-27858	Mineral oil	120	100
NA	Residential Housing	T-29580	Mineral oil	120	100
NA	Residential Housing	T-29937	Mineral oil	120	100
NA	Residential Housing	T-29942	Mineral oil	120	100
NA	Residential Housing	T-29943	Mineral oil	120	100
CCAD - Hydraulic Elevator Tanks					
8	CCAD Repair Center Mezzanine 9	E-8260	Hydraulic Oil	150	NA
8	CCAD Repair Center Mezzanine 9	E-8558	Hydraulic Oil	150	NA
8	CCAD Repair Center Mezzanine 30	E-8272	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A1	E-8270	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A9	E-8262	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A9	E-8274	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A40	E-8261	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A40	E-8263	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A41	E-8264	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A43	E-8265	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A44	E-8275	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A45	E-8268	Hydraulic Oil	150	NA

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
8	CCAD Repair Center Section A45	E-8269	Hydraulic Oil	150	NA
8	CCAD Repair Center Section A46	E-8273	Hydraulic Oil	150	NA
44	CCAD Aircraft Hangar	E-8283	Hydraulic Oil	120	NA
45	CCAD Aircraft Hangar	E-8284	Hydraulic Oil	120	NA
46	CCAD Aircraft Hangar	E-H46	Hydraulic Oil	120	NA
49	CCAD Rotary Wing Repair	E-8277	Hydraulic Oil	100	NA
49	CCAD Rotary Wing Repair	E-8278	Hydraulic Oil	100	NA
131	CCAD Engineering Analysis	E-8280	Hydraulic Oil	100	NA
340	CCAD Metal Plating Shop	E-8281	Hydraulic Oil	100	NA
1727	CCAD Personnel Office	E-7838	Hydraulic Oil	100	NA
1880	CCAD Rotating Electric Shop	E-8279	Hydraulic Oil	100	NA
CCAD – Miscellaneous Hydraulic Equipment					
8	CCAD Compressor NDT Shop	AN-1210	Hydraulic Oil	110	NA
8	CCAD Foundry Shop	G-9802	Hydraulic Oil	795	NA
8	CCAD Foundry Shop	G-9803	Hydraulic Oil	55	NA
8	CCAD Foundry Shop	G-9804	Hydraulic Oil	55	NA
8	CCAD Foundry Shop	G-9805	Hydraulic Oil	55	NA
8	CCAD Jig Shop	W-1358	Hydraulic Oil	55	NA

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
8	CCAD Jig Shop	Z-9653	Hydraulic Oil	100	NA
8	CCAD Machine Shop	G-6751	Hydraulic Oil	100	NA
8	CCAD Machine Shop	G-9498	Hydraulic Oil	70	NA
8	CCAD Machine Shop	K-6568	Hydraulic Oil	200	NA
8	CCAD Machine Shop	K-6775	Hydraulic Oil	300	NA
8	CCAD Machine Shop	M-5143	Hydraulic Oil	300	NA
8	CCAD Machine Shop	R-3843	Hydraulic Oil	200	NA
8	CCAD Shot Peen	M-3737	Hydraulic Oil	77	NA
8	CCAD Shot Peen	P-6331	Hydraulic Oil	77	NA
8	CCAD Shot Peen	W-2032	Hydraulic Oil	55	NA
8	CCAD T-700 Assembly	R-9752	Hydraulic Oil	65	NA
8	CCAD Tool & Die Shop	K-5838	Hydraulic Oil	55	NA
8	CCAD Tool & Die Shop	M-3529	Hydraulic Oil	55	NA
8	CCAD Tool & Die Shop	M-4040	Hydraulic Oil	55	NA
8	CCAD Tool & Die Shop	M-8567	Hydraulic Oil	55	NA
8	CCAD Tool & Die Shop	R-4534	Hydraulic Oil	55	NA
8	CCAD Transmission Shop	R-7177	Hydraulic Oil	800	NA
8	CCAD Transmission Shop	W-0968	Hydraulic Oil	800	NA

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
8	CCAD Transmission Shop	W-9075	Hydraulic Oil	250	NA
8	CCAD Transmission Shop	Y-0427	Hydraulic Oil	130	NA
8	CCAD Welding Shop	G-4958	Hydraulic Oil	500	NA
8	CCAD Welding Shop	Z-7886	Hydraulic Oil	500	NA
77	CCAD Whirl Tower	R-8914	Hydraulic Oil	750	NA
77	CCAD Whirl Tower	Y-6391	Hydraulic Oil	78	NA
77	CCAD Whirl Tower	Y-7701	Hydraulic Oil	300	NA
165	CCAD Welding Annex	K-8595	Hydraulic Oil	250	NA
340	CCAD Metal Plating Shop	P-3401	Hydraulic Oil	100	NA
340	CCAD Metal Plating Shop	P-3402	Hydraulic Oil	100	NA
340	CCAD Metal Plating Shop	P-3403	Hydraulic Oil	100	NA
1828	CCAD Aircraft Bearing Shop	Y-1412	Hydraulic Oil	200	NA
1828	CCAD Aircraft Bearing Shop	Y-1413	Hydraulic Oil	200	NA
1828	CCAD Aircraft Bearing Shop	Y-1425	Hydraulic Oil	200	NA
1828	CCAD Aircraft Bearing Shop	Y-1427	Hydraulic Oil	200	NA

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
CCAD Pad-Mounted Transformers					
8	CCAD Repair Center	T-214	Mineral oil	400	1,500
8	CCAD Repair Center	T-257	Mineral oil	440	2,000
8	CCAD Repair Center	T-345	Mineral oil	140	112.5
8	CCAD Repair Center	T-360	Mineral oil	200	225
8	CCAD Repair Center	T-1099	Mineral oil	440	2,000
8	CCAD Repair Center	T-1335	Mineral oil	600	3,000
8	CCAD Repair Center	T-2592	Mineral oil	500	2,500
8	CCAD Repair Center	T-3084	Mineral oil	250	300
8	CCAD Repair Center	T-3085	Mineral oil	250	300
8	CCAD Repair Center	T-3086	Mineral oil	250	300
8	CCAD Repair Center	T-3087	Mineral oil	250	300
8	CCAD Repair Center	T-3088	Mineral oil	340	1,000
8	CCAD Repair Center	T-3089	Mineral oil	340	1,000
8	CCAD Repair Center	T-3090	Mineral oil	310	750
8	CCAD Repair Center	T-3092	Mineral oil	310	750
8	CCAD Repair Center	T-3095	Mineral oil	280	500
8	CCAD Repair Center	T-3098	Mineral oil	280	500

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
8	CCAD Repair Center	T-3101	Mineral oil	280	500
8	CCAD Repair Center	T-3105	Mineral oil	280	500
8	CCAD Repair Center	T-3106	Mineral oil	280	500
8	CCAD Repair Center	T-3107	Mineral oil	280	500
8	CCAD Repair Center	T-3108	Mineral oil	600	3,000
8	CCAD Repair Center	T-3109	Mineral oil	370	1,250
8	CCAD Repair Center	T-3111	Mineral oil	340	1,000
8	CCAD Repair Center	T-7091	Mineral oil	140	112.5
8	CCAD Repair Center	T-27854	Mineral oil	340	1,000
8	CCAD Repair Center	T-27859	Mineral oil	340	1,000
8	CCAD Repair Center	T-29662	Mineral oil	310	750
8	CCAD Repair Center	T-30786	Mineral oil	310	750
37	CCAD Administration	T-27559	Mineral oil	310	750
43	CCAD Aircraft Hangar	T-29656	Mineral oil	280	500
43	CCAD Aircraft Hangar	T-29657	Mineral oil	280	500
43	CCAD Aircraft Hangar	T-29658	Mineral oil	280	500
44	CCAD Aircraft Hangar	T-27518	Mineral oil	310	750
44	CCAD Aircraft Hangar	T-29654	Mineral oil	280	500

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
44	CCAD Aircraft Hangar	T-29655	Mineral oil	280	500
45	CCAD Aircraft Hangar	T-29652	Mineral oil	280	500
45	CCAD Aircraft Hangar	T-29653	Mineral oil	280	500
46	CCAD Aircraft Hangar	T-29650	Mineral oil	280	500
46	CCAD Aircraft Hangar	T-29651	Mineral oil	280	500
47	CCAD Aircraft Hangar	T-29648	Mineral oil	250	300
47	CCAD Aircraft Hangar	T-29649	Mineral oil	280	500
48	CCAD Helicopter Blade Testing	T-27607	Mineral oil	600	3,000
48	CCAD Helicopter Blade Testing	T-27799	Mineral oil	280	500
49	CCAD Rotary Wing Repair	T-26791	Mineral oil	310	750
49	CCAD Rotary Wing Repair	T-29634	Mineral oil	310	750
49	CCAD Rotary Wing Repair	T-29645	Mineral oil	500	2,500
49	CCAD Rotary Wing Repair	T-30993	Mineral oil	340	1,000
77	CCAD Whirl Tower	T-27613	Mineral oil	160	150
127	CCAD Corrosion Control	T-30062	Mineral oil	310	750
129	CCAD Administration	T-27562	Mineral oil	250	300
131	CCAD Engineering Analysis	T-27558	Mineral oil	250	300
135	CCAD Aviation Warehouse	T-29120	Mineral oil	200	225

TABLE 2-4
Oil-Filled Operational Equipment

Facility Number	Facility Name	Equipment ID Number	Contents	Oil Capacity (Gallons)	KVA Rating*
206	CCAD Corrosion Control	T-27576	Mineral oil	160	150
250	CCAD Administration	T-27651	Mineral oil	140	112.5
340	CCAD Metal Plating Shop	T-27614	Mineral oil	500	2,500
1217	CCAD Aviation Warehouse	T-28386	Mineral oil	200	225
1246	CCAD Aircraft Part Storage	T-27575	Mineral oil	250	300
1246	CCAD Aircraft Part Storage	T-27861	Mineral oil	80	50
1260	CCAD Learning Center	T-31915	Mineral oil	310	750
1727	CCAD Personnel	T-27064	Mineral oil	280	500
1787	CCAD Administration	T-27580	Mineral oil	280	500
1808	CCAD Aircraft Paint Shop	T-33836	Mineral oil	440	2,000
1828	CCAD Aircraft Bearing Shop	T-27601	Mineral oil	340	1,000
1828	CCAD Aircraft Bearing Shop	T-27649	Mineral oil	280	500
1880	CCAD Aircraft Instrument Shop	T-33200	Mineral oil	440	2,000
1882	CCAD Corrosion Control	T-31031	Mineral oil	340	1,000
1882	CCAD Corrosion Control	T-31032	Mineral oil	340	1,000

*** KVA = kilovolt-ampere**

SECTION 3

Conformance and Environmental Equivalence

3.1 Conformance with Requirements

"112.7(a)(1): Include a discussion of your facility's conformance with the requirements listed in this part."

NAS Corpus Christi SPCC plan provisions are in conformance with 40 CFR 112 and provide control and countermeasures as detailed in this document, except as noted in this section. The oil storage tanks, OFOE, fuel transfer operations, portable containers and mobile refueler trucks, and all associated management processes included in this Plan, conform to the SPCC requirements, except as noted in **Table 3-1**, below. Recommended corrective actions are also included in this table. NAS Corpus Christi's Environmental Division tracks and maintains documentation on the completion of corrective actions for regulated tanks, which are reported to have 40 CFR 112 deficiencies.

3.2 Environmental Equivalence

"112.7(a)(2): Comply with all applicable requirements listed in this part. Except as provided in 112.6, your Plan may deviate from the requirements in paragraphs (g), (h)(2) and (3), and (i) of this section and the requirements in subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and 112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.9(d)(3), 112.9(d)(3), 112.10(c), 112.12(c)(2), and 112.12(c)(11), where applicable to a specific facility, if you provide equivalent environmental protection by some other means of spill prevention, control, or countermeasure. Where your Plan does not conform to the applicable requirements in paragraphs (g), (h)(2), and (3), and (i) of this section, or the requirements of subparts B and C of this part, except the secondary containment requirements in paragraph (c) and (h)(1) of this section, and 112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), and 112.12(c)(11), you must state the reasons for nonconformance in your Plan and describe in detail alternate methods and how you will achieve equivalent environmental protection. If the Regional Administrator determines that the measures described in your Plan do not provide equivalent environmental protection, he may require you to amend your Plan, following the procedures in 112.4(d) and (e)."

The PE certifying this plan is not deviating from any requirements applicable to the facility. **Table 3-1** lists deficiencies that require corrective action to attain compliance.

3.3 Facilities or Equipment Not Yet Fully Operational

112.7: If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, you must discuss these items in separate paragraphs, and must explain separately the details of installation and operational start-up."

A new project has been designed for the GOV Gas Station, to remove the out of service OWS-169 (OS), which receives drainage from the fuel dispensing and truck loading/unloading area, and replace it with a spill collection basin.

Tanks that are permanently closed or have been taken OS, are covered in **Section 2.2.10**.

TABLE 3-1
List of Tank Deficiencies

Tank ID	Facility Name	Owner/ Operator	Deficiencies	Recommendations	Completion Status
7-G	Central Fire Station	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
10-2	Fire Pump Room in Multi-Purpose Warehouse	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
104-G	Security Police	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - equipped with interstitial monitoring but not hooked up.	Connect interstitial monitoring sensor to instrument panel.	
111-G (1742)	CNATRA HQ Generator House	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
340-TK-09	CCAD Metal Plating Shop	CCAD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide appropriate integrity testing by using continuous electronic interstitial monitoring.	
1700-TK-12	DCRF Phase 1 Fire Pump Room	CCAD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
1700-TK-17	DCRF Phase 2 Fire Pump Room	CCAD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	

TABLE 3-1
List of Tank Deficiencies

Tank ID	Facility Name	Owner/ Operator	Deficiencies	Recommendations	Completion Status
1758-T (1757)	Marina Boat House	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
1848-G	Navy Training Generator House	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - equipped with interstitial monitoring but not hooked up.	Connect interstitial monitoring sensor to instrument panel.	
4008-1 (1737)	NEX & MWR Auto Repair	CNIC/ PWD	40 CFR 112.8(c)(6) Insufficient integrity testing - interstitial space not checked for fuel or water leaks.	Provide popup LEAK gauge on top of interstitial monitoring tube.	
DSA 1216	Flight Simulator HW Storage	CNIC/ PWD	40 CFR 112.8(c)(11) Equipment not located in proper secondary containment.	Position steel drums in area providing secondary containment or provide spill pallet.	

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SECTION 4

Predicted Spills as Result of Equipment Failure

4.1 Discharge Notification and Response Procedures

"112.7(a)(4): Unless you have submitted a response plan under 112.20, provide information and procedures in your Plan to enable a person reporting a discharge as described in 112.1(b) to relate information on the exact address or location and phone number of the facility;"

"112.7(a)(5): Unless you have submitted a response plan under 112.20, organize portions of the Plan describing procedures you will use when a discharge occurs in a way that will make them readily usable in an emergency, and include appropriate supporting material as appendices."

"112.7(a)(3)(iv): Countermeasure for discharge discovery, response, and cleanup (both facility's capability and those that might be required of a contractor);"

"112.7(a)(3)(vi): 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 Federal, State, and local agencies who must be contacted in case of a discharge as described in 112.1(b)."

All spills must be reported to the Navy PWD Environmental Spill Manager or the Environmental Director. Exception: a minor spill that does not enter the ground or water, and is cleaned up by the organization who caused the spill, using rags or other absorbent materials, does not need to be reported.

Any oil product spill or discharge that escapes a containment structure, and enters the soil or water environment, such that it requires assistance for cleanup, should be reported immediately to the regional dispatcher by calling 911, and then to the Environmental office (see section 1.6 for phone numbers). Mobile phone callers must notify the dispatcher that they are at NAS Corpus Christi, so their call can be routed to the Navy Region Southeast Operations Center. The dispatcher should notify the Facility Response team, which will include the Fire & Emergency Services (Fire Chief) for land-based spills. The dispatcher should also notify the 24-hour CDO at telephone 361-534-9093, who may make additional notifications as needed.

EPA 40 CFR 110 requires that if a facility discharges any kind of oil in any quantity, which causes the presence of a visible film or sheen or discoloration on the surface of navigable waters, or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the water surface, or which may affect natural resources, then this discharge must be reported to the U.S. Coast Guard, National Response Center (NRC) at telephone 800-424-8802. This criteria is not based on any number of gallons. Oil spills that enter into navigable waters must also be reported to the Texas Commission on Environmental Quality (TCEQ) at 24-hour phone 800-832-8224, and Texas Division of Emergency Management at 24-hour phone 361-438-5388.

Discharges or spills of oil into the storm water drain system should be assumed to have sufficient quantity and a potential to cause a visible oil sheen on navigable waters. Spills of this kind should be reported to the NRC and TCEQ, by estimating the quantity of oil that entered the storm drain system.

The facility owner or operator (or Environmental representative) must notify the NRC immediately (or within 30 minutes of discovery), when they have knowledge of a reportable oil spill, released into a navigable waterway. Information to be reported to the NRC shall be listed on the spill response reporting form in the **FRP**. The Navy Environmental Director is responsible for making these notifications (unless delegated to a subordinate).

In the event that oil is released into navigable waters, the **NAS Corpus Christi FRP** describes the process to hire an Oil Spill Removal Organization contractor, who has the necessary equipment and trained personnel to perform the cleanup actions. The **FRP** has additional information on discharge notification and response procedures.

The term "Oil" includes all grades of gasoline, diesel fuel, jet propulsion fuel, reclaimed or waste fuel, lubricating oil, used engine oil, synthetic oil, heating oil, hydraulic oil, preservation oil, vegetable cooking oil, and transformer mineral oil.

The term "Navigable Waters" can be summarized as certain water ways of the United States, including territorial seas, which include the following:

(a) All waters that are currently used, or were used in the past, or may be susceptible to future use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

(b) Interstate waters, including interstate wet lands;

(c) All other waters such as intra-state lakes, rivers, continuous and intermittent streams, mud flats, sand flats, and wet lands, that the use, degradation, or destruction of which, would or could affect interstate or foreign commerce, including any such waters:

- That are or could be used by interstate or foreign travelers for recreational or other purposes;
- Waters from which fish or shell fish are or could be taken and sold in interstate or foreign commerce;
- Waters that are or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters, otherwise defined as navigable waters under this section;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this section, including adjacent wet lands. A tributary can be a natural, man-altered, or man-made water way.

Refer to **Section 1.6** for NAS Corpus Christi's Designated Person, who is accountable for discharge prevention and who reports to facility management.

4.2 Predicted Spill Scenarios

"112.7(b): 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 oil which could be discharged from the facility as a result of each type of major equipment failure."

Experience indicates there is a reasonable potential for spills to occur, usually caused by operator error or some type of equipment failure (for example, loading or unloading equipment misconnection, tank overflow, rupture, line leakage, etc.) for all bulk storage tanks included in the Plan. Therefore, typical spill scenarios that apply to each category of tank and operation are discussed in **Appendix F**. In addition, a prediction of the spill flow direction is shown on each Tank Data Sheet in **Appendix A**. The Tank Data Sheets and **Table 2-3** provide known tank capacities. These capacities show the maximum release volume for a worst-case spill at each site.

Appendix F includes assumptions and calculations used to determine potential spill rate-of-flow, most likely discharge, and maximum most probable discharge for each type of spill scenario. For ASTs, the worst-case spill scenario is considered to be a catastrophic rupture of the AST, which could be caused by collision with a moving vehicle or other heavy object. This could result in an instantaneous release of the entire fuel contents, which is not considered a likely spill scenario. Worst-case spill scenarios for the previously identified facility high-risk oil storage sites and piping types are discussed below. Response procedures described in **NAS Corpus Christi FRP** would be activated if NAS Corpus Christi experienced any of the discharge scenarios described below.

4.2.1 High-Risk Oil Storage Facilities

The quantity and frequency of bulk fuel transfer activities, which depend greatly on operator judgment and attentiveness, are combined to consider these facilities as high risk sites for spill potential and spill response.

4.2.1.1 Aviation Fuel Facility 1717

There are two single walled, carbon steel, field-erected ASTs, 1716-1 and 1720-2, installed in 1987 that store 244,604-gallons and 247,627-gallons of F-24 jet fuel, respectively. Secondary containment is provided by individual dikes, with vertical concrete walls and sloped earthen floors, all covered with a flexible membrane liner. The dikes are large enough to provide containment for the entire capacity of each AST, plus sufficient freeboard to contain precipitation from a 25-year, 24-hour storm event. Each containment has a normally closed drain with PIV that controls flow to OWS-1717-1 (3,450-gallons).

The largest most-likely spill at this site is based on the 7,500 gallons capacity of a commercial fuel truck, which unloads F-24 jet fuel into the field-erected ASTs. Any fuel transfer spill would be isolated within a curbed containment area, and then directed to the spill basin (available containment volume of 11,316-gallons) through drains at the loading rack. The most likely spill would be 150 gallons, based on a malfunction or discharge during a commercial fuel truck delivery, or loading of military refueler trucks, with a maximum pumping rate of 600 gallons per minute (gpm).

The pump house and a majority of aboveground piping is contained in concrete curbing or trenches, or in containment dikes for the bulk fuel ASTs. In addition, spill kits are available nearby. Overfill of the field-erected ASTs into the containment dikes is a potential discharge scenario if the liquid level sensing and alarm devices were to malfunction during a fuel transfer.

Fuel piping is generally categorized as either high or low risk, depending on the pipe size and proximity to open water. The LB&B (DLA contractor) operated bulk fuel piping system at NAS Corpus Christi is required to have an API-570 evaluation performed every 10 years because it was determined to have service class 3 piping. The class 3 rating applies to bulk fuel pipelines that are not located over or adjacent to open waters. The API-570 evaluations are conducted by API certified contractors and documented in the POL Pipeline Integrity Management Plan report. This facility had an API-570 pipeline evaluation done in 2015, so the next one is due in 2025.

Higher risk, large-diameter, aboveground, stainless steel, single-walled pipelines are installed mostly within diked or curbed or trench containment areas. Fueling personnel from LB&B (DLA contractor) are on site whenever fuel is being transferred to or from ASTs. Fueling personnel inspect the entire pipeline within the fenced facility, during fuel transfer operations, to check for leaks or spills. All piping is required to be pressure tested annually by DLA contractors to verify integrity, in accordance with Unified Facilities Criteria (UFC) requirements. All aboveground bulk fuel piping is visually inspected monthly by LB&B contractor.

Refer to **Appendix F** for more information on the types of potential failures and discharge volumes. A spill from any AST is predicted to flow in the direction as shown on the spill diagrams in **Appendix A**.

4.2.1.2 GOV Gas Station – Facility 154

There are two shop-fabricated, concrete encased, double-walled ASTs, 154-1 and 154-2, which were both installed in 2005. AST 154-1 stores 8,000 gallons of diesel, and AST 154-2 stores 4,000 gallons of gasoline. The ASTs are installed on a concrete slab adjacent to a loading/unloading station. Aboveground piping from the ASTs to transition sumps are coated carbon steel, single walled, which then changes to fiberglass/plastic, double-walled, for the underground piping to dispensers.

The largest most-likely spill at this site is based on the 7,500 gallons capacity of a commercial fuel truck delivering fuel to the ASTs. The LB&B (DLA contractor) fills and operates military refueler trucks (2,000-gallon capacity) that are used to deliver gasoline and diesel products to generators and ASTs throughout the station. The standard dispensers deliver fuel into vehicles at a rate of 10 gpm. The fuel dispensers can operate 24 hours a day and are controlled by keys. Any fuel transfer spill would be isolated within a curbed containment area, which is sloped into a trench drain with a normally closed PIV. This containment area has a volume of 7,050 gallons. When the drain is open the flow can be directed to OWS-169 (OS), but it is currently out of service. A project is planned to replace the OWS with a spill basin of 3,340-gallons. The most likely spill would be 150 gallons, based on a malfunction or discharge during a commercial fuel delivery, or loading of military refueler trucks, with a maximum pumping rate of 600 gpm.

Refer to **Appendix F** for more information on the types of potential failures and discharge volumes. A spill from any AST is predicted to flow in the direction as shown on the spill diagrams in **Appendix A**.

4.2.1.3 NEX Gas Station – Facility 1290

The NEX Gas Station has three 10,000 gallon, fiberglass reinforced plastic, single-walled USTs, which were installed in 1986. UST-1 stores regular gasoline, UST-2 stores premium gasoline, and UST-3 stores diesel. USTs have no underground containment, so they are periodically pressure tested to verify integrity. USTs are filled by commercial fuel delivery trucks, into the fill ports located within containment sumps on top of each UST. These sumps are intended to capture any minor spills during fuel transfer. There is no secondary containment berm around the fuel truck unloading area.

The largest most-likely spill at this site is based on the 7,500 gallons capacity of a commercial fuel delivery truck, which unloads fuel into the USTs. The most likely spill would be 150 gallons, based on a malfunction or discharge during a commercial fuel delivery, with a maximum pumping rate of 600 gpm. Any fuel spill would travel across concrete surfaces until reaching the adjacent grassy areas.

Active containment measures are provided by spill kits, located in the fuel delivery trucks and at the dispenser area, which are composed of absorbent materials. The UST fill operations are monitored by NEX personnel to verify that SOPs are followed.

The NEX Gas Station has remote fuel dispensers with flexible hose connections for motor vehicles. The dispenser hoses are equipped with breakaway fittings, automatic shutoff nozzles, and shear valves installed in the piping inside the dispenser cabinet, which will stop fuel flow in case of a collision.

Refer to **Appendix F** for more information on the types of potential failures and discharge volumes. A spill from the UST fuel transfer area is predicted to flow in the direction as shown on the spill diagrams in **Appendix A**.

4.2.2 Other Ancillary Tanks

There are typically three potential spill scenarios for fuel transfer operations to shop-fabricated tanks (excluding piping failures): tank rupture, overfill, and hose retrieval. Spills from ASTs are predicted to flow in the direction as shown on spill diagrams in **Appendix A**. Details related to potential spill rate-of-flow and total quantity of oil, which could be discharged as a result of each spill scenario, are presented in **Appendix F**. Secondary containment requirements will generally be the same for ancillary tanks.

A tank rupture is not considered likely, as some tanks are double-walled and tanks that are in a location susceptible to vehicular damage are protected from such damage, which is considered a primary cause of rupture. Shop-fabricated tanks that are not double-walled are constructed so that secondary containment is provided for the largest single tank within the dike, plus sufficient freeboard to allow for precipitation. **Table 5-1** summarizes the secondary containment capacities measured for each single-walled tank.

Shop-fabricated tanks conducting fuel transfers with mobile refueler trucks and commercial fuel delivery trucks, that are not within a curbed containment area require strong active measures for spill control. These measures will include covering any adjacent storm drains prior to fuel transfer and having spill kits available at all times. Mobile refueler trucks have spill kits mounted on the vehicle.

Overfill is a potential discharge scenario for ancillary tanks without a working level gauge, OPV, or spill bucket. An OPV is a piece of equipment that activates at a certain level (for example, 95% capacity) and prevents additional fuel from entering the tank. A spill bucket is a measure to collect a discharge from tank overfilling or catching drips during hose disconnection. Refer to **Appendix A** to see which tanks have a level gauge or an OPV or a spill bucket. If neither of these items are present on an ancillary tank, an active method of containment is required per §112.7(c); for example, a spill kit is present in the immediate vicinity. Mobile refueler trucks have spill kits available during the tank fill process.

Hose retrieval following fuel transfer is a likely potential discharge scenario for shop-fabricated tanks. The spill bucket is a measure that can be used to reduce spills by tipping the hose nozzle back into the spill bucket following transfer operations to contain any residual fuel left in the nozzle. Operators should cap the nozzle prior to taking the hose back to the mobile refueler truck and ensure the nozzle is not dragging on the ground. **Section 9** recommends the above steps be taken. However, in addition to these steps, an active method of containment is required per §112.7(c), that is, an appropriately sized spill kit is present with each of the mobile refueler trucks.

4.2.3 Mobile Refueler Equipment

There are typically four potential spill scenarios for mobile refuelers, which include fuel trucks, fuel dispensing trailers, and fuel collection bowsers: tank rupture, overfill during filling, overfill during defueling, and hose retrieval. Details related to potential spill rate of flow and total quantity of oil, which could be discharged as a result of each spill scenario, are presented in **Appendix F**.

A tank rupture on a mobile refueler truck during fuel transfer operations is not likely, as mobile refueler trucks are inspected on a regular basis. However, many of the ancillary tank locations being serviced do not have a passive method of containment for mobile refueler trucks. Spilled fuel on paved surfaces can be collected with spill kits at the transfer site, or with the vacuum/used oil truck.

Filling a mobile refueler truck, or a rotary or fixed wing aircraft tank, which could result in an overfill, is a likely discharge scenario. Fuel transfer operations from a refueler truck to an aircraft, are usually performed on the airfield or hangar tarmac, which do not have any curbed secondary containment. However, these are concrete surfaces with a large flat area, which may allow a small spill to be cleaned up before it enters the environment. If there are storm drain openings adjacent to the fuel transfer area, then they should be covered to prevent spilled fuel from entering navigable waters. Follow the fuel transfer procedures in **Section 9.1**. If a spill occurs, the concrete pad will hold the fuel until it is cleaned up.

Defueling a mobile refueler truck, or a rotary or fixed wing aircraft tank, is a likely discharge scenario. The transfer hose is attached to the mobile refueler truck via a cam-lock type connection and fuel is emptied into one of the following tanks: a product recovery tank (if the fuel is reclaimable), a waste oil tank (if the fuel is not reclaimable), or a mobile refueler truck (defueling aircraft). This defueling operation can result in overfill of the receiving tank. During the transfer operation, the mobile refueler truck operator maintains flow control through the use of a “deadman” control. Upon recognition of an overfill discharge, the operator will immediately release the “deadman” control, which will automatically close the flow control valve inside the refueler truck pumping compartment and stop transfer operations. Spilled fuel on paved surfaces can be collected with spill kits at the transfer site, or with the vacuum/used oil truck.

Hose retrieval following fuel transfer is a likely potential discharge scenario for mobile refueler trucks. The spill bucket is a measure that can be used to reduce spills by tipping the hose nozzle back into the spill bucket following transfer operations to contain any residual fuel left in the nozzle. Operators should cap the nozzle prior to taking the hose back to the mobile refueler truck, and ensure the nozzle is not dragging on the ground. **Section 9** recommends the above steps be taken. In addition to these steps, an active method of containment is allowed by 40 CFR 112.7(c), that is an appropriately sized spill kit is present with each of the mobile refueler trucks.

4.2.4 Drum Storage Areas

There are three potential spill scenarios for DSAs: drum failure, overfill while filling a drum, and a spill when emptying a drum. Details related to potential spill rate of flow and total quantity of oil that could be discharged as a result of each spill scenario are presented in **Appendix F.**

The potential for a drum rupture is very low because the drums are not stored near vehicle traffic, do not stay outside long enough for corrosion to become significant, and are unlikely to be damaged during handling. The containment provided for DSAs is of sufficient size to contain the standard 55-gallon drum, as required.

Overfill when filling a drum is a likely discharge scenario. Drums are stored in secondary containment, thus minimizing a release during an overfill situation. Absorbent materials are available at drum storage areas to address any release during filling operations.

A spill when emptying a drum is not a likely discharge scenario. Drums are emptied with the vacuum/ used oil truck, or a portable shop pump, which minimizes the potential for a spill. Drums are stored with adequate secondary containment; absorbent materials are available at drum storage areas.

4.2.5 Oil-Filled Operational Equipment

All regulated OFOE containers are listed in **Table 2-4**, including transformers and elevator hydraulic oil tanks, which are separated by NAS owned and CCAD owned. OFOE locations are shown in **Appendix B**.

OFOE including hydraulic oil actuated equipment (such as elevator tanks) and electrical transformers are considered low risk for potential spills based on their design, operation, and preventive maintenance program. NAS Corpus Christi PWD Utilities office oversees a maintenance program of annual inspections, repairs as needed, general servicing and operational checks by the NEC contractor, to ensure that all transformers are properly maintained and monitored. More thorough transformer inspections are conducted every 5 years by a third-party contractor, URS. Identified leaks will be reported and corrected promptly.

Additional rationale for NAS Corpus Christi's ability to rely on spill response to satisfy this requirement is included below:

- There is no documented case of oil from an electrical transformer reaching navigable waters at NAS Corpus Christi. If an electrical transformer or other high-voltage electrical equipment were to fail, causing a leakage of oil, the affected electrical systems would be shut down. Thus, operating personnel would immediately know that transformer damage or oil leakage may have occurred and would react to inspect the area and control any oil leaks.
- Secondary containment is not provided for outdoor high-voltage electrical equipment because it would represent a potential safety hazard for personnel who enter these areas. Standing rainwater, which is a common occurrence in diked areas, poses an unreasonable risk of electrical shock to maintenance employees.
- NAS Corpus Christi is manned by Navy Security and Fire & Emergency Services personnel, 24 hours per day, 365 days per year. Personnel are trained to make the proper notifications if an oil release is discovered. The station has an adequate spill response program for addressing such discoveries. Refer to the NAS Corpus Christi **FRP** for more information.

4.2.6 Other Ancillary Piping

4.2.6.1 Aboveground Pipelines

This section addresses typical failure modes for aboveground single-walled steel pipelines that do not have a passive method of containment. These areas include, but are not limited to, all stand-alone tanks that supply fuel to emergency generators or boilers. Refer to **Section 4.2.1** for piping information at High Risk facilities, and **Section 5.6** for piping secondary containment, which includes underground pipelines.

There are typically two potential spill scenarios for aboveground pipelines (including tank piping): rupture and corrosion. The potential for pipe failure depends upon the conditions at each site and the types of inspections performed. Pipeline inspections at a minimum include monthly visual inspections. Refer to **Section 6** for details of these inspections. Details related to potential spill rate of flow and total quantity of oil, which could be discharged as a result of each spill scenario, are presented in **Appendix F**. The appropriate active spill control measures are also included in **Appendix A**.

Pipe rupture due to impact with a heavy object or vehicle collision is not a likely occurrence, but it can result in a large spill rate. Pipe rupture from impact can result in a large spill quantity if the anti-siphon devices are damaged or not present at all. In this scenario, the size of the spill can be increased if the generator is operating and fuel is being pumped through the breached return line.

Pipe failure due to corrosion usually occurs at threaded or flanged connections or improperly welded joints. A likely scenario could be a pin-hole leak in a generator fuel supply or return line. This leak would be expected to drip fuel during generator operation, and it may continue to leak after the operation stops. If the generator is not being operated, the potential exists for the supply line quantity to drain from the generator to the anti-siphon device. In the event the generator is being operated at the time of the failure, the largest spill would occur when the return line fails causing the generator to pump oil through the leaking piping until discovered, or the contents of the container are emptied. Corrosion failure is a likely occurrence if the maintenance is not performed as needed, and usually results in a small spill rate.

Although the pipelines are visually inspected monthly, some stand-alone tanks that supply fuel to emergency generators are in remote, out of sight, and unmanned areas. The expectation for rapid response to a spill is not practical. Therefore, all stand-alone tanks that supply fuel to remotely located dispensers or emergency generators should have anti-siphon valves installed at the high point of fuel supply piping, if there is a piping low point below the average fuel level in tank. Also, more effective inspections and maintenance is recommended to keep the piping in good condition.

The PWD maintains procedures that include regular inspection of generators under routine or emergency operations, to detect leaks and ensure equipment is operating properly. The operators performing these inspections will be equipped with spill kits and trained on appropriate response procedures. A combination of the pre-deployed on-site spill kits, and/or mobile refueler truck spill kits, will be used to control piping leaks that may occur.

40 CFR 112.7(c) applies to piping, and it requires either an active (spill response kit) or passive (structural) method of secondary containment, to address the typical failure mode, and the most likely quantity of oil that may be discharged. Refer to the assumptions and calculations in **Appendix F**.

4.2.6.2 Flexible Hoses

This section addresses typical failure modes for aboveground, single-walled, non-metallic flexible hoses, that do not have a passive method of containment. These areas include, but are not limited to, integral generator base tanks that have rubber hoses for fuel supply and return, which are located inside the generator enclosures, and stand alone tanks with attached fuel dispenser hoses. There are typically two potential spill scenarios: the flexible hose becoming disconnected, or the hose leaking due to damage. Refer to **Section 4.2.1** for dispenser information at High Risk facilities.

The supply and return fuel lines or dispenser lines associated with an AST, can be disconnected by a loose fitting or poorly applied clamping system. In this scenario, the greatest potential spill would result if the return line from the generator separated during operation. On ASTs that are equipped with a fuel dispenser, the flexible hose should be inspected prior to each use, to verify that it is not damaged, disconnected or leaking.

The supply and return fuel lines in the generator could start to leak due to cuts, cracks, or degradation of hose material. In this scenario, the greatest potential spill would result if the return line from the generator is leaking during operation.

Active spill control and containment measures are required for the various spill scenarios for piping and hoses associated with these remote tanks. A combination of the pre-deployed on-site spill kits, and/or mobile spill kits on a refueler truck or maintenance truck, should be able to control the piping leaks that may occur. Refer to the assumptions and calculations in **Appendix F**.

4.3 Discharge or Drainage Controls

"112.7(a)(3)(iii): Describe in your Plan discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge;"

"112.8(c)(10): Promptly correct visible discharges which result in loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas."

Refer to **Appendix A** and **Appendix B** of this Plan for a description of each storage tank containment, spill kit availability, location, diversionary structures, discharge, or drainage controls. **Section 5** contains information on secondary containment for field-erected and shop-fabricated fuel tanks, fuel transfer areas, drum storage areas, piping, mobile refueler truck parking, and OFOE.

Procedures have been established for environmental staff, tank custodians, and other personnel, to inspect diked areas for signs of petroleum contamination (odor, sheen) on a periodic basis prior to draining the containment area or within one week of rainfall event. See **Appendix C** for OWS Inspection Checklist, and Form 8 Dewatering Visual Monitoring Checklist. In addition, procedures are in place to repair leaking equipment to prevent a spill or a discharge to navigable waters.

NAS Corpus Christi has multiple spill kits for a rapid response to mitigate and clean up small discharges only. For more detailed information about spill response, see the **NAS Corpus Christi FRP**.

NAS Corpus Christi follows discharge prevention protocols during bulk fuel transfer operations, in accordance with Naval Air Systems Command (NAVAIR) 00-80T-109, Naval Air Training and Operating Procedures Standardization (NATOPS) manual, which is maintained by the Aviation Fuel Facility office. A list of relevant military and industry standards is included in **Table 11-1**.

Response personnel will deploy sorbent materials (boom/pads) around or in the path of the spreading fuel. Responders may also construct berms or ditches to stop the flow of fuel and remove product with sorbent pads, vacuum/used oil trucks, or pumps as needed, until all the fuel is removed from the land surface.

For small releases, collected fuel/soil would be stored in drums, vacuum/used oil trucks or frac tanks until the material can be properly disposed. Contaminated soil and sorbent materials would be processed for proper disposal or placed in plastic bags as appropriate.

For a large spill, fuel will be pumped from the secondary containment area by vacuum/used oil trucks or pumps into a tank or tanks with sufficient capacity to contain the amount of fuel released. The impacted soil will be excavated and stored in lined roll-off boxes and disposed of at a licensed facility.

All contractors providing service to NAS Corpus Christi that are regulated by this SPCC Plan will adhere to the minimum spill prevention practices during transfer operations as outlined in **Section 9.**

4.4 Disposal of Recovered Materials

"112.7(a)(3)(v): Describe in your Plan methods of disposal of recovered materials in accordance applicable legal requirements;"

The methods of disposal of recovered spill materials are outlined in **NAS Corpus Christi FRP** and **Hazardous Waste Management Plan**.

SECTION 5

Secondary Containment

5.1 Requirements

112.7(c): Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank, will not escape the containment system before cleanup occurs. In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:

(i) Dikes, berms, or retaining walls sufficiently impervious to contain oil;

(ii) Curbing;

(iii) Culverting, gutters, or other drainage systems;

(iv) Weirs, booms, or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds; or

(vii) Sorbent materials."

There are four sections of 40 CFR 112 that specify requirements for secondary containment. 40 CFR 112.7(c) is the general containment requirement, with no specific size or capacity limits, which applies to all fuel or oil storage tanks, equipment, and systems on a facility, as defined in 40 CFR 112.2, where a discharge could occur. This rule also applies to fuel piping, flexible hoses, tank fill pipes, fueling stations and other fuel transfer areas without a loading rack, mobile refuelers (including trucks, trailers and bowsers) and their parking areas. Either an active or passive means of containment may be used, to control the most likely quantity of oil that may be discharged. Active means the facility has a process or procedure, with trained personnel and spill response equipment available, which can be used for spill cleanup. Passive means the facility has a dike, berm, curb, or other containment structure to contain the tank, piping, or fuel transfer area. This general rule is supplemented by additional specific size containment requirements, which apply to certain types of tanks and equipment as follows.

40 CFR 112.8(c)(2) is a containment requirement specifically for stationary bulk oil storage tanks (but NOT piping), which must include the maximum capacity of a tank, plus sufficient freeboard for precipitation (if the containment is exposed to rainfall). You must ensure that diked areas are sufficiently impervious to contain discharged oil. See **Section 5.2**.

40 CFR 112.8(c)(11) is a containment requirement specifically for portable oil storage containers (but NOT mobile refueler trucks), applicable to mobile generators, 55-gallon DSAs, and UCO containers, which must include the capacity of the largest container in the area, plus sufficient freeboard for precipitation (if the containment is exposed to rainfall). 40 CFR 112.12 also applies to UCO containers. See **Section 5.3**.

40 CFR 112.7(h)(1) is a containment requirement specifically for loading / unloading racks (as defined in 40 CFR 112.2), which must include the capacity of the largest compartment of a mobile refueler truck, but does NOT include freeboard for precipitation. See **Section 5.4**.

Secondary containment for fuel transfer areas is addressed in **Section 5.5.** Secondary containment for piping is addressed in **Section 5.6.** Secondary containment for OFOE is addressed in **Section 5.7.** Impracticability of Secondary Containment is discussed in **Section 5.8.**

5.2 Secondary Containment for Stationary Bulk Storage Tanks

"112.8(c)(2) Construct all bulk storage tank installations (except mobile refuelers and other non-transportation-related tank trucks) so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond."

5.2.1 Freeboard for Precipitation

Secondary containment must be sized to contain the entire contents (maximum shell capacity) of the largest tank, plus adequate freeboard to collect precipitation, for those open containment areas located outdoors. The EPA manual, SPCC Guidance for Regional Inspectors (GRI), 2013 version, Section 4.3.2 for Sufficient Freeboard, allows the plan certifying PE to determine for each tank, the criteria for sufficient freeboard to hold precipitation. This could be either 110 percent of storage tank capacity, or the published rainfall amount for a 25-year, 24-hour storm event, or any other reasonable criteria that is approved by the PE. Freeboard is measured as vertical inches of rainfall allowance within an open containment. For this Plan, the storm event has been chosen as the most conservative method of determining freeboard, unless stated otherwise in the plan and PE approved. The 25-year, 24-hour storm event for NAS Corpus Christi, Texas, is 9 inches, or 0.75 feet.

Table 5-1 provides freeboard volume calculations for open secondary containments for single-walled tanks only.

Storm water that may accumulate in the containment area must be inspected for oil contamination prior to discharge and documented on the log form in **Appendix C**.

5.2.2 Sufficiently Impervious

40 CFR 112.8(c)(2) states that diked areas must be sufficiently impervious to contain discharged oil. This applies to all steel, concrete, or other types of containment materials for tanks, piping, mobile equipment, and fuel transfer areas, which are accessible for inspection. Double-walled tanks have integral containments, which are assumed to be sufficiently impervious, unless external leaks or structural damage is found. The sufficiently impervious requirement is evaluated during monthly visual inspections by looking for leaks, and by considering the ability of the containment material to retain oil, so that a discharge will not escape the containment system before cleanup occurs. If the material is not impervious to oil, then an additional layer of spill protection must be added, such as oil proof membrane on top of natural earth berms. If concrete is used for containment, interior separated cracks or inadequately sealed joints should be repaired with sealant as needed to retain oil. Excessive growth of weeds and vegetation in containment joints and cracks should be removed.

5.2.3 Field Erected Tanks

The Aviation Fuel Facility contains two single walled, field-erected ASTs, 1716-1 and 1720-2, that store F-24 Jet Fuel. Each AST has a maximum fill capacity that corresponds to the overflow height as listed on individual strapping charts, which is listed on **Table 2-3**. Each AST has a separate secondary containment dike, consisting of vertical concrete walls and sloped earthen floors, all covered with a flexible membrane liner. The dikes are sufficiently impervious to hold discharged oil for an adequate period of time, to allow Fuel Facility personnel to remove the oil. Each dike containment volume is calculated in **Appendix F**, **Section F.2.1**, and listed in **Table 5-1**. The dikes provide adequate secondary containment volume to hold the AST contents of maximum fill capacity, plus sufficient freeboard for worst case precipitation. The containment volume was reduced by obstacles within each dike, consisting of concrete pipeline supports, and an AST circular ring wall foundation, which has a sloped berm from the top edge of ring wall to the dike floor.

5.2.4 Shop-Fabricated Ancillary Tanks

NAS Corpus Christi utilizes various types of secondary containment for fixed position shop-fabricated ancillary ASTs. Some tanks are single-walled with open containment structures, some tanks are double-walled with a sealed and vented interstitial space, and some tanks are double-walled with an open and protected interstitial space. **Appendix A,** Tank Data sheets, shows the type of containment.

5.2.4.1 Secondary Containment Calculations

Table 5-1 provides a summary of volume calculations for open secondary containments, for fixed position single-walled tanks. **Appendix A,** Tank Data sheets, and **Appendix F, Table F-2,** provide the dimensions for these containment calculations. For tanks located inside a building, mechanical room, or other walled enclosure, the requirement for adequate freeboard in the containment to collect precipitation does not apply if the tank is not exposed to rainfall. This table does not apply to mobile or portable containers, which are listed in **Table 5-2.** Out of service tanks are not listed for containment evaluation.

Double-walled tanks are listed on **Table 2-3.** They are manufactured such that the secondary containment wall or barrier is sufficiently impervious to hold leaked oil, and it will hold at least 110 percent of the primary tank capacity. Specific containment capacities of double-walled tanks are provided in **Appendix A** if listed on the tank data plate. Double-walled tanks are manufactured with an interstitial containment space, which is normally not accessible to be measured for volume. If the interstice is properly contained, having adequate freeboard to collect precipitation is not a factor to consider.

TABLE 5-1
Secondary Containment of Single-Walled Tanks

Tank ID Number	Tank Volume[1]	Freeboard Volume[2,3,4]	Total Volume Required Including Freeboard	Total Existing Containment Volume[5]	Remarks
114-T (55-1)	280	N/A	280	314	Adequate
1716-1	244,604	83,549	328,153	389,313	Adequate, Obstacles in Containment (see note 6)
1720-2	247,627	83,353	330,980	388,597	Adequate, Obstacles in Containment (see note 6)
1804-TK-08	1,000	918	1,918	4,185	Adequate

Notes: All volume quantities in gallons

1. Information on this page was gathered from the site visit completed in July 2018.
2. Required Freeboard Volume for a 25-year, 24-hour storm event based on NOAA's Precipitation Frequency Data Server http://hdsc.nws.noaa.gov/hdsc/pfds/index.html.
3. N/A = Freeboard is not applicable for a tank under cover with closed sides, or inside a building.

Equations Used:

4. (Length)*(Width)*(Freeboard Height of 0.75 feet (ft)*7.48 gallons per cubic feet (gal/ft^3)
5. (Length)*(Width)*(Height)*7.48 gal/ft^3
6. Containment volume was reduced by the volume of obstacles in the secondary containment dike. See section F.2.1 for details.
7. Dimensions and calculations for secondary containment are located in **Appendix F, Table F-2**.

5.2.4.2 Containment Evaluations

As shown in **Table 5-1**, all single-walled tanks have satisfactory sized containments, as approved by the plan-certifying PE, to hold the maximum fill capacity, plus sufficient freeboard to meet the SPCC plan criteria defined in **Section 5.2.1** (a 25-year, 24-hour storm event for NAS Corpus Christi). Below is an example of the containment volume calculations for tank 1804-TK-08.

Freeboard Volume (Vol) for Precipitation

Equation Example: (Length * Width * Freeboard) * 7.48

*Vol = ((12.75 ft * 11.00 ft * 0.75 ft) + (6.67 ft * 3.5 ft * 0.75 ft)) *7.48 gal/ft^3*

Vol = 918 gallons

Total Existing Containment Volume

Equation Example: [(Length * Width * Height)
- (Foundation obstacle volume within dike boundary)] * 7.48

$$Vol = [\ ((12.75\ ft * 11.00\ ft * 3.42\ ft) + (6.67\ ft * 3.50\ ft * 3.42\ ft)) - (0\ ft^3)\ ] * 7.48\ gal/ft^3$$

Vol = 4,185 gallons

Total Required Volume including Freeboard

Vol = Tank Volume (1,000) + Freeboard Volume (918)
Vol = 1,918 gallons

Notes: ft – feet; gal/ft^3 – gallons per cubic feet

5.2.4.3 Industry Standard Considerations

National Fire Protection Association (NFPA) Code 30, Edition 2018, Section 22.11.4 Secondary Containment–Type ASTs. Where a secondary containment–type tank is used to provide spill control, the tank will meet all of the requirements of 22.11.4.1 through 22.11.4.10.

- The capacity of the listed primary tank for Classes I, II, and IIIA liquids shall not exceed 50,000 gallons.
- All piping connections to the tank will be made above the maximum liquid level.
- Means will be provided to prevent the release of liquid from the tank by siphon flow.
- Means will be provided for determining the level of liquid in the tank. This means will be accessible to the delivery operator.
- Means will be provided to prevent overfilling by sounding an alarm when the liquid level in the tank reaches 90 percent of capacity and by automatically stopping delivery of liquid to the tank when the liquid level in the tank reaches 95 percent of capacity.
- In no case will these provisions restrict or interfere with the functioning of the normal vent or the emergency vent.
- Spacing between adjacent tanks will be in accordance with NFPA 30, Table 22.4.2.1, and not less than 3 feet (0.9 meter).
- The tank will be capable of resisting the damage from the impact of a motor vehicle, or collision barriers will be provided.
- Where the means of secondary containment is enclosed, it will be provided with emergency venting in accordance with NFPA 30, Section 22.7.
- Means will be provided to establish the integrity of the secondary containment, in accordance with NFPA 30, Chapter 21.
- The secondary containment will be designed to withstand the hydrostatic head resulting from a leak from the primary tank of the maximum amount of liquid that can be stored in the primary tank.

5.3 Secondary Containment for Mobile and Portable Containers

"112.8(c)(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in 112.1(b). Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation."

5.3.1 Portable Containers

Table 5-2 provides a summary of the secondary containment for single walled portable containers, with greater than 55 gallons capacity, including mobile generators, but not DSAs. Information for each portable, DSA or UCO container is listed in **Table 2-3**. Photos of the portable, DSA or UCO containers are shown in **Appendix AB**.

40 CFR 112.8(c)(11) is the containment requirement specifically for portable containers, which do not store bulk fuel for transfer to other containers on site. This includes mobile generators, and 55-gallon drums. 40 CFR 112.12(c)(11) is the containment requirement for UCO containers. Secondary containment must include the capacity of largest container present, plus sufficient freeboard for precipitation, if the containment is exposed to rainfall.

NAS Corpus Christi has three mobile generators for backup power supply, MG-1 with 250 gallons, MG-4 with 84 gallons, and G-70 with 115 gallons of diesel fuel capacity. When not in temporary use at another facility, they are staged at Facility 305, PWD Equipment Storage area. The generators are parked on top of flexible vinyl dikes when they are holding fuel. These containments have adequate size volume to provide at least 110 percent spill volume for the fuel tanks.

CCAD has four mobile generators for backup power supply, AMC 209, 219, 220, 221, each with 65 gallons of diesel fuel capacity. When not in temporary use at another facility, they are staged at Hangar 44. The generators are parked on plastic spill pallets when they are holding fuel. These containments have adequate size volume to provide at least 110 percent spill volume for the fuel tanks.

UCO containers are considered to be portable for inspection purposes. 1283-1-UCO is at the Catalina Consolidated Club, 294-gallons, double walled, steel. 1735-1-UCO is at the Golf Course Grill, 294-gallons, double walled, steel. Both UCO containers have adequately sized interstitial containment.

Some drums are stored on a large spill pallet that is designed to hold 4 drums, which has an adequate size 60 gallon containment volume. Some drums are stored in an overpack container that is sized to hold the volume of one drum. Some drums are stored on a rolling spill cart, or on a small spill pallet, or inside a flammable storage locker, which have a containment volume between 15 to 30 gallons, but these DSAs are located inside shop buildings with large surface area concrete floors, that are considered to provide adequate containment. Some drums are stored in covered curbed concrete containment areas, with a volume greater than 1,000 gallons. Most DSAs are located inside buildings or covered enclosures, which prevents the need for providing freeboard volume for precipitation.

DSA-28-B is located in an outdoor uncovered containment area for refueler truck parking, which is sloped and drains into a spill basin with a volume of 8,221 gallons. DSA-257-21 is located in an outdoor uncovered containment, which is a rollover vinyl berm with a volume of 5,236 gallons. DSA-1216 has no containment structure but is stored on absorbent pads inside a shop building.

The plan certifying PE can approve containment structures for portable containers, including mobile generators and DSAs, that can hold at least 110 percent of the tank or container capacity, and includes an allowance for precipitation, if containment is exposed to rainfall. This does not apply to refuelers, see **Section 5.3.2.**

Any outdoor uncovered containments must be inspected for oil sheen following rain events, and then drained of water (if clean). Containment areas are inspected at least monthly for leaks and container integrity. Document any water removal on Form 8 in **Appendix C**.

When filling or emptying the contents of mobile and portable containers, the transfer process should be in accordance with **Section 9**.

5.3.2 Mobile Refueler Equipment

Table 5-2 provides a summary of the secondary containment for the mobile refuelers and portable containers. Information for each type of mobile refueler is listed in **Table 2-3**. Photos of the mobile refuelers are shown in **Appendix AB**.

40 CFR 112.7(c) is the general containment requirement, with no specific size or capacity limits, that applies to all mobile refueler equipment, which stores bulk fuel for transfer to other containers on site, or collects reclaimed fuel from other tanks (such as from aircraft). This includes refueler trucks, plus dispensing trailers and bowsers (if present), while in use on the station and parked in their normal storage areas. Either an active or passive means of containment may be used, to address the typical failure mode, and to control the most likely quantity of oil that may be discharged. There is no freeboard for precipitation requirement.

At NAS Corpus Christi, the LB&B fuels contractor currently operates five 5,000-gallon (F-24) refueler trucks, one 2,000-gallon (F-24) refueler truck, and one 2,000-gallon (gasoline/ diesel) dual compartment refueler truck. Refueler trucks are used in daily operations for fueling of aircraft and ancillary storage tanks. Refueler trucks are parked at Facility 28 when not in use. The parking area includes a curbed concrete secondary containment, that is sloped and drains into a spill basin (8,221 gallons). The liquid in the spill basin can be discharged into OWS-28-1 (9,874 gallons). This containment area is sufficiently sized to contain the most-likely sized spills that may occur from a refueler truck.

Drainage from the refueler truck containment area spill basin and OWS-28-1 is controlled by PIVs, which are normally kept locked in the closed position, so oil may be retained in the containment system. When filling or emptying the contents of mobile and portable containers, the transfer process should be in accordance with **Section 9.**

Any outdoor uncovered containments must be inspected for oil sheen following rain events, and then drained of water (if clean). Containment areas are inspected at least monthly for leaks and container integrity. Document any water removal on Form 8 in **Appendix C**.

TABLE 5-2
Secondary Containment for Mobile and Portable Containers

Container Name or Number	Largest Container Volume[1]	Freeboard Volume[2]	Total Volume Required Including Freeboard	Total Existing Containment Volume [6]	Remarks
Refueler Truck Parking Area Facility 28	5,000	N/A (note 3)	60 (note 4)	Basin 8,221 + OWS 9,874	Adequate
PWD Transportation MG-1 Mobile Generator Facility 305	250	25 (note 5)	275	748	Adequate
PWD Transportation MG-4 Mobile Generator Facility 305	84	8 (note 5)	92	359	Adequate
PWD Transportation G-70 Mobile Generator Facility 305	115	12 (note 5)	127	359	Adequate
CCAD Hangar 44 Mobile Generators 209, 219, 220, 221	65	7 (note 5)	72	210	Adequate

Notes: All volume quantities in gallons

1. Information on this page was gathered from the site visit completed in July 2018.
2. Required Freeboard Volume for a 25-year, 24-hour storm event based on NOAA's Precipitation Frequency Data Server http://hdsc.nws.noaa.gov/hdsc/pfds/index.html.
3. N/A = Freeboard is not applicable to refueler equipment, including trucks, trailers, and bowsers.
4. For refueler equipment, the volume required is the most likely quantity of oil that may be spilled. This is calculated in Appendix F. Active measures of spill control is an allowed alternative to passive containment.
5. For portable containers (not refuelers), when used outdoors without cover, required Freeboard should be at least 10 percent of tank capacity, subject to approval by plan certifying PE.

Equations Used:

6. (Length)*(Width)*(Height)*7.48 gal/ft^3

5.4 Secondary Containment for Loading and Unloading Racks

"112.7(h)(1) Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading/unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility."

Table 5-3 provides a summary of secondary containment for the loading/unloading racks. An aerial image of the loading rack is shown in **Figure 2-2,** for the Aviation Fuel Facility. Photo of the loading/unloading rack is shown in **Appendix AB**.

NAS Corpus Christi has one loading rack (with movable or swivel arm) located at the Aviation Fuel Facility 1717. See **Section 9.1** for EPA definition of a loading/unloading rack. There is no requirement for sufficient freeboard to collect precipitation. The loading rack is used for filling refueler trucks with F-24 jet fuel from the bulk ASTs. The refueler truck loading rack is situated within a curbed concrete containment area, which is sloped towards the center trench drain. There is a PIV that controls drain flow to a remote spill basin with a volume of 11,316 gallons. From the spill basin, flow can be directed into either OWS-1717-1 (3,450 gallons) or to sanitary sewer. This containment area is sufficiently sized to contain the capacity of largest compartment inside a refueler truck, estimated at 50 % of truck capacity.

Any outdoor uncovered containments must be inspected for oil sheen following precipitation events, and then drained of water (if clean). Document any water removal on the log form in **Appendix C**.

5.4.1 Industry Standard Consideration

Industry standard (NFPA 30 & API 2610) outlines the following:

- Section 28.9 of NFPA 30 specifies that "loading and unloading facilities shall be provided with drainage systems or other means to contain spills."
- Section 9.3.1 of API 2610 specifies that "spill containment for refueler truck loading rack areas should include concrete pavement with a raised edge (curbing) or other spill containment method provided around the loading rack perimeter. The raised edge *should* be sloped or rounded to facilitate refueler truck access. Concrete joints *should* be sealed with petroleum resistant sealants to prevent leaks to subgrade. Pavement *should* be sloped toward catch basins and drains that are piped to containment or treatment facilities."

5.5 Secondary Containment for Fuel Transfer Areas

Table 5-3 provides a summary of secondary containment for the high risk fuel transfer areas, which may or may not have curbed concrete containments. Aerial images of the fuel transfer areas are shown in **Figures 2-3, 2-4, 2-5,** for the GOV Gas Station, NEX Gas Station, and CCAD Fuel Farm.

40 CFR 112.7(c) is the general containment requirement, with no specific size or capacity limits, which applies to all fuel piping, flexible hoses, tank fill pipes, and fuel transfer areas without a mechanical loading / unloading rack. Either an Active or Passive means of containment may be used, to address the typical failure mode, and to control the most likely quantity of oil that may be discharged. There is no freeboard for precipitation requirement.

The major fuel transfer locations at NAS Corpus Christi are associated with the high-risk areas discussed in **Section 2.2.1** of this plan. For the remaining ancillary and generator tanks, most locations do not have a passive method of containment for mobile refueler trucks and commercial fuel delivery trucks. These fuel transfer areas may be on a concrete or asphalt surface without any containment curbs, or they may be on a grass or dirt surface. Therefore, an active spill response procedure will be needed in case of a spill. Most fuel transfers are manned and visually inspected, in accordance with procedures in **Section 9,** to reduce the likelihood of an undetected release. The only transfers that are not typically manned are automatic emergency generator startup operations, which have a relatively low flow rate.

Pre-deployed spill kits are located near most fuel dispensing tanks. At emergency generators, small spill kits are located on mobile refueler trucks delivering fuel, and inside the maintenance trucks of PWD personnel responsible for operation and maintenance.

As listed in **Appendix A**, many tanks have a fill port spill bucket and/or OPV that will contain or prevent an overfill during fuel transfer. However, if neither of these devices are present on an AST, then an active method of containment will be needed, such as a small spill kit on a refueler truck, or a large spill kit placed in the immediate vicinity.

Stand-alone tanks connected to separate generators, and integral generator base tanks, utilize single-walled piping or flexible hoses to transfer oil to and from the generator. These tanks require active countermeasures for spill control and containment during fuel transfers. Tanks that are located inside of containment berms provide passive containment measures for piping and any discharges located within the containment.

The PWD should ensure that all generators be manned and inspected at the start of operations, and inspected every hour during operation, to ensure equipment is operating properly, with special attention to the return line of each generator tank. The operators performing these inspections will be equipped with spill kits and be trained on the appropriate response procedures.

TABLE 5-3
Secondary Containment for High-Risk Loading / Unloading Racks & Fuel Transfer Areas

Rack or Area Name[1]	Mobile Container Volume	Rack Required Volume[2]	Most Likely Spill Volume[3]	Total Existing Containment Volume[4]	Remarks
GOV Gas Station Facility 154 Loading / Unloading Area	7,500	N/A	150	7,050	Adequate
Aviation Fuel Facility 1717 Commercial Unloading Area	7,500	N/A	150	Basin 11,316 + OWS 3,450	Adequate
Aviation Fuel Facility 1717 Refueler Loading Rack	5,000	2,500	N/A	Basin 11,316 + OWS 3,450	Adequate

TABLE 5-3
Secondary Containment for High-Risk Loading / Unloading Racks & Fuel Transfer Areas

Rack or Area Name[1]	Mobile Container Volume	Rack Required Volume[2]	Most Likely Spill Volume[3]	Total Existing Containment Volume[4]	Remarks
CCAD Fuel Farm Facility 8 Unloading Area	7,500	N/A	150	36,134	Adequate
NEX Gas Station Facility 1290 Unloading Area	7,500	N/A	150	None	Use Active Measures, and spill kit in area.

Notes: All volume quantities in gallons

1. Information on this page was gathered from the site visit completed in July 2018.
2. Loading Rack (with movable or swivel arm) is required to contain the volume of largest compartment inside a refueler truck, estimated at 50 % of truck capacity. This is N/A at fuel transfer areas with no rack.
3. Most likely spill volume for fuel transfer areas is calculated in Appendix F. This is N/A for loading/unloading racks. Active measures of spill control is an allowed alternative to passive containment.

Equations Used:

4. (Length)*(Width)*(Height)*7.48 gal/ft^3

5.6 Secondary Containment for Piping

40 CFR 112.7(c) is the general containment requirement, with no specific size or capacity limits, which applies to all fuel piping, flexible hoses, tank fill pipes, and fuel transfer areas without a mechanical loading and unloading rack. Either an active or passive means of containment may be used to address the typical failure mode and to control the most likely quantity of oil that may be discharged. There is no freeboard for precipitation requirement.

Fuel piping is categorized as either high or low risk, depending on the pipe size and proximity to open water. The DLA contractor operated bulk fuel system at NAS Corpus Christi is required to have an API-570 pipeline integrity evaluation performed every 10 years because it was determined to have service class 3 piping (a lower risk). The class 3 rating applies to bulk fuel pipelines that are not located over or adjacent to open waters. The API-570 evaluations are conducted by API certified contractors and documented in the POL Pipeline Integrity Management Plan report. NAS Corpus Christi had an API-570 pipeline evaluation completed in 2015, so the next one is due in 2025.

Higher risk, large-diameter, aboveground bulk F-24 Jet fuel pipelines at the Aviation Fuel Facility, are single-walled, stainless steel. Some portions of the aboveground pipelines are located within bulk fuel field-erected AST containment dikes, or below grade covered containment trenches. The section of piping from AST dike walls to the pump/filter pad is out of containment. The stretches of pipeline out of containment are within the facility storm water drainage area that would flow through storm drains into spill basin-1717. Aboveground pipelines without passive containment require active measures for spill control, and spill kits have been positioned nearby. These aboveground pipelines are visually inspected monthly for leakage, they are required to be pressure tested annually, and API-570 inspections are performed every 10 years.

Lower risk, small-diameter, underground piping carrying gasoline and diesel, is installed at the GOV Gas Station, going from AST piping transition sumps to the loading/ unloading/ dispensing station. Underground piping carrying gasoline and diesel, is also installed at NEX Gas Station, going from the USTs to transition sumps under the vehicle fuel dispenser cabinets. Underground piping carrying gasoline (only) is installed at MWR Marina, going from the AST piping transition sump towards the small boat pier which has a fuel dispenser. The NEX Gas Station and Marina fuel systems are temporarily out of service, pending completion of needed repairs. When these systems are put back into operation, the tanks and piping will be monitored by a Veeder Root ATG, which includes tank leak detection and pipeline tightness testing functions. All the underground piping is double-walled, made of fiberglass/plastic, with an interstitial monitoring function to detect leakage.

Lower risk, small-diameter, aboveground piping, is typically single-walled, coated carbon steel, with little or no passive containment at most areas. This is a typical arrangement for piping installed from shop-fabricated stand-alone ancillary ASTs, going to generators without integral base tanks, or to CCAD Jet engine test cells, or to Fire pumps. Aboveground piping is also installed at the GOV Gas Station, going from the ASTs across a curbed containment area to underground piping transition sumps. Aboveground piping without passive containment will require active measures for spill control. POLs transferred within this piping include F-24 Jet fuel, gasoline, diesel, and lube oils.

Generators with integral base tanks, typically have single-walled, flexible rubber hoses for diesel fuel supply and return, which are located inside generator enclosures, and have no secondary containment. Active measures will be needed for spill control.

One area where single-walled, aboveground piping is very close to open water, is the MWR Marina where gasoline can be transferred into boats on the water, from a rubber dispenser hose attached to the pier. Under normal operation, dispenser hoses are inspected at least monthly, and are observed for leaks each time fuel is dispensed. When the Marina fuel system is repaired and reopened, it must use active measures for spill control, and position spill kits nearby.

5.7 Oil-Filled Operational Equipment

"112.7(k): The owner or operator of a facility with oil-filled operational equipment that meets the qualification criteria in paragraph (k)(1) of this sub-section may choose to implement for this qualified oil-filled operational equipment the alternate requirements as described in paragraph (k)(2) of this sub-section in lieu of general secondary containment required in paragraph (c) of this section.

112.7(k)(2): Alternate Requirements to General Secondary Containment. If secondary containment is not provided to qualified oil-filled operational equipment pursuant to paragraph (c) of this section, the owner or operator of a facility with qualified oil-filled operational equipment must: (i) Establish and document the facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge;"

All regulated OFOE containers are listed in **Table 2-4**, including transformers and elevator hydraulic oil tanks, which are separated by NAS owned and CCAD owned. OFOE locations are shown in **Appendix B**.

OFOE includes electrical equipment such as oil cooled transformers, as well as any hydraulic equipment that utilizes oil as an operating fluid, such as elevator hydraulic oil tanks, and flight training simulators. NAS Corpus Christi has 158 oil-filled transformers and 19 hydraulic elevator tanks on site, that are owned by Navy. CCAD has 68 transformers, 23 hydraulic elevator tanks, and 39 miscellaneous hydraulic oil containing equipment.

40 CFR 112.7(k)(1) allows NAS Corpus Christi to set alternate requirements in lieu of general secondary containment for qualified OFOE. These requirements have been met by NAS Corpus Christi by having no reportable discharges from OFOE within any 12-month period for the previous three years; the NAS Corpus Christi PWD facilities maintenance office has a written procedure for inspecting the equipment; and NAS Corpus Christi maintains an FRP as a written commitment of manpower and resources, to mitigate any discharge from OFOE that may occur.

For hydraulic oil operated elevators (also known as vertical transportation equipment), NAS Corpus Christi has a monitoring program of external inspections, operational checks, and preventive maintenance to ensure that all hydraulic oil tanks are monitored for leaks.

All hydraulic oil tanks are enclosed in buildings, which have passive containment provided by concrete floors. The most likely spill would occur if an oil connection leaks during operation. Hydraulic oil tanks are considered a low risk for spills based on their location (typically inside mechanical rooms with no outlet for discharge) and the preventive maintenance program, which ensures that all hydraulic oil tanks are maintained and monitored. Any identified leaks would be reported and corrected.

After a hydraulic oil tank is put into operation by an outside contractor, there is no reason for base personnel to refill it during normal usage (unless severe damage occurs), because it is a closed system and the oil is not consumed during normal operation.

For pad-mounted transformers, NAS Corpus Christi PWD Utilities office oversees a monitoring program of annual inspections, repairs as needed, general servicing and operational checks by the NEC contractor, to ensure that all transformers are monitored for leaks. More thorough transformer inspections are conducted by a third party contractor, URS, every 5 years.

Transformers are considered a low risk for spills based on their design, operation, and the preventive maintenance program, which ensures that all electrical equipment is maintained and monitored. Any identified leaks would be reported and corrected.

EPA is allowing flexibility in managing storm water runoff from undiked OFOE transformers. Their minimum criterion is to prevent oil from being released from the facility. This can be done by installation of drainage barriers and other diversionary structures. However, it can also be done through the use of spill response procedures and equipment, that should be readily available in the event of a leak. Additional rationale for the facility’s ability to rely on spill response to satisfy this requirement is included below:

- There is no documented case of oil from a transformer reaching navigable waters at NAS Corpus Christi. If a transformer or other high-voltage electrical equipment were to fail causing a leakage of oil, the affected electrical systems would be shut down. Thus, operating personnel would immediately know that transformer damage or oil leakage may have occurred and would react expeditiously to inspect the area and control any oil leaks.
- Secondary containment is not provided for outdoor high-voltage electrical equipment because it would represent a potential safety hazard for personnel who enter these areas. Standing rainwater, which is a common occurrence in diked areas, poses an unreasonable risk of electrical shock to maintenance employees.

- NAS Corpus Christi is manned by security personnel and a Fire Department, 24 hours per day, 365 days per year. Personnel are trained to make the proper notifications should an oil release be discovered. NAS Corpus Christi has an adequate spill response program for addressing such discoveries; refer to the **NAS Corpus Christi FRP** for more information.

5.8 Impracticability of Secondary Containment

"112.7(d): Provided your Plan is certified by a licensed Professional Engineer under §112.3(d), or, in the case of a qualified facility that meets the criteria in §112.3(g), the relevant sections of your Plan are certified by a licensed Professional Engineer under §112.6(d), if you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), and 112.12(c)(11) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under §112.20, provide in your Plan the following:

(1) An oil spill contingency plan following the provisions of part 109 of this chapter.

(2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful."

There are no bulk storage containers at NAS Corpus Christi where this provision of 40 CFR 112.7(d) has been applied.

SECTION 6

Inspections and Testing

6.1 Inspection Schedule and Recordkeeping

"112.7(e): Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

112.8(c)(6): Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph."

Inspections conducted by NAS Corpus Christi to satisfy the 40 CFR 112.8(c)(6) requirements are detailed as follows. Fixed position, shop-fabricated ASTs, including concrete encased ASTs, will be visually inspected monthly and documented, using the NAS Corpus Christi PWD Inspection Form 1, developed from the Steel Tank Institute (STI) SP001 Monthly Checklist. The NAVFAC-SE developed Annual Record of Monthly AST Inspections is an optional form to use in record keeping. The Convault Maintenance Checklist is optional guidance for concrete encased ASTs. Mobile and portable containers, will be visually inspected monthly and documented, using the NAS Corpus Christi PWD Inspection Form 6, developed from the STI SP001 Portable Monthly Checklist. All inspection forms are included in **Appendix C.**

NAVFAC-SE will use the STI SP001 Annual Inspection Checklist, to hire STI-certified contractors to perform Annual AST inspections on Navy PWD responsible shop-fabricated ASTs (including concrete encased ASTs). Tenant organizations may provide funding into the NAVFAC-SE contract to perform Annual AST inspections on the tenant responsible ASTs.

Tenant organizations at NAS Corpus Christi may use their own inspection checklist, only if it is consistent with STI SP001 for shop-fabricated ASTs, and PWD Environmental Tank Manager must agree with use of an alternate checklist. The completed / signed inspection checklists must be kept on file for at least 3 years and must be available to PWD Environmental Tank Manager, if requested for official records.

HW storage locations on NAS Corpus Christi that contain 55-gallon drums of used oil will be included in the DSA inventory of this plan and may be inspected with a more detailed and site-specific HW checklist, which is not included in **Appendix C** of this plan.

This Plan provides guidance on inspection actions and record retention criteria, that NAS Corpus Christi must perform to comply with the SPCC rule. **Table 6-1** summarizes the inspection schedule for NAS Corpus Christi. The Environmental Division (or Fuels office for bulk fuel systems) maintains copies of most inspection records or has filed documents elsewhere detailing where the information is stored.

TABLE 6-1
Inspection Schedule

Type of Inspection	Frequency	Inspection Performed By[1]	Regulatory Driver	Inspection Form	Record Retention
Bulk Fuel Tank System					
Internal API-653 for Field-Erected ASTs	Varies, See **Table 6-2**	DLA Qualified Contractor	40 CFR 112 UFC 3-460-3	API-653 Report	Note 3
External API-653 for Field-Erected ASTs	5-year	DLA Qualified Contractor	40 CFR 112 UFC 3-460-3	API-653 Report	Note 3
System Tanks, Pumps, Filters, Valves	Varies per DLA Checklist	Fuels contractor LB&B Associates	NAVAIR 00-80T-109 40 CFR 112 UFC 3-460-3	-----------	5 years
Corrosion Control & Cathodic Protection	Bi-monthly, Annual and 5-year	DLA Qualified Contractor	40 CFR 112 UFC 3-570-6	CP Report	5 years
Bulk Fuel Piping System					
API-570 for Above & Underground Pipelines	10-year	DLA Qualified Contractor	40 CFR 112 UFC 3-460-3	API-570 Report	Note 3
External Visual	Monthly[2]	Fuels contractor LB&B Associates	40 CFR 112 UFC 3-460-3	-----------	3 years
Operational System Check	During fuel transfer	Fuels contractor LB&B Associates	NAVAIR 00-80T-109	-----------	-----------
Pressure Testing for Above & Underground Pipelines	Annual	DLA Qualified Contractor	UFC 3-460-03	-----------	3 years
Hydrostatic Testing Underground Pipelines only	5-year	DLA Qualified Contractor	UFC 3-460-03	–	5 years

TABLE 6-1
Inspection Schedule

Type of Inspection	Frequency	Inspection Performed By[1]	Regulatory Driver	Inspection Form	Record Retention
Pressure Testing Underground Pipelines	3-year (Military GOV Gas Station only)	DLA Qualified Contractor	UFC 3-460-03	–	5 years
Secondary Containment & Dike Areas					
Bulk Fuel Tank or Spill Basin Visual	Within 7 days of rain event	Fuels contractor LB&B Associates	NAVAIR 00-80T-109 40 CFR 112	**Appendix C**	3 years
Ancillary Tanks Visual	Monthly [2]	PWD Environ or Tank Owner	40 CFR 112	**Appendix C**	3 years
Fuel Transfer Areas & Loading/ Unloading Racks					
Bulk Fuel or Ancillary Tanks Visual	During fuel transfer	Fuels contractor LB&B Associates or Fuel truck driver	NAVAIR 00-80T-109 40 CFR 112	**Appendix C**	3 years
Refueler Trucks, Bowsers, Mobile Equipment (in Parking Area)					
External Visual	Monthly [2]	Fuels contractor LB&B Associates and Equipment Owners	40 CFR 112		3 years
Shop-Fabricated Tanks & Piping (including Generator Base Tanks)					
External Visual STI-SP001	Monthly [2]	PWD Environ or Tank owner	40 CFR 112	**Appendix C**	3 years
External Visual STI-SP001	Annual	STI Certified Inspector	40 CFR 112	STI inspection report	3 years
Integrity Testing and Formal STI Inspections	Refer to **Table 6-2**	STI Certified Inspector	40 CFR 112	STI inspection report	10 years

TABLE 6-1
Inspection Schedule

Type of Inspection	Frequency	Inspection Performed By[1]	Regulatory Driver	Inspection Form	Record Retention
Operational Generator Check	Monthly[2]	PWD Electrical technician	N/A	-----------	3 years
UST Containment Sumps					
Internal Visual	Monthly[2]	PWD Environ or Tank owner	40 CFR 280	**Appendix C**	3 years
OFOE (Hydraulic Elevators)					
External Visual	Semi-Annually	PWD Facilities Maintenance	40 CFR 112	-----------	3 years
OFOE (Transformers)					
External Visual	Annually	Nueces Electric Contractor	40 CFR 112	-----------	3 years
OWS					
Internal Visual and Cleaning	As needed	PWD Contractor	N/A	**Appendix C**	3 years
55-gallon Drums (Portable Containers)					
External Visual	Monthly[2]	HW Manager or DSA custodian	40 CFR 112	**Appendix C** or similar form	3 years
Used Cooking Oil Tanks (Portable Containers)					
External Visual	Monthly[2]	PWD Environmental or MWR staff	40 CFR 112	**Appendix C**	3 years

Notes:

1. While various facility personnel or contracted professionals perform the inspections, it is the facility Owner's or tenant organization responsibility to ensure all inspections are scheduled and performed in accordance with this Plan.
2. Monthly, means not later than 35 days from the previous inspection.
3. Records for bulk fuel ASTs and pipelines, and USTs must be kept for the life of the container.

6.2 Stationary Bulk Storage Tank Inspections

6.2.1 Field Erected Tanks

All bulk fuel systems and field-erected tanks at the Aviation Fuel Facility, and bulk fuel system at GOV Gas Station, are inspected by LB&B Associates (Fuels contractors), or DLA funded off-site contractors, in accordance with DLA required schedule, and as shown on **Tables 6-1 and 6-2**. Records of inspections and repairs conducted by LB&B Associates or DLA contractors are maintained at the Fuels office. Inspections required by industry standards (such as API-653, API-570, etc.) are programmed and executed through the DLA Centrally Managed Program and use of contracts with API certified inspectors. The tanks require formal internal (out of service) and external (in service) API inspections, according to the schedule specified by the most recent API inspection reports. Refer to **Section 10** for more information.

6.2.2 Shop-Fabricated Tanks

Monthly and Annual visual inspections are performed to satisfy the periodic inspection requirements of STI-SP001, which is the applicable industry standard recognized by EPA for inspection of shop-fabricated ASTs, that is required to comply with 40 CFR 112.8(c)(6). STI-SP001 requires Monthly inspections of every shop-fabricated, fixed position steel AST, plus mobile or portable containers, and plastic or fiberglass containers, with at least 55 gallons capacity. Monthly inspections are conducted by the PWD Environmental Tank Manager, and other designated fuel tank custodians and equipment operators, who have been briefed or trained on how to conduct AST inspections. The results of inspections are documented on a NAS Corpus Christi inspection form, or STI- SP001 Monthly checklist form. If used, the optional NAVFAC-SE inspection form is not big enough to include all the STI Monthly checklist information, so it refers to the STI-SP001 (6th edition) checklists for more guidance.

STI-SP001 also requires Annual inspections of every shop-fabricated, fixed position steel AST, with at least 55 gallons capacity. Annual AST system inspections are conducted on all Navy owned tanks, by a STI certified AST inspection contractor, who is hired by NAVFAC-SE region office. Annual AST system inspections for non-Navy owned tanks, should be performed by an AST inspection contractor, who is paid by the AST owner/custodian organization. The inspection results are documented on a NAS Corpus Christi inspection form, or STI- SP001 Annual checklist form. Mobile containers (on wheels), portable containers (such as 55 gal drums), and plastic or fiberglass tanks, do not require Annual inspections. Since the Annual inspection form has more items to complete, this requires more time to perform, more tools are needed, and more inspector experience is needed, when compared to Monthly inspections. Due to the complexity of work, it is recommended that a STI certified AST inspector perform the Annual inspections.

STI-SP001 also requires a Formal External Inspection, to be conducted at least once every 20 years, for a fixed position, shop-fabricated, Category 1 AST, with greater than 5,000 gallons capacity. Formal inspections must be performed by a STI certified AST inspector, who must document the results in a Formal inspection report. Category 1 ASTs with less than 5,000 gallons capacity, mobile containers (on wheels), and portable containers (such as 55 gal drums) do not require Formal inspections. Ultrasonic Testing (UT) of the outer tank steel plating may be required, if the original shell thickness is unknown, or if corrosion is found during Formal inspections. On double-walled ASTs, a UT is not required on primary tank surfaces that are not accessible.

Category 1 as defined by STI-SP001, is an AST with both Spill Control and Continuous Release Detection Method (CRDM). Category 2 is an AST that has Spill Control, but does not have CRDM. Category 3 is an AST that does not have Spill Control. CRDM for an AST is a method of leak detection, such as visually checking for leaks inside an open containment dike or monitoring the interstitial space of a double-walled AST. Spill Control for an AST is an adequate volume of secondary containment, with an impervious surface to hold oil spills, and at least one method of overfill prevention, such as a working level gauge, high level alarm, or OPV.

The NAS Corpus Christi inspection forms, and STI SP001 AST inspection checklists are located in **Appendix C**. Tank systems undergo visual inspections that include the following: integrity of containment, checking ground surfaces for signs of leakage or spills, operation of level gauges, leak detectors, alarms and controls, condition of piping, foundations, appurtenances, and drainage systems.

Shop-fabricated tanks are also inspected for any signs of leakage prior to and during fuel transfer activities. Emergency generators and their associated fuel tanks and piping are also inspected for any signs of leakage while the generators are operating.

Inspections and integrity testing of concrete encased double-walled tanks should follow the STI SP001 and Convault manufacturer recommendations, located in **Appendix C**. However, per NAVFAC-SE discussion with a Convault company engineer, the Convault Maintenance Checklist items are recommended actions (not mandatory). Convault weekly listed checks are normally not funded at Navy facilities, so they should be performed monthly as specified by STI-SP001. Convault does not require tank owners to follow all checklist recommendations, if superseded by local or Navy policies, so this is not a condition for maintaining the Convault tank warranty. The conditions for warranty are specified in the Operation and Maintenance chapters of Convault Owner's Manual.

Indicators for additional investigation of the primary tank include, but are not limited to the following: heavy impact damage, excessive corrosion or failure of steel appurtenances, significant concrete cracking or crumbling, calcareous deposits on lower edge of the concrete outer shell surfaces, fuel/oil or water found in the interstitial space, etc. If needed, the primary tank integrity should be verified using either a test procedure recommended by the manufacturer, or a pressure or vacuum test performed in accordance with section 9.1.1 of STI SP001.

All of the AST inspection results must be documented in checklists or reports, and maintained in readily accessible record files for at least 3 years. The PWD Environmental Tank Manager is responsible for overseeing this inspection and record keeping process.

Table 6-2 outlines the inspection requirements for field-erected ASTs (from API-653), and shop-fabricated ASTs (from STI SP001). Category designations as defined here, and in Section 5.4 of STI SP001, are only applicable to fixed position, shop fabricated ASTs, which are made of welded steel (with or without concrete protection). OS, mobile, portable, UCO, DSA, plastic or fiberglass, and underground tanks are not listed for inspection requirements. Refer to **Table 6-3** to determine inspection requirements for shop fabricated ASTs.

TABLE 6-2
Tank Category and Inspection Requirements

Tank ID	Year Installed	Tank Capacity (Gallons)	STI Category[1]	Inspection Required[2]	Formal Inspection Due Date
NAS ASTs					
7-G	2005	4,500	2	M & A, E & L(10)	See Note 6
10-2	2014	180	2	M & A	See Note 3
30-G (10-1)	2006	2,000	1	M & A	See Note 3
42-1	2015	300	1	M & A	See Note 3
50-1	2017	359	1	M & A	See Note 3
50-2	2017	359	1	M & A	See Note 3
50-3	2005	660	1	M & A	See Note 3
50-4	2006	357	1	M & A	See Note 3
68-G	2014	300	1	M & A	See Note 3
104-G	2009	80	2	M & A	See Note 3
111-G (1742)	2011	250	2	M & A	See Note 3
114-T (55-1)	2000	280	1	M & A	See Note 3
118-G (236)	1992	250	1	M & A	See Note 3
121-G	2009	217	1	M & A	See Note 3
154-1	2005	8,000	1	M & A, E(20)	See Note 4, next Formal Inspection due in 2025
154-2	2005	4,000	1	M & A	See Note 3
258-1	2020	119	1	M & A	See Note 3
1099-G (PAR-1)	2010	211	1	M & A	See Note 3
1237-G (2607)	1998	500	1	M & A	See Note 3
1238-G	2006	1,000	1	M & A	See Note 3

TABLE 6-2
Tank Category and Inspection Requirements

Tank ID	Year Installed	Tank Capacity (Gallons)	STI Category[1]	Inspection Required[2]	Formal Inspection Due Date
1241-G	2012	500	1	M & A	See Note 3
1289-G	2016	134	1	M & A	See Note 3
1292-G	2005	60	1	M & A	See Note 3
1716-1	1987	244,604	API-653	Note 5	Next Formal Internal Inspection due 2022
1717-2	2017	1,000	1	M & A	See Note 3
1720-2	1987	247,627	API-653	Note 5	Next Formal Internal Inspection due 2028
1720-PRT	Unknown	55	1	M & A	See Note 3
1758-T (1757)	2012	2,000	2	M & A, E & L(10)	See Note 6
1797-G	2020	209	1	M & A	See Note 3
1846-1	2014	115	1	M & A	See Note 3
1846-2 (11-1)	2007	500	1	M & A	See Note 3
1848-G	2004	425	2	M & A	See Note 3
1870-G	2020	2,644	1	M & A	See Note 3
1870-T (1833)	2011	2,000	1	M & A	See Note 3
4008-1 (1737)	1992	500	2	M & A	See Note 3
GM-1	1998	500	1	M & A	See Note 3
GM-2	2000	500	1	M & A	See Note 3
H-100-A	2014	115	1	M & A	See Note 3
W-1-1	2011	500	1	M & A	See Note 3

TABLE 6-2
Tank Category and Inspection Requirements

Tank ID	Year Installed	Tank Capacity (Gallons)	STI Category[1]	Inspection Required[2]	Formal Inspection Due Date
CCAD ASTs					
8-TK-16	2020	758	1	M & A	See Note 3
47-1 / 2	2012	500 / 500	1	M & A	See Note 3
47-3 / 4	2012	500 / 500	1	M & A	See Note 3
47-5	2012	3,000	1	M & A	See Note 3
227-TK-01	1996	10,000	1	M & A, E(20)	See Note 4, next Formal Inspection due in 2032.
228-TK-02	1996	10,000	1	M & A, E(20)	See Note 4, next Formal Inspection due in 2032.
229-TK-03	1996	10,000	1	M & A, E(20)	See Note 4, next Formal Inspection due in 2032.
232-TK-05	1996	2,000	1	M & A	See Note 3
233-TK-07	1996	2,000	1	M & A	See Note 3
340-TK-09	1992	200	2	M & A	See Note 3
1260-TK-10	2012	600	1	M & A	See Note 3
1700-TK-11	2013	450	1	M & A	See Note 3
1700-TK-12	2013	250	2	M & A	See Note 3
1700-TK-15	2020	1,000	1	M & A	See Note 3
1700-TK-17	2020	300	2	M & A	See Note 3
1804-TK-08	2017	1,000	1	M & A	See Note 3
1804-TK-14	2017	250	1	M & A	See Note 3

Notes:

1. STI Category determination is as follow: Category 1 = ASTs with spill control and CRDM; Category 2 = ASTs with spill control but no CRDM; Category 3 = ASTs with no spill control.
2. Inspection Required Abbreviations: M = Monthly, A = Annual, E = Formal External inspection by STI certified inspector, L = Leak Test, (#) = interval of the inspection in years.

3. As shown in **Table 6-3**, for Category 1 shop-built tanks with less than or equal to 5,000-gallon capacity and Category 2 shop-built tanks with less than or equal to 1,100-gallon capacity, no STI certified Formal External inspection is required.
4. As shown in **Table 6-3**, for Category 1 shop-built tanks with greater than 5,000-gallon capacity, a STI certified Formal External inspection is required every 20 years; a baseline inspection should be performed following installation.
5. Bulk field-erected tanks follow the API-653 inspection protocol, and therefore do not fall into an STI category. Formal external (in service) inspections are required every five (5) years. Formal internal (out of service) inspections are required as specified in the most recent API-653 report.
6. As shown in **Table 6-3**, For Category 2 shop-built tanks, with greater than 1,100-gallons capacity up to 5,000 gallons, a STI certified Formal External inspection and Leak test is required every 10 years.

Table 6-3 outlines the STI- SP001 inspection and integrity testing requirements for the shop fabricated ASTs, based upon the tank capacity and category. The STI category of each shop-fabricated AST is listed on **Table 6-2** and the appropriate Tank Data Sheet in **Appendix A**.

TABLE 6-3
STI SP001 Periodic Testing Requirements

Tank Size		Category 1	Category 2	Category 3
Shop built tanks	0 - 1,100	P	P	P, E&L(10)
	1,101 - 5,000	P	P, E&L(10)	[P, E&L(5), I(10)] or [P, E(5) & L(2)]
	5,001 - 30,000	P, E(20)	[P, E(10)& I(20)] or [P, E(5) & L(10)]	[P, E&L(5), I(10)]or [P, E(5) & L(1)]
	30,001 - 50,000	P, E(20)	P, E&L(5), I(15)	P, E&L(5), I(10)
Portable containers		P	P	P **

Notes:
P = Periodic inspection (monthly and/or annual)
E = Formal external inspector by certified inspector
I = Formal Internal inspection by certified inspector
L = Leak test by owner or owner's designee
(#) = maximum inspection interval, in years
** Containers must be tested to Department of Transportation (DOT) requirements every 12 years (steel) or 7 years (plastic)

6.2.3 Industry Standard Considerations

The criteria for the STI SP001 inspection schedule are based on the tank capacity, known dates of installation, and known standard of construction. The scheduled integrity testing dates for each of the tanks should be based upon the following criteria.

- If installation date is known and the tank has a manufacturer's label, testing date is scheduled based upon the STI Category and corresponding schedule.
- If tank manufacturer information is unavailable and the tank is not labeled to standard conformance, inspection is to be performed as soon as possible following SPCC Plan approval. The stringent testing date is based on the lack of sufficient knowledge that exists for the tank construction procedures and materials used in tank manufacture. The level of risk for discharges from tanks constructed with no known standard can be higher, and requires the evaluation of a tank's condition to determine if corrective action is needed.

For any new shop-fabricated tanks that may be installed in the future, NAS Corpus Christi should obtain certification of integrity testing from the manufacturer or installer prior to placing the tank into service.

NAS Corpus Christi should recommend new tanks be installed in accordance with manufacturer instructions, or STI Standard R912 Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable or Combustible Liquids.

If there is a material repair of the tank, in particular inner/outer shell, top/bottom, or tanks supports, the integrity of the tank must be tested by an appropriate method before the tank is returned to service.

NAS Corpus Christi should recommend for tanks which have been relocated, if the tank's condition is in question due to possible damage, then integrity testing should be performed in accordance with manufacturer instructions, or STI R912 Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable or Combustible Liquids.

NAS Corpus Christi should recommend all shop-fabricated tanks be repaired in accordance with manufacturer instructions, or STI SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Flammable or Combustible Liquids.

Section 4.1 of STI SP001 requires that a tank be taken out-of-service within 24 hours if a leak is found. The tank must then be repaired or replaced as required.

If the tank has been exposed to a fire or other means that could cause possible damage, it must be inspected by a certified inspector for serviceability and leaks prior to being put into service. Consult with the tank manufacturer prior to making any alterations or repairs of leaks to a tank.

Upon discovery of fuel in the interstice of a double-walled tank, performance of primary tank pressure testing should be considered in accordance with the 9.1.1 of STI SP001, and STI R912, Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks, or manufacturer's recommendations.

6.3 Mobile and Portable Container Inspections

Table 2-3 lists the designated areas where mobile and portable containers are stored at NAS Corpus Christi. This includes mobile generators, refueler trucks, 55-gallon drums, and UCO containers. At bulk fuel facilities, monthly inspections of refueler trucks parked at Facility 28 adjacent to the airfield are conducted by the LB&B Fuels contractors. At other facilities, monthly portable container inspections are conducted by NAS Corpus Christi personnel, including the PWD Environmental Tank Manager, and other designated fuel tank custodians and equipment operators. There is no annual inspection requirement for mobile or portable containers.

The non-bulk fuel containers are inspected monthly, using the STI SP001 Portable Container Inspection Checklist, located in **Appendix C.** DSAs that are accumulation areas for HW and used oil, will be inspected with forms as required by the HW Management Plan, but are not included in this plan. One inspection form may be used for each storage area, regardless of how many containers are present within the storage area.

At least once a month, and before each use, visual inspections must be conducted to verify the fuel tank or container has no signs of leaks or obvious damage. The fill and discharge connections must be inspected for proper operation to prevent oil leaks. Secondary containment at locations where the containers are normally parked or stored must be visually inspected to verify that it is in good condition and is capable of holding a spill.

Table 6-1 summarizes the inspection schedule for NAS Corpus Christi. The Environmental Division maintains copies of most inspection records or has filed documents elsewhere detailing where the information is stored.

6.4 Liquid Level Sensing Device Inspections

"112.8(c)(8): You must engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.
(iii) Direct audible or code signal communication between the container gauger and the pumping station.
(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
(v) You must regularly test liquid level sensing devices to ensure proper operation."

6.4.1 Field Erected Tanks

The field erected ASTs at the Aviation Fuel Facility are equipped with mechanical float gauges and automatic tank gauging, which includes sensors, high-level alarms, and high-level control overfill prevention valves, connected to the Fuels Manager Defense program, located inside the Fuels office, that is monitored during deliveries. AST 1720-2 was recently updated to have shell mounted audio and visual level alarms installed. The ASTs are gauged continuously to verify product quantities, and the readings are reconciled with the previous day's inventory and the fuel dispensed at the loading station.

6.4.2 Shop-Fabricated Tanks

The various types of shop-fabricated tanks on NAS Corpus Christi utilize manual, mechanical, and automatic methods for determining liquid levels.

The manual method involves using a measured dipping stick to determine the level of liquid in the tank. If this method is used, the ullage level or available capacity, should be determined before transfer of product into the container is initiated.

The mechanical methods use various types of direct vision liquid level gauges, which can be monitored at the tank site during the filling operations.

The automatic methods use various types of liquid level sensing devices, which are electrically connected from the tank to a remote reading instrument panel, such as the Veeder-Root system.

All liquid level sensing devices for shop-fabricated tanks, are inspected monthly by NAS Corpus Christi PWD personnel, and are tested annually by contractors, in accordance with the manufacturer instructions, or STI SP001 AST inspection checklists (or similar forms), which are in **Appendix C.**

6.4.3 Mobile Refueler Trucks

NAS Corpus Christi uses mobile refueler trucks to perform F-24 fuel transfers to fill aircraft, and diesel fuel to fill shop-fabricated tanks. The refueler trucks are equipped with an automatic Scully Intellitrol System that offers layered spill prevention. The system is equipped with a dead-man switch and internal sensors to automatically shut off the flow of fuel. The dead-man switch must be held and squeezed for fuel to flow. In an emergency, fuel flow stops once the operator releases the dead-man switch. The Scully System's internal sensors operate separately from the dead-man switch and will shut off fuel flow in the event of a system fault or if the high level on the refueler truck detects fuel moisture. If the operator was unable to release the handle, the high-level sensor would still prevent overfill of the refueler truck's tank. The system is maintained by the vehicle maintenance personnel at the fuel farm and receives an operational inspection check every time the refueler truck is filled.

The emergency cut-off procedures in place for refueler truck fueling are the following:

- Release trigger on nozzle
- Close valve on refueler truck
- Disengage pump
- Close valve handle "T" on refueler truck

6.4.4 Industry Standard Considerations

NAS Corpus Christi personnel should be cognizant of following the overfill protection guidelines outlined in API 2350 Section 2.2.2:

- If an electrical or mechanical failure occurs that affects the level detectors, product receipt will stop and not recommence until (a) the detectors are functioning properly or (b) manual operations and procedures are implemented.
- When only one detector is used, this high-high-level detector will be located at or above the safe fill levels and will alarm/signal to provide sufficient time to shut off or divert product flow before the overfill is reached.
- When used for overfill protection, the high-high-level detector will be independent of the ATG system to provide greater reliability and to comply with the requirements of NFPA 30 (Section 2-10).
- If a tank is to be filled above its normal fill level (normal capacity) up to its safe fill level (tank rated capacity), a trained and qualified person will be assigned by the operator to be present at the tank. API does not recommend routinely filling a tank above the safe fill level due to the increase in overfill risk.

- Any shutdown or diversion procedures should be compatible with the transporter's operations to prevent consequential damage such as hydraulic shock or over-pressuring the piping system.

6.5 Aboveground Piping Inspections

"112.8(d)(4): Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement."

Fuel piping is generally categorized as either high or low risk, depending on the pipe size and proximity to open water. The DLA contractor operated bulk fuel piping system at NAS Corpus Christi, Aviation Fuel Facility, is required to have an API-570 evaluation performed every 10 years because it was determined to have service class 3 piping. The class 3 rating applies to bulk fuel pipelines that are not located over or adjacent to open waters. The API-570 evaluations are conducted by API certified contractors and documented in the POL Pipeline Integrity Management Plan report. This facility had an API-570 pipeline evaluation done in 2015, so the next one is due in 2025.

Higher risk, large-diameter, aboveground, stainless steel, single-walled, bulk fuel pipelines, are installed at the Aviation Fuel Facility, mostly within diked or curbed or trench containment areas. LB&B Fuels contractor personnel are on site whenever fuel is being transferred to or from ASTs. LB&B personnel inspect the entire pipeline within the fenced facility, to verify system operational integrity during fuel transfer operations, by checking for leaks or spills. All piping is required to be pressure tested annually by DLA contractors to verify integrity, in accordance with UFC requirements. All aboveground bulk fuel piping is visually inspected monthly by LB&B contractor.

Lower risk, small-diameter, aboveground piping is installed from shop-fabricated stand-alone ASTs, going to generators without integral base tanks, to CCAD jet engine test cells, or to fire pumps. Aboveground piping is also installed at the GOV gas station, going from ASTs to underground piping transition sumps. All the smaller aboveground piping is single-walled, coated carbon steel, with some or no secondary containment, so active measures are needed for spill control when outside of containment.

For shop-fabricated ASTs with aboveground piping systems, monthly visual inspections are conducted by NAS Corpus Christi personnel, including the PWD Environmental Tank Manager, and other tenant designated fuel tank custodians and equipment operators. This piping is monitored for leaks during fuel transfer operations. Annual AST system inspections (which include connected piping) are conducted on all Navy owned tanks, by a STI certified AST inspector who is hired by NAVFAC-SE region office. Annual AST system inspections for non-Navy owned tank piping, should be performed by an AST inspector who is hired by the owner/custodian organization. The monthly and annual inspection records are documented and maintained by the PWD Environmental Tank Manager, who is responsible for overseeing this inspection process.

Aboveground piping connected to shop-fabricated ASTs is inspected monthly and annually in accordance with STI SP001 checklists (or similar forms), which are included in **Appendix C**. All exposed piping, support structure, valves, flange joints, fittings, hose connections, fuel dispensers, and other appurtenances, must be inspected for excessive or wide spread corrosion, failed paint/ coating, damage, leakage or spills. All surfaces with active corrosion must be cleaned and repainted.

6.6 Containment Dike Inspections

"112.8(b)(1): 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 must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged."

"112.8(b)(2): 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 must inspect and may drain uncontaminated retained stormwater, as provided in 112.8(c)(3)(ii), (iii), and (iv)."

"112.8(c)(3): 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:

(i) Normally keep the bypass valve sealed closed.
(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in 112.1(b).
(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and
(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with 122.41(j)(2) and 122.41(m)(3)of this chapter."

For information on containments for single-walled ASTs, refer to Tank Data sheets and Spill Flow diagrams in **Appendix A** and **Table 5-1**. For information on containments for mobile equipment storage areas, refer to Equipment photo sheets in **Appendix AB,** plus **Table 5-2**. For information on containments for loading/unloading racks and fuel transfer areas, refer to **Table 5-3**.

AST containment dikes and curbed containment areas are provided with drain sumps, or spill basins, and manual operated drainage control valves, or PIVs that can be locked in the closed position, to prevent accidental and unauthorized drainage. No flapper-type drain valves are utilized at NAS Corpus Christi. The valves of choice are gate valves. If diked areas are not equipped with a valve (containment has no drainage outlet), then qualified personnel or a contractor shall pump or vacuum out the water for disposal.

Secondary containment drain valves at single-walled AST dikes, loading/unloading racks, fuel transfer areas, and mobile equipment parking or storage areas are normally kept locked in the closed position, except when clean storm water (no oil sheen) is being released from the containment dike.

Following each major rainfall event, designated facility personnel who are trained in SPCC Plan and spill response procedures, must inspect all diked containment areas to determine if the rainwater needs to be removed from the structure, and whether an oil sheen is present. If an oil sheen is observed on the water surface in containment, then follow the **Response** procedure below.

If an oil sheen is not observed, then secondary containment areas are drained as needed, prior to impacting AST fueling operations. Most often, the water inside the containment areas is removed by means of evaporation. However, when necessary, a trained operator inspects the water to be drained, then opens the drain valve, and drains the clean water into the applicable storm water drainage ditch. The operator should remain in the immediate area when draining water, so the drain valve can be closed and locked as soon as possible. Water can be treated through an OWS if one is plumbed to the containment structure. Refer to the NAS Corpus Christi secondary containment Dewatering Form 8 in **Appendix C,** which is a checklist for inspection of accumulated rainfall prior to release. The previously used Corpus Christi Form 5, Secondary Containment Log, is out of date and not included in this plan.

Response procedure: If an oil sheen or leakage is discovered in any containment area, tank custodians and the PWD Environmental Division, Tank & Spill Manager are notified immediately, to investigate the source of the sheen or leakage. Once the source of oil leak is discovered, appropriate maintenance actions are taken to stop the source of leakage. The oil product is then removed from containment area, using applicable absorbent material, or vacuum/used oil truck, or portable pump, and is then processed for off-site disposal, or treated with an OWS prior to discharge (only after approval by Environmental).

Drainage of rainwater from the diked or curbed containment areas into a storm drain, or an effluent discharge that empties into an open water course may be acceptable if:

- The drain valve is normally locked closed.
- Inspection of the rainwater drainage ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.
- The drain valve is opened and resealed or locked closed following drainage, while working under a responsible supervisor.
- Adequate records are kept of each drainage event.

6.7 Underground Storage Tank Inspections

There are three active USTs at NAS Corpus Christi, NEX Gas Station, that store 10,000 gallons each, of regular and premium gasoline and diesel, which is provided to vehicle fuel dispensers. USTs are made of fiberglass reinforced plastic, single-walled, and were installed in 1986. These USTs are subject to the State of Texas requirements as specified in 30 TAC 334, which are shown in **Section 11.1.**

In addition, 40 CFR 280 has EPA requirements for monthly UST sump inspections, to check for fuel leaks, equipment damage, and corrosion caused by water accumulation. There are accessible steel components, underneath removable covers in the UST sumps (including fill port, turbine pump, and dispenser), which are below ground level, but are not in contact with the soil. The UST sump monthly inspection checklist is located in **Appendix C**. Also the sumps must be hydraulically integrity tested every 3 years.

Continuous inventory control of the fuel in each UST is maintained by a Veeder Root ATG with leak detection monitoring system, with high-level alarm. Records of fuel receipt, inventory control, and reconciliation are kept at the NEX Mini-Mart in Building 1290. ATG is automatically updated after each receipt of fuel, and leak detection system cycles every 24 hours with a print-out. The NEX Mini-Mart manager verifies and files the leak detection slips. The ATG system is tested for proper operation annually. Fuel dispensers are maintained by the NEX Command, but the USTs with underground piping are maintained by CNIC/ PWD, using off-site contractors on an as-needed basis. Records of UST system inspections and repairs are kept at the PWD Environmental office.

6.8 Underground Piping Inspections

There are no underground (buried in the soil) bulk fuel pipelines at the Aviation Fuel Facility. Underground piping systems connected to USTs are regulated by Texas 30 TAC 334 and EPA 40 CFR 280. Underground piping systems connected to ASTs are regulated by EPA 40 CFR 112.8(d)(1) and industry standard Petroleum Equipment Institute (PEI)/RP-900.

The GOV Gas Station includes two fiberglass/plastic, double-walled, underground pipelines, which carry gasoline/diesel fuel from the AST piping transition sumps to the truck loading/ unloading station, and vehicle fuel dispensers. API-570 piping evaluations are conducted every 10 years by DLA contractors, with the last one conducted in 2015. Pipeline transition sump and dispenser sump inspections are performed by LB&B Fuels contractors at least monthly. Underground piping is to be pressure tested every 3 years by DLA contractors to verify integrity, in accordance with UFC 3-460-03 requirements that were revised in 2021.

Underground double-walled, fiberglass/plastic piping at the NEX Gas Station, runs from the UST turbine pump sumps to the transition sumps under vehicle fuel dispenser cabinets. The sumps are checked monthly by visual inspection. Currently there are no leak detection sensors inside the sumps. The NEX Gas Station fuel system is temporarily out of service, pending completion of needed repairs. When this system is put back into operation, the USTs and piping will be monitored by a Veeder Root ATG, which includes tank leak detection and pipeline tightness testing functions. Veeder Root ATG annual calibration test is required. The Veeder Root system will be able to print UST inventory and leak reports daily.

Underground double-walled, fiberglass/plastic piping at the MWR Marina runs from the AST piping transition sump towards the gasoline dispenser located on small boat pier. The Marina fuel system is temporarily out of service, pending completion of needed repairs. When this system is put back into operation, the AST and piping will be monitored by a Veeder Root ATG, which includes tank leak detection and pipeline tightness testing functions. Veeder Root ATG annual calibration test is required.

As part of the monthly AST inspection process, surface conditions over and adjacent to where the pipeline runs underground are evaluated for indications of leaks in buried piping. Indications of leaks include change in the surface contour of the ground, discoloration of the soil or concrete, softening of asphalt, pool formation, bubbling water puddles, or noticeable odor.

6.9 Oil Water Separator Inspections

OWS internal inspections and monitoring are performed by a PWD contractor when requested, or by designated personnel in each tenant organization responsible for the equipment. These personnel are trained and instructed to notify the PWD Environmental staff if unsatisfactory conditions are observed. If the OWS needs to be cleaned per inspection or custodian request, an off-site contractor will pump and clean the OWS, and manage the final disposal of oil and wastewater.

6.10 OFOE Inspections

All regulated OFOE containers are listed in **Table 2-4**, including pad mounted transformers and hydraulic oil elevator tanks, separated by NAS and CCAD owned, and miscellaneous hydraulic equipment operated by CCAD. OFOE locations are shown in **Appendix B**.

For NAS Corpus Christi hydraulic oil elevators, the PWD Facilities Maintenance office performs semi-annual elevator machinery inspections, which will identify if the hydraulic oil system is leaking. The elevator tanks are under a service contract with Inspection Experts, who conducts maintenance and repairs when requested by PWD. In addition, the elevators are on a monthly preventive maintenance program. The inspection and repair records are maintained at the PWD Facilities Maintenance office.

For NAS Corpus Christi transformers, the PWD Utilities office oversees a maintenance and inspection program. Annual inspections, repairs as needed, and general servicing of transformers is performed as scheduled by the NEC contractor. Should a transformer leak, oil spillage would be reported and promptly corrected. More thorough transformer inspections are conducted by a third party contractor URS every 5 years. The inspection and repair records are maintained at the PWD Utilities office.

SECTION 7

Oil-Handling Personnel Training

Initial SPCC Training and Annual Discharge Prevention Briefings are required for all oil-handling personnel, as outlined in the following sections.

7.1 Initial SPCC Training

"112.7(f)(1): At a minimum, train your oil-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."

NAS Corpus Christi Environmental Division will provide spill training (prevention, awareness, and response) to new employees involved with oil equipment operation, maintenance, or oversight. Annual refresher training, and response exercises/drills should be performed, per the **NAS Corpus Christi FRP**. Intermediate training sessions are conducted for affected personnel when a process or procedure changes, as well as for new employees who are responsible for implementing any portion of the SPCC Plan.

Tenant organizations at NAS Corpus Christi provide their employees with environmental training that discusses spill prevention, in addition to attending Navy provided spill training annually. The LB&B Fuels contractor also provides SPCC training to its employees who regularly manage, handle, or transfer oil products, (such as refueler truck drivers). Records of tenant or contractor training are maintained by the individuals, and/or within their respective environmental departments.

Initial SPCC training topics typically include:

- Discussion of applicable SPCC laws, rules, and regulations.
- Operation and maintenance of facility fuel systems to prevent discharges of oil.
- Purpose, overview, and contents of NAS Corpus Christi SPCC Plan.
- Review of chemical and physical properties of materials transferred.
- Review of potential spill areas and drainage routes.
- Review of emergency spill response procedures.
- Review of locations and use of spill cleanup equipment.

Specific individuals designated as AST inspectors, are also trained on inspection procedures and frequency, record keeping requirements, and the process for reporting and correcting deficiencies. PWD Environmental Tank managers are typically provided with STI-SP001 AST Inspector training, or other types of tank management training.

A copy of the "Record of Initial Training and Annual Discharge Prevention Briefings" is located in **Appendix D** or alternately, a local training attendance sheet may be used.

7.2 Annual Discharge Prevention Briefings

"112.7(f)(3): Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures."

Oil-handling personnel and their supervisors will receive discharge prevention briefings at least once a year to assure adequate understanding of the Plan including amendments. These briefings may be performed in conjunction with Hazardous Waste Operations and Emergency Response Certification Training. The following personnel are included in the SPCC Plan briefings: personnel responsible for the oil storage areas, tank system inspections, fuel transfers, contractor's representatives, security guards, and spill response personnel. At a minimum, the discharge prevention briefing subject matter will include:

- Known discharges as described in 40 CFR 112.1(b).
- Known failures or malfunctioning components.
- Recently developed spill prevention precautionary measures.
- Any changes or modifications to Plan or methods in the past year.

The PWD Environmental Tank manager performs periodic reviews of the completed inspection forms and checklists (from **Appendix C** of this plan). If necessary, additional case specific spill prevention briefing or communication may be conducted to address any findings and recommendations.

Tank owners or operators are responsible for scheduling, designating, and instructing personnel in the proper operation and maintenance of tanks and equipment related to their operations. Training will include review of applicable pollution control laws, rules, regulations, and changes to regulations.

7.3 State UST Operator Training

The State of Texas UST regulations require that every UST facility shall designate personnel to complete UST operator training that fulfills the role of Class A, B, and C operators. NEX Gas Station has three regulated USTs in service, which means that NAS Corpus Christi is a regulated UST facility that is required to have at least one trained UST operator in each of three classes as listed below.

Class A operator: An individual who is required to have general knowledge of the requirements of all applicable UST regulations and is typically a facility owner representative or UST manager. Class A and Class B operators must complete a TCEQ approved operator training course.

Class B operator: An individual who is required to ensure the implementation of all UST regulatory requirements at a facility, and day to day aspects of facility operation, maintenance and recordkeeping. In addition, the designated Class B operator for a facility is responsible for the training of all Class C operators at that facility.

Class C operator: An individual, typically a clerk or cashier, who controls the dispensing of fuel and is responsible for initial response to emergencies. The training of Class C operators is facility specific and is the responsibility of the Class B operator of a facility.

NAS Corpus Christi has trained UST operators to fill the roles stated above, including the NEX Gas Station Manager, and PWD Environmental Tank manager. More information is listed in **Section 11-1 – State Regulatory Standards**, TAC Title 30, Part 1, Chapter 334, Sub-chapter N-Operator Training.

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SECTION 8
Security

"112.7(g): Describe in your Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharge."

8.1 Site Access and Fencing

NAS Corpus Christi has fully fenced perimeter boundaries, which are monitored and patrolled and guarded, by military and civilian Naval Security personnel, who are present at the property 24-hours per day, 365 days per year. Some areas, like the Aviation Fuel Facility and CCAD Fuel Farm, have additional fenced and locked security areas within the station boundary. Access into the station is controlled by two security gates**.** The front gate, with a Pass & ID office, is normally open and guarded 24 hours per day, 365 days per year. The back gate is typically only open during peak traffic times in morning and evening hours.

Since the station access gates are either guarded or closed at all times, the tanks and equipment described in this plan, are considered to be adequately secured with controlled access. The station conforms to the industry standard outlined for fencing and security, Section 13.3.6 of API 2610. Entrance into the station is accessible to government employees, Navy residents, official visitors, and contractors, who have been cleared for access by the Security office. The guard at each gate requires personnel to show either a U.S. government-issued identification card, or a non-government ID card and vehicle pass, prior to station entry. See **Appendix A** for information on security and lighting of each tank.

8.2 Master Flow and Drain Valves

All drainage valves on secondary containment structures are manual gate or ball valves that are required by 40 CFR 112.8(c)(3)(i) to be normally closed except during secondary containment draining events.

Flapper-type drain valves are not used for secondary containment structures at NAS Corpus Christi. All accumulated rainwater is inspected in accordance with **Section 6.6** prior to discharge. All secondary containment drain valves are inspected in accordance with the STI monthly inspections in **Table 6-1**; see **Appendix C** for the checklists.

The tank master flow valve, tank fill ports, and containment drain valves are maintained in a closed position and locked when on non-operating or non-standby status. Access to master flow and tank drain valves is limited to authorized personnel only.

Tank master flow and drain valves that permit direct discharge of container contents should have adequate security to prevent unauthorized operation of valves. Valves controlling discharges must be directly locked at the open/close valve mechanism.

8.3 Starter Controls

The starter controls for oil pumps are maintained in an off position and locked. Access to starter controls is limited to authorized personnel only. Starter controls are located in a secure area of the facility and usually within a locked concrete-walled pump house adjacent to the associated UST or AST. Only authorized personnel have access to keys to the pump houses and starter controls.

8.4 Pipeline Loading and Unloading Connections

Oil pipeline loading and unloading connections are to be securely capped or blank-flanged when not in service or on standby service. Designated personnel who observe fuel loading and unloading activities verify that these connections are properly capped following each loading and unloading event.

8.5 Lighting

Various types of security lighting are provided throughout NAS Corpus Christi. Sufficient lighting is provided at high-risk fuel loading and unloading areas and oil storage structures to identify a release at night, should one occur. In addition, most fuel transfers from military refueler trucks or commercial fuel delivery trucks, are conducted during hours of daylight. Some areas, for safety reasons, may not have adequate lighting. In these cases, and in the event that fuel transfers are required during darkness; security, site personnel, and contractors have additional lighting (flashlights and vehicle-mounted spotlights). The additional lighting is adequate to prevent spills, monitor for leaks, prevent vandalism, and enhance safety during transfer operations. In some areas, exterior lighting near aircraft landing/taxing areas could be shortened. Specific lighting notes for each tank are listed in **Appendix A.**

Lighting at NAS Corpus Christi is sufficient to identify spills, or fuel transfer activities that may create the potential for a spill at high-risk areas, which include the Aviation Fuel Facility, GOV Gas Station, NEX Gas Station, and CCAD Fuel Farm. These areas are surrounded by elevated and high-level mount, high-intensity discharge security lighting that is automatically operated during all periods of darkness.

Adequate overhead lighting is provided throughout NAS Corpus Christi at most buildings and along all major roadways and thoroughfares. This extensive lighting grid assists night-time security operations and surveillance personnel, all of which are trained to report discharges if they are observed. Manned security gates are illuminated by moderate- and high-intensity discharge security lighting. Where lighting is not permanently fixed, all on-site delivery vehicles have spotlights, and all on-site and off-site contracted delivery personnel have flashlights in the event delivery must be made in the hours of darkness. Details about specific tanks that may need additional temporary lighting to check for spills in case of emergencies are listed in **Appendix A**.

SECTION 9

Procedures for Fuel Transfers

9.1 Loading/Unloading of Military Refuelers & Commercial Fuel Delivery Trucks

"112.2: Loading/unloading rack means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices."

"112.7(h): Facility Tank car and tank truck loading/unloading rack (excluding offshore facilities).

(h)(1): Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or truck loading/unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility."
(h)(2): Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks or vehicle brake interlock system in the area adjacent to a loading/unloading rack, to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.
(h)(3): Prior to filling and departure of any tank or 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."

At NAS Corpus Christi, this section applies to the Aviation Fuel Facility, GOV Gas Station, NEX Gas Station, and CCAD Fuel Farm. This procedure is applicable to either loading/ unloading racks (with a movable arm) or fuel transfer areas (with no movable arm). Fuels contractor LB&B Associates staff follow the NAVAIR 00-80T-109, Aircraft Refueling NATOPS manual, which directs the Fuels contractor to provide SOPs for bulk fuel management, receipt, storage, transfer, and delivery.

Spill Release Procedures

Designated facility personnel provide oversight for each loading/ unloading event. Facility personnel ensure that the proper procedures are employed, and that the appropriate personnel are notified immediately if a release occurs. NAS Corpus Christi operates 24-hours per day, 7 days per week, so emergency response personnel are always available on site.

An emergency contact number is posted at each loading/ unloading area, and the designated facility personnel have access to a radio or other device to notify emergency response personnel if a release occurs. The designated employee who observes the loading event should be SPCC trained as discussed in **Section 7**.

Spill kits are maintained and accessible at each fuel loading/ unloading area. Facility personnel who are responsible for observing fuel transfer activities, are trained in the use of spill kits, and must ensure that the spill kit is replenished promptly.

Should a release occur during a loading/ unloading event, the designated employee who observed the procedure, notifies appropriate personnel to clean-up the spill fuel for off-site disposal.

Before Transfer Procedures

- Ensure that appropriate secondary containment drain valves are closed and locked.
- Set the parking brake of the vehicle.

- The vehicle will not be left running unless required for other operations.
- Open appropriate fuel system valves in accordance with applicable checklists.
- Validate ullage of the receiving tank, and ensure the refueler truck is grounded.
- Connect the hose nozzle to refueler truck, and ensure the nozzle is grounded.
- Ensure the Scully system is operational.
- Connect the Scully plug to the refueler truck.
- Activate the Scully module on the refueler truck control panel.
- Activate the dead-man control to fill the refueler truck; do not rig the dead-man control in the open position.

During Transfer Procedures

- Monitor operation for leaks; shutdown the operation if a leak is detected.
- The system will shut down automatically (close control valves) when:
  - The dead-man control has been released.
  - The fuel level reaches the tank high level on the refueler truck.
  - The Scully system loses effective ground.

After Transfer Procedures

- When transfer operations are completed, ensure the nozzles capped and carried back to the hose rack; do not drag the nozzle across the ground
- Disconnect the Scully system and replace the dust covers on the refueler truck.

9.2 General Transfer Procedures

"112.7(a)(3)(ii): You must also address in your Plan Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, etc.);"

These procedures include the minimum discharge prevention measures for all personnel transferring regulated oil at NAS Corpus Christi. Refer to **Sections 2.2.1, 4.2.1, 5.4 and 5.5** of this Plan for information on the higher risk fueling areas. Refer to **Appendix A** for a summary of tank information at each site, to meet discharge prevention requirements. If passive secondary containment is not provided to hold the most likely spill volume for a fuel transfer release, as listed in **Appendix F,** then active containment measures must be available. Additional procedures for spill response are documented in the **NAS Corpus Christi FRP**.

Procedures also include proper use of hoses equipped with cam-lock quick connects and spill buckets to capture drips or leaks from the transfer hose. While some fuel delivery vehicles do not utilize the "Scully Single Point Overfill Prevention Controls" for delivery, they are equipped with a "deadman" control to transfer fuel to various tanks. The "deadman" switch must be held and squeezed for fuel to flow. In the event of an emergency, the operator releases the "deadman" and the fuel flow stops.

All transporters of oil to and from NAS Corpus Christi must meet the minimum requirements and regulations established by the DOT. Loading and unloading of hazardous materials at this facility (fuels), as defined in §49 CFR 172, are to meet the requirements of §49 CFR 177 Subpart B. Transporters who load and/or unload hazardous material at this facility must comply with the following requirements:

- Provide a qualified person to be in attendance at all times when a cargo tank is loaded and/or unloaded.
- The attendant must be awake, have an unobstructed view of the cargo tank, and be within 25 feet of the cargo tank throughout the event.
- The attendant must be aware of the nature of the material to be loaded and/or unloaded, trained on the procedures to be followed in emergencies, authorized to move the cargo tank, and have a means to move the cargo tank.
- Manholes and valves must be closed and secured during transfer.
- All loading and unloading areas must be empty of any volume of rainwater or other liquids prior to beginning transfer operation.
- No loading and unloading can take place during extreme weather events to prevent overflow of containment areas during a storm.

The following additional requirements apply when the transporter is loading and unloading materials with flash points below 140 degrees Fahrenheit. These materials meet the DOT definition of a Class 3 flammable liquid. Combustible materials with flash points between 140 and 200 degrees Fahrenheit are not subject to these requirements.

- Unless the engine of the cargo tank motor vehicle is to be used to operate a pump, the engine will not be running during loading and unloading of the material.
- Bonding and grounding procedures for cargo tanks and containers during the transfer of material are to be implemented according to §49 CFR 177.837 (b) and (c). The current process for loading and unloading at NAS Corpus Christi meets these requirements.

The following are the minimum procedures for on-site and off-site contractors to follow for handling of fuel. These procedures are to be used to help prevent discharges at NAS Corpus Christi.

- Extreme caution is taken to prevent spills from refueler trucks due to faulty connections or hose ruptures.
- Exercise extra precautions and diligence for deliveries during rainy weather. Fuel migration rates increase in water-filled ditches and rain saturated-soil, and a reduced spill response time exists to prevent a spill from reaching waterways or sensitive ecological areas.
- Gauge tanks prior to filling to ensure adequate space is available in the tanks for the product being delivered. A tank is never to be topped off completely; adequate headspace at the top of the tank must be left to allow for product expansion.
- Storm drains in the immediate vicinity of the fueling operation are to be covered with a flexible mat during fueling operations.
- Spill containment equipment will be readily accessible and prepared for deployment during fueling operations.

- All used sorbent material will be disposed of promptly and should not be allowed to remain on the ground or other surface where it could cause further contamination. Used sorbent material will be processed and properly disposed, in accordance with the **NAS Corpus Christi FRP** and **Hazardous Waste Management Plan**.

9.3 Refueler Trucks to Ancillary Tanks

Before Transfer Procedures

- Use a spotter when backing the vehicle.
- Set the parking brake of the vehicle.
- Attach the ground or bonding cable.
- The vehicle will not be left running unless required for transfer operations.
- Validate ullage of the receiving tank with the expected delivery amount.
- While extending the hose to the fill connection, do not drag the nozzle or capped hose.
- Ensure the correct tank valves are open prior to transfer.
- Extend the nozzle/hose to the fill port/inside spill bucket, where applicable.
- For “Open Port” transfer operations, do not prop the nozzle in the open position.
- For “Closed Port” transfer operations, ensure valve/cam-lock fitting is completely locked shut on tank fill port.

During Transfer Procedures

- Use the “deadman” switch, if equipped on refueler truck.
- Monitor operation for leaks. Shutdown the operation if leaks are detected.
- Monitor the tank level gauge.
- Do not fill underground tanks over 90 percent of tank capacity (UFC 3-460-1 Chapter 8).
- Do not fill aboveground tanks over 95 percent of the tank capacity (UFC 3-460-1 Chapter 8).
- If the tank level gauge is not visible from the tank fill port/spill bucket, stop filling, verify ullage and restart the transfer operation.

After Transfer Procedures

- When transfer operations are completed, ensure the nozzle/hose is capped and carried back to the refueler truck. Do not drag the nozzle/capped hose end across the ground.
- Secure capped nozzle/hose in compartment box or hose reel to prevent damage or spills.
- Remove and store bonding cable.
- Closely inspect the lower most drain and all outlets of the vehicle for discharges. Ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

9.4 Hand Pour Oil into Tank or Container

Before Transfer Procedures

- Depending on the height of the UCO container or used oil tank, use the appropriate step ladder or platform in accordance with 29 CFR 1910.25(b)(2).
- Validate ullage of the receiving container or tank with the expected amount of oil to be poured or drained.
- Ensure the weight of the hand carried oil container is not too heavy, to allow for safe transfer while standing on the step ladder or platform.

During Transfer Procedures

- Gradually pour or drain the oil into the UCO container or used oil tank or other drum/container.
- Monitor the operation for leaks. Shutdown the operation if a leak is detected.
- Do not fill aboveground containers or tanks over 95 percent of their capacity (UFC 3-460-1 Chapter 8).
- If the container liquid level or tank gauge is not visible from the spill bucket, stop filling, verify ullage, and restart the transfer operation.

After Transfer Procedures

- Secure the UCO container or tank fill cover or drum/container cap.

9.5 Vacuum Oil from Tank or Container

Before Transfer Procedures

- Use a spotter when backing the vehicle.
- Set the parking brake of the vehicle.
- The vehicle will not be left running unless required for transfer operations.
- Validate ullage of the vacuum/used oil truck with the expected amount of oil to be removed from the UCO container or used oil tank.
- While extending the hose to the tank, do not drag the nozzle or capped hose.
- Ensure the correct vacuum/used oil truck valves are open prior to transfer.
- Extend the nozzle/hose to the container or tank suction port/ inside spill bucket, where applicable.
- For “Open Port” transfer operations, do not prop the nozzle in the open position.
- For “Closed Port” transfer operations, ensure valve/cam-lock fitting is completely locked shut on tank suction port.

During Transfer Procedures

- Use the “deadman” switch, if equipped on vacuum/used oil truck.
- Monitor the vacuum/used oil truck level gauge.
- Monitor the operation for leaks. Shutdown the operation if a leak is detected.

After Transfer Procedures

- When transfer operations are completed, ensure the nozzle/hose is capped and carried back to the vacuum/used oil truck. Do not drag the nozzle/capped hose end across the ground.
- Secure capped nozzle/hose in compartment box or hose reel to prevent damage or spills. If the container or tank is equipped with a spill bucket, drain any residual oil into the spill bucket before capping the nozzle.
- Closely inspect the lower most drain and all outlets of the vehicle for discharges. Ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

9.6 Dispenser Hose Fueling to Motor Vehicles or Boats

Before Transfer Procedures

- Stop all engines and auxiliaries unless required for transfer operations.
- Shut off electricity, open flames and heat sources.
- If applicable, check all bilges for fuel vapors
- If applicable, close access fittings and opening that could allow fuel vapors to enter enclosed spaces of the vessel.
- While extending the hose to the tank, do not drag the nozzle or capped hose.
- Ensure the tank fill cap is open prior to transfer.
- Extend the nozzle/hose to the tank fill port
- For “Open Port” fill operations, do not prop the nozzle in the open position.

During Transfer Procedures

- Monitor the operation/attend nozzle at all times and watch for leaks. Shutdown the operation if a leak is detected.
- Maintain nozzle contact with the tank fill pipe.

After Transfer Procedures

- When transfer operations are completed, ensure the nozzle/hose is capped and carried back to the tank or dispenser holster. Do not drag the nozzle/capped hose end across the ground.
- If applicable, inspect bilges for leakage and fuel odors. Ventilate until odors are removed.
- Secure nozzle/hose in compartment box or hose reel to prevent damage or spills.
- Closely inspect the vessel or tank fill area for discharges. Ensure the tank fill cap is tightened, adjusted, or replaced to prevent liquid discharge.

9.7 Refueler Trucks to and from Aircraft

Before Transfer Procedures

- Refueling or defueling of aircraft requires two personnel (refueler truck operator and aircraft operator). Fire watch person is also required for open port fuel transfers.
- Position refueler truck for servicing of aircraft.
- Verify Power Take Off is operational.
- Ensure the refueler truck is electrically bonded to aircraft.
- Ensure the fuel nozzle is extended with the cap on, and the aircraft operator removes the cap, when ready to begin fuel transfer.
- The aircraft operator will connect the single point fuel nozzle to the aircraft and will ensure the strainer coupling quick disconnect locking device is properly seated and that the nozzle is in secure position.

During Transfer Procedures

- The refueler truck operator will begin the pumping operation, upon direction of aircraft operator, and ensure the pump revolutions per minute are slowly increased.
- “Deadman” fuel control must be held, and not propped open.
- Closely monitor the control panel during operation, and do not exceed the recommended nozzle pressure for the aircraft being serviced.
- When defueling an aircraft, to prevent over-riding the high-level shutoff on the refueler truck, do not exceed the recommended gallons per minute.
- Closely monitor the refueler truck and aircraft for signs of leaks.

After Transfer Procedures

- When transfer operations are completed, ensure the fuel nozzle is capped, and carried back to the refueler truck. Do not drag the nozzle across the ground.
- Secure capped nozzle/hose in compartment box or hose reel to prevent damage or spills. If possible, drain any residual fuel from the defueling hose into a bucket, before capping the nozzle.
- Closely inspect the lower most drain plugs and all outlets of the refueler truck for fuel discharges. Ensure that they are tightened, adjusted, or replaced to prevent fuel discharge while in transit.

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SECTION 10

Brittle Fracture Evaluation

"112.7(i): If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action."

NAS Corpus Christi will evaluate the two field-erected tanks 1716-1 and 1720-2 at the Aviation Fuel Farm, as required by 40 CFR 112.7(i) if applicable. Brittle fracture is a type of structural failure in large aboveground steel tanks, characterized by rapid crack formation that can cause a sudden tank rupture. An EPA review of past tank failures due to brittle fracture, shows that this typically occurs under the following conditions which are considered to be high risk factors for brittle fracture:

- Field-erected tanks located in a cold weather climate.
- Tanks with a shell thickness greater than one-half (0.5) inch.
- During an initial hydrostatic tank test with cold liquid.
- During the first tank filling in cold weather.
- After a change to low temperature liquid service.
- After a significant repair or modification.

API 653 includes a decision flow chart for use by the API inspector to evaluate the risk of brittle fracture. NAS Corpus Christi field-erected tanks are located in a hot weather climate, and the most recent API 653 inspection reports show the average tank wall thickness to be 0.25 inch, which are both low risk factors. A brittle fracture evaluation was not documented in these API 653 reports.

DLA has a Centrally Managed program to coordinate the field erected tank inspection schedule, and to provide contract services for certified API 653 tank inspectors. NAS Corpus Christi will implement this inspection and maintenance program in accordance with the standards and procedures required by API 653. The program will address all aspects associated with maintenance, inspections, repair, alteration, relocation, and reconstruction of tanks, as applicable.

Inspections will be performed, and inspection frequencies will be established, for each field erected tank by the certified API 653 inspector, based on historical inspection records, ultrasonic plate testing results, and known or projected tank wall corrosion rates. After each tank has been evaluated, the API 653 inspector will identify the suitability for continued service, recommended corrective actions, and determine when the next API 653 inspection is required for the respective tank. Formal external (in service) inspections are required every 5 years. Formal internal (out of service) inspections are required as specified in the most recent API-653 report. Internal inspection frequencies typically vary between 10 and 20 years.

NAS Corpus Christi will maintain records in the Fuels office of tank construction, inspection, repair, and alteration, including API 653 reports, for the life of each tank.

Additional information on inspections for field-erected ASTs is included in **Section 6.2.1** and **Table 6-1**.

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SECTION 11

Conformance with State and Local Applicable Requirements

11.1 State Regulatory Standards

"112.7(j): In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines."

The State of Texas regulates ASTs and USTs through the TCEQ administration of TAC Title 30, Chapter 334, which applies to owners and operators of registered AST and UST systems, not including UST exemptions and exclusions listed in §334.3(a) and §334.4(a), and AST exemptions and exclusions listed in §334.123 and §334.124. Three USTs at NAS Corpus Christi, NEX Gas Station, all installed in 1986, and 15 ASTs throughout the base with a capacity greater than 1,100 gallons, are regulated by the TCEQ. This applies to ASTs: 7-G, 30-G (10-1), 154-1, 154-2, 1716-1, 1720-2, 1758-T (1757), 1870-G, 1870-T (1833), 47-5, 227-TK-01, 228-TK-02, 229-TK-03, 232-TK-05, and 233-TK-07. ASTs 230-TK-06 (OS) and 231-TK-04 (OS) are empty and out of service, but will be regulated by the TCEQ if they are put back in service.

The information below includes TAC rule text for sections of interest to NAS Corpus Christi. For full review of regulatory text visit:
https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=334

Title 30, Part 1, Chapter 334, A-General Provisions

§334.10 Reporting and Recordkeeping

(a) Reporting. Owners and operators of underground storage tank (UST) systems must assure that all reporting and filing requirements in this chapter are met, including the following (as applicable):

(1) construction notification, in accordance with §334.6 of this title (relating to Construction Notification for Underground Storage Tanks (USTs) and UST Systems);

(2) application for approval of any proposed UST system on the regulated zones of the Edwards Aquifer, in accordance with §334.6(a)(3) of this title and Chapter 213 of this title (relating to Edwards Aquifer);

(3) registration of UST systems and changes in information, in accordance with §334.7 of this title (relating to Registration for Underground Storage Tanks (USTs) and UST Systems);

(4) certification of construction activities, financial assurance, and compliance self-certification in accordance with §334.8 of this title (relating to Certification for Underground Storage Tanks (USTs) and UST Systems);

(5) request for approval of any variance or alternative procedure, in accordance with §334.43 of this title (relating to Variances and Alternative Procedures);

(6) documentation of release determination or site assessment conducted when a UST system is permanently removed from service, in accordance with §334.55(a)(6) of this title (relating to Permanent Removal from Service);

(7) payment of UST fees, in accordance with Subchapter B of this chapter (relating to Underground Storage Tank Fees);

(8) reports, plans, and certifications related to suspected and confirmed releases of regulated substances, including:

(A) release reports and notifications, in accordance with §334.72 of this title (relating to Reporting of Suspected Releases), §334.75 of this title (relating to Reporting and Cleanup of Surface Spills and Overfills), and §334.76 of this title (relating to Initial Response to Releases);

(B) report and certification of site check methods, in accordance with §334.74(3) of this title (relating to Release Investigation and Confirmation Steps);

(C) initial abatement report, in accordance with §334.77(b) of this title (relating to Initial Abatement Measures and Site Check);

(D) initial site assessment report, in accordance with §334.78(c) of this title (relating to Site Assessment);

(E) non-aqueous phase liquid removal report, in accordance with §334.79(4) of this title (relating to Removal of Non-Aqueous Phase Liquids (NAPLs));

(F) soil and groundwater contamination information, in accordance with §334.80(b) of this title (relating to Investigation for Soil and Groundwater Cleanup);

(G) corrective action plan, in accordance with §334.81 of this title (relating to Corrective Action Plan);

(H) notification of cleanup initiation, in accordance with §334.81(e) of this title;

(I) certification of compliance with corrective action plan, in accordance with §334.81(h) of this title; and

(J) public notices related to corrective action plans, in accordance with §334.82(b) of this title (relating to Public Participation);

(9) notifications and reports relating to financial assurance requirements, in accordance with Chapter 37, Subchapter I of this title (relating to Financial Assurance for Petroleum Underground Storage Tank Systems); and

(10) any other reports, filings, notifications, or other submittals required by this chapter, or otherwise required by the agency to demonstrate compliance with the provisions of this chapter. When agency requirements specify documents that must be prepared by, or prepared under, the supervision of a duly licensed professional engineer, a duly licensed professional geoscientist, or a duly licensed professional surveyor, those documents must be prepared in accordance with all requirements of statute and rule applicable to that respective professional.

(b) Recordkeeping.

(1) General recordkeeping requirements.

(A) Owners and operators of UST systems are responsible for developing and maintaining all records required by the provisions of this chapter.

(B) Except for exemptions in subparagraphs (C) and (D) of the rule, legible copies of all required records pertaining to a UST system must be maintained in a secure location on the premises of the UST facility, must be immediately accessible for reference and use by the UST system operator, and must be immediately available for inspection upon request by agency personnel.

(2) Required records and documents. Owners and operators of UST systems must assure that all recordkeeping requirements in this chapter are met, including the following records and documentation (as applicable).

(A) Legible copies of the following general records must be maintained for the operational life of the UST system:

(i) original and amended registration documents, in accordance with §334.7 of the rule;

(ii) original and amended certifications for UST installations and financial assurance, in accordance with §334.8 of the rule;

(iii) notification to UST purchaser, in accordance with §334.9 of the rule (relating to Seller's Disclosure).

(B) Legible copies of applicable records and documents related to technical standards for UST systems must be maintained in accordance with the following provisions:

(i) application documents and the agency's approval letter for any variances or alternative procedures, in accordance with §334.43 of the rule;

(ii) records demonstrating compliance with technical standards and installation standards for new UST systems, in accordance with §334.45(f) of the rule (relating to Technical Standards for New Underground Storage Tank Systems) and §334.46(i) of this title (relating to Installation Standards for New Underground Storage Tank Systems);

(iii) records demonstrating compliance with the minimum upgrading requirements for existing UST systems, in accordance with §334.47(e) of this title (relating to Technical Standards for Existing Underground Storage Tank Systems);

(iv) operation and maintenance records, in accordance with §334.42 and §334.48 of this title (relating to General Standards; and General Operating and Management Requirements) including:

(I) documentation of compliance with operational requirements for release detection equipment;

(II) documentation of periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment; and

(III) documentation of periodic operation and maintenance walkthrough inspections.

(v) corrosion protection records, in accordance with §334.49(e) of this title (relating to Corrosion Protection);

(vi) release detection records, in accordance with §334.50(e) of this title (relating to Release Detection);

(vii) spill and overfill control records, in accordance with §334.51(c) of this title (relating to Spill and Overfill Prevention and Control);

(viii) records for repairs and relining of a UST system, in accordance with §334.52(e) of this title (relating to Underground Storage Tank System Repairs and Relining);

(ix) records for reuse of used tanks, in accordance with §334.53(c) of this title (relating to Reuse of Used Tanks);

(x) records for temporary removal of UST systems from service, in accordance with §334.54(e)(4) of this title (relating to Temporary Removal from Service);

(xi) records for permanent removal of UST systems from service, in accordance with §334.55(f) of this title;

(xii) compatibility data related to the stored substances and the materials of construction in accordance with the requirements for documentation of biofuel compatibility in §334.42(b)(2) of this title.

(C) Legible copies of all required financial assurance records must be maintained in accordance with the applicable provisions of Chapter 37, Subchapter I of this title.

(D) Legible copies of previous and current registration and self-certification forms required to be filed annually with the agency under §334.8(c) of this title, as well as UST delivery certificates, must be maintained for at least five years from the original date of submittal.

§334.12 Other General Provisions

(c) Inspections, monitoring, and testing.

(1) For the purposes of developing or assisting in the development of any regulation, conducting any study, or enforcing this chapter, an owner and/or operator of a UST or an AST, on the request of the agency, must:

(A) furnish information relating to the tank, including tank equipment and contents; and

(B) permit a designated agent or employee of the agency at all reasonable times to have access to and to copy all records relating to the tanks.

(2) For the purposes of developing or assisting in the development of a regulation, conducting a study, or enforcing the provisions of this chapter, the agency's designated agent or employee may:

(A) enter at reasonable times an establishment or place in which a UST or an AST is located;

(B) inspect and obtain samples of a regulated substance contained in the tank from any person; and

(C) conduct monitoring or testing of the tanks, associated equipment, contents, or surrounding soils, air, surface water, or groundwater.

(3) The agency may order an owner or operator of a UST or an AST to conduct monitoring and testing if the agency determines that there is reasonable cause to believe that a release has occurred in the area in which the UST or AST is located.

Title 30, Part 1, Chapter 334, B-Underground Storage Tank Fees

Title 30, Part 1, Chapter 334, C-Technical Standards

§334.42 General Standards

(a) All components of any new/existing UST system shall be operated in a manner that will prevent releases of related substances due to structural failure or corrosion.

(b) Compatibility.

(1) Owners and operators must use a UST system made of or lined with materials that are compatible with the substance stored in the UST system.

(2) Biofuels.

(A) Owners and operators must notify the executive director at least 30 days prior to switching to a regulated substance containing greater than 10% ethanol or greater than 20% biodiesel in accordance with §334.6(b)(1) of this title (relating to Construction Notification for Underground Storage Tanks (USTs) and UST Systems). In addition, owners and operators with UST systems storing these regulated substances must meet one of the following:

(i) demonstrate compatibility of the UST system (including the tank, piping, containment sumps, pumping equipment, release detection equipment, spill equipment, and overfill equipment). Owners and operators may demonstrate compatibility of the UST system by using one of the following options:

(I) certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored (such as American Petroleum Institute Recommended Practice 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations."); or

(II) for equipment or component manufacturer approval, the manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

(ii) use another option determined by the executive director to be no less protective of human health and the environment than the options listed in this subsection.

(B) Owners and operators must maintain records in accordance with §334.10(b) of this title (relating to Reporting and Recordkeeping) documenting compliance with subparagraph (A)(i) of this paragraph for as long as the UST system is used to store the regulated substance.

(c) The owners and operators of UST systems subject to the provisions of this subchapter and those persons and/or business entities who engage in, perform, or supervise the installation, repair, or removal of UST systems shall be responsible for ensuring that those UST systems are designed, installed, repaired, removed, and operated in accordance with the provisions of this subchapter, as provided under §334.12(b) of this title (relating to Other General Provisions) and under the provisions of Chapter 70 of this title (relating to Enforcement).

(d) When provisions of this subchapter require compliance with a specific code or standard of practice developed by a nationally recognized association or independent testing laboratory, the most recent version of the referenced code in effect at the time of the regulated UST activity shall be applicable.

(e) Compliance with the provisions of this subchapter shall not relieve an owner or operator of a UST system from compliance with other applicable regulations legally developed by other governmental entities. This requirement is more fully discussed in §334.12(a) of this title.

(f) Unless otherwise stated in a variance approved by the agency in accordance with §334.43 of this title (relating to Variances and Alternative Procedures), the requirements of this subchapter shall take precedence if and when such requirements are determined to be in conflict with any provisions contained in the following:

(1) any code or standard of practice developed by a nationally recognized association or independent testing laboratory; and

(2) the manufacturer's specifications and instructions for installation and operation of UST equipment.

(g) Any underground component of a UST system installed on or after September 29, 1989, shall be properly protected from corrosion by one or more of the allowable methods in §334.49(b) of this title (relating to Corrosion Protection).

(h) Any new tank or piping or dispenser installed as part of a UST system on or after January 1, 2009, shall incorporate secondary containment meeting the applicable requirements of §334.45(d) of this title (relating to Technical Standards for New Underground Storage Tank Systems).

(i) Any sumps (including dispenser sumps) or manways installed prior to January 1, 2009, which are utilized as an integral part of a UST release detection system to monitor the interstitial space of a secondarily contained piping system, and any overspill containers or catchment basins installed at any time, which are associated with a UST system must be inspected at least once every 60 days to assure that their sides, bottoms, and any penetration points are maintained liquid tight. Any liquid or debris found in them during that inspection or an agency or agency-authorized inspection must be removed and properly disposed of within 96 hours of discovery.

§334.43 Variances and Alternative Procedures

(a) Prior to proceeding in any manner that differs from the requirements of this subchapter, the owner or operator of an underground storage tank (UST) system shall secure written agency approval in the form of a variance in accordance with this section.

(b) The agency shall have authority to review and approve requests for variances from the requirements in this subchapter. The agency will approve such requests only if the owner or operator can demonstrate to appropriate agency staff that the proposed alternative procedure and/or equipment will result in an UST system that is no less protective of human health and safety and the environment than the requirement(s) for which the variance is sought.

(c) An owner or operator may submit a request for a variance when one or more of the following situations is applicable:

(1) when conformance with a requirement in this subchapter is considered not practicable due to the type, design, capacity, material stored, or use of the UST system; or

(2) when new or alternative products, equipment, methods, and/or procedures appropriate for use with UST systems are not specifically authorized by the provisions of this subchapter.

(d) Any request to the agency for approval of a variance shall be made in writing, shall be signed and dated by the owner or operator, and shall be accompanied by the following additional documentation:

(1) written concurrence by the site or facility owner, if different from the tank owner;

(2) complete project identification, including:

(A) facility name, location, and UST facility identification number (if known);

(B) owner's name, address, and telephone number;

(C) name, address, and telephone number of owner's/operator's authorized representative; and

(D) proposed date for implementation of the alternative procedure and/or equipment;

(3) sufficient documentation to describe or illustrate the alternative procedure and/or equipment, such as:

(A) plans, drawings, and detail sheets (drawn to scale);

(B) design and construction specifications; and

(C) equipment manufacturers' specifications, operating instructions, and warranty information;

(4) documentation and supporting data which demonstrates, to the satisfaction of agency staff, the reliability and appropriateness of the proposed procedure and/or equipment, such as:

(A) results of tests or studies conducted by an equipment manufacturer, independent consultant, or nationally recognized association or independent testing laboratory; and

(B) results of previous experience involving use of the alternative procedure and/or equipment;

(5) complete explanation of the reasons why the requested proposed procedure and/or equipment are considered preferable to the requirement for which the variance is sought, or why that requirement is considered impracticable; and

(6) documentation that demonstrates, to the satisfaction of agency staff, that use of the proposed alternative procedure and/or equipment will be no less protective of human health and safety and the environment than adhering to the requirement(s) for which the variance is sought.

(e) If a variance is granted by the agency, the owner or operator shall maintain complete copies of the variance and supporting documentation (including the request for approval), in accordance with §334.10(b) of this title (relating to Reporting and Recordkeeping).

(f) When a variance is sought, the owner and operator must adhere to the requirement in question until such time as the owner or operator receives a written variance which allows an alternative procedure and/or equipment for that requirement.

(g) Once a person has received a written variance from the agency under this section, that person must adhere to the terms of that variance as written, or to the terms of the requirement for which the variance was sought.

§334.44 Implementation Schedules

§334.46 Installation Standards for New Underground Storage Tank Systems

§334.47 Technical Standards for Existing Underground Storage Tank Systems

(a) General requirements.

(1) Alternatives for existing underground storage tank (UST) systems. No later than the implementation dates specified in §334.44(b) of this title (relating to Implementation Schedules), all applicable components of any existing UST system (i.e., UST system for which installation has commenced or has been completed on or prior to December 22, 1988) shall be either installed, upgraded, improved, or replaced with equipment or components which meet or exceed either of the following requirements:

(A) the requirements for technical standards and installation of new UST systems in §334.45 of this title (relating to Technical Standards for New Underground Storage Tank Systems) and in §334.46 of this title (relating to Installation Standards for New Underground Storage Tank Systems);

(B) the minimum upgrading requirements for existing UST systems in subsection (b) of this section; or

(C) National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code" and Standard 30A, "Code for Motor Fuel Dispensing Facilities and Repair Garages."

(2) If any applicable component of an existing UST system is not brought into timely compliance with the requirements of paragraph (1) of this subsection, the UST system shall be permanently removed from service no later than 60 days after the prescribed implementation date. The permanent removal from service shall be conducted in accordance with the applicable provisions of §334.55 of this title (relating to Permanent Removal from Service).

(b) Minimum upgrading requirements for all existing UST systems.

(1) Tank integrity assessment and UST system cathodic protection. No later than December 22, 1998, all tanks in an existing UST system shall be assessed for structural integrity, and all underground metallic components of an existing UST system shall be equipped with a cathodic protection system, as provided in the following subparagraphs.

(A) Tank integrity assessment. The tank shall be assessed for structural integrity and for the presence of corrosion holes by one or more of the following methods.

(i) The tank may be equipped with one or more of the release detection systems meeting the applicable requirements of §334.50(d)(4) - (10) of this title (relating to Release Detection). Such release detection system(s) shall have been in operation for at least 60 days prior to the date of the cathodic protection system installation, and at least one of the systems shall remain in operation for the remaining operational life of the tank.

(ii) The tank may be tested by conducting at least two tank tightness tests meeting the requirements of §334.50(d)(1)(A) of this title. The first tightness test shall be conducted prior to installing the cathodic protection system, and the second test shall be conducted between three and six months after the cathodic protection system is placed into operation. For tanks constructed of non-corrodible material, or metal tanks clad or jacketed with non-corrodible material which are electrically isolated from surrounding soil, backfill or groundwater or any other water, the tank may be tested by conducting at least one tightness test meeting the requirements of §334.50(d)(1)(A) of this title, within the 12-month period prior to December 22, 1998.

(iii) When the tank upgrading is to include the installation of an interior lining meeting the applicable provisions in §334.52(b) of this title (relating to Underground Storage Tank System Repairs and Relining), a site assessment or release determination may be conducted prior to the installation of the interior lining and the cathodic protection system. Such site assessment or release determination shall be conducted in accordance with the provisions of §334.55(e) of this title.

(iv) Prior to the installation of the cathodic protection system, the tank may be internally inspected and assessed to assure that the tank is structurally sound and free of corrosion holes, provided that such internal inspection shall be:

(I) conducted in accordance with a code or standard of practice developed by a nationally recognized association or independent testing laboratory; and

(II) performed by qualified personnel possessing the requisite training, experience, and competence to assure that any corrosion holes or structurally unsound areas are located.

(v) Prior to the installation of the cathodic protection system, the tank may be assessed for structural integrity and the presence of corrosion holes by an alternate method which has been reviewed and determined by the agency to prevent releases in a manner that is no less protective of human health and the environment than the methods described in clauses (i) - (iv) of this subparagraph, in accordance with the provisions of §334.43 of this title (relating to Variances and Alternative Procedures).

(B) Repairs or corrective action. If the results of the tank integrity assessment (required by subparagraph (A) of this paragraph) indicate that the existing tank is not structurally sound and/or that a release of regulated substances has occurred, then the owner and operator shall:

(i) comply with the applicable release reporting, investigation, and corrective action requirements of Subchapter D of this chapter (relating to Release Reporting and Corrective Action); and

(ii) conduct one of the following activities, as applicable:

(I) perform appropriate repairs or relining of the tank, in accordance with the applicable requirements of §334.52 of this title, as necessary to restore the structural integrity of the tank; or

(II) permanently remove the tank from service in accordance with the applicable provisions in §334.55 of this title.

(C) Field-installed cathodic protection system. After confirmation or restoration of the structural integrity of the tank, all underground metal components of the UST system, which are not isolated from the surrounding soil, backfill, and groundwater or any other water, and which either do or could convey, contain, or store regulated substances, shall be equipped with a field-installed cathodic protection system meeting the requirements of §334.49(c)(2) of this title (relating to Corrosion Protection).

(2) Adding spill and overfill prevention equipment. All existing USTs shall be equipped with appropriate spill and overfill prevention equipment, in accordance with the provisions in §334.51(b) of this title (relating to Spill and Overfill Prevention and Control).

(3) Adding release detection for UST system piping.

(A) Release detection for pressurized piping. No later than December 22, 1990, all piping in an existing UST system that routinely conveys regulated substances under pressure (i.e., which operates at greater than atmospheric pressure) shall be brought into compliance with the pressurized piping release detection requirements in §334.50(b)(2)(A) of this title.

(B) Release detection for suction piping and gravity-flow piping. All piping in an existing UST system that routinely conveys regulated substances either under suction (i.e., which operates at less than atmospheric pressure) or by gravity-flow shall be brought into compliance with the applicable release detection requirements in §334.50(b)(2)(B) of this title no later than the date on which release detection is required for the tank to which such piping is connected, as prescribed in paragraph (4) of this subsection.

(4) Adding release detection for tanks.

(A) Except as provided in subparagraph (B) of this paragraph, all tanks at an existing UST system shall be brought into compliance with the tank release detection requirements in §334.50(b)(1) of this title no later than the date specified in the following clauses for the time of installation applicable to such tanks:

(i) December 22, 1989, for tanks where the installation dates are undetermined or unknown;

(ii) December 22, 1989, for tanks installed during 1964 or prior years;

(iii) December 22, 1990, for tanks installed during the years 1965 - 1969, inclusive;

(iv) December 22, 1991, for tanks installed during the years 1970 - 1974, inclusive;

(v) December 22, 1992, for tanks installed during the years 1975 - 1979, inclusive;

(vi) December 22, 1993, for tanks installed during the years 1980 - 1987, inclusive; and

(vii) December 22, 1993, for tanks installed between January 1, 1988, and December 22, 1988, inclusive.

(B) For emergency generator tanks only, the compliance dates prescribed in subparagraph (A)(i) - (v) of this paragraph shall be extended by one year; however, no compliance date shall be extended past December 22, 1993.

(C) When two or more existing tanks are located in a common tank hole, and when the selected method of release detection is either vapor monitoring or groundwater monitoring in accordance with §334.50(d)(5) and (6) of this title, then all such tanks shall be brought into compliance with the applicable release detection requirements of this paragraph no later than the date specified for the oldest tank in such common tank hole.

(c) Additional upgrading requirements for existing hazardous substance UST systems. In addition to the upgrading requirements applicable to all existing UST systems in subsections (a) and (b) of this section, all existing hazardous substance UST systems (e.g., UST system for which installation has commenced or has been completed on or prior to December 22, 1988) shall be equipped or retrofitted with a secondary containment system and an associated release detection system in accordance with the following provisions.

(1) No later than December 22, 1998, all existing hazardous substance UST systems shall be equipped with a secondary containment system meeting the design, construction, and installation requirements in §334.45(d) of this title and §334.46(f) of this title.

(2) No later than December 22, 1998, all existing hazardous substance UST systems shall be equipped with a release detection system capable of monitoring either the interstitial spaces between the primary and secondary walls of any double-walled UST component, or the spaces between the primary UST component walls and any external liners, as applicable, in accordance with the provisions in §334.50(c) of this title.

(d) A UST system, at a minimum, shall incorporate secondary containment as specified in Texas Water Code, §26.3476, if the UST system is located in an area described in that provision.

(e) Records for upgrading of existing UST systems.

(1) Owners and operators shall maintain all records related to the upgrading of existing UST systems required in this subsection in accordance with the requirements in §334.10(b) of this title (relating to Reporting and Recordkeeping).

(2) Owners and operators shall maintain the following records for the operational life of the UST system:

(A) general information related to the tank integrity assessment and cathodic protection requirements in subsection (b) of this section, including:

(i) dates of the tank integrity assessment and cathodic protection installation activities;

(ii) names, addresses, and telephone numbers of the persons conducting the tank integrity assessment and cathodic protection installation activities; and

(iii) copies of all related notifications or reports filed with the agency or others, including:

(I) registration information, as required by §334.7 of this title (relating to Registration for Underground Storage Tanks (USTs) and UST Systems); and

(II) installation certification information, as required by §334.8(a) of this title (relating to Certification for Underground Storage Tanks (USTs) and UST Systems);

(B) as-built drawings (or plans), which have been drawn to scale and in sufficient detail so as to accurately depict and describe the sizes, dimensions, and locations of any UST system components or equipment added or installed on or after September 29, 1989, which are installed pursuant to one of the construction activities included in §334.6(b)(1)(A) of this title (relating to Construction Notification for Underground Storage Tanks (USTs) and UST Systems); and

(C) equipment information for any UST system components or equipment added or installed on or after September 29, 1989, for the purpose of compliance with the upgrading requirements of this section, including manufacturer's specifications, installation instructions, operating instructions, warranty information, recommended test procedures, and inspection and maintenance schedules.

(3) Owners and operators shall maintain the results of all equipment tests and tank integrity tests required in this section including internal inspections, tank and piping tightness tests, and site assessments, for at least five years after the dates such tests are conducted.

§334.48 General Operating and Management Requirements

(a) Prevention of releases. All owners and operators of underground storage tank (UST) systems shall ensure that the systems are operated, maintained, and managed in a manner that will prevent releases of regulated substances from such systems.

(b) UST system management. UST systems shall be operated, maintained, and managed in accordance with accepted industry practices.

(c) Inventory control. On or after September 29, 1989, regardless of which method of release detection is used for compliance with §334.50 of this title (relating to Release Detection), effective manual or automatic inventory control procedures shall be conducted for all UST systems at retail service stations as defined in §334.2 of this title (relating to Definitions). Such inventory control procedures shall be in accordance with §334.50(d)(1)(B) of this title. Complete and accurate inventory records shall be maintained in accordance with §334.10 of this title (relating to Reporting and Recordkeeping).

(d) Spill and overfill control. All owners and operators shall ensure that spills and overfills of regulated substances do not occur and that all spill and overfill prevention equipment is properly operated and maintained in accordance with §334.51 of this title (relating to Spill and Overfill Prevention and Control).

(e) Operational requirements for release detection equipment. Owners and operators of all new and existing UST systems shall ensure that all release detection equipment installed as part of a UST system pursuant to §334.50 of this title is maintained in good operating condition and electronic and mechanical components are tested for proper operation in accordance with one of the following: manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or requirements determined by the executive director to be no less protective of human health and the environment than listed in this subsection.

§334.49 Corrosion Protection

§334.50 Release Detection

(a) Release detection standards require owners and/or operation of UST systems to provide a method, or combination of methods, of release detection. The USTs at NAS Corpus Christi are equipped with Veeder Root gauging and leak detection. Verification of the interstitial alarm leak monitoring and gauging is testing daily by the tank custodians.

(a)(2) In the event the release detection program yields a positive or suspected-positive release, the owner/operator shall comply with applicable release reporting, investigation, and corrective action requirements in Subchapter D.

(b)(1) All tanks shall be monitored at least once per month.

(b)(2) UST piping shall be monitored in a manner which will detect a release from any portion of the piping system.

(d) Tanks in a UST system may be monitored for releases using one or more of the methods listed in sections (2)-(10) below. Piping in a UST system may be monitored for releases using one or more of the methods listed in sections (5)-(10) below. Each method of release detection for tanks is required to be conducted in accordance with specific requirements for each method:

(d)(1) Tank tightness testing and inventory control.

(d)(2) Manual tank gauging.

(d)(3) Monthly tank gauging.

(d)(4) Automatic tank gauging in combination with inventory control.

(d)(5) Vapor monitoring.

(d)(6) Groundwater monitoring.

(d)(7) Interstitial monitoring for double-walled UST systems.

(d)(8) Monitoring UST systems with secondary containment barriers.

(d)(9) Statistical inventory reconciliation (SIR) and inventory control

(d)(10) Other, if approved by the [Environmental Protection] Agency.

§334.51 Spill and Overfill Prevention and Control

(b) Spill and overfill prevention equipment. Except as provided in paragraph (4) of this subsection, all UST systems shall be equipped with spill and overfill prevention equipment which shall be designed, installed, and maintained in a manner that will prevent any spilling or overfilling of regulated substances resulting from transfers to such systems, as provided in this subsection.

(c) Spill and overfill control records.

(1) Owners and operators shall maintain the spill and overfill control records required in this subsection in accordance with the requirements in §334.10(b) of this title (relating to Reporting and Recordkeeping).

(2) Owners and operators shall maintain records adequate to demonstrate compliance with the spill and overfill prevention and control requirements in this section, and in accordance with the following minimum requirements.

(A) All appropriate installation records related to the installation of any spill and overfill prevention equipment, as listed in §334.46(i) of this title (relating to Installation Standards for New Underground Storage Tank Systems), shall be maintained for as long as the spill and overfill prevention equipment is used.

(B) Records of any servicing, calibration, maintenance, inspection, monitoring, testing, and repair of any spill and overfill prevention equipment shall be maintained for at least five years after such work is completed.

(3) If an owner or operator claims an exemption from the spill and overfill equipment requirements under the provisions of subsection (b)(4) of this section (i.e., transfers of 25 gallons or less), such owner

or operator shall maintain appropriate transfer or inventory records for at least five years to document the basis for such exemption.

§334.52 Underground Storage Tank System Repairs and Relining

§334.53 Reuse of Used Tanks

§334.54 Temporary Removal from Service

§334.55 Permanent Removal from Service

§334.56 Change to Exempt or Excluded Status

Title 30, Part 1, Chapter 334, D-Release Reporting and Corrective Action

§334.72 Reporting of Suspected Releases

Owners and operators of aboveground storage tank (AST) and underground storage tank (UST) systems must report to the agency within 24 hours (see §334.50(d)(9)(A)(v) of this title (relating to Release Detection) for reporting requirements associated with statistical inventory reconciliation inconclusive results), and follow the procedures in §334.74 of this title (relating to Release Investigation and Confirmation Steps) for any of the following conditions:

(1) The discovery by owners and operators, or written notification by others to the owner or operator, of released regulated substances at the AST or UST site or in the surrounding area (such as the presence of non-aqueous phase liquids or vapors in soils, basements, sewer and utility lines, and nearby surface water).

(2) Unusual operating conditions observed by owners or operators (such as the erratic behavior of product dispensing equipment that is consistent with or indicates a release, the sudden loss of product from the AST or UST system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless:

(A) the system equipment or component is found not to be releasing regulated substances to the environment;

(B) any defective system equipment or component is immediately repaired or replaced; and

(C) for secondarily contained systems, except as provided for in §334.50(d)(8)(C) of this title, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.

(3) Monitoring results, including investigation of an alarm, from a release detection method required under §334.50 of this title or other method that indicates a release may have occurred unless:

(A) the monitoring device is found to be defective and is immediately repaired, recalibrated, or replaced, or the monitoring procedure is found to be ineffective, and is modified, and additional monitoring does not confirm the initial result;

(B) in the case of inventory control, described in §334.50(d)(1)(B) of this title, a second 30-day period of data does not confirm the initial result or the alarm investigation determines no release has occurred;

(C) the leak is contained in the secondary containment:

(i) except as provided for in §334.50(d)(8)(C) of this title, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed; and

(ii) any defective system equipment or component is immediately repaired or replaced; or

(D) the alarm was investigated and determined to be a non-release event (for example, from a power surge or caused by filling the tank during release detection testing).

§334.74 Release Investigation and Confirmation Steps

Owners and operators must immediately investigate and confirm all suspected releases of regulated substances within 30 days using either the following steps or another procedure that has been approved by the [Environmental Protection] Agency:

(1). Perform a system test (per requirements from §334.50);

(2). Perform a site check by sampling areas likely to be contaminated;

(2)(A) In the event the test results indicate a release has occurred, owners/operators must begin corrective action according to further guidelines listed §§334.76-334.81.

(2)(B) If the analysis returns negative, no further investigation is required.

(3) Following an analysis that returns negative, the owner/operator must file a signed report which contains a detailed description of the event, investigation, and results, submitting the findings to the Agency within 45 days of the first observation.

§334.75 Reporting and Cleanup of Surface Spills and Overfills

(a) Owners/operators must contain and immediately clean any spill or overfill, report the spill to the agency within 24 hours, and begin corrective action in accordance with §§334.76-334.81 if any of the following scenarios are to occur:

(a)(1) Any spill of petroleum product resulting in a release to the environment that exceeds 25 gallons or causes a sheen on nearby surface water.

(b) Owners/operators must contain and immediately clean a spill of petroleum substance from an UST that is less than 25 gallons. If cleanup cannot be accomplished within 24 hours, the owner/operator must immediately notify the Agency.

§334.76 Initial Response to Releases

Upon confirmation of a release in accordance with §334.74 or after a release from a UST is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release:

Report the release to the Agency

Take immediate action to prevent any further release into the environment

Identify and mitigate fire, explosion, and vapor hazards

Title 30, Part 1, Chapter 334, F-Aboveground Storage Tanks

§334.121 Purpose and Applicability for Aboveground Storage Tanks (ASTs)

(a) Purpose. The purpose of this subchapter is to provide a regulatory program for aboveground storage tanks (ASTs) storing petroleum products, as prescribed by the Texas Water Code, Chapter 26, Subchapter I, to maintain and protect the quality of groundwater and surface water resources in the state from certain substances in ASTs that may pollute such groundwater and surface water resources, and to provide for the protection of human health and safety, as well as the protection of the overall environment of the state.

(b) Applicability.

(1) An AST shall be subject to the regulations in this subchapter only when such tank:

(A) meets the definition of "aboveground storage tank" in §334.122 of this title (relating to Definitions for Aboveground Storage Tanks (ASTs));

(B) contains, has contained, or will contain a "petroleum product" as defined in §334.2 of this title (relating to Definitions);

(C) is not exempted from regulation in §334.123 of this title (relating to Exemptions for Aboveground Storage Tanks (ASTs)); and

(D) is not excluded from regulation in §334.124 of this title (relating to Exclusions for Aboveground Storage Tanks (ASTs)).

(2) The requirements and provisions in this subchapter are applicable to regulated ASTs, and to the registration, installation notification, reporting, recordkeeping, release reporting and corrective action, fee assessment, and other requirements associated with such tanks, as more fully described in this subchapter.

(3) The requirements and provisions in this subchapter apply equally to all owners and operators of regulated ASTs, including individuals, trusts, firms, joint-stock companies, corporations, governmental corporations, partnerships, associations (including nonprofit and charity organizations), states, municipalities, commissions, political subdivisions of a state, interstate bodies, consortiums, joint ventures, commercial and noncommercial entities, and the United States government (including all of its departments), except as otherwise provided in this subchapter.

(4) The following types of aboveground tanks are subject to the regulations in this subchapter if they meet the general qualifications for an AST in paragraph (1) of this subsection:

(A) compartmental tanks, when at least one of the compartments is used to store petroleum products; and

(B) dual-use or multiple-use tanks which alternately store two or more substances, when at least one of the stored substances is a petroleum product.

(5) If a storage tank containing a petroleum product technically meets the definitions of both an AST and an underground storage tank (UST) under this chapter, then the tank will be considered an UST, and must conform with all applicable requirements for UST in this chapter.

(6) Consistent with the exemption for heating oil tanks in §334.123(a)(2) of this title, an AST storing a petroleum product (such as kerosene or diesel) which is primarily used as a heating oil substitute for heating purposes on the premises where stored, and which is secondarily used as a motor fuel for the operation of internal combustion engines, is exempt from the regulations of this subchapter.

§334.122 Definitions for Aboveground Storage Tanks (ASTs)

§334.123 Exemptions for Aboveground Storage Tanks (ASTs)

§334.124 Exclusions for Aboveground Storage Tanks (ASTs)

(a) Except as provided in subsection (b) of this section, the following aboveground storage tanks (ASTs) are excluded from regulation under this subchapter:

(1) any tank with a capacity of 1,100 gallons or less.

§334.125 General Prohibitions and Requirements for Aboveground Storage Tanks

(a) Delivery prohibition. Except as provided in paragraph (1) of this subsection, on or after June 25, 1990, no common carrier (as defined in §334.2 of this title (relating to Definitions) shall deposit any petroleum products into an aboveground storage tank (AST) unless he observes that the owner or operator has a valid, current registration certificate, issued by the agency in accordance with §334.127 of this title (relating to Registration for Aboveground Storage Tanks (ASTs)).

(1) For new or replacement AST systems, only during the initial period ending 90 days after that petroleum product is first deposited into such system(s), a common carrier may accept, as adequate to meet this requirement, documentation that the owner or operator has a "temporary delivery authorization" (as defined at §334.127(h) of this title) issued by the agency for the facility at which the new or replacement AST system(s) exists.

(2) A common carrier delivering petroleum product into an AST system may observe a valid, current, original registration certificate (or temporary delivery authorization, if applicable), or a legible copy of the same.

(b) Owner/Operator requirements. The owner and operator of ASTs regulated under this section must make available to a common carrier a valid, current TCEQ tank registration certificate (or TCEQ temporary delivery authorization, as applicable) before delivery of a petroleum product(s) into the AST(s) can be accepted. The bill of lading for the first delivery of petroleum product into any new or replacement AST system at the facility must be attached to the temporary delivery authorization for that facility.

§334.126 Installation Notification for Aboveground Storage Tanks (ASTs)

(a) Except as provided in subsection (b) of this section, any person who intends to install a new or replacement aboveground storage tank (AST) must comply with the notification requirements of this section prior to initiating such activity.

(1) Installation notifications shall be submitted to the agency at least 30 days prior to initiating the activity.

(A) The notification may be provided either to the agency's central office in Austin or to the agency's appropriate regional office. The official date of notification shall be the date on which the notification is first received in an agency office.

(B) Notification may be provided by the owner or operator, or an authorized representative of the owner or operator, (e.g., the contractor or consultant retained for the activity). Notifications filed by unauthorized persons shall be null and void.

(C) Notifications shall be submitted on the agency's authorized form. The form shall be filled out completely. Upon completion, the form shall be dated and signed by the owner or operator (or authorized representative) and shall be filed in accordance with this paragraph.

(D) When appropriate, installation notifications for ASTs (as required under this section) may be filed together with construction notifications for underground storage tank (UST) activities at the same facility (as required by §334.6 of this title (relating to Construction Notification for Underground Storage Tank (USTs) and UST Systems)), provided that complete and accurate explanation of the activities is included.

(E) Between 24 and 72 hours prior to the scheduled time of initiation of the installation, the owner or operator (or authorized representative) shall contact the agency's appropriate regional office to confirm the time of the initiation of the installation activities.

(F) The requirements and procedures for rescheduling, waiver requests, and expiration as related to installation notifications for ASTs shall be in conformance with the procedures for construction notifications applicable to USTs in §334.6(b)(3)-(5) of this title.

(2) When requested by the agency, any person who intends to install a new or replacement AST shall also submit additional supporting information to assure that the activity is in compliance with applicable statutes and regulations.

(3) In addition to the installation notification requirements of this section, the owner or operator of a proposed AST that is to be located in the designated recharge zone or transition zone of the Edwards Aquifer shall also secure the requisite approval from the executive director prior to initiating any installation or replacement activities, as prescribed in Chapter 313 of this title (relating to Edwards Aquifer).

(4) When an existing UST is to be removed from the ground and is to be subsequently converted to an AST, the person must comply with the applicable technical requirements under §334.55 of this title (relating to Permanent Removal from Service) and with the notification requirements of §334.6 and §334.126 of this title (relating to Construction Notification for Aboveground Storage Tanks (ASTs) and Installation Notification for Aboveground Storage Tanks (ASTs)).

(b) The following ASTs shall not be subject to the installation notification requirements of this section:

(1) ASTs which are exempt from regulation under §334.123 of this title (relating to Exemptions for Aboveground Storage Tanks (ASTs));

(2) ASTs which are excluded from regulation under §334.124 of this title (relating to Exclusions for Aboveground Storage Tanks (ASTs));

(3) movable or mobile ASTs (e.g., skid tanks) which are moved from one location to another on a regular basis, which are not permanently part of any particular facility, and which are otherwise in compliance with the provisions of §334.127(f) of this title (relating to Registration for Aboveground Storage Tanks (ASTs)); except that any movable or mobile ASTs proposed for installation or placement at a retail service station shall remain subject to the installation notification requirements of this section.

§334.127 Registration for Aboveground Storage Tanks (ASTs)

(a) General provisions.

(1) All aboveground storage tanks (ASTs) in existence on or after September 1, 1989, must be registered with the agency on authorized agency forms in accordance with subsection (e) of this section, except for those tanks which:

(A) are exempt from regulation under §334.123 of this title (relating to Exemptions for Aboveground Storage Tanks (ASTs)); or

(B) are excluded from regulation under §334.124 of this title (relating to Exclusions for Aboveground Storage Tanks (ASTs)).

(2) The owner and operator of an AST are responsible for compliance with the tank registration requirements of this section. An owner or operator may designate an authorized representative to complete and submit the required registration information; however, the owner and operator remain responsible for compliance with the provisions of this section.

(3) All ASTs subject to the registration requirements of this section are also subject to the fee provisions in §334.128 of this title (relating to Annual Facility Fees for Aboveground Storage Tanks (ASTs)), except where specifically exempted from such fee provisions. The failure by a tank owner or operator to properly or timely register any tanks shall not exempt the owner from such fee assessment and payment provisions.

(4) Proper completion of the specified agency tank registration form will result in the agency's issuance of a registration certificate for the tanks at the facility covered by that registration. This certificate is tied to the delivery prohibitions detailed in §334.125 of this title (relating to General Prohibitions and Requirements for Aboveground Storage Tanks (ASTs)).

(b) Existing tanks. Any person who owns or operates an AST subject to the provisions of this section that was in existence on September 1, 1989, shall register such tank with the agency not later than March 1, 1990, on an authorized agency form.

(c) New or replacement tanks. Any person who owns or operates a new or replacement AST subject to the provisions of this section that is placed into service on or after September 1, 1989, must register the tank with the agency on an authorized agency form within 30 days from the date any petroleum product is first placed into the tank.

(d) Changes or additional information. An owner or operator of an AST subject to the provisions of this section must provide written notice to the agency of any changes or additional information concerning the status of any regulated tanks, including, but not limited to, information regarding the operational status, condition, substance stored, ownership, location of records, and number of tanks. This notice must be submitted on an authorized agency form which has been completed in accordance with subsection (e) of this section. This form must be properly completed and signed, and shall include the TCEQ facility identification number in the appropriate space on the form. Notice of any change or additional information must be filed with the agency within 30 days of the occurrence of the change or addition, or within 30 days from the date on which the owner or operator first became aware of the change or addition, as applicable.

(e) Required form for providing AST registration information.

(1) Any AST owner or operator required to submit tank registration information under subsections (a) - (d) of this section must provide all the information indicated on the agency's authorized form for each regulated AST owned.

(2) The tank registration form must be filled out completely and accurately. Upon completion, the form must be dated and signed by the owner, operator, or an authorized representative of the owner or operator, and must be filed with the agency within the time frames specified in this section.

(3) All AST owners or operators required to submit AST registration information under subsections (a) - (d) of this section must provide the registration information for all ASTs located at a particular facility on the same registration form.

(4) All AST owners or operators who own or operate ASTs located at more than one facility must complete and file a separate registration form for each facility where regulated ASTs are located, unless otherwise allowed under subsection (f) of this section.

(5) If additional documents are submitted with new or revised registration data, the specific facility identification information (including the facility identification number, if known) must be conspicuously indicated on each document, and all such documents must be securely attached to and filed with the registration form.

(f) Registration requirements for movable ASTs. Movable or mobile ASTs which are regularly used to store petroleum products (e.g., skid tanks) must also be registered by the owner or operator in accordance with the provisions of this section. When such tanks are intended to be moved from one location to another on a regular basis and are not permanently part of any particular facility, then an owner or operator may register the tanks in accordance with the following procedures:

(1) for the purposes of completing the tank registration form, the owner or operator must identify the facility location for such movable tanks as the owner's or operator's principal business address or location;

(2) the owner or operator must continuously maintain complete and accurate records of the specific location, operational status, condition, and type of petroleum products stored at the owner's or operator's principal business address or location. At any given time, the records must include the required tank information for at least the preceding five years. Such records must be readily accessible and available for inspection upon request by agency personnel; and

(3) any movable or mobile tank which is registered at the owner's or operator's business address or location, rather than at the actual facility location, must be permanently and legibly labeled with the agency's designated identification number for such tank by painting, decals, tags, or other permanent identification method.

(g) Inadequate information. When any of the required AST registration information submitted to the agency is determined to be inaccurate, unclear, illegible, incomplete, or otherwise inadequate, the agency may require the owner and/or operator to submit additional information. An owner and/or operator must submit any such additional information within 30 days of receipt of such request.

(h) Temporary delivery authorization.

(1) Upon receipt of a TCEQ construction notification form indicating pending installation of a new or replacement AST system(s), the agency will issue a temporary delivery authorization for that tank system(s).

(2) The temporary delivery authorization is valid for no more than 90 days after the first delivery of petroleum product into the new or replacement AST system.

(3) The AST owner and operator are responsible for maintaining complete and accurate records of the date of the first deposit of petroleum product into a new or replacement AST, as well as the date that the initial 90-day period expires. The bill of lading for the first delivery of regulated substance into any new or replacement AST at the facility must be attached to the temporary delivery authorization for that facility.

§334.128 Annual Facility Fees for Aboveground Storage Tanks (ASTs)

(a) Fee assessments.

(1) Except as provided in subsection (e) of this section, an annual facility fee of $25 will be assessed by the agency for each aboveground storage tank (AST) subject to the registration provisions of §334.127 of this title (relating to Registration for Aboveground Storage Tanks (ASTs)).

(2) All annual facility fees will be billed to, and must be payable by, the owner of the AST.

(3) Payment of annual facility fees is due no later than 30 days after the date the agency mails a statement of the assessment to the tank owner.

(4) Annual facility fees must be paid by check, certified check, or money order made payable to the Texas Commission on Environmental Quality. Payments must be mailed to the address specified in the billing statement.

(b) Billing schedule.

(1) The agency will establish a schedule for the billing of annual facility fees.

(2) Regardless of the actual billing date, the total amount of annual facility fees billed to and payable by an owner will be based on the total number of regulated ASTs in place on or after the first day of each fiscal year (September 1).

(c) Failure to make payment.

(1) Annual facility fees must be paid at the time and in the manner and amount provided by this section.

(2) The agency will impose interest and penalties on owners who fail to make payment of the annual facility fees assessed under this section when due in accordance with Chapter 12 of this title (relating to Payment of Fees).

(d) Disposition of fees, interest, and penalties. As required by the Texas Water Code (TWC), §26.358(g), the agency will deposit all annual facility fees collected, together with all interest and penalties collected for late payment, in the state treasury to the credit of the storage tank fund.

(e) Exception. An annual facility fee shall cease to be assessed, effective September 1, 2007, and shall not be assessed until such time as reinstated by the commission at an amount determined appropriate by the commission, however, prior owing tank fees are still due as previously described. In addition, at such time as the annual facility fee is reinstated by the commission, it will not be assessed for an AST which is owned by a common carrier railroad, as provided in the TWC, §26.344 (g).

§334.129 Release Reporting and Corrective Action for Aboveground Storage Tanks (ASTs)

(a) An owner or operator of an AST must comply with the same release reporting, investigation, and corrective action requirements and procedures applicable to underground storage tanks, as prescribed in Subchapter D of this chapter, whenever a suspected or confirmed release of a petroleum product from an AST has occurred.

(b) An owner or operator of an AST which stores other petroleum substances or hazardous substances which are not petroleum products must comply with the release reporting, investigation, and corrective action requirements prescribed in the Texas Water Code, Chapter 26, Subchapter G.

§334.130 Reporting and Recordkeeping for Aboveground Storage Tanks (ASTs)

(a) Reporting. Owners and operators of ASTs must assure that all reporting and filing requirements in this subchapter are met, including the following (as applicable):

(1) Installation notification in accordance with §334.126;

(2) Application for approval of any proposed AST in the Edwards Aquifer recharge or transition zones;

(3) Registration of ASTs and changes in information, in accordance with §334.127;

(4) Payment of annual facility fees for ASTs, in accordance with §334.128;

(5) All reports, plans, and certifications related to actions taken in response to suspected and confirmed releases of petroleum products, in accordance with §334.129.

(b) Recordkeeping.

(1) General recordkeeping requirements.

(A) Except as provided in (b)(1)(B), owners and operators of ASTs must comply with the same general recordkeeping requirements applicable to underground storage tanks.

(B) Owners and operators of movable or mobile ASTs (e.g., skid tanks) may maintain the records for such tanks in accordance with the provisions of §334.127(f)(2).

(2) Required records and documents. Owners and operators of ASTs must assure that legible copies of all original and amended tank registration documents are maintained for the operational life of the AST.

§334.132 Other General Provisions for Aboveground Storage Tanks

(c) Inspections, monitoring, and testing.

(1) For the purposes of developing or assisting in the development of a regulation, conducting a study, or enforcing this subchapter, an owner or operator of an AST, on the request of the agency must:

(A) furnish information related to the tank, including tank equipment and contents; and

(B) permit a designated agent or employee of the agency at all reasonable times to have access to and to copy all records relating to the tank.

(2) For the purposes of developing or assisting in the development of a regulation, conducting a study, or enforcing this subchapter, the agency's designated agent or employee may:

(A) enter at reasonable times an establishment or place in which an AST is located;

(B) inspect and obtain samples of a petroleum substance contained in the tank from any person; and

(C) conduct monitoring or testing of the tank, associated equipment, contents, or surrounding soils, air, surface water, or groundwater.

(3) The agency may direct an owner or operator of an AST to conduct monitoring and testing if the agency finds that there is reasonable cause to believe that a release has occurred in the area in which the tank is located.

Title 30, Part 1, Chapter 334, G-Target Concentration Criteria

Title 30, Part 1, Chapter 334, H-Reimbursement Program

Title 30, Part 1, Chapter 334, I-Underground Storage Tank On-Site Supervisor Licensing and Contractor Registration

Title 30, Part 1, Chapter 334, J-Leaking Petroleum Storage Tank Corrective Action Specialist Registration and Project Manager Licensing

Title 30, Part 1, Chapter 334, K-Storage, Treatment, and Reuse Procedures for Petroleum-Substance Contaminated Soil

Title 30, Part 1, Chapter 334, L-Overpayment Prevention

Title 30, Part 1, Chapter 334, M-Reimbursable Cost Specifications for the Petroleum Storage Tank Reimbursement Program

Title 30, Part 1, Chapter 334, N-Operator Training

§334.602 Designation and Training of Classes of Operators

(a) Owners or operators shall identify and designate for each underground storage tank (UST) facility including unmanned facilities, at least one named individual for each class of operator - Class A, Class B, and Class C. All individuals designated as a Class A, B, or C operator shall, at a minimum, be trained and certified in accordance with this subchapter. For the purposes of this subchapter, the terms "Class A operator," "Class B operator," "Class C operator," "certified operator, " or "designated operator" are terms specific to the training requirements of this subchapter. The term "operator" used without these descriptors is the same as the term "operator" used in this chapter generally and as specifically defined in §334.2(75) of this title (relating to Definitions).

(1) Owners and operators may designate different individuals for each class of operator, or one individual for more than one of the operator classes.

(2) Any individual designated for more than one operator class shall be trained and certified for each operator class, except that training and certification as a Class B operator also entitles that individual to certification as a Class A operator.

(3) An individual may be designated as a Class A operator for one or more facilities. An individual may be designated as a Class B operator for one or more, but not to exceed 50 facilities. An individual Class C operator must be specifically trained for each facility.

(4) During hours of operation, UST facilities must have at least one certified operator (either a Class A, Class B, or Class C operator) present at the UST facility, except when a UST facility is unmanned. A UST facility is considered unmanned when during the normal course of business there is routinely no attendant present at the facility who could respond to alarms or emergencies related to the UST system. (Examples of unmanned UST facilities include, but are not limited to, card lock or card access fueling stations, telecommunication towers or utility transfer stations serviced by emergency generator USTs, and unattended UST systems located at industrial facilities.) Unmanned facilities must have weather resistant signage clearly visible from any dispenser which instructs users with regard to basic safety procedures, provides the customer with a 24-hour telephone contact number monitored by a Class A, B, or C operator for the facility and provides instruction on when to call 911.

11.2 Other Relevant Standards

Table 11-1 is a general list of the primary SOPs, military standards, Navy instructions, and applicable industry standard guidance that should be used at NAS Corpus Christi.

TABLE 11-1
Relevant Military & Industry Standards

Department of Defense	
UFC 3-460-01	Design: Petroleum Fuel Facilities
UFC 3-460-03	Operation and Maintenance of Petroleum Systems
UFC 3-570-06	Operation and Maintenance of Cathodic Protection Systems
DLA-Energy, P-40 (Aug 2015)	Fuel Spill / Leak / Release Reporting
DD Form 1391	Military Construction Project Data
Military Standard 161-F	Identification Methods for Bulk Petroleum Products Systems Including Hydrocarbon Missile Fuels
MIL Handbook 1022A	Petroleum Fuel Facilities
Navy Instructions	
OPNAV M-5090.1	Environmental Readiness Program Manual
NAVAIR 00-80T-109	NATOPS Manual
NAS Corpus Christi Compliance Plans	
FRP	NAS Corpus Christi Facility Response Plan
API Standards	
API 570	Piping Inspection Code (Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems)
API RP 574	Inspection of Piping System Components
API RP 579	Fitness-for-Service
API RP 651	Cathodic Protection of Petroleum ASTs
API RP 652	Lining of Petroleum AST Bottoms
API 653	Tank Inspection, Repair, Alteration, and Reconstruction
API 912	Installation Instructions for Shop Fabricated Stationary ASTs for Flammable, Combustible Liquids

TABLE 11-1
Relevant Military & Industry Standards

API RP 2350	Overfill Protection for Storage Tanks in Petroleum Facilities
API 2610	Design, Construction, Operation, Maintenance, and Inspection of Terminal and Tank Facilities
API Bulletin D16	Suggested Procedure for Development of SPCCs
STI Standards	
STI SP001 6th edition	Standard for Inspection of In-Service Shop Fabricated ASTs for Storage of Combustible and Flammable Liquids
STI SP031	Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Flammable, Combustible Liquids
STI F911	Standard for Diked Aboveground Steel Tanks
STI R912	Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids
STI Publication R931	Double-Wall AST Installation and Testing Instruction
UL Standards	
UL Std. 58	Standard for Steel USTs for Flammable and Combustible Liquids
UL Std. 142	Standard for Steel ASTs for Flammable and Combustible Liquids
UL Std. 1316	Standard for Glass-Fiber-Reinforced Plastic USTs for Petroleum Products
UL Std. 2085	Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids
Other Standards	
NFPA 30	Flammable and Combustible Liquids Code
NFPA 30A	Code for Motor Fuel Dispensing Facilities and Repair Garages
PEI RP 200	Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling
American Society of Mechanical Engineers (ASME) B 31.3	Process Piping
ASME B31.4	Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols

SECTION 12

Other SPCC Requirements

12.1 Container Construction

"112.8(c)(1): You must not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature."

See **Table 2-3** and **Appendix A** for tank specific details, including construction standards and materials. All aboveground oil storage tanks and containers are made of material (e.g., steel, concrete, polyethylene, fiberglass) that is compatible with the type of oil being stored (e.g., jet fuel, vehicular diesel, unleaded gasoline, waste oil, lubrication oil), and therefore conform with the relevant industry standard (Chapter 28.11 of NFPA 30). All transformers are also made of material (e.g., steel) that is compatible with its contents (e.g., mineral oil).

Currently, the following aboveground shop-fabricated tanks are built to an unknown construction standard: 7-G and 340-TK-09. Based on an engineering assessment completed during the site visit for SPCC plan update, each AST was observed to be made of a material that is compatible with the type of oil stored.

If any existing tanks are to be replaced, or new tanks are to be installed, then they must be constructed to meet the applicable industry standard requirements, such as UL-142 for double walled steel ASTs, UL-2085 for double walled concrete encased ASTs, NFPA Code 30 for all ASTs, and UL-1316 for fiberglass USTs.

12.2 Corrosion Protection for Buried, Partially Buried and Bunkered Storage Tanks

"112.8(c)(4): You must protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks."

"112.8(c)(5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

No partially or completely buried metallic steel USTs, installed after 1974, are present at NAS Corpus Christi; therefore, this section is not applicable. There are OS, buried metallic steel USTs at Facilities 12 and 217, but they were installed before 1974, and are now permanently closed. The NEX Gas Station USTs are made of fiberglass reinforced plastic, which is not subject to corrosion.

However, there are accessible steel components, under removable cover plates in the UST sumps (including fill port, turbine pump, and dispenser cabinet sumps), which are below ground level, but the components are not in contact with soil. As required by 40 CFR 280, the sumps must be inspected monthly to check for fuel leaks, equipment damage, and corrosion caused by water accumulation. In addition, these sumps must be hydraulically integrity tested every 3 years. Sump components must be protected from corrosion. The Form 4, UST sump monthly inspection checklist is located in **Appendix C**.

12.3 Corrosion Protection for Buried Piping

"112.8(d)(1): Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage."

Underground piping (buried in soil) is installed at the GOV Gas Station, going from AST piping transition sumps to the loading/ unloading/ dispensing station. Underground piping is also installed at the NEX Gas Station, going from the USTs to transition sumps under vehicle fuel dispenser cabinets. Underground piping is also installed at the MWR Marina, going from AST piping transition sump towards the pier that has a fuel dispenser. The Marina fuel system is temporarily out of service, pending completion of repairs. All the underground piping is double-walled, made of fiberglass/plastic, which is not subject to corrosion in contact with soil, and has an interstitial monitoring system to detect leakage.

At the Aviation Fuel Facility, there is a section of below grade piping, single walled, made of stainless steel, which is not subject to corrosion. This piping goes to the loading/unloading station, in a covered concrete trench, which is supported above the trench bottom surface (not in contact with soil).

12.4 Heating Coils

"112.8(c)(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system."

No tanks equipped with internal heating coils exist at NAS Corpus Christi.

12.5 Overfill Prevention

"112.8(c)(8): You must engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:
(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.
(iii) Direct audible or code signal communication between the container gauger and the pumping station.
(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
(v) You must regularly test liquid level sensing devices to ensure proper operation."

As indicated in **Appendix A**, different types of liquid level sensing devices have been installed to prevent overfills on the various tanks and fuel systems at NAS Corpus Christi. The following devices are used at this facility:

- Automatic Tank Gauge System
- Automated Fuels Manager Defense System
- High-Level Alarm
- High / High-Level Alarm

- Automatic High Level Control Valve
- Mechanical Level Gauge
- Overfill Prevention Valve
- Direct Communications between Tank Gauge and the Fuel Provider

There is an EPA guidance memo, from the Office of Solid Waste and Emergency Response 9360.8-38 posted on the EPA website, regarding the use of double-walled shop-built ASTs, made of steel or concrete, that are not installed within an open secondary containment dike or berm. This would be considered a third form of containment. The concern is that an overfill during a fuel transfer could spill out of the fill port, or blow out the emergency vent, onto the outside surfaces of tank, and not be contained. The EPA memo states that these ASTs should have protective measures, to include overfill alarm, AND overfill flow shutoff device, AND all fuel transfers to be constantly monitored. An EPA approved alternative action to installing overfill equipment, is to specify in the SPCC plan, an active procedure or method of spill response and control for the AST. An on-site evaluation was performed for each AST of this type to determine the appropriate action needed.

Bulk fuel ASTs 1716-1 and 1720-2 at the Aviation Fuel Facility, plus ASTs 154-1 and 154-2 at the GOV Fueling Station, are programmed into an automated Fuel Manager Defense system, which is used to monitor liquid levels and high-level alarm systems to prevent overfills. Field-erected ASTs 1716-1 and 1720-2 are equipped with an automatic high-level control valve on the fuel receipt inlet pipeline to prevent overfills. Audible alarms activate in the Fuels Control office on electronic system status panels, which provide for overfill protection, leak detection, and monitoring of AST operating levels, using an extensive inventory reconciliation process. The Fuels Manager Defense system is checked during each fuel transfer to ensure proper operation and is tested every 5 years by API 653 certified contractors. At the NEX Gas Station, the Veeder Root ATG system for monitoring of USTs is checked monthly and is annually tested by a contractor to ensure proper operation.

Some kind of level gauge device must be installed on all regulated tanks, except for low risk tanks such as UCO containers, 55-gallon oil drums, and plastic totes, in which the level is easy to see. The level gauge device can be an ATG system, which has an electronic liquid level sensor inside the tank that is connected to a remote reading display panel in an adjacent building. Other shop-fabricated tanks utilize mechanical methods for determining liquid levels, which are various types of direct-vision level gauges that can be monitored at the tank site during fill operations.

If the level gauge device is installed in a position, such that the level amount is not visible to the person who is controlling the fuel flow to fill the tank, then the facility must implement a two-person fill procedure, with "direct audible or signal communication between the container gauger and the pumping station". This is a tank fill procedure which requires two people on site: the first person operates the fuel pump, and the second person monitors the level gauge device.

A portable measuring stick may be used to check liquid levels during static (no flow) tank conditions. However, a measuring stick is not an acceptable method of level gauging, during a high flow rate or pressurized tank fill process, because it does not meet the 40 CFR 112.8(c)(8)(iv) requirement for a "fast response system" of gauging.

Liquid level sensing devices and alarms on shop-fabricated tanks, are inspected monthly by NAS Corpus Christi personnel and contractors, and must be tested annually by STI certified contractors, per manufacturer recommendations. AST Inspection checklists are located in **Appendix C**.

12.6 Effluent Treatment Facility

"112.8(c)(9): You must observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b)."

Two WWTPs are located at NAS Corpus Christi; the Industrial WWTP primarily serves CCAD facilities. Navy industrial processes generate pass-through water from OWSs that is directed through the sanitary sewer lines to the Domestic WWTP. The physical condition and effluent of the WWTPs is inspected on a daily basis by the WWTP operators. The effluent from both WWTPs combines together and is then discharged into Corpus Christi Bay. The WWTPs operate under a National Pollutant Discharge Elimination System permit. Effluent into Corpus Christi Bay is monitored for signs of oil or grease contamination (such as odor, sheen), and other pollutants on a regular basis to ensure it meets permit requirements.

OWS internal inspections and monitoring are performed by a PWD contractor when requested, or by designated personnel in each tenant organization responsible for the equipment. These personnel are trained and instructed to notify the PWD Environmental staff, if any oil discharge to the storm water system if observed, or other unsatisfactory conditions are noted. If the OWS needs to be cleaned per inspection or custodian request, an off-site contractor will pump and clean the OWS, and manage the final disposal of oil and wastewater.

12.7 Terminal Connections

"112.8(d)(2): Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time."

Bulk fuel pipelines and terminal connections at the Aviation Fuel Facility, which are out of service, or on standby service, are capped or blank flanged, or a blind/spectacle flange is installed, when not in use or removed from the fuel system.

Section of piping that is removed, isolated or disconnected, must be marked in accordance with UFC 3-460-03, Section 1. Fuel should be evacuated from this piping if possible. Small-diameter piping systems are also capped when not in service or in standby status.

12.8 Pipe Supports

"112.8(d)(3): Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction."

Based on visual inspections only, the majority of the pipe supports at NAS Corpus Christi appear to have been designed and constructed in accordance with good engineering practice, as outlined in UFC 3-460-01, Chapter 9, and American National Standards Institute SP-58. Pipe supports must be designed in a manner that minimizes the potential for abrasion and corrosion, and allows for expansion and contraction of the piping, while providing for adequate support during operations, including the potential for vibration and hammer effects. Proper materials must also be used for pipe supports. Examples of poor or inadequate pipe supports would include:

- Wooden blocks
- Missing or broken supports or anchors
- Supports that do not allow for pipe movement, due to thermal expansion

- Supports that trap moisture against the pipe, leading to corrosion
- Improper spacing that allows excessive vibration movement

12.9 Vehicle Warning

"112.8(d)(5): Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations."

Aboveground fuel piping at the site is protected from vehicular collision or damage through a variety of methods. Fencing, secured areas, concrete posts (bollards), temporary highway barriers, secondary containment dike structures, and distance from traffic areas, may be employed to protect aboveground fuel systems. Yellow concrete bollards are used in the vicinity of aboveground piping that is adjacent to roadways and refueler truck loading stands at NAS Corpus Christi.

Roads, parking areas, and driveways are clearly marked to control vehicular traffic in and around these spill risk areas. Base security regularly enforces site specific traffic regulations to ensure compliance with warning signs. Refer to the individual Tank Data Sheets in **Appendix A** for specific vehicular protection for each storage container and piping system.

12.10 Facility Drainage: Design and Equipment

"112.8(b)(3): 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 rack) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding."

"112.8(b)(4): If facility drainage is not engineered as in 112.8(b)(3), equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility."

"112.8(b)(5): 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 as described in §112.1(b) in case there is an equipment failure or human error at the facility."

The GRI prepared by EPA, Version 2.0, dated August 28, 2013, says that 40 CFR Sections 112.8(b)(3), 112.8(b)(4), and 112.8(b)(5), specify performance requirements for systems used to drain storm water from undiked areas with the potential for a discharge. These provisions apply only when NAS Corpus Christi chooses to use a facility wide engineered storm water drainage system to meet general secondary containment requirements under §112.7(c) or a more specific requirement under §112.8(c).

For the containers in this Plan, NAS Corpus Christi has chosen to meet the applicable secondary containment requirements under §112.7(c) and §112.8(c), using passive structures and active response measures, as discussed in previous sections of this Plan. Therefore, as discussed in the GRI excerpt previously noted, sections §112.8(b)(3), §112.8(b)(4), and §112.8(b)(5), do not apply to the containers in this Plan.

If there is a discharge from any tank piping system or fuel transfer area, which is located outside of containment walls or berms, then active discharge response controls are required, and must be implemented in accordance with the NAS Corpus Christi **FRP**.

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Appendix A
Tank Data Sheets

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NAS CORPUS CHRISTI TANK DATA

Tank ID: 7-G

Facility Name: Central Fire Station

Facility Number: 7

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 4,500

Capacity Unit: Gallon

Year Installed: 2005

Manufacturer: Unknown

Listing Standard: Unknown

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: West

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
7-G Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 10-2

Facility Name: Fire Pump Room in Multi-Purpose

Facility Number: 10

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST   Cylinder

☐ Vertical   ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 180

Capacity Unit: Gallon

Year Installed: 2014

Manufacturer: Patterson

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):   Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No   Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Radial in Building

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
10-2 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 30-G (10-1)

Facility Name: Generator House for Multi-Purpos

Facility Number: 30

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 2,000

Capacity Unit: Gallon

Year Installed: 2006

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Leak Gauge

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: South

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storm Drain Inlet

Note:
30-G (10-1) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 42-1

Facility Name: Fire Pump House for Hangar 42

Facility Number: 78

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 300

Capacity Unit: Gallon

Year Installed: 2015

Manufacturer: Jakes, Inc

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Leak Gauge

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Building

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes: leak in the interstice

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
42-1 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 50-1

Facility Name: Customs Fire Pump House

Facility Number: 50-G

Maint Responsibility: DHS/CBP

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 359

Capacity Unit: Gallon

Year Installed: 2017

Manufacturer: Clay and Bailey

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Drain Detector

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
50-1 Diesel
50-2 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 50-2

Facility Name: Customs Fire Pump House

Facility Number: 50-G

Maint Responsibility: DHS/CBP

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 359

Capacity Unit: Gallon

Year Installed: 2017

Manufacturer: Clay and Bailey

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Drain Detector

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Piping Secondary Containment: Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
50-1 Diesel
50-2 Diesel

0 15 30 60
Feet

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

NAS CORPUS CHRISTI TANK DATA

Tank ID: 50-3

Facility Name: Customs Aircraft Hangar

Facility Number: 50

Maint Responsibility: DHS/CBP

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 660

Capacity Unit: Gallon

Year Installed: 2005

Manufacturer: Tramont

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
50-3 Diesel
50-4 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 50-4

Facility Name: Customs Aircraft Hangar

Facility Number: 50

Maint Responsibility: DHS/CBP

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 357

Capacity Unit: Gallon

Year Installed: 2006

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storm Drain Inlet

Note:
50-3 Diesel
50-4 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 68-G

Facility Name: Air Traffic Control Tower

Facility Number: 68

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 300

Capacity Unit: Gallon

Year Installed: 2014

Manufacturer: Pee Dee Tank CO

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Steel

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Yes

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: N/A

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: North

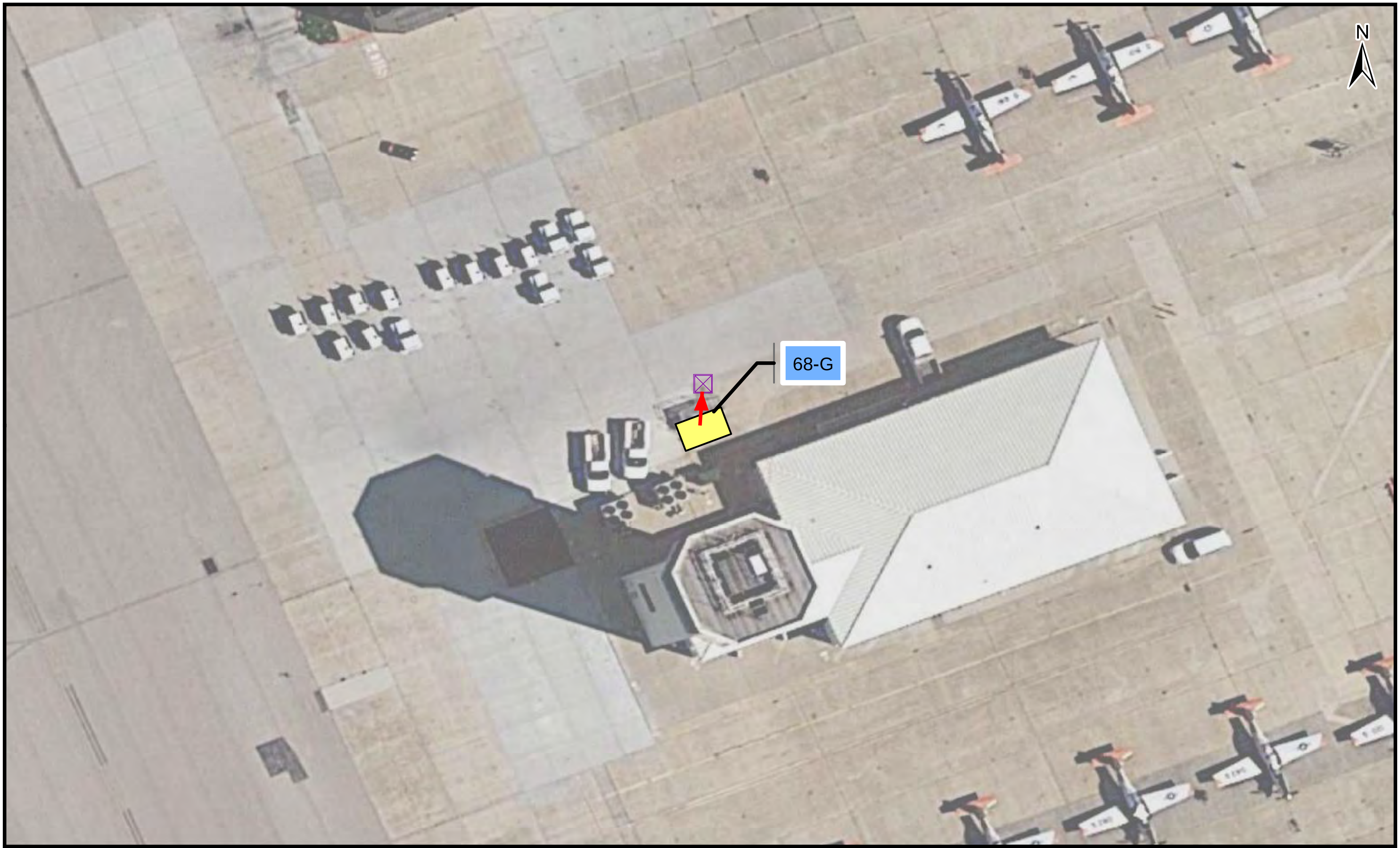
Nearest Receptor Distance: 8 Feet

Nearest Receptor Type: Sewer

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

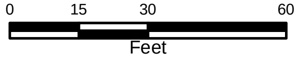
Notes:



Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
68-G Diesel



Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 104-G

Facility Name: Security Police

Facility Number: 104

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 80

Capacity Unit: Gallon

Year Installed: 2009

Manufacturer: United Power Products

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): None (Sensor Disconnected)

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: East

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storage Drain Inlet

Service Layer Credits: Google Earth

Note:
104-G Diesel

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 111-G (1742)

Facility Name: Generator House for CNATRA Hea

Facility Number: 111

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 250

Capacity Unit: Gallon

Year Installed: 2011

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units: Gallon

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Yes

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Southeast

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storage Drain Inlet

Service Layer Credits: Google Earth

Note:
111-G (1742) Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/13/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 114-T (55-1)

Facility Name: Fure Pump House for Hangar 55

Facility Number: 114

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 280

Capacity Unit: Gallon

Year Installed: 2000

Manufacturer: Patterson

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Concrete Dike

Secondary Containment Dimensions (LxWxH): 8.33 x 6.08 x 0.83 Units: Feet

Secondary Containment Capacity: 314 Capacity Units: Gallons

Spill Kit: No Locked:

☐ High-Level Alarm
☐ Signal between tank gauger and pumper
☐ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Visual Containment Inspection

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storage Drain Inlet

Note:
114-T (55-1) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 118-G (236)

Facility Name: PWD Maintenance Shops Generat

Facility Number: 118

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 250

Capacity Unit: Gallon

Year Installed: 1992

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Non-Compliant

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southwest

Nearest Receptor Distance: 3 Feet

Nearest Receptor Type: Stormdrain

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
118-G (236) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 121-G

Facility Name: ELMR Communication Tower

Facility Number: 121

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 217

Capacity Unit: Gallon

Year Installed: 2009

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: West

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
121-G Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 154-1
Facility Name: GOV Gas Station
Facility Number: 155
Maint Responsibility: DLA
Status: Active
Type: AST Rectangular
☐ Vertical ☑ Horizontal
Material: Carbon Steel & Concrete
Content: Diesel
Tank Capacity: 8,000
Capacity Unit: Gallon
Year Installed: 2005
Manufacturer: Convault
Listing Standard: UL-2085
Corrosion Protection: N/A
Construction: Shop Fabricated

Category: 1
Labeled: Yes
Foundation: Concrete
Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Double-Walled
Secondary Containment Dimensions (LxWxH): Units:
Secondary Containment Capacity: Capacity Units:
Spill Kit: Yes Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☑ Spill Bucket
☐ Overfill Prevention NA
☑ Leak Detection System (If yes, describe): Automatic Leak Detection

---

Piping Location: Above / Underground
Piping Material: Steel/Fiberglass
Piping Walls: Single/Double
Pipe Supports: Adequate
AntiSiphon Valve: Yes
Piping Corrosion Protection: Coated
Piping Secondary Containment: Concrete Containment/Double Wall

---

Vehicle Collision Protection: Yes
Lighting Adequate: Yes
Fencing Gates Locked: Yes
Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment
Nearest Receptor Distance:
Nearest Receptor Type:
Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13,19
Notes:

Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Belowground
- Drainage Ditch
- Storm Drain Inlet

Note:
154-1 Diesel
154-2 Gasoline

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 154-2
Facility Name: GOV Gas Station
Facility Number: 155
Maint Responsibility: DLA
Status: Active
Type: AST Rectangular
☐ Vertical ☑ Horizontal
Material: Carbon Steel & Concrete
Content: Gasoline
Tank Capacity: 4,000
Capacity Unit: Gallon
Year Installed: 2005
Manufacturer: Convault
Listing Standard: UL-2085
Corrosion Protection: N/A
Construction: Shop Fabricated

Category: 1
Labeled: Yes
Foundation: Concrete
Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Double-Walled
Secondary Containment Dimensions (LxWxH):
Units:
Secondary Containment Capacity:
Capacity Units:
Spill Kit: Yes
Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☑ Spill Bucket
☐ Overfill Prevention NA
☑ Leak Detection System (If yes, describe): Automatic Leak Detection

Piping Location: Above / Underground
Piping Material: Steel/Fiberglass
Piping Walls: Single/Double
Piping Secondary Containment: Concrete Containment/Double Wall
Pipe Supports: Adequate
AntiSiphon Valve: Yes
Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes
Lighting Adequate: Yes
Fencing Gates Locked: Yes
Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment
Nearest Receptor Distance:
Nearest Receptor Type:
Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13,19
Notes:

Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Belowground
- Drainage Ditch
- Storm Drain Inlet

Note:
154-1 Diesel
154-2 Gasoline

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 258-1

Facility Name: Fire Pump Room for < 90 Day HW

Facility Number: 258

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 119

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Jake's Inc

Category: 1

Listing Standard: UL-142

Labeled: Yes

Corrosion Protection: Coated

Foundation: Concrete

Construction: Shop Fabricated

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Spill Bucket

☐ Signal between tank gauger and pumper

☐ Overfill Prevention NA

☐ Overfill Prevention Valve

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Drain Sensor

---

Piping Location: Aboveground

Pipe Supports: Adequate

Piping Material: Carbon Steel

AntiSiphon Valve: Not Required - Not Present

Piping Walls: Single

Piping Corrosion Protection: Coated

Piping Secondary Containment: Building Containment

Vehicle Collision Protection: Yes

Fencing Gates Locked: Yes

Lighting Adequate: Yes

Master Flow Valves Locked: No

Flow Direction: Radial in Building

Nearest Receptor Type:

Nearest Receptor Distance:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
258-1 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 7/2/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1099-G (PAR-1)

Facility Name: PAR Generator House

Facility Number: 1099

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 211

Capacity Unit: Gallon

Year Installed: 2010

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Building

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1099-G (PAR-1) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1237-G (2607)

Facility Name: TACAN Radar Generator House

Facility Number: 1236

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 1998

Manufacturer: Modern Melding

Listing Standard: UL-2085

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: N/A

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1237-G (2607) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/13/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1238-G

Facility Name: Hangar 58 Generator House

Facility Number: 1238

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 1,000

Capacity Unit: Gallon

Year Installed: 2006

Manufacturer: Watco Tanks

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: N/A

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southeast

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1238-G Diesel

0 15 30 60
Feet

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1241-G

Facility Name: Airfield Power Distribution

Facility Number: 1241

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: N/A

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southwest

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1241-G Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1289-G

Facility Name: Sanitary Lift Station

Facility Number: 1289

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

- [ ] Vertical
- [x] Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 134

Capacity Unit: Gallon

Year Installed: 2016

Manufacturer: United Alloys, Inc

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

- [x] High-Level Alarm
- [ ] Signal between tank gauger and pumper
- [ ] Overfill Prevention Valve
- [ ] Spill Bucket
- [ ] Overfill Prevention NA
- [x] Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southeast

Nearest Receptor Distance: 5 Feet

Nearest Receptor Type: Sewer

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1289-G Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1292-G

Facility Name: Sanitary Lift Station

Facility Number: 1292

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 60

Capacity Unit: Gallon

Year Installed: 2005

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: West

Nearest Receptor Distance: 5 Feet

Nearest Receptor Type: Sewer

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1292-G Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/13/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID:	1716-1
Facility Name:	Aviation Fuel Facility
Facility Number:	1717
Maint Responsibility:	DLA
Status:	Active
Type:	AST Cylinder
	☑ Vertical ☐ Horizontal
Material:	Carbon Steel
Content:	F-24 Jet Fuel
Tank Capacity:	244,604
Capacity Unit:	Gallon
Year Installed:	1987
Manufacturer:	Unknown
Listing Standard:	API-653
Corrosion Protection:	Coated + CP Bottom
Construction:	Field Erected

Category:	API-653
Labeled:	Yes
Foundation:	Concrete Ring
Level Gauge:	Automatic Tank Gauging

Secondary Containment Type: Lined Earthen & Concrete Dike

Secondary Containment Dimensions (LxWxH): See Section F.2.1 Units:

Secondary Containment Capacity: 389,313 Capacity Units: Gallons

Spill Kit: No Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Visual Containment Inspection

---

Piping Location:	Aboveground	Pipe Supports:	Adequate
Piping Material:	Stainless Steel	AntiSiphon Valve:	Yes
Piping Walls:	Single	Piping Corrosion Protection:	N/A

Piping Secondary Containment: Lined AST Dike/Active Measures/Concrete Trench

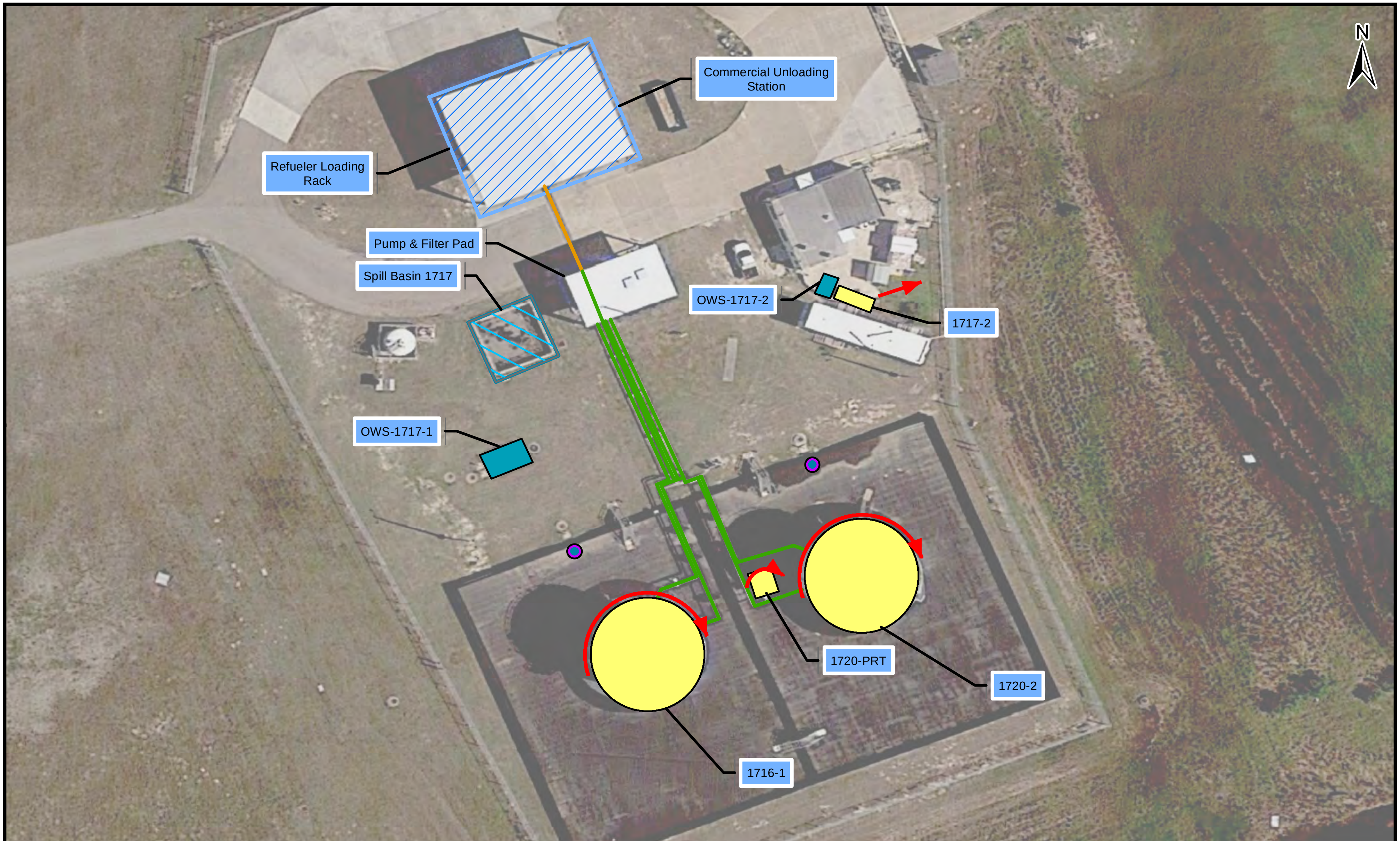
---

Vehicle Collision Protection:	Yes	Fencing Gates Locked:	Yes
Lighting Adequate:	Yes	Master Flow Valves Locked:	Yes

Flow Direction:	Radial in Containment	Nearest Receptor Type:	
Nearest Receptor Distance:		Nearest Receptor Direction:	

Applicable Spill Scenarios (Appendix F): 5,6,7,8

Notes:



Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Retention Basin
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Trenched
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:

1716-1 F-24 Jet Fuel
1717-2 Diesel
1720-2 Reclaimed F-24 Jet Fuel
1720-PRT F-24 Jet Fuel

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1717-2

Facility Name: Aviation Fuel Facility

Facility Number: 1717

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 1,000

Capacity Unit: Gallon

Year Installed: 2017

Manufacturer: United Alloys, Inc

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: No

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: No

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Northeast

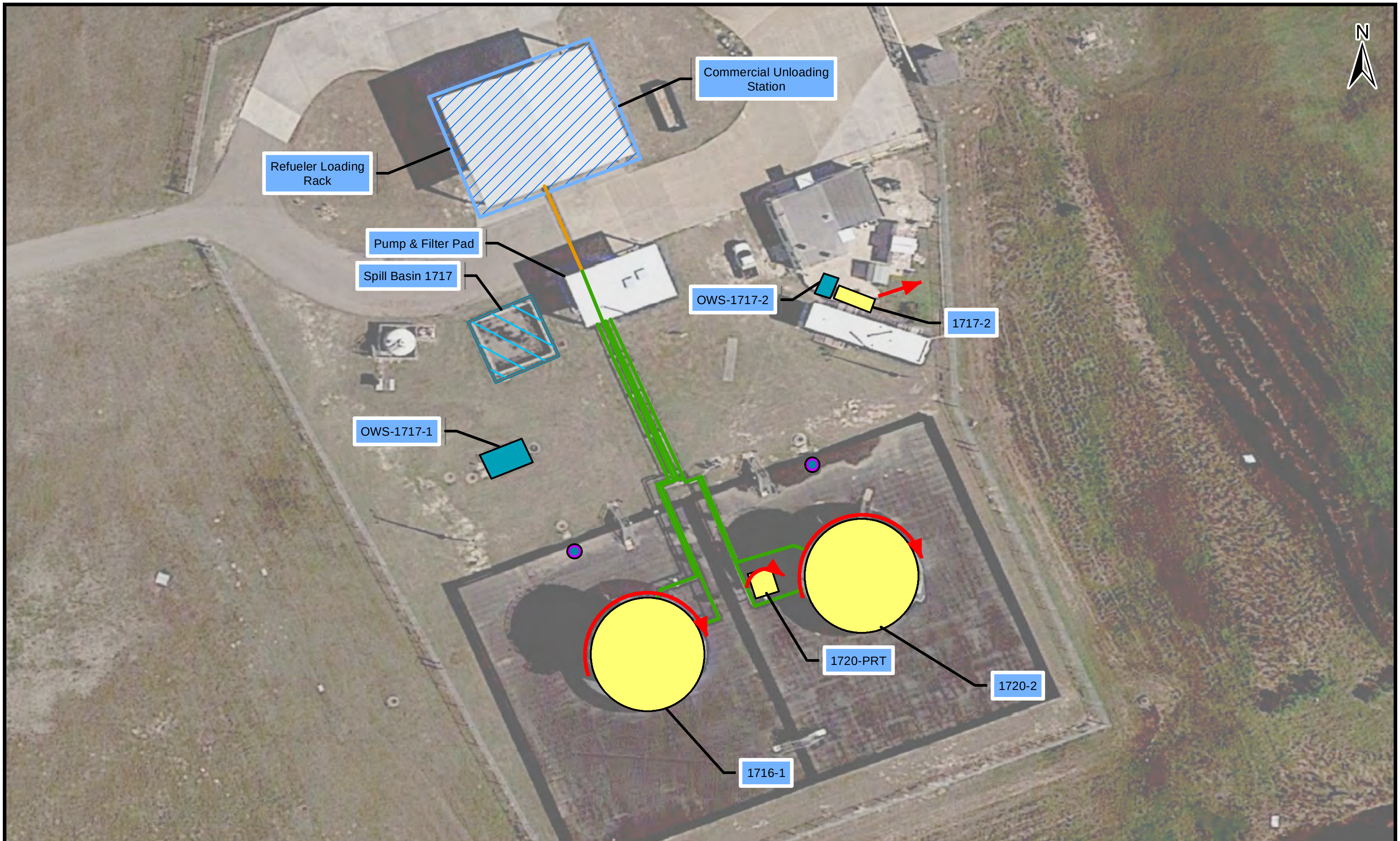
Nearest Receptor Distance: 1 Feet

Nearest Receptor Type: Sewer

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:



Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Retention Basin
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Trenched
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1716-1 F-24 Jet Fuel
1717-2 Diesel
1720-2 Reclaimed F-24 Jet Fuel
1720-PRT F-24 Jet Fuel

0 20 40 80
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1720-2

Facility Name: Aviation Fuel Facility

Facility Number: 1717

Maint Responsibility: DLA

Status: Active

Type: AST Cylinder

☑ Vertical ☐ Horizontal

Material: Carbon Steel

Content: F-24 Jet Fuel

Tank Capacity: 247,627

Capacity Unit: Gallon

Year Installed: 1987

Manufacturer: Unknown

Listing Standard: API-653

Corrosion Protection: Coated + CP Bottom

Construction: Field Erected

Category: API-653

Labeled: Yes

Foundation: Concrete Ring

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Lined Earthen & Concrete Dike

Secondary Containment Dimensions (LxWxH): See Section F.2.1 Units:

Secondary Containment Capacity: 388,597 Capacity Units: Gallons

Spill Kit: No Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Visual Containment Inspection

---

Piping Location: Aboveground

Piping Material: Stainless Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Yes

Piping Corrosion Protection: N/A

Piping Secondary Containment: Lined AST Dike/Active Measures/Concrete Trench

---

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

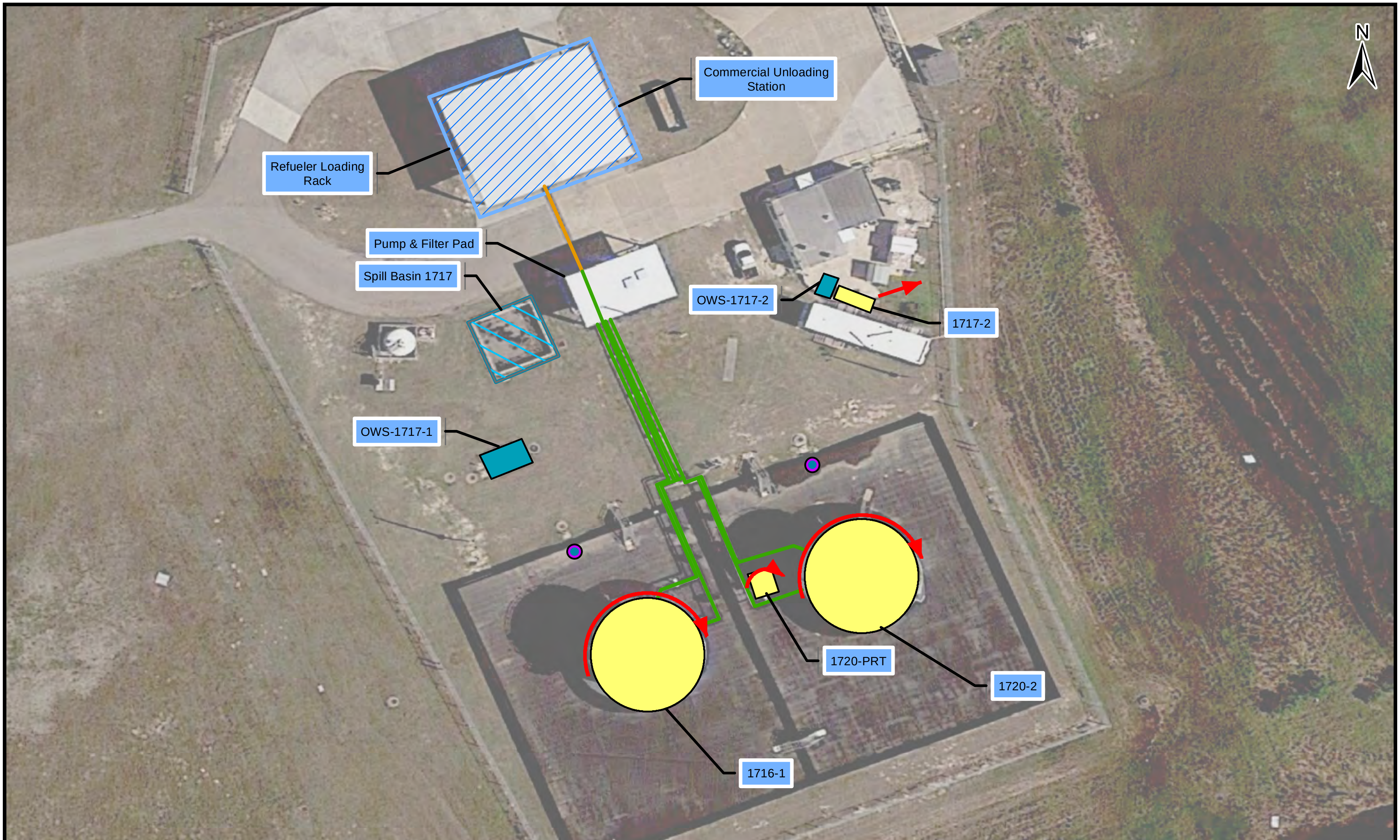
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 5,6,7,8

Notes:



Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Retention Basin
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Trenched
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1716-1 F-24 Jet Fuel
1717-2 Diesel
1720-2 Reclaimed F-24 Jet Fuel
1720-PRT F-24 Jet Fuel

0 20 40 80
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1720-PRT

Facility Name: Aviation Fuel Facility

Facility Number: 1717

Maint Responsibility: DLA

Status: Active

Type: AST Cylinder

☑ Vertical ☐ Horizontal

Material: Stainless Steel

Content: Reclaimed F-24 Jet Fuel

Tank Capacity: 55

Capacity Unit: Gallon

Year Installed: Unknown

Manufacturer: Gammon

Listing Standard: Unknown

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: No

Foundation: Concrete

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Lined Earthen & Concrete Dike

Secondary Containment Dimensions (LxWxH): See Section F.2.1 Units:

Secondary Containment Capacity: 388,597 Capacity Units: Gallons

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Visual

Piping Location: Aboveground

Piping Material: Stainless Steel

Piping Walls: Single

Piping Secondary Containment: Lined AST Dike

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

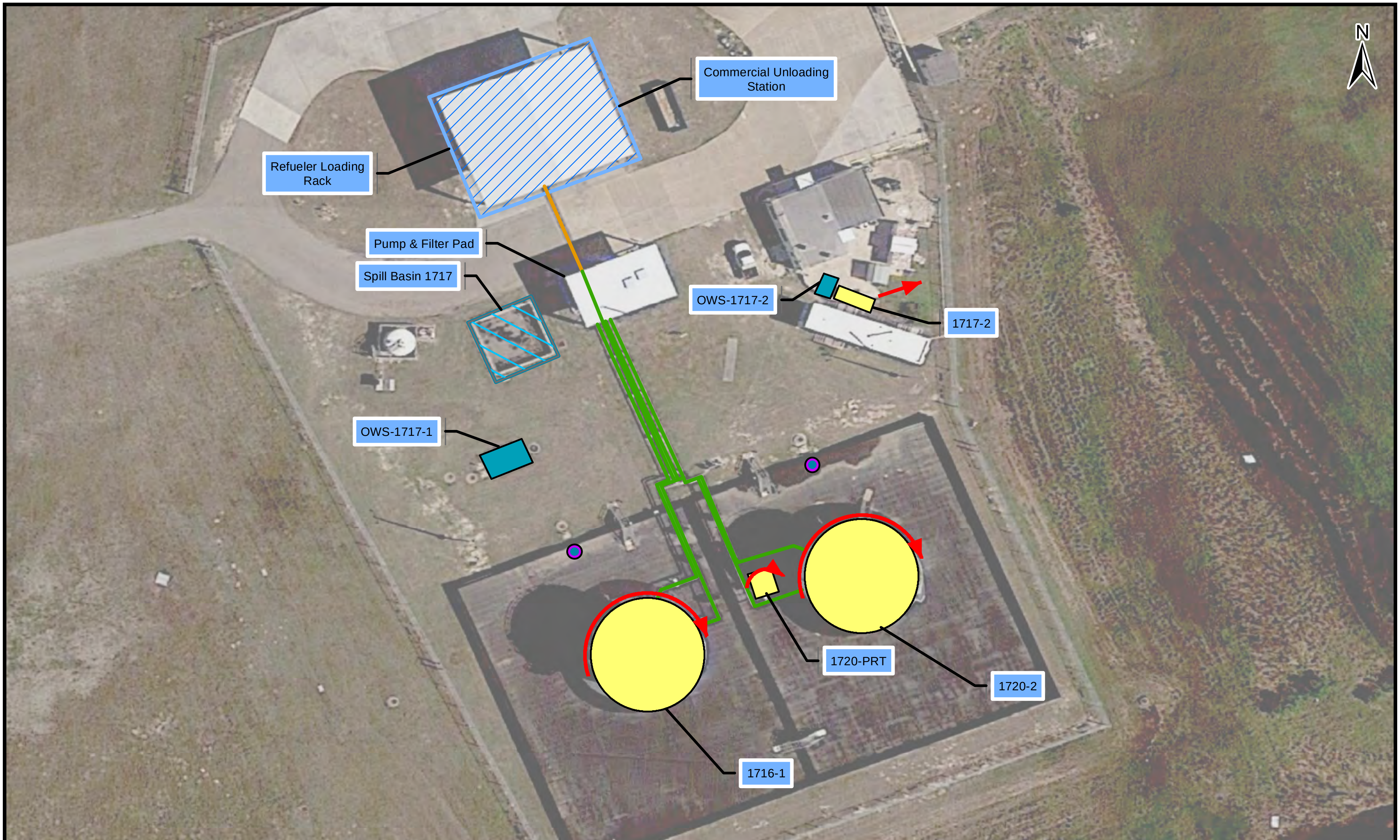
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F):

Notes:



Legend

- Aboveground Storage Tank (AST)
- Oil-water Separator (OWS)
- Retention Basin
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Fuel Pipeline - Trenched
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1716-1 F-24 Jet Fuel
1717-2 Diesel
1720-2 Reclaimed F-24 Jet Fuel
1720-PRT F-24 Jet Fuel

0 20 40 80
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1758-T (1757)

Facility Name: Marina Boat House

Facility Number: 1758

Maint Responsibility: CNIC/PWD

Status: Temporary OS

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Gasoline

Tank Capacity: 2,000

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Modern Welding

Listing Standard: UL-2085

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Above / Underground

Piping Material: Steel/Fiberglass

Piping Walls: Single/Double

Pipe Supports: Adequate

AntiSiphon Valve: Yes

Piping Corrosion Protection: Coated Steel

Piping Secondary Containment: Concrete Containment/Double Wall

---

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1758-T (1757) Gasoline

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1797-G

Facility Name: Pass and Tag

Facility Number: 1794

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 209

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Sauk Technologies

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southeast

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend
Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storage Drain Inlet

Service Layer Credits: Google Earth

Note:
1797-G Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1846-1

Facility Name: DLA Distribution Center

Facility Number: 1846

Maint Responsibility: DLA

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 115

Capacity Unit: Gallon

Year Installed: 2014

Manufacturer: United Alloys

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: South

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1846-1 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1846-2 (11-1)

Facility Name: DLA Distribution Forklift Fueling

Facility Number: 1846

Maint Responsibility: DLA

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 2007

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southeast

Nearest Receptor Distance: 10 Feet

Nearest Receptor Type: Stormdrain

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1846-2 (11-1) Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1848-G

Facility Name: Generator House for Navy Trainin

Facility Number: 1848

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 425

Capacity Unit: Gallon

Year Installed: 2004

Manufacturer: Tramont

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): None (Sensor Disconnected)

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Building

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1848-G Diesel

0 15 30 60
Feet

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Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1870-G

Facility Name: WWTP Generator House

Facility Number: 1870

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 2,644

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Tramont

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Southwest

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1870-G Diesel
1870-T (1833) Diesel

0 15 30 60
Feet

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Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1870-T (1833)

Facility Name: WWTP Generator House

Facility Number: 1870

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 2,000

Capacity Unit: Gallon

Year Installed: 2011

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Non-Compliant

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Southwest

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18,19

Notes:

Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1870-G Diesel
1870-T (1833) Diesel

0 15 30 60
Feet

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 4008-1 (1737)

Facility Name: NEX & MWR Auto Repair

Facility Number: 4008

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Used Oil

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 1992

Manufacturer: Unknown

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: N/A

Piping Material: N/A

Piping Walls: N/A

Piping Secondary Containment: N/A

Pipe Supports: N/A

AntiSiphon Valve: N/A

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Southeast

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 15,16,17

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
4008-1 (1737) Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

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Spill Flow Diagram

PN: 698585

Date: 9/13/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: GM-1

Facility Name: DRMO Grounds Maintenance

Facility Number: 53

Maint Responsibility: TRDI

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 1998

Manufacturer: Newberry

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Steel

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Leak Gauge

---

Piping Location: Aboveground

Piping Material: Steel/Rubber Hose

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated Steel

Piping Secondary Containment: Steel Dike

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in containment

Nearest Receptor Type:

Nearest Receptor Distance:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
GM-1 Diesel
GM-2 Gasoline

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

0 15 30 60
Feet

PN: 698585

Date: 9/13/2021

JACOBS

Service Layer Credits: Google Earth

NAS CORPUS CHRISTI TANK DATA

Tank ID: GM-2

Facility Name: DRMO Grounds Maintenance

Facility Number: 53

Maint Responsibility: TRDI

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Gasoline

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 2000

Manufacturer: Newberry

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Steel

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Leak Gauge

---

Piping Location: Aboveground

Piping Material: Steel/Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Steel Dike

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated Steel

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
GM-1 Diesel
GM-2 Gasoline

0 15 30 60
Feet

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/13/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: H-100-A

Facility Name: Fire Pump House for Navy Hospita

Facility Number: H-107

Maint Responsibility: BUMED

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 115

Capacity Unit: Gallon

Year Installed: 2014

Manufacturer: Newberry

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Drain Detector

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Building

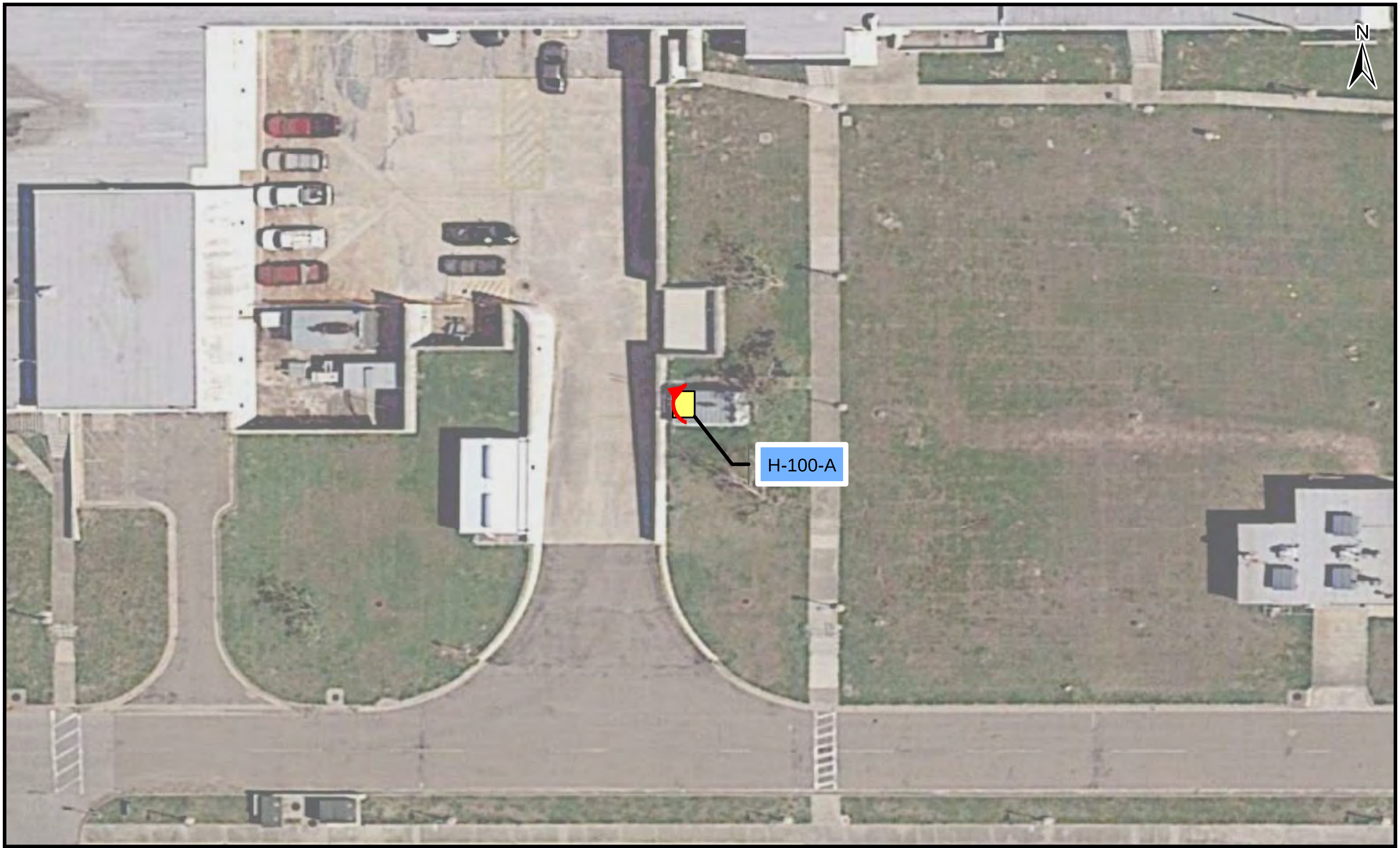
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:



Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storage Drain Inlet

Service Layer Credits: Google Earth

Note:
H-100-A Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: W-1-1

Facility Name: Water Pumping Station

Facility Number: W-1

Maint Responsibility: CNIC/PWD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Diesel

Tank Capacity: 500

Capacity Unit: Gallon

Year Installed: 2011

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Stainless Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: West

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
W-1-1 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

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NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: UST-1
Facility Name: NEX Gas Station
Facility Number: 1290
Maint Responsibility: CNIC/PWD
Status: Temporary OS
Type: UST Cylinder
☐ Vertical ☑ Horizontal
Material: Fiberglass
Content: Regular Gasoline
Tank Capacity: 10,000
Capacity Unit: Gallon
Year Installed: 1986
Manufacturer: Owens Corning
Listing Standard: UL-1316
Corrosion Protection: N/A
Construction: Shop Fabricated

Category: UST
Labeled: No
Foundation: Earth
Level Gauge: Automatic Tank Gauging

Secondary Containment Type: None
Secondary Containment Dimensions (LxWxH): Units:
Secondary Containment Capacity: Capacity Units:
Spill Kit: Yes Locked:

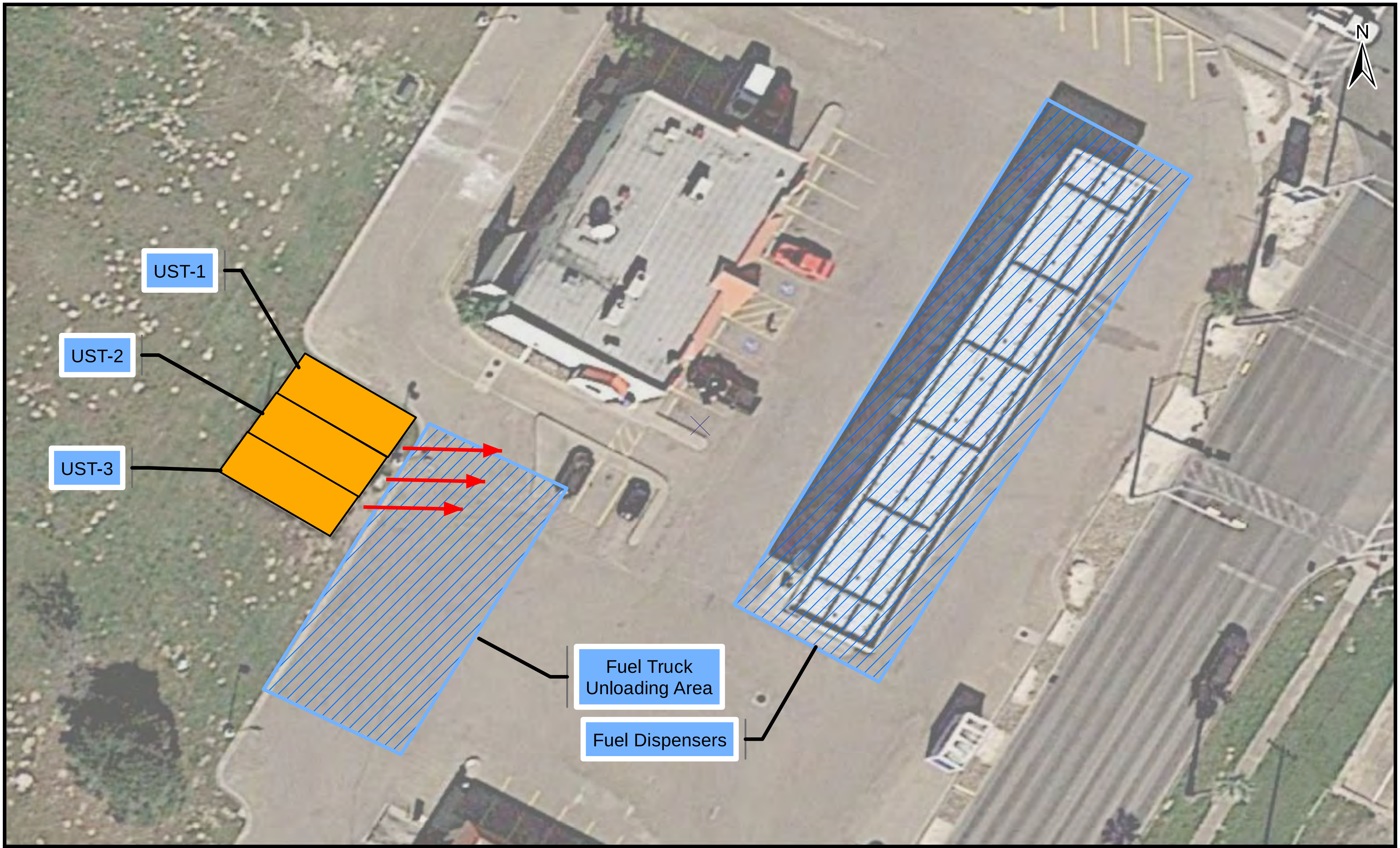
☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☑ Spill Bucket
☐ Overfill Prevention NA
☑ Leak Detection System (If yes, describe): Veeder Root System

Piping Location: Belowground
Piping Material: Fiberglass/Plastic
Piping Walls: Double
Pipe Supports: N/A
AntiSiphon Valve: Not Required - Not Present
Piping Corrosion Protection: N/A
Piping Secondary Containment: Double-Walled

Vehicle Collision Protection: N/A
Lighting Adequate: Yes
Fencing Gates Locked: Yes
Master Flow Valves Locked: Yes

Flow Direction: East
Nearest Receptor Distance:
Nearest Receptor Type:
Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13
Notes:



Legend

- Underground Storage Tank (UST)
- Loading/Unloading Area
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
UST-1 Regular Gasoline
UST-2 Premium Gasoline
UST-3 Diesel

0 15 30 60
Feet

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Spill Flow Diagram

PN: 698585

Date: 7/2/2021

NAS CORPUS CHRISTI TANK DATA

Tank ID: UST-2
Facility Name: NEX Gas Station
Facility Number: 1290
Maint Responsibility: CNIC/PWD
Status: Temporary OS
Type: UST Cylinder
☐ Vertical ☑ Horizontal
Material: Fiberglass
Content: Premium Gasoline
Tank Capacity: 10,000
Capacity Unit: Gallon
Year Installed: 1986
Manufacturer: Owens Corning
Listing Standard: UL-1316
Corrosion Protection: N/A
Construction: Shop Fabricated

Category: UST
Labeled: No
Foundation: Earth
Level Gauge: Automatic Tank Gauging

Secondary Containment Type: None
Secondary Containment Dimensions (LxWxH): Units:
Secondary Containment Capacity: Capacity Units:
Spill Kit: Yes Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☑ Overfill Prevention Valve
☑ Spill Bucket
☐ Overfill Prevention NA
☑ Leak Detection System (If yes, describe): Veeder Root System

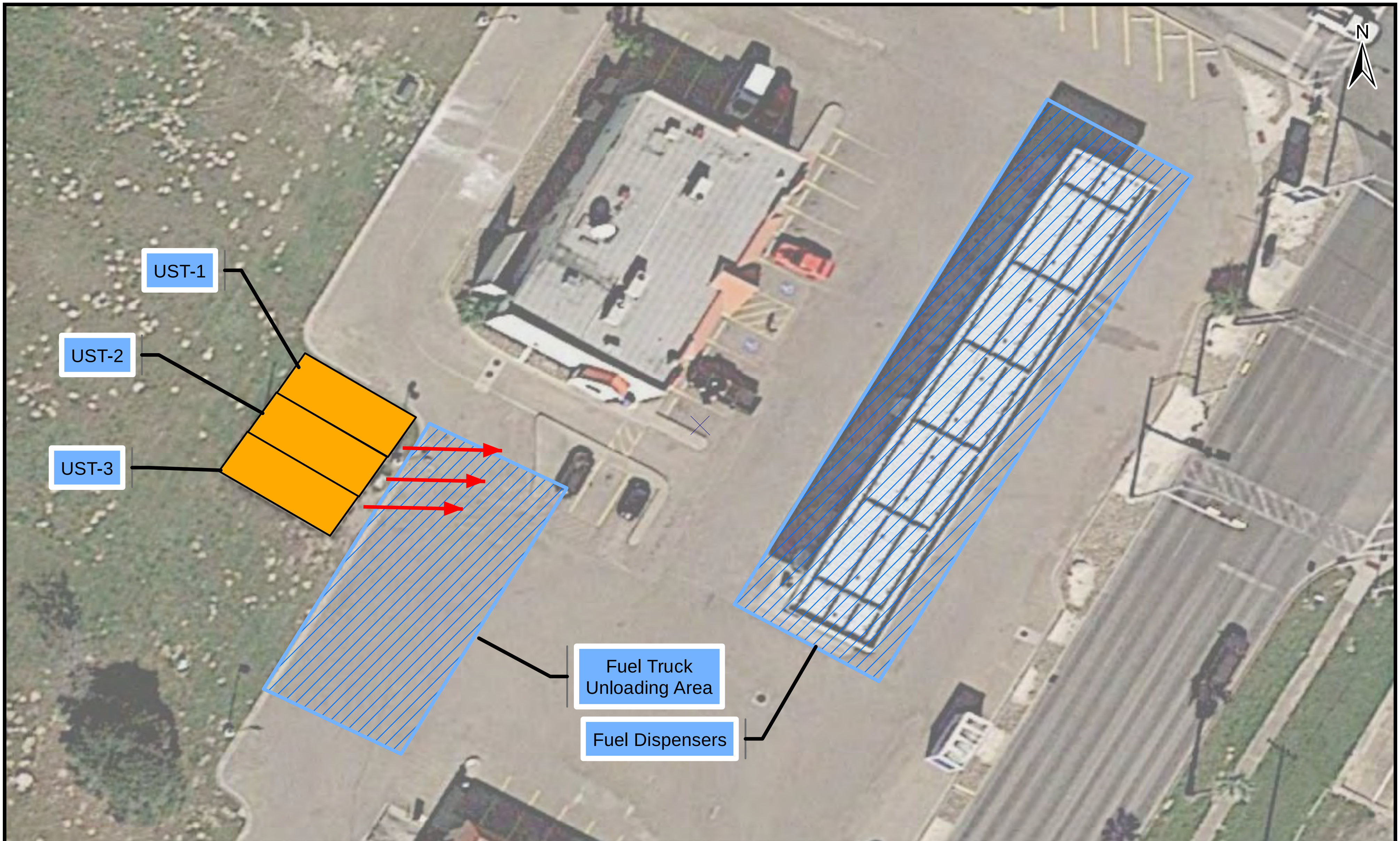
---

Piping Location: Belowground
Piping Material: Fiberglass/Plastic
Piping Walls: Double
Piping Secondary Containment: Double-Walled
Pipe Supports: N/A
AntiSiphon Valve: Not Required - Not Present
Piping Corrosion Protection: N/A

Vehicle Collision Protection: N/A
Lighting Adequate: Yes
Fencing Gates Locked: Yes
Master Flow Valves Locked: Yes

Flow Direction: East
Nearest Receptor Distance:
Nearest Receptor Type:
Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13
Notes:



Legend

- Underground Storage Tank (UST)
- Loading/Unloading Area
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
UST-1 Regular Gasoline
UST-2 Premium Gasoline
UST-3 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 7/2/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: UST-3

Facility Name: NEX Gas Station

Facility Number: 1290

Maint Responsibility: CNIC/PWD

Status: Temporary OS

Type: UST Cylinder

☐ Vertical ☑ Horizontal

Material: Fiberglass

Content: Diesel

Tank Capacity: 10,000

Capacity Unit: Gallon

Year Installed: 1986

Manufacturer: Owens Corning

Listing Standard: UL-1316

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: UST

Labeled: No

Foundation: Earth

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: None

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☑ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Veeder Root System

---

Piping Location: Belowground

Piping Material: Fiberglass/Plastic

Piping Walls: Double

Piping Secondary Containment: Double-Walled

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: N/A

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: East

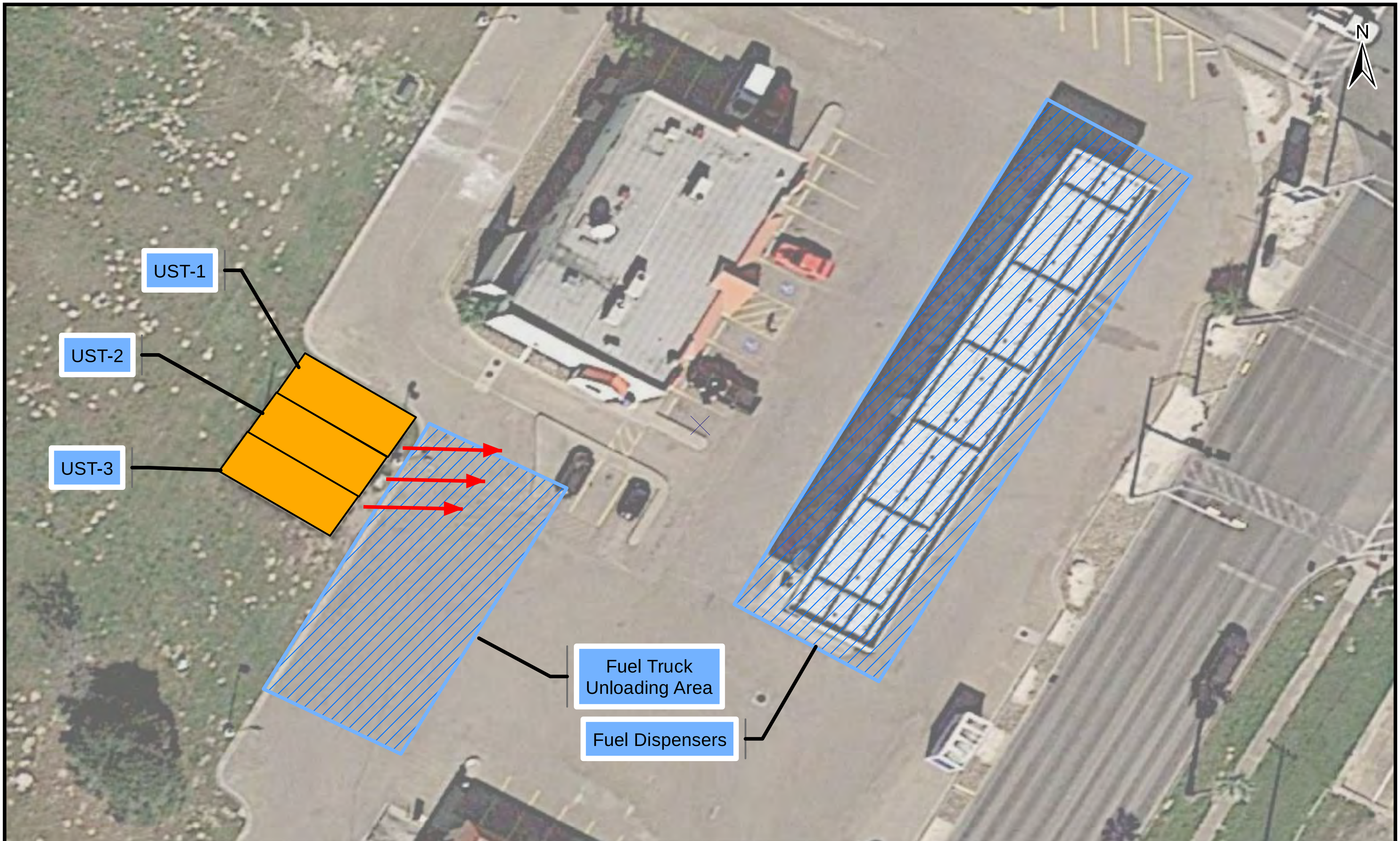
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,12,13

Notes:



Legend

- Underground Storage Tank (UST)
- Loading/Unloading Area
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
UST-1 Regular Gasoline
UST-2 Premium Gasoline
UST-3 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 7/2/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 8-TK-16

Facility Name: CCAD Repair Center

Facility Number: 8

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 758

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Sauk Technologies

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm
☐ Signal between tank gauger and pumper
☐ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked:

Flow Direction: West

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
8-TK-16 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 47-1 / 2

Facility Name: CCAD Aircraft Ramp

Facility Number: 47

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Preservation Oil

Tank Capacity: 500/500

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fab Dual Compart

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:

47-1 / 2 Preservation Oil
47-3 / 4 Preservation Oil
47-5 F-24 Jet Fuel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC
Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 47-3 / 4

Facility Name: CCAD Aircraft Ramp

Facility Number: 47

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Preservation Oil

Tank Capacity: 500/500

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fab Dual Compart

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: No Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

Aboveground Storage Tank (AST)

Spill Direction

Drainage Ditch

Storm Drain Inlet

Service Layer Credits: Google Earth

Note:

47-1 / 2 Preservation Oil

47-3 / 4 Preservation Oil

47-5 F-24 Jet Fuel

0 15 30 60

Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi

Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 47-5

Facility Name: CCAD Aircraft Ramp

Facility Number: 47

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: F-24 Jet Fuel

Tank Capacity: 3,000

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:

47-1 / 2 Preservation Oil
47-3 / 4 Preservation Oil
47-5 F-24 Jet Fuel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID:	227-TK-01
Facility Name:	CCAD Fuel Farm
Facility Number:	8
Maint Responsibility:	CCAD
Status:	Active
Type:	AST Rectangular
	☐ Vertical ☑ Horizontal
Material:	Carbon Steel & Concrete
Content:	F-24 Jet Fuel
Tank Capacity:	10,000
Capacity Unit:	Gallon
Year Installed:	1996
Manufacturer:	Convault
Listing Standard:	UL-2085
Corrosion Protection:	N/A
Construction:	Shop Fabricated

Category:	1
Labeled:	Yes
Foundation:	Concrete
Level Gauge:	Automatic Tank Gauging

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

- ☑ High-Level Alarm
- ☐ Signal between tank gauger and pumper
- ☐ Overfill Prevention Valve
- ☐ Spill Bucket
- ☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Automatic Leak Detection

Piping Location:	Aboveground	Pipe Supports:	Adequate
Piping Material:	Carbon Steel	AntiSiphon Valve:	Required - Not Present
Piping Walls:	Single	Piping Corrosion Protection:	Coated
Piping Secondary Containment:	Partial Concrete Containment		

Vehicle Collision Protection:	Yes	Fencing Gates Locked:	Yes
Lighting Adequate:	Yes	Master Flow Valves Locked:	Yes

Flow Direction:	Radial in Containment	Nearest Receptor Type:	
Nearest Receptor Distance:		Nearest Receptor Direction:	

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Note:

227-TK-01 F-24 Jet Fuel
228-TK-02 F-24 Jet Fuel
229-TK-03 F-24 Jet Fuel
230-TK-06 (OS) Empty
231-TK-04 (OS) Empty
232-TK-05 Turbine Oil
233-TK-07 Preservation Oil

0 15 30 60
Feet

Service Layer Credits: Google Earth

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 228-TK-02

Facility Name: CCAD Fuel Farm

Facility Number: 8

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: F-24 Jet Fuel

Tank Capacity: 10,000

Capacity Unit: Gallon

Year Installed: 1996

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☐ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Automatic Leak Detection

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Partial Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

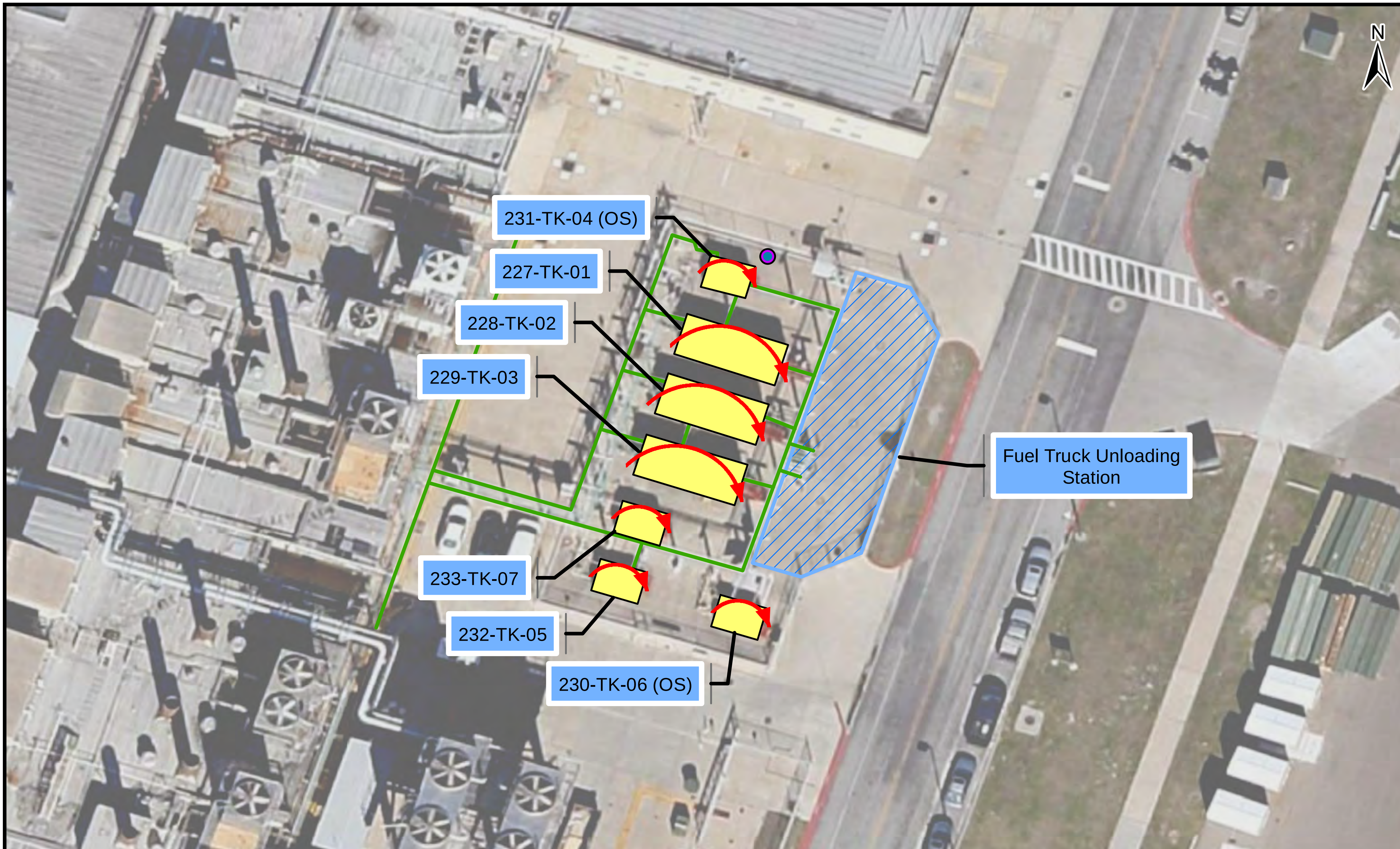
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:



Legend

- Aboveground Storage Tank (AST)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Note:

227-TK-01 F-24 Jet Fuel
228-TK-02 F-24 Jet Fuel
229-TK-03 F-24 Jet Fuel
230-TK-06 (OS) Empty
231-TK-04 (OS) Empty
232-TK-05 Turbine Oil
233-TK-07 Preservation Oil

0 15 30 60
Feet

Service Layer Credits: Google Earth

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 229-TK-03

Facility Name: CCAD Fuel Farm

Facility Number: 8

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel & Concrete

Content: F-24 Jet Fuel

Tank Capacity: 10,000

Capacity Unit: Gallon

Year Installed: 1996

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Automatic Leak Detection

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Partial Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

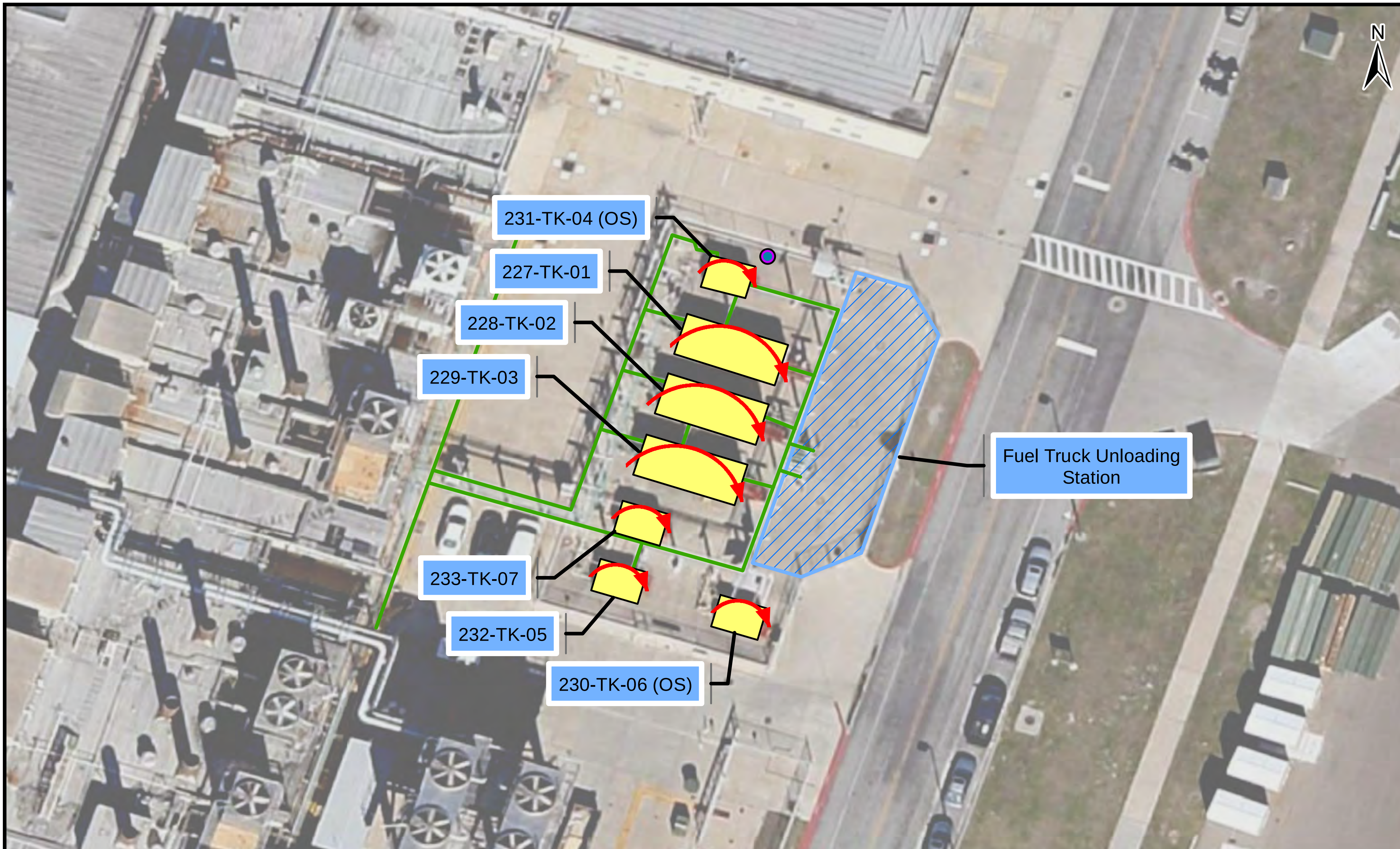
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:



Legend

- Aboveground Storage Tank (AST)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:

227-TK-01 F-24 Jet Fuel
228-TK-02 F-24 Jet Fuel
229-TK-03 F-24 Jet Fuel
230-TK-06 (OS) Empty
231-TK-04 (OS) Empty
232-TK-05 Turbine Oil
233-TK-07 Preservation Oil

0 15 30 60
Feet

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Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID:	232-TK-05
Facility Name:	CCAD Fuel Farm
Facility Number:	8
Maint Responsibility:	CCAD
Status:	Active
Type:	AST Rectangular
	☐ Vertical ☑ Horizontal
Material:	Carbon Steel & Concrete
Content:	Turbine Oil
Tank Capacity:	2,000
Capacity Unit:	Gallon
Year Installed:	1996
Manufacturer:	Convault
Listing Standard:	UL-2085
Corrosion Protection:	N/A
Construction:	Shop Fabricated

Category:	1
Labeled:	Yes
Foundation:	Concrete
Level Gauge:	Automatic Tank Gauging

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH): Units:

Secondary Containment Capacity: Capacity Units:

Spill Kit: Yes Locked:

☑ High-Level Alarm
☐ Signal between tank gauger and pumper
☐ Overfill Prevention Valve
☐ Spill Bucket
☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Automatic Leak Detection

Piping Location:	Aboveground	Pipe Supports:	Adequate
Piping Material:	Carbon Steel	AntiSiphon Valve:	Required - Not Present
Piping Walls:	Single	Piping Corrosion Protection:	Coated
Piping Secondary Containment:	Partial Concrete Containment		

Vehicle Collision Protection:	Yes	Fencing Gates Locked:	Yes
Lighting Adequate:	Yes	Master Flow Valves Locked:	Yes

Flow Direction:	Radial in Containment	Nearest Receptor Type:	
Nearest Receptor Distance:		Nearest Receptor Direction:	

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Note:

227-TK-01 F-24 Jet Fuel
228-TK-02 F-24 Jet Fuel
229-TK-03 F-24 Jet Fuel
230-TK-06 (OS) Empty
231-TK-04 (OS) Empty
232-TK-05 Turbine Oil
233-TK-07 Preservation Oil

0 15 30 60
Feet

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 233-TK-07

Facility Name: CCAD Fuel Farm

Facility Number: 8

Maint Responsibility: CCAD

Status: Active

Type: AST   Rectangular

☐ Vertical   ☑ Horizontal

Material: Carbon Steel & Concrete

Content: Preservation Oil

Tank Capacity: 2,000

Capacity Unit: Gallon

Year Installed: 1996

Manufacturer: Convault

Listing Standard: UL-2085

Corrosion Protection: N/A

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Automatic Tank Gauging

Secondary Containment Type: Double-Walled & Concrete Curb

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Automatic Leak Detection

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Partial Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,19

Notes:

Legend

- Aboveground Storage Tank (AST)
- Loading/Unloading Area
- Spill Direction
- Fuel Pipeline - Aboveground
- Drainage Ditch
- Containment Drain
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:

227-TK-01 F-24 Jet Fuel
228-TK-02 F-24 Jet Fuel
229-TK-03 F-24 Jet Fuel
230-TK-06 (OS) Empty
231-TK-04 (OS) Empty
232-TK-05 Turbine Oil
233-TK-07 Preservation Oil

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 340-TK-09

Facility Name: CCAD Metal Plating Shop

Facility Number: 340

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 200

Capacity Unit: Gallon

Year Installed: 1992

Manufacturer: Pryco, Inc

Listing Standard: Unknown

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): None

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Northeast

Nearest Receptor Distance: 5

Nearest Receptor Type: Stormdrain

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
340-TK-09 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 1260-TK-10

Facility Name: CCAD Training Center

Facility Number: 1260

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 600

Capacity Unit: Gallon

Year Installed: 2012

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Concrete Containment

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Radial in Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1260-TK-10 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 1700-TK-11

Facility Name: DCRF Phase 1 Generator

Facility Number: 1700

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 450

Capacity Unit: Gallon

Year Installed: 2013

Manufacturer: Generac

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: Yes

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: South

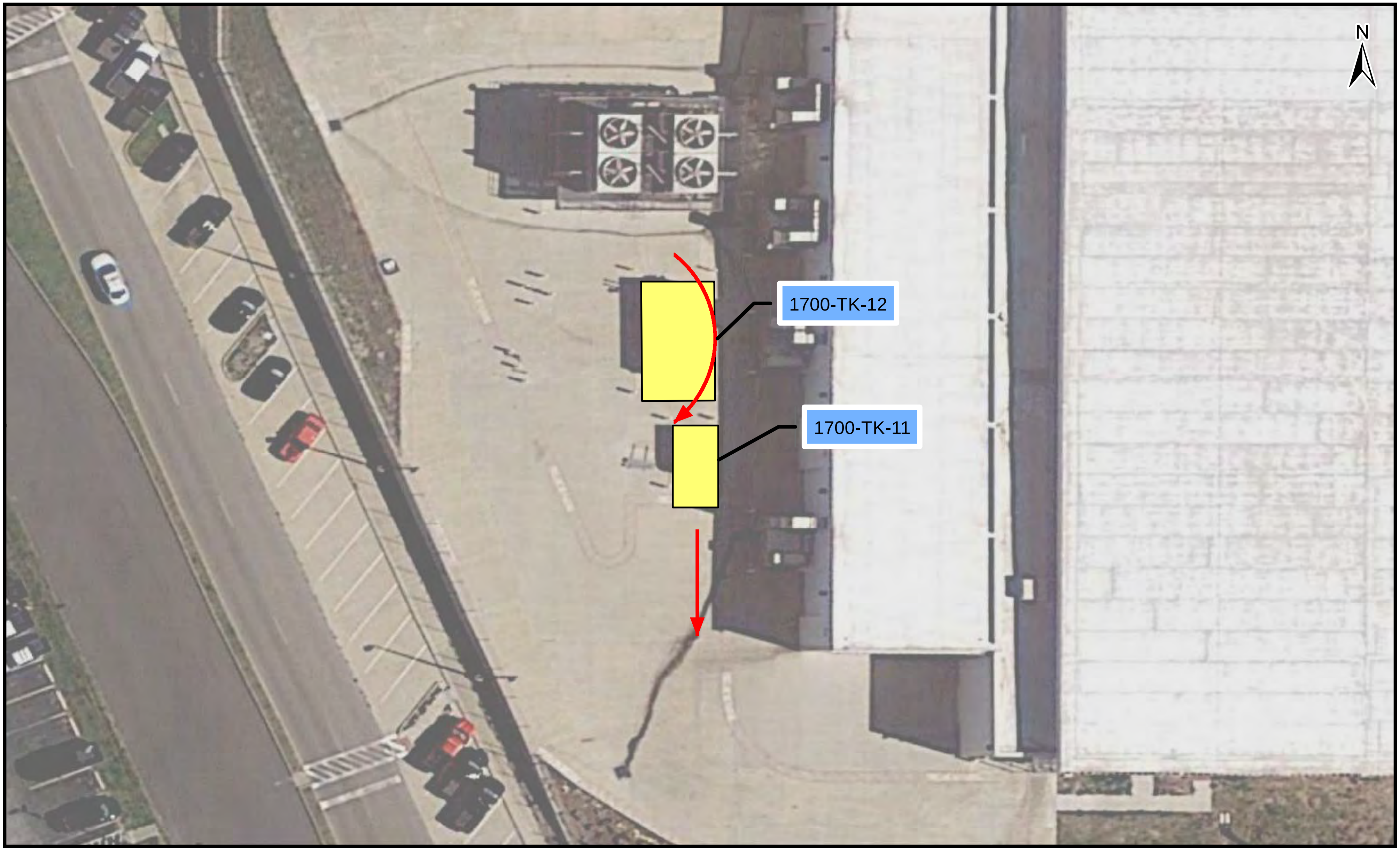
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:



Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storage Drain Inlet

Note:
1700-TK-11 Diesel
1700-TK-12 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1700-TK-12

Facility Name: DCRF Phase 1 Fire Pump Room

Facility Number: 1700

Maint Responsibility: CCAD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 250

Capacity Unit: Gallon

Year Installed: 2013

Manufacturer: Fabstar

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 2

Labeled: Yes

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: Adequate

AntiSiphon Valve: N/A

Piping Corrosion Protection: Coated

Vehicle Collision Protection: Yes

Lighting Adequate: Yes

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: Radial in Building

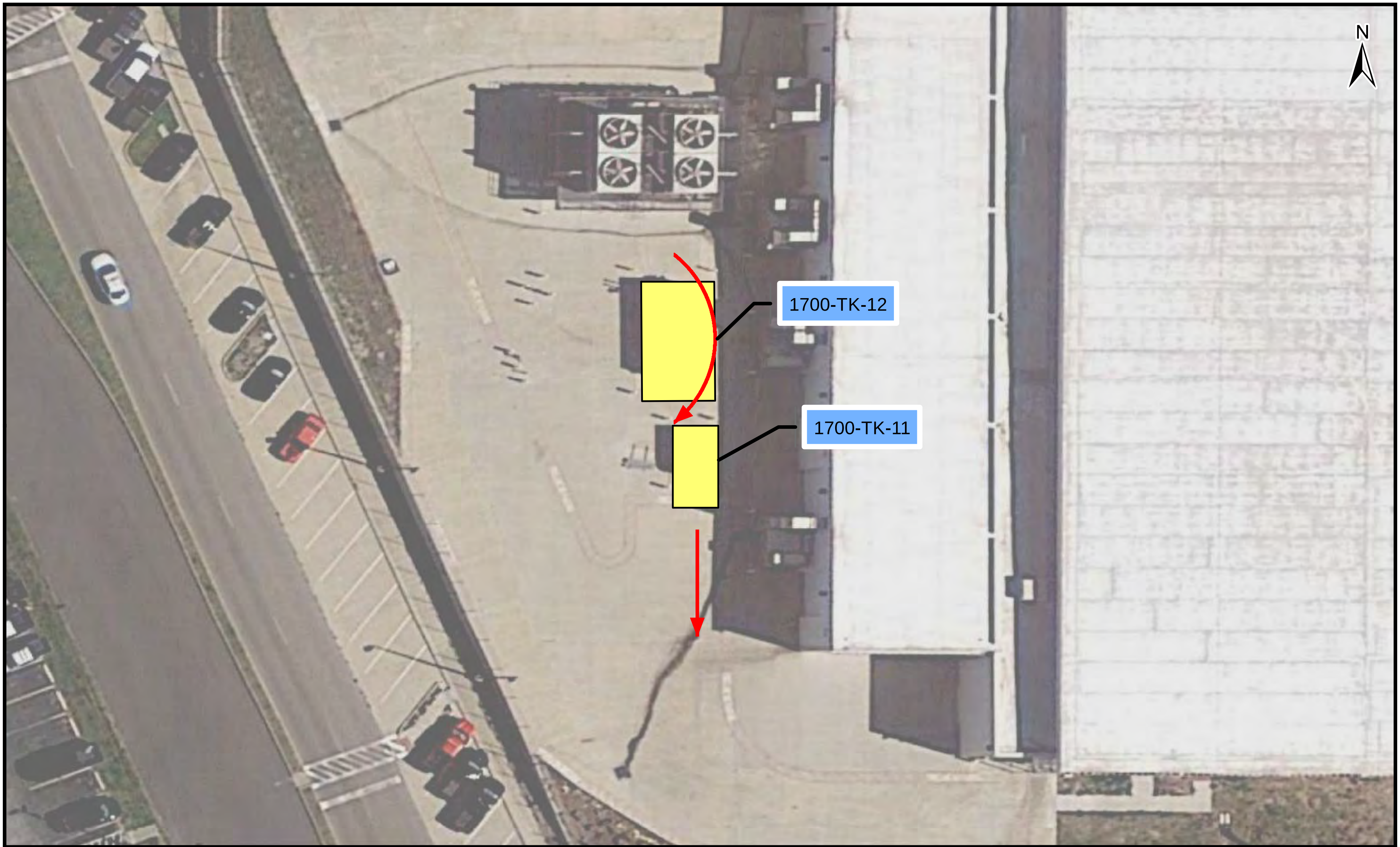
Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:



Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storage Drain Inlet

Service Layer Credits: Google Earth

Note:
1700-TK-11 Diesel
1700-TK-12 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 1700-TK-15

Facility Name: DCRF Phase 2 Generator

Facility Number: 1700

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 1,000

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Engine and Compressor Accessori

Category: 1

Listing Standard: UL-142

Labeled: Yes

Corrosion Protection: Coated

Foundation: Concrete

Construction: Shop Fabricated

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☑ High-Level Alarm

☐ Spill Bucket

☐ Signal between tank gauger and pumper

☐ Overfill Prevention NA

☑ Overfill Prevention Valve

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

---

Piping Location: Aboveground

Pipe Supports: N/A

Piping Material: Rubber Hose

AntiSiphon Valve: Not Required - Not Present

Piping Walls: Single

Piping Corrosion Protection: N/A

Piping Secondary Containment: Active Measures

Vehicle Collision Protection: No

Fencing Gates Locked: Yes

Lighting Adequate: Yes

Master Flow Valves Locked: No

Flow Direction: Northeast

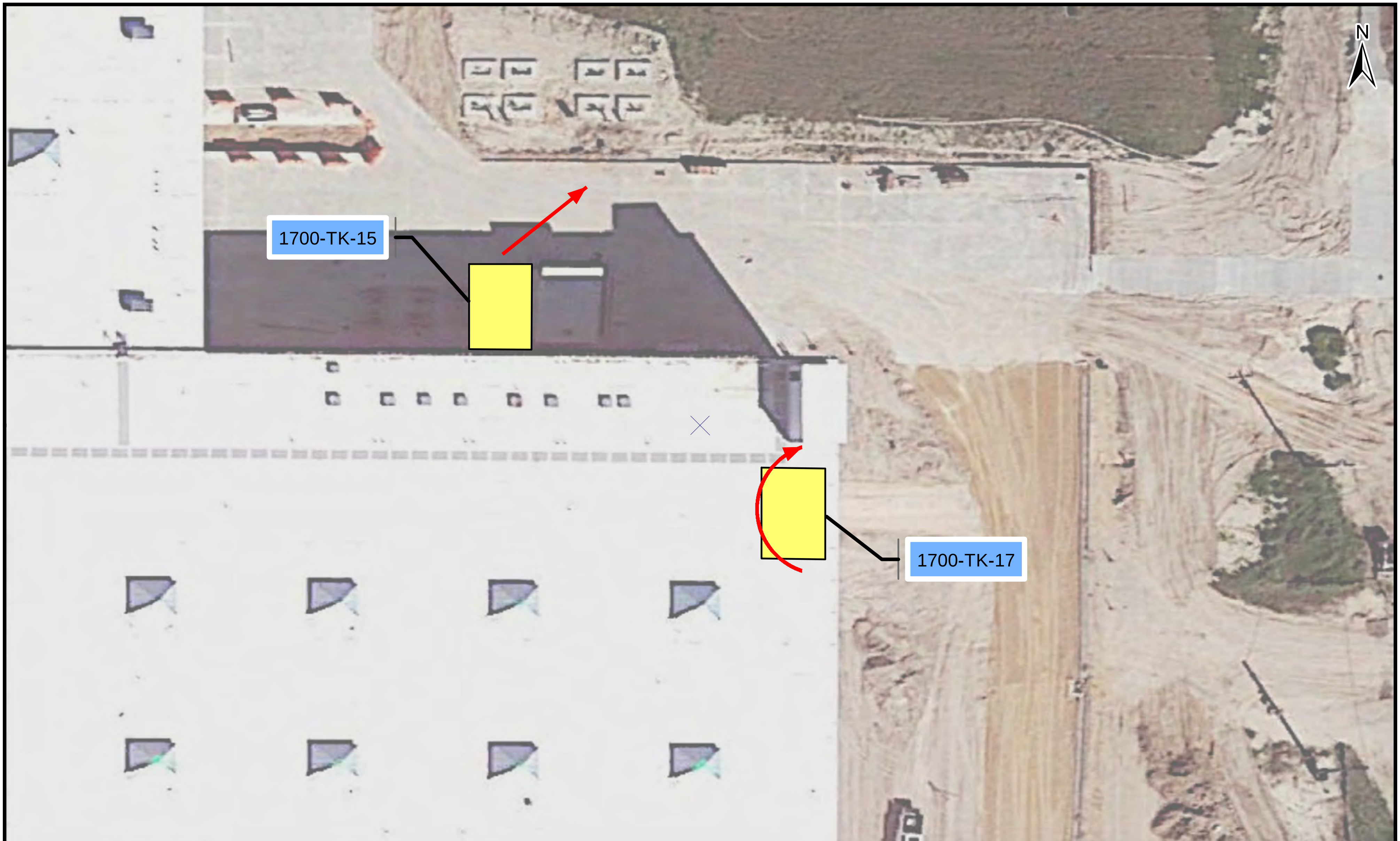
Nearest Receptor Type:

Nearest Receptor Distance:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 3,4,18

Notes:



Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1700-TK-15 Diesel
1700-TK-17 Diesel

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

NAS CORPUS CHRISTI TANK DATA

Tank ID: 1700-TK-17

Facility Name: DCRF Phase 2 Fire Pump Room

Facility Number: 1700

Maint Responsibility: CCAD

Status: Active

Type: AST Cylinder

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 300

Capacity Unit: Gallon

Year Installed: 2020

Manufacturer: Jake's Inc

Category: 2

Listing Standard: UL-142

Labeled: Yes

Corrosion Protection: Coated

Foundation: Concrete

Construction: Shop Fabricated

Level Gauge: Mechanical Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: No

Locked:

☐ High-Level Alarm

☐ Spill Bucket

☐ Signal between tank gauger and pumper

☐ Overfill Prevention NA

☐ Overfill Prevention Valve

☐ Leak Detection System (If yes, describe): Interstitial Monitoring Tube (no Leak gauge)

Piping Location: Aboveground

Pipe Supports: Adequate

Piping Material: Carbon Steel

AntiSiphon Valve: Not Required - Not Present

Piping Walls: Single

Piping Corrosion Protection: Coated

Piping Secondary Containment: Building Containment

Vehicle Collision Protection: Yes

Fencing Gates Locked: Yes

Lighting Adequate: Yes

Master Flow Valves Locked: No

Flow Direction: Radial in Building

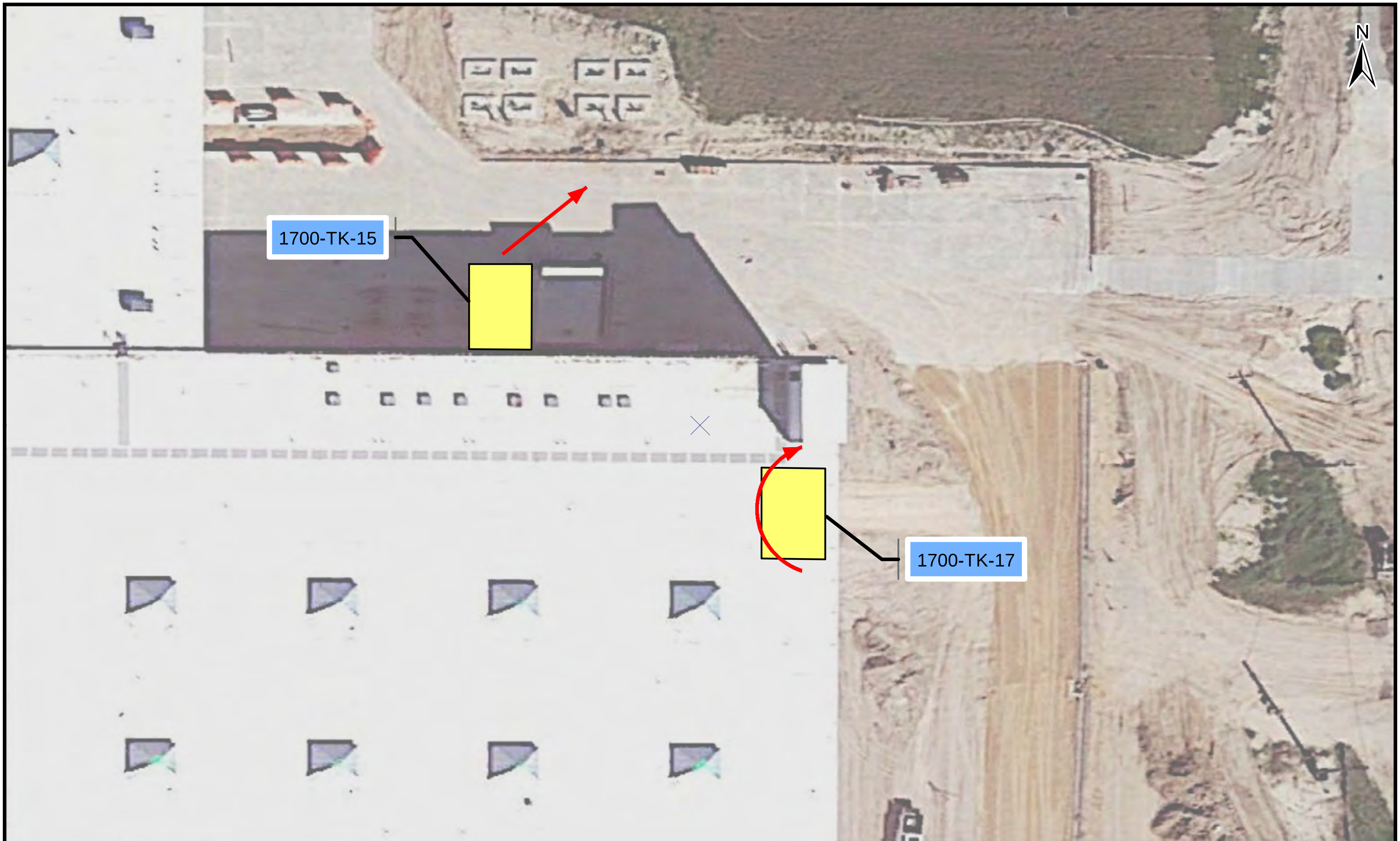
Nearest Receptor Type:

Nearest Receptor Distance:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:



Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1700-TK-15 Diesel
1700-TK-17 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

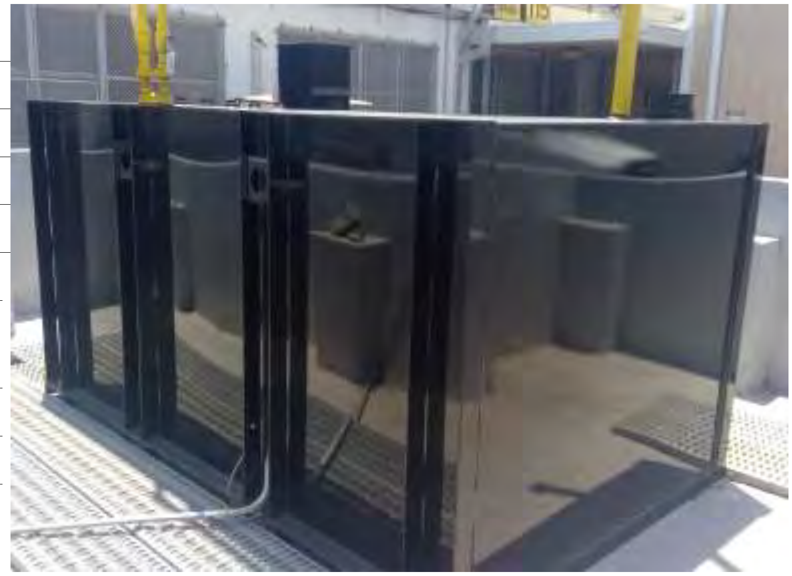
Spill Flow Diagram

PN: 698585

Date: 9/12/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA



Tank ID: 1804-TK-08

Facility Name: Generator House for CCAD Repair

Facility Number: 1804

Maint Responsibility: CCAD

Status: Active

Type: AST Rectangular

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 1,000

Capacity Unit: Gallon

Year Installed: 2017

Manufacturer: Global Power Components

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: No

Foundation: Concrete

Level Gauge: Mechanical Gauge

Secondary Containment Type: Concrete Dike

Secondary Containment Dimensions (LxWxH): [(12.75 x 11) + (6.67 x 3.5)] x 3.42 Units: Feet

Secondary Containment Capacity: 4,185 Capacity Units: Gallons

Spill Kit: Yes Locked:

☐ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☑ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Visual Containment Inspection

---

Piping Location: Aboveground

Piping Material: Carbon Steel

Piping Walls: Single

Pipe Supports: Adequate

AntiSiphon Valve: Not Required - Not Present

Piping Corrosion Protection: Coated

Piping Secondary Containment: Partial Concrete Containment

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: No

Flow Direction: Radial In Containment

Nearest Receptor Distance:

Nearest Receptor Type:

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18,19

Notes:

Legend

Aboveground Storage Tank (AST)
Spill Direction
Drainage Ditch
Storm Drain Inlet

Service Layer Credits: Google Earth

Note:
1804-TK-08 Diesel
1804-TK-14 Diesel

0 15 30 60
Feet

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

CORPUS CHRISTI ARMY DEPOT TANK DATA

Tank ID: 1804-TK-14

Facility Name: Generator House for CCAD Repair

Facility Number: 1804

Maint Responsibility: CCAD

Status: Active

Type: AST Genset

☐ Vertical ☑ Horizontal

Material: Carbon Steel

Content: Diesel

Tank Capacity: 250

Capacity Unit: Gallon

Year Installed: 2017

Manufacturer: Global Power Components

Listing Standard: UL-142

Corrosion Protection: Coated

Construction: Shop Fabricated

Category: 1

Labeled: No

Foundation: Concrete

Level Gauge: Dial Gauge

Secondary Containment Type: Double-Walled

Secondary Containment Dimensions (LxWxH):

Units:

Secondary Containment Capacity:

Capacity Units:

Spill Kit: Yes

Locked:

☑ High-Level Alarm

☐ Signal between tank gauger and pumper

☐ Overfill Prevention Valve

☐ Spill Bucket

☐ Overfill Prevention NA

☑ Leak Detection System (If yes, describe): Interstitial Monitoring Sensor

Piping Location: Aboveground

Piping Material: Rubber Hose

Piping Walls: Single

Piping Secondary Containment: Active Measures

Pipe Supports: N/A

AntiSiphon Valve: Required - Not Present

Piping Corrosion Protection: N/A

Vehicle Collision Protection: Yes

Lighting Adequate: No

Fencing Gates Locked: Yes

Master Flow Valves Locked: Yes

Flow Direction: West

Nearest Receptor Distance: 36 Feet

Nearest Receptor Type: Stormdrain

Nearest Receptor Direction:

Applicable Spill Scenarios (Appendix F): 1,2,18

Notes:

Legend

- Aboveground Storage Tank (AST)
- Spill Direction
- Drainage Ditch
- Storm Drain Inlet

Note:
1804-TK-08 Diesel
1804-TK-14 Diesel

0 15 30 60
Feet

Service Layer Credits: Google Earth

NAVFAC Naval Facilities Engineering Command

NAS Corpus Christi
Corpus Christi, TX

Spill Flow Diagram

PN: 698585

Date: 6/30/2021

JACOBS

Appendix AB
Equipment Photos

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41-1 (OS)

General Area Information:

Facility Number: **305**

Facility Name: **PWD Equipment Storage Area**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **No**

Secondary Containment:

Type: **Double-Walled**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 1,000**

62-G (OS)

General Area Information:

Facility Number: **62**

Facility Name: **Generator House for Electronic Maint Shop 60**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **Yes**

Secondary Containment:

Type: **Double-Walled**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 1,000**

254-G (252) (OS)

General Area Information:

Facility Number: **254**

Facility Name: **Generator House for Detention Facility**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **Yes**

Secondary Containment:

Type: **Double Walled**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 250**

1215-G (89) (OS)

General Area Information:

Facility Number: **1215**

Facility Name: **Generator House for Flight Simulator Training**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **Yes**

Secondary Containment:

Type: **Double-Walled**

Material: **Concrete/Carbon Steel**

Condition: **Good**

Volume (Gallons): **> 1,000**

4006-T (1743) (OS)

General Area Information:

Facility Number: **4006**

Facility Name: **Golf Course Grounds Maintenance**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **No**

Secondary Containment:

Type: **Double-Walled**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 250**

UST-12 (OS)

General Area Information:

Facility Number: **12**

Facility Name: **Storage**

Status: **Out of Service**

Type: **UST**

Vehicle Protection: **N/A**

Secondary Containment:

Type: **None**

Material: **N/A**

Condition: **N/A**

Volume (Gallons): **N/A**

UST-217 (OS)

General Area Information:

Facility Number: **N/A**

Facility Name: **Old Underground Navy Fuel Farm**

Status: **Closed in Place**

Type: **UST**

Vehicle Protection: **N/A**

Secondary Containment:

Type: **None**

Material: **N/A**

Condition: **N/A**

Volume (Gallons): **N/A**

DSA-20-30

General Area Information:

Facility Number: **20**

Facility Name: **PWD Transportation**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-27

General Area Information:

Facility Number: **27**

Facility Name: **NAVSUP Haz Mart**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-28-A

General Area Information:

Facility Number: **28**

Facility Name: **Refueler Truck Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Metal Containment**

Material: **Metal**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-28-B

General Area Information:

Facility Number: **28**

Facility Name: **Refueler Truck Parking Area**

Status: **Active**

Type: **DSA**

Vehicle Protection: **N/A**

Secondary Containment:

Type: **Spill Basin**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **8,220**

DSA-50-33-A-C

General Area Information:

Facility Number: **50**

Facility Name: **Customs Aircraft Hangar**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Locker / Hangar Floor**

Material: **Steel / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-50-33-B

General Area Information:

Facility Number: **50**

Facility Name: **Customs Aircraft Hangar Prop Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-50-33-E

General Area Information:

Facility Number: **50**

Facility Name: **Customs Aircraft Hangar**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-50-A-33-O

General Area Information:

Facility Number: **50-A**

Facility Name: **Customs GSE**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Drum Overpack**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-51-22-C-R

General Area Information:

Facility Number: **51**

Facility Name: **Navy GSE Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-51-22-S

General Area Information:

Facility Number: **51**

Facility Name: **Navy GSE Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-55-26-D-12

General Area Information:

Facility Number: **55**

Facility Name: **Dyn-Corp Aircraft Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Locker / Hangar Floor**

Material: **Steel / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-56-26-C-8-14

General Area Information:

Facility Number: **56**

Facility Name: **Dyn-Corp Aircraft Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-57-26-B-1-9

General Area Information:

Facility Number: **57**

Facility Name: **Dyn-Corp Aircraft Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-58-23-A

General Area Information:

Facility Number: **58**

Facility Name: **Airfield Services**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Locker / Hangar Floor**

Material: **Steel / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-58-26-A-3-17

General Area Information:

Facility Number: **58**

Facility Name: **Dyn-Corp Aircraft Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Locker / Hangar Floor**

Material: **Steel / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-257-21

General Area Information:

Facility Number: **257**

Facility Name: **Main < 90 Day HW Storage Area**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rollover Pig Berm**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **5,236**

DSA-363-22

General Area Information:

Facility Number: **363**

Facility Name: **Auxiliary < 90 Day HW Storage Area**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 1,000**

DSA-365-26-B-16

General Area Information:

Facility Number: **365**

Facility Name: **Dyn-Corp Support Equipment**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-1216

General Area Information:

Facility Number: **1216**

Facility Name: **Flight Simulator HW Storage Area**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **No Containment**

Material: **N/A**

Condition: **N/A**

Volume (Gallons): **N/A**

DSA-1719

General Area Information:

Facility Number: **1719**

Facility Name: **Aviation Fuel Facility Truck Loading Rack**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallets**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-1846-76-C-V-W

General Area Information:

Facility Number: **1846**

Facility Name: **DLA Distribution Center**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-1869-76-H-N

General Area Information:

Facility Number: **1869**

Facility Name: **DLA Packing Center**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-4006-18-B-15

General Area Information:

Facility Number: **4006**

Facility Name: **Golf Course Grounds Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-4008-MWR

General Area Information:

Facility Number: **4008**

Facility Name: **MWR Auto Repair Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-4008-NEX

General Area Information:

Facility Number: **4008**

Facility Name: **NEX Auto Repair Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-GM-1

General Area Information:

Facility Number: **53**

Facility Name: **DRMO Grounds Maintenance**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

Fuel Trucks

General Area Information:

Facility Number: **28**

Facility Name: **Refueler Truck Parking Area**

Status: **Active**

Type: **ME**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Catch Basin**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **17,928**

G-70

General Area Information:

Facility Number: **305**

Facility Name: **PWD Equipment Storage Area**

Status: **Active**

Type: **ME**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Flexible Dike**

Material: **Vinyl**

Condition: **Good**

Volume (Gallons): **359**

MG-1

General Area Information:

Facility Number: **305**

Facility Name: **PWD Equipment Storage Area**

Status: **Active**

Type: **ME**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Flexible Dike**

Material: **Vinyl**

Condition: **Good**

Volume (Gallons): **748**

MG-4

General Area Information:

Facility Number: **305**

Facility Name: **PWD Equipment Storage Area**

Status: **Active**

Type: **ME**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Flexible Dike**

Material: **Vinyl**

Condition: **Good**

Volume (Gallons): **359**

1283-1-UCO

General Area Information:

Facility Number: **1283**

Facility Name: **Catalina Consolidated Club**

Status: **Active**

Type: **UCO**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Double-Walled**

Material: **Carbon Steel**

Condition: **Good**

Volume (Gallons): **>294**

1735-1-UCO

General Area Information:

Facility Number: **1735**

Facility Name: **Golf Course Grill**

Status: **Active**

Type: **UCO**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Double-Walled**

Material: **Carbon Steel**

Condition: **Good**

Volume (Gallons): **>294**

Spill Basin-28 + OWS-28-1

General Area Information:

Facility Number: **28**

Facility Name: **Fuel Truck Parking Area**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **8,220 - Basin and 9,874 - OWS**

Spill Basin-1717

General Area Information:

Facility Number: **1717**

Facility Name: **Aviation Fuel Facility**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **11,316**

OWS-28-2 (OS)

General Area Information:

Facility Number: **28**

Facility Name: **Fuel Truck Parking Wash Pad**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **3,150**

OWS-50

General Area Information:

Facility Number: **50**

Facility Name: **Customs Aircraft Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **2,000**

OWS-51

General Area Information:

Facility Number: **51**

Facility Name: **Hangar 51 Navy GSE**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **253**

OWS-57

General Area Information:

Facility Number: **57**

Facility Name: **Hangar 57 Aircraft Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **253**

OWS-169 (OS)

General Area Information:

Facility Number: **169**

Facility Name: **GOV Gas Station**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **1,681**

OWS-305 (OS)

General Area Information:

Facility Number: **305**

Facility Name: **PWD Equipment Wash Pad**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Fair**

Volume (Gallons): **Unknown**

OWS-344

General Area Information:

Facility Number: **344**

Facility Name: **Dyn-Corp Wash Pad**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **40**

OWS-388 (OS)

General Area Information:

Facility Number: **20**

Facility Name: **PWD Transportation Wash Pa**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **241**

OWS-1281 (OS)

General Area Information:

Facility Number: **1281**

Facility Name: **BOQ Car Wash Pad**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **195**

OWS-1291

General Area Information:

Facility Number: **1291**

Facility Name: **NEX Car Wash Pad**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **Unknown**

OWS-1717-1

General Area Information:

Facility Number: **1717**

Facility Name: **Aviation Fuel Facility**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **3,450**

OWS-1717-2

General Area Information:

Facility Number: **1717**

Facility Name: **Aviation Fuel Facility**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **Unknown**

OWS-1742

General Area Information:

Facility Number: **1742**

Facility Name: **Fire Department Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **97**

OWS-1857 (OS)

General Area Information:

Facility Number: **1857**

Facility Name: **DLA Hazmat Storage**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **Unknown**

OWS-4146

General Area Information:

Facility Number: **1757**

Facility Name: **Marina Boat Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **227**

OWS-Dimmit (OS)

General Area Information:

Facility Number: **Dimmit Dr.**

Facility Name: **Family Housing Car Wash Pad**

Type: **OWS**

Status: **Out of Service**

OWS Information:

Condition: **Good**

Volume (Gallons): **244**

OWS-Taxiway-W

General Area Information:

Facility Number: **Runway W**

Facility Name: **Runway Aircraft Washrack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **650**

Aviation Fuel Facility Loading/Unloading

General Area Information:

Facility Number:	**1717**
Facility Name:	**Aviation Fuel Facility**
Status:	**Active**
Type:	**Loading/Unloading Rack**
Vehicle Protection:	**Yes**

Secondary Containment:

Type:	**Spill Basin and OWS**
Material:	**Concrete**
Condition:	**Good**
Volume (Gallons):	**11,316-Basin and 3,450-OWS**

35-1 (OS)

General Area Information:

Facility Number: **35**

Facility Name: **Generator House for CCAD Administration**

Status: **Out of Service**

Type: **AST**

Vehicle Protection: **Yes**

Secondary Containment:

Type: **Double-Walled**

Material: **Carbon Steel**

Condition: **Good**

Volume (Gallons): **> 150**

230-TK-06 (OS)

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Fuel Farm**

Status: **Out of Service**

Type: **AST**

Vehicle Protection:

Secondary Containment:

Type: **Double-Walled & Curb**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **36,134**

231-TK-04 (OS)

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Fuel Farm**

Status: **Out of Service**

Type: **AST**

Vehicle Protection:

Secondary Containment:

Type: **Double-Walled & Curb**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **36,134**

DSA-8-16-C

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Transmission Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-16-F

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Jet Engine Test Cell**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-17-A-B

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Machine Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-28-A

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Hydraulic Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-34-A-B

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Jet Engine Test Cell**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-76-E

General Area Information:

Facility Number: **8**

Facility Name: **DLA Engine Drain**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-204-A

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Engine Dissassembly**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-229

General Area Information:

Facility Number: **8**

Facility Name: **CCAD T-55 Engine Assembly**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-900-A

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Transmission Test Cell**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-900-B

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Jet Engine Test Cell**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-900-D

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Hydraulic Shop**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-8-900-F

General Area Information:

Facility Number: **8**

Facility Name: **CCAD Fuel Control**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-43-51

General Area Information:

Facility Number: **43**

Facility Name: **CCAD Aircraft Hangar**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-44-207-A

General Area Information:

Facility Number: **44**

Facility Name: **CCAD Aircraft Hangar**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-45-14-A

General Area Information:

Facility Number: **45**

Facility Name: **CCAD Aircraft Hangar**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-77-238-Y

General Area Information:

Facility Number: **77**

Facility Name: **CCAD Whirl Tower**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-339-25-A

General Area Information:

Facility Number: **339**
Facility Name: **CCAD Motor Pool**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**
Condition: **Good**
Volume (Gallons): **> 55**

DSA-339-B

General Area Information:

Facility Number: **339**
Facility Name: **CCAD Motor Pool**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Concrete**
Condition: **Good**
Volume (Gallons): **> 55**

DSA-341

General Area Information:

Facility Number: **341**
Facility Name: **CCAD Oil Storage Shed**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**
Condition: **Good**
Volume (Gallons): **> 1,000**

DSA-353

General Area Information:

Facility Number: **353**
Facility Name: **CCAD Oil Storage Shed**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**
Condition: **Good**
Volume (Gallons): **> 1,000**

DSA-356

General Area Information:

Facility Number: **356**
Facility Name: **CCAD Oil Storage Shed**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**
Condition: **Good**
Volume (Gallons): **> 1,000**

DSA-358

General Area Information:

Facility Number: **358**
Facility Name: **CCAD Oil Storage Shed**

Status: **Active**
Type: **DSA**
Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**
Condition: **Good**
Volume (Gallons): **> 1,000**

DSA-359

General Area Information:

Facility Number: **359**

Facility Name: **CCAD Oil Storage Shed**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 1,000**

DSA-360

General Area Information:

Facility Number: **360**

Facility Name: **CCAD Oil Storage Shed**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Curbed Area**

Material: **Concrete**

Condition: **Good**

Volume (Gallons): **> 1,000**

DSA-1700-707-N

General Area Information:

Facility Number: **1700**

Facility Name: **CCAD Gearbox Output**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **> 55**

DSA-1880-220

General Area Information:

Facility Number: **1880**

Facility Name: **CCAD Rotating Electric**

Status: **Active**

Type: **DSA**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Rolling Cart (or Spill Pallet) / Shop Floor**

Material: **Plastic / Concrete**

Condition: **Good**

Volume (Gallons): **> 55**

AMC-209, 219, 220, 221

General Area Information:

Facility Number: **44**

Facility Name: **CCAD Aircraft Hangar**

Status: **Active**

Type: **ME**

Vehicle Protection: **Adequate**

Secondary Containment:

Type: **Spill Pallet**

Material: **Plastic**

Condition: **Good**

Volume (Gallons): **6 x 35 = 210**

OWS-45

General Area Information:

Facility Number: **46**

Facility Name: **CCAD Aircraft Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **Unknown**

OWS-4090

General Area Information:

Facility Number: **339**

Facility Name: **CCAD Motor Pool Wash Rack**

Type: **OWS**

Status: **Active**

OWS Information:

Condition: **Good**

Volume (Gallons): **Unknown**

Appendix B
Facility Diagrams

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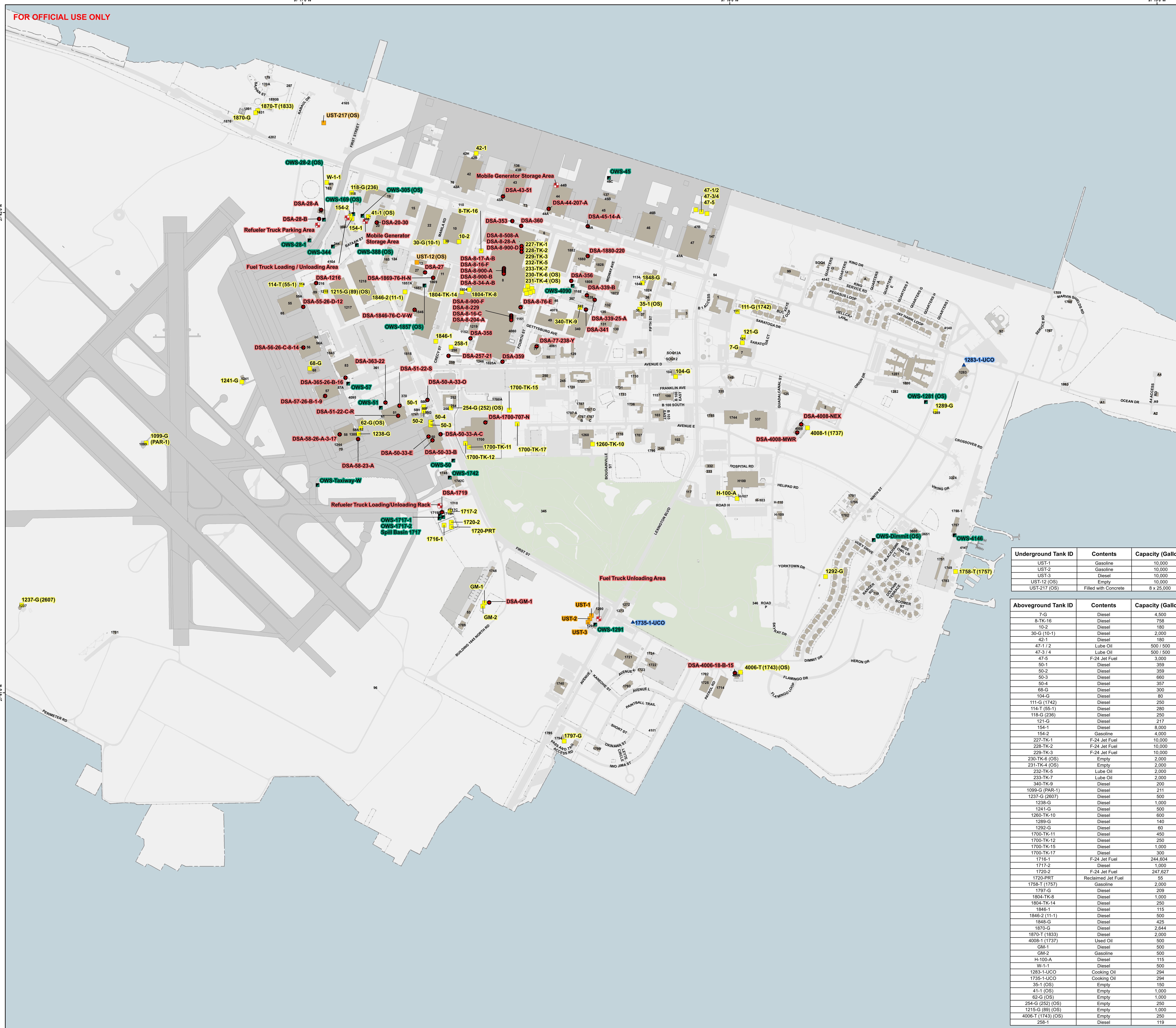
NAS CORPUS CHRISTI

MAIN INSTALLATION

N00216

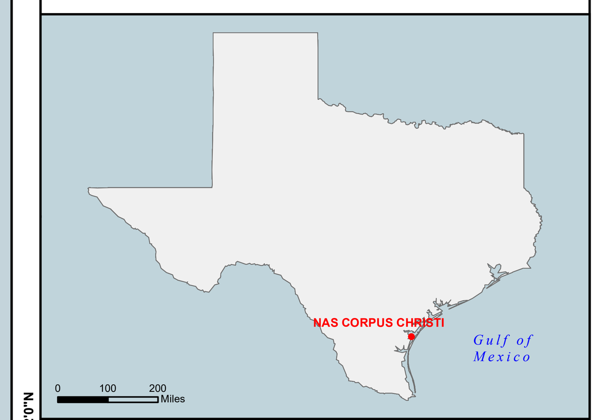
Spill Prevention, Control, and Countermeasure (SPCC) Tanks

FOR OFFICIAL USE ONLY



Underground Tank ID	Contents	Capacity (Gallons)
UST-1	Gasoline	10,000
UST-2	Gasoline	10,000
UST-3	Diesel	10,000
UST-12 (OS)	Empty	10,000
UST-217 (OS)	Filled with Concrete	8 x 25,000

Aboveground Tank ID	Contents	Capacity (Gallons)
7-G	Diesel	4,500
8-TK-16	Diesel	758
10-2	Diesel	180
30-G (10-1)	Diesel	2,000
42-1	Diesel	180
47-1 / 2	Lube Oil	500 / 500
47-3 / 4	Lube Oil	500 / 500
47-5	F-24 Jet Fuel	3,000
50-1	Diesel	359
50-2	Diesel	359
50-3	Diesel	660
50-4	Diesel	357
68-G	Diesel	300
104-G	Diesel	80
111-G (1742)	Diesel	250
114-T (55-1)	Diesel	280
118-G (236)	Diesel	250
121-G	Diesel	217
154-1	Diesel	8,000
154-2	Gasoline	4,000
227-TK-1	F-24 Jet Fuel	10,000
228-TK-2	F-24 Jet Fuel	10,000
229-TK-3	F-24 Jet Fuel	10,000
230-TK-6 (OS)	Empty	2,000
231-TK-4 (OS)	Empty	2,000
232-TK-5	Lube Oil	2,000
233-TK-7	Lube Oil	2,000
340-TK-9	Diesel	200
1099-G (PAR-1)	Diesel	211
1237-G (2607)	Diesel	500
1238-G	Diesel	1,000
1241-G	Diesel	500
1260-TK-10	Diesel	600
1289-G	Diesel	140
1292-G	Diesel	60
1700-TK-11	Diesel	450
1700-TK-12	Diesel	250
1700-TK-15	Diesel	1,000
1700-TK-17	Diesel	300
1716-1	F-24 Jet Fuel	244,604
1717-2	Diesel	1,000
1720-2	F-24 Jet Fuel	247,627
1720-PRT	Reclaimed Jet Fuel	55
1758-T (1757)	Gasoline	2,000
1797-G	Diesel	209
1804-TK-8	Diesel	1,000
1804-TK-14	Diesel	250
1846-1	Diesel	115
1846-2 (11-1)	Diesel	500
1848-G	Diesel	425
1870-G	Diesel	2,644
1870-T (1833)	Diesel	2,000
4008-1 (1737)	Used Oil	500
GM-1	Diesel	500
GM-2	Gasoline	500
H-100-A	Diesel	115
W-1-1	Diesel	500
1283-1-UCO	Cooking Oil	294
1735-1-UCO	Cooking Oil	294
35-1 (OS)	Empty	150
41-1 (OS)	Empty	1,000
62-G (OS)	Empty	1,000
254-G (252) (OS)	Empty	250
1215-G (89) (OS)	Empty	1,000
4006-T (1743) (OS)	Empty	250
258-1	Diesel	119



Legend

SPCC Features

- Aboveground Storage Tanks (AST) (64)
- Mobile and Portable Containers (6)
- Underground Storage Tanks (UST) (5)
- Used Cooking Oil (UCO) Containers (2)
- Oil Water Seperators (21)
- Drum Storage Areas (DSA) (53)

Base Map Features

- Fence
- Wall
- Building
- Structure
- Docks and Wharfs
- Airfield Markings
- Airfield Section
- Sidewalk
- Bridge
- Road Section
- Ammunition Storage
- Military Range
- Water
- Wetland
- RecreationTrail
- Recreation Area
- Golf Course Feature
- Golf Course
- Playground
- Base Boundary

Coord Sys: WGS 1984 UTM Zone 14N
Projection: Transverse Mercator
Datum: WGS 1984
Sheet Size: 44" W x 34" H

N

Scale: 1:4,800
1 in = 400 feet

0 400 800 Feet
0 120 240 Meters

PREPARED BY:

Date: 4/21/2021
Naval Facilities Engineering Command Southeast
Asset Utilization Branch, AM4
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NAS CORPUS CHRISTI

MAIN INSTALLATION

N00216

Spill Prevention, Control, and Countermeasure (SPCC) Tanks

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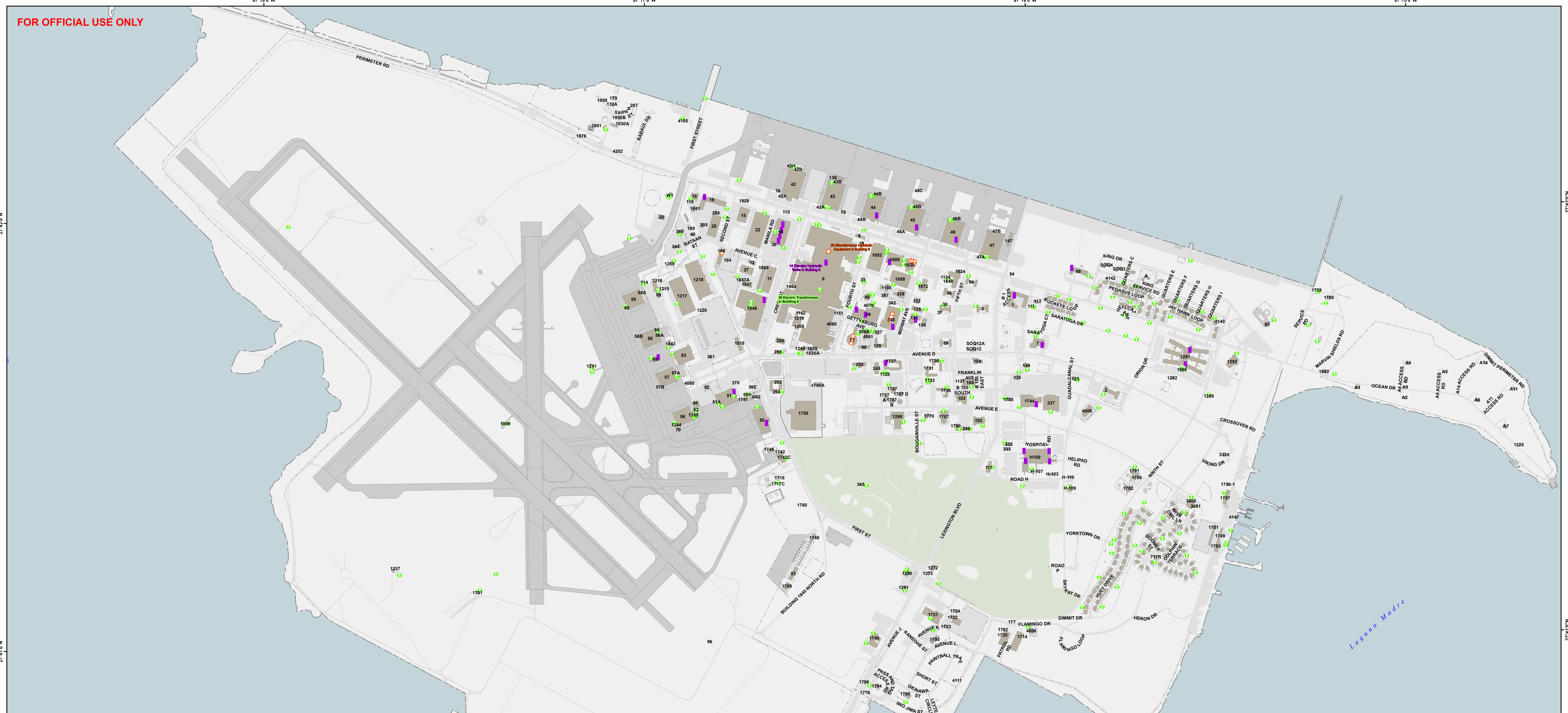

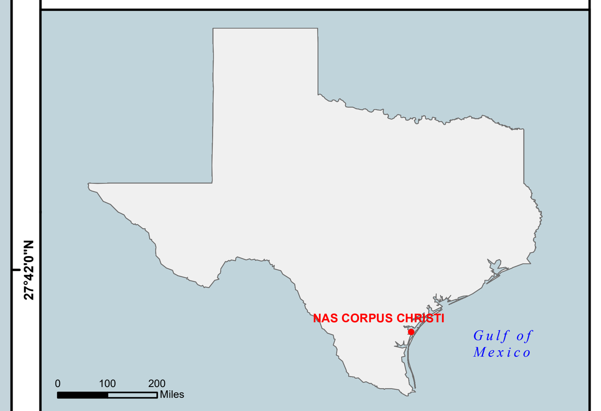

Legend

SPCC Features

- Miscellaneous Hydraulic Equipment
- Elevator Hydraulic Tanks (55+ Gallons)
- Electric Transformers

Base Map Features

- Fence
- Wall
- Building
- Structure
- Docks and Wharfs
- Airfield Markings
- Airfield Section
- Sidewalk
- Bridge
- Road Section
- Ammunition Storage
- Military Range
- Water
- Wetland
- RecreationTrail
- Recreation Area
- Golf Course Feature
- Golf Course
- Playground
- Base Boundary

Elevator Tank ID	Contents	Capacity (Gallons)
E-1	Hydraulic Oil	60
E-7	Hydraulic Oil	70
E-10-1	Hydraulic Oil	160
E-10-2	Hydraulic Oil	160
E-10-3	Hydraulic Oil	160
E-10-4	Hydraulic Oil	160
E-19	Hydraulic Oil	80
E-50	Hydraulic Oil	100
E-51	Hydraulic Oil	100
E-68	Hydraulic Oil	100
E-99	Hydraulic Oil	100
E-1281-1	Hydraulic Oil	100
E-1281-2	Hydraulic Oil	100
E-1744	Hydraulic Oil	120
E-1846	Hydraulic Oil	140
E-H100-1	Hydraulic Oil	130
E-H100-2	Hydraulic Oil	130
E-H100-3	Hydraulic Oil	130
E-H100-4	Hydraulic Oil	130
E-8260	Hydraulic Oil	150
E-8558	Hydraulic Oil	150
E-8272	Hydraulic Oil	150
E-8270	Hydraulic Oil	150
E-8262	Hydraulic Oil	150
E-8274	Hydraulic Oil	150
E-8261	Hydraulic Oil	150
E-8263	Hydraulic Oil	150
E-8264	Hydraulic Oil	150
E-8265	Hydraulic Oil	150
E-8275	Hydraulic Oil	150
E-8268	Hydraulic Oil	150
E-8269	Hydraulic Oil	150
E-8273	Hydraulic Oil	150
E-8283	Hydraulic Oil	120
E-8284	Hydraulic Oil	120
E-H46	Hydraulic Oil	120
E-8277	Hydraulic Oil	100
E-8278	Hydraulic Oil	100
E-8280	Hydraulic Oil	100
E-8281	Hydraulic Oil	100
E-7838	Hydraulic Oil	100
E-8279	Hydraulic Oil	100

Misc Equipment ID	Contents	Capacity (Gallons)
AN-1210	Hydraulic Oil	110
G-9802	Hydraulic Oil	795
G-9803	Hydraulic Oil	55
G-9804	Hydraulic Oil	55
G-9805	Hydraulic Oil	55
Z-9653	Hydraulic Oil	100
W-1358	Hydraulic Oil	55
R-3843	Hydraulic Oil	200
K-6775	Hydraulic Oil	300
K-6568	Hydraulic Oil	200
G-6751	Hydraulic Oil	100
M-5143	Hydraulic Oil	300
G-9498	Hydraulic Oil	70
W-2032	Hydraulic Oil	55
P-6331	Hydraulic Oil	77
M-3737	Hydraulic Oil	77
R-9752	Hydraulic Oil	65
M-8567	Hydraulic Oil	55
M-3529	Hydraulic Oil	55
K-5838	Hydraulic Oil	55
R-4534	Hydraulic Oil	55
M-4040	Hydraulic Oil	55
W-9075	Hydraulic Oil	250
Y-6391	Hydraulic Oil	78
Y-7701	Hydraulic Oil	300
R-8914	Hydraulic Oil	750
K-8595	Hydraulic Oil	250
P-3401	Hydraulic Oil	100
P-3402	Hydraulic Oil	100
P-3403	Hydraulic Oil	100
Y-1412	Hydraulic Oil	200
Y-1413	Hydraulic Oil	200
Y-1427	Hydraulic Oil	200
Y-1425	Hydraulic Oil	200

Transformer ID	Contents	Capacity (Gallons)	Transformer ID	Contents	Capacity (Gallons)	Transformer ID	Contents	Capacity (Gallons)	Transformer ID	Contents	Capacity (Gallons)
T-14874	Mineral Oil	80	T-27596	Mineral Oil	250	T-27851	Mineral Oil	120	T-31031	Mineral Oil	340
T-19418	Mineral Oil	40	T-27597	Mineral Oil	100	T-27854	Mineral Oil	340	T-31032	Mineral Oil	340
T-20865	Mineral Oil	400	T-27598	Mineral Oil	100	T-27855	Mineral Oil	120	T-31314	Mineral Oil	250
T-20870	Mineral Oil	120	T-27599	Mineral Oil	250	T-27856	Mineral Oil	120	T-31634	Mineral Oil	80
T-24074	Mineral Oil	160	T-27600	Mineral Oil	140	T-27857	Mineral Oil	120	T-31915	Mineral Oil	310
T-26152	Mineral Oil	250	T-27601	Mineral Oil	340	T-27858	Mineral Oil	120	T-31916	Mineral Oil	440
T-26170	Mineral Oil	100	T-27602	Mineral Oil	140	T-27859	Mineral Oil	340	T-32090	Mineral Oil	250
T-26534	Mineral Oil	120	T-27603	Mineral Oil	340	T-27861	Mineral Oil	80	T-32667	Mineral Oil	250
T-26536	Mineral Oil	120	T-27606	Mineral Oil	280	T-27868	Mineral Oil	40	T-32809	Mineral Oil	140
T-26537	Mineral Oil	120	T-27607	Mineral Oil	600	T-27942	Mineral Oil	250	T-33176	Mineral Oil	280
T-26791	Mineral Oil	310	T-27609	Mineral Oil	310	T-27950	Mineral Oil	250	T-33200	Mineral Oil	440
T-27064	Mineral Oil	280	T-27611	Mineral Oil	100	T-28336	Mineral Oil	80	T-33836	Mineral Oil	440
T-27065	Mineral Oil	280	T-27613	Mineral Oil	160	T-28341	Mineral Oil	100	T-214	Mineral Oil	400
T-27135	Mineral Oil	280	T-27614	Mineral Oil	500	T-28347	Mineral Oil	280	T-257	Mineral Oil	400
T-27137	Mineral Oil	80	T-27615	Mineral Oil	440	T-28386	Mineral Oil	200	T-345	Mineral Oil	140
T-27518	Mineral Oil	310	T-27617	Mineral Oil	160	T-28494	Mineral Oil	80	T-360	Mineral Oil	200
T-27519	Mineral Oil	250	T-27618	Mineral Oil	100	T-28570	Mineral Oil	250	T-1099	Mineral Oil	440
T-27520	Mineral Oil	140	T-27619	Mineral Oil	100	T-28834	Mineral Oil	200	T-1335	Mineral Oil	600
T-27521	Mineral Oil	100	T-27620	Mineral Oil	100	T-28835	Mineral Oil	200	T-2592	Mineral Oil	500
T-27524	Mineral Oil	80	T-27621	Mineral Oil	120	T-29120	Mineral Oil	200	T-3084	Mineral Oil	250
T-27525	Mineral Oil	180	T-27622	Mineral Oil	100	T-29462	Mineral Oil	340	T-3085	Mineral Oil	250
T-27528	Mineral Oil	250	T-27623	Mineral Oil	100	T-29580	Mineral Oil	120	T-3086	Mineral Oil	250
T-27529	Mineral Oil	200	T-27624	Mineral Oil	120	T-29590	Mineral Oil	120	T-3087	Mineral Oil	250
T-27531	Mineral Oil	160	T-27625	Mineral Oil	120	T-29634	Mineral Oil	310	T-3088	Mineral Oil	340
T-27532	Mineral Oil	100	T-27627	Mineral Oil	200	T-29645	Mineral Oil	500	T-3089	Mineral Oil	340
T-27533	Mineral Oil	280	T-27630	Mineral Oil	160	T-29646	Mineral Oil	250	T-3090	Mineral Oil	310
T-27535	Mineral Oil	100	T-27631	Mineral Oil	250	T-29647	Mineral Oil	280	T-3092	Mineral Oil	310
T-27536	Mineral Oil	100	T-27632	Mineral Oil	200	T-29648	Mineral Oil	280	T-3095	Mineral Oil	280
T-27538	Mineral Oil	40	T-27633	Mineral Oil	310	T-29649	Mineral Oil	250	T-3098	Mineral Oil	280
T-27539	Mineral Oil	160	T-27635	Mineral Oil	250	T-29650	Mineral Oil	280	T-3101	Mineral Oil	280
T-27540	Mineral Oil	100	T-27637	Mineral Oil	100	T-29651	Mineral Oil	280	T-3105	Mineral Oil	280
T-27541	Mineral Oil	100	T-27640	Mineral Oil	40	T-29652	Mineral Oil	280	T-3106	Mineral Oil	280
T-27544	Mineral Oil	160	T-27642	Mineral Oil	120	T-29653	Mineral Oil	280	T-3107	Mineral Oil	600
T-27546	Mineral Oil	160	T-27643	Mineral Oil	120	T-29654	Mineral Oil	280	T-3108	Mineral Oil	370
T-27548	Mineral Oil	250	T-27645	Mineral Oil	280	T-29655	Mineral Oil	280	T-3111	Mineral Oil	340
T-27549	Mineral Oil	310	T-27646	Mineral Oil	100	T-29656	Mineral Oil	280	T-7091	Mineral Oil	140
T-27550	Mineral Oil	250	T-27647	Mineral Oil	120	T-29657	Mineral Oil	280			
T-27551	Mineral Oil	200	T-27648	Mineral Oil	250	T-29658	Mineral Oil	280			
T-27552	Mineral Oil	200	T-27649	Mineral Oil	280	T-29659	Mineral Oil	280			
T-27554	Mineral Oil	340	T-27651	Mineral Oil	140	T-29660	Mineral Oil	340			
T-27555	Mineral Oil	160	T-27652	Mineral Oil	140	T-29661	Mineral Oil	160			
T-27556	Mineral Oil	160	T-27656	Mineral Oil	250	T-29662	Mineral Oil	310			
T-27557	Mineral Oil	250	T-27658	Mineral Oil	250	T-29664	Mineral Oil	200			
T-27558	Mineral Oil	250	T-27659	Mineral Oil	250	T-29665	Mineral Oil	280			
T-27559	Mineral Oil	310	T-27661	Mineral Oil	280	T-29666	Mineral Oil	250			
T-27560	Mineral Oil	100	T-27662	Mineral Oil	280	T-29667	Mineral Oil	160			
T-27562	Mineral Oil	250	T-27664	Mineral Oil	100	T-29670	Mineral Oil	310			
T-27567	Mineral Oil	100	T-27665	Mineral Oil	100	T-29671	Mineral Oil	340			
T-27571	Mineral Oil	140	T-27666	Mineral Oil	100	T-29672	Mineral Oil	280			
T-27572	Mineral Oil	280	T-27667	Mineral Oil	100	T-29673	Mineral Oil	340			
T-27573	Mineral Oil	280	T-27668	Mineral Oil	100	T-29674	Mineral Oil	340			
T-27575	Mineral Oil	250	T-27799	Mineral Oil	280	T-29775	Mineral Oil	120			
T-27576	Mineral Oil	160	T-27813	Mineral Oil	280	T-29937	Mineral Oil	120			
T-27578	Mineral Oil	160	T-27836	Mineral Oil	120	T-29942	Mineral Oil	120			
T-27579	Mineral Oil	100	T-27837	Mineral Oil	120	T-29943	Mineral Oil	120			
T-27580	Mineral Oil	280	T-27838	Mineral Oil	120	T-29951	Mineral Oil	280			
T-27581	Mineral Oil	160	T-27839	Mineral Oil	120	T-30015	Mineral Oil	250			
T-27582	Mineral Oil	280	T-27840	Mineral Oil	120	T-30062	Mineral Oil	310			
T-27584	Mineral Oil	100	T-27841	Mineral Oil	120	T-30211	Mineral Oil	310			
T-27585	Mineral Oil	100	T-27842	Mineral Oil	100	T-30224	Mineral Oil	40			
T-27586	Mineral Oil	100	T-27843	Mineral Oil	120	T-30226	Mineral Oil	40			
T-27587	Mineral Oil	160	T-27844	Mineral Oil	100	T-30785	Mineral Oil	160			
T-27593	Mineral Oil	250	T-27845	Mineral Oil	120	T-30786	Mineral Oil	310			
T-27594	Mineral Oil	120	T-27846	Mineral Oil	120	T-30989	Mineral Oil	80			
T-27595	Mineral Oil	100	T-27848	Mineral Oil	160	T-30993	Mineral Oil	340			

Coord Sys: WGS 1984 UTM Zone 14N
Projection: Transverse Mercator
Datum: WGS 1984
Sheet Size: 44" W x 34" H

N

Scale: 1:7,000
1 in = 583 feet

0 580 1,160 Feet
0 120 240 Meters

COMMANDER NAVY INSTALLATIONS COMMAND

NAVY REGION SOUTHEAST COMMANDER

PREPARED BY:

Date: 7/23/2021
Naval Facilities Engineering Command Southeast
Asset Utilization Branch, AM4
Contact: Evan Echlin (904) 542-6719

FOR OFFICIAL USE ONLY

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Appendix C
Inspection Forms and Checklists

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FORM 1: STORAGE TANK SYSTEM INSPECTION CHECKLIST

Instructions: Complete Form 1, one inspection checklist per storage tank system. Notify Environmental if any significant deficiencies are identified.

Regulatory Driver: 40 CFR 112

Frequency: Monthly, not to exceed 35 days between inspections.

General Inspection Information:

Tank(s) inspected ID:_________________________ Inspection Date: _________________________________

Location:______________________________Tank Size:_____________Content: _______________________

STI SP001 MONTHLY INSPECTION CHECKLIST

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Inspect the liquid for regulated products or other contaminants and dispose of properly.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.
- **After severe weather (snow, ice, wind storms) or maintenance (such as coating) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank and Piping		
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? **Note**: *If "No", identify tank and describe leak and actions taken.*	□ Yes □ No	
2	Is the tank liquid level gauge legible and in good working condition?	□ Yes □ No □ N/A	
3	Is the area around the tank (concrete surfaces, ground, containment, etc.) free of visible signs of leakage?	□ Yes □ No	
4	Is the primary tank free of water or has another preventative measure been taken? NOTE: Refer to paragraphs 6.10 and 6.11 of the standard for alternatives for Category 1 tanks. N/A is only appropriate for these alternatives.	□ Yes □ No □ N/A	
5	For double-wall or double bottom tanks or CE-ASTs, is interstitial monitoring equipment (where applicable) in good working condition?	□ Yes □ No □ N/A	
6	For double-wall tanks or double bottom tanks or CE-ASTs, is interstice free of liquid? Remove the liquid if it is found. If tank product is found, investigate possible leak.	□ Yes □ No □ N/A	

Equipment on Tank			
7	If overfill equipment has a “test” button, does it activate the audible horn or light to confirm operation? If battery operated, replace battery if needed.	□ Yes □ No □ N/A	
8	Is overfill prevention equipment in good working condition? If it is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	□ Yes □ No □ N/A	
9	Is the spill container (spill bucket) empty, free of visible leaks and in good working condition?	□ Yes □ No □ N/A	
10	Are piping connections to the tank (valves, fittings, pumps, etc.) free of visible leaks? Note: If "No", identify location and describe leak.	□ Yes □ No	
11	Do the ladders/platforms/walkways appear to be secure with no sign of severe corrosion or damage?	□ Yes □ No □ N/A	
Containment (Diking and Impounding)			
12	Is the containment free of excess liquid, debris, cracks, corrosion, erosion, fire hazards and other integrity issues?	□ Yes □ No □ N/A	
13	Are dike drain valves closed and in good working condition?	□ Yes □ No □ N/A	
14	Are containment egress pathways clear and any gates/doors operable?	□ Yes □ No □ N/A	
Concrete Exterior AST (CE-AST)			
15	Inspect all sides for cracks in concrete. Are there any cracks in the concrete exterior larger than 1/16”?	□ Yes □ No □ N/A	
16	Inspect concrete exterior body of the tank for cleanliness, need of coating, or rusting where applicable. Tank exterior in acceptable condition?	□ Yes □ No □ N/A	
17	Visual inspect all tank top openings including nipples, manways, tank top overfill containers, and leak detection tubes. Is the sealant between all tank top openings and concrete intact and in good condition?	□ Yes □ No □ N/A	
Other Conditions			
18	Is the system free of any other conditions that need to be addressed for continued safe operation?	□ Yes □ No □ N/A	

WORK ORDER#___________DATE SUBMITTED: ___________WO STATUS: __________DATE COMPLETED: __________

Additional Comments:

Inspector: ____________________________________ Date: _________________________

Signature: ____________________________________

FORM 2: ANNUAL STORAGE TANK SYSTEM INSPECTION CHECKLIST

Instructions: Complete Form 2, one inspection checklist per storage tank system. Notify Environmental if any significant deficiencies are identified.

Regulatory Driver: 40 CFR 112

Frequency: Annually, not to exceed 14 months between inspections.

General Inspection Information:

Tank(s) inspected ID:_________________________ Inspection Date: ________________________________

Location:______________________________Tank Size:_____________Content: _______________________

STI SP001 ANNUAL INSPECTION CHECKLIST

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Remove promptly standing water or liquid discovered in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility should regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.
- Complete this checklist on an annual basis, supplemental to the owner monthly-performed inspection checklists.

- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank Foundation Supports		
1	Free of tank settlement or foundation washout?	□ Yes □ No	
2	Concrete pad or ring wall free of cracking and spalling?	□ Yes □ No □ N/A	
3	Tank supports in satisfactory condition?	□ Yes □ No □ N/A	
4	Is water able to drain away from tank if tank is resting on a foundation or on the ground? .	□ Yes □ No □ N/A	
5	Is the grounding strap between the tank and foundation/supports in good condition?	□ Yes □ No □ N/A	
	Tank Shell, Heads and Roof		
6	Free of visible signs of coating failure?	□ Yes □ No	
7	Free of noticeable distortions, buckling, denting, or bulging?	□ Yes □ No	
8	Free of standing water on roof?	□ Yes □ No □ N/A	
9	Are all labels and tags intact and legible?	□ Yes □ No	
	Tank Manways, Piping and Equipment		
10	Flanged connection bolts tight and fully engaged with no sign of wear or corrosion?	□ Yes □ No □ N/A	
	Tank Equipment		
11	Normal and emergency vents free of obstructions?	□ Yes □ No	
12	Normal vent on tanks storing gasoline equipped with pressure/vacuum vent?	□ Yes □ No □ N/A	

13	Are flame arrestors free of corrosion and are air passages free of blockage?	□ Yes □ No □ N/A	
14	Is the emergency vent in good working condition and functional, as required by manufacturer? Consult manufacturer's requirements. Verify that components are moving freely (including long-bolt manways).	□ Yes □ No □ N/A	
15	Is interstitial leak detection equipment in good condition? Are windows on sight gauges clear? Are wire connections intact? If equipment has a test function, does it activate to confirm operation?"	□ Yes □ No □ N/A	
16	Are all valves free of leaks, corrosion and other damage? Follow manufacturers' instructions for regular maintenance of these items. Check the following and verify (as applicable): □ Anti-siphon valve □ Check valve □ Gate valve □ Pressure regulator valve □ Expansion relief valve □ Solenoid valve □ Fire valve □ Shear valve	□ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A	
17	Are strainers and filters clean and in good condition?	□ Yes □ No □ N/A	
Insulated Tanks			
18	Free of missing insulation? Insulation free of visible signs of damage? Insulation adequately protected from water intrusion?	□ Yes □ No □ N/A	
19	Insulation free of noticeable areas of moisture?	□ Yes □ No □ N/A	
20	Insulation free of mold?	□ Yes □ No □ N/A	
21	Free of visible signs of coating failure?	□ Yes □ No □ N/A	
Tank / Piping Release Detection			
22	Is inventory control being performed and documented if required?	□ Yes □ No □ N/A	
23	Is release detection being performed and documented if required?	□ Yes □ No □ N/A	
24	Are electrical wiring and boxes in good condition?	□ Yes □ No □ N/A	
Other Conditions			
25	Has the cathodic protection system on the tank been tested as required by the designing engineer?	□ Yes □ No □ N/A	

Additional Comments:

___

___

___

___

Inspector: ____________________________________ Date: _________________________

Signature: ____________________________________

FORM 3: OIL/WATER SEPARATOR (OWS) INSPECTION CHECKLIST

Instructions: Remove cover plates and visual inspect internal condition of OWS.
Notify Environmental if any significant deficiencies are identified.

Frequency: At least once per year.

Site Name: ______________________ Date/Time of Inspection: ____________________________

Inspector: _____________________

	SAT	UNSAT	NA	COMMENTS
DETECTION				
Presence of Free Product	☐	☐	☐	______________________
Presence of Sheen	☐	☐	☐	______________________
Presence of Fuel Odor	☐	☐	☐	______________________
STRUCTURAL				
OWS Functioning	☐	☐	☐	______________________
Gate and Valve Condition	☐	☐	☐	______________________
FLOW				
OWS Free of Blockage	☐	☐	☐	______________________
Up/Down Stream Free of Blockage	☐	☐	☐	______________________

Note:
SAT – satisfactory
UNSAT - unsatisfactory
NA – not applicable

FORM 4: Instructions: Remove cover plates and visual inspect internal condition of UST sumps.
Regulatory Driver: 40 CFR 280 and 30 TAC 334.42 (i).
Frequency: Monthly, not to exceed 35 days between inspections.

Underground Storage Tank And Spill Bucket Inspection Checklist

Name: ______________________________ Date/Time Of Inspection: ______________________________

Comments/Follow-Up Needed: ______________________________

____

____

____

____

____

Choose yes or no for each questions that applies.
Choosing no on any item indicates a problem that should be corrected.
When you have corrected the problem, check the fixed box.

Turbine/Transition/Intermediate Sumps	Sump No.: ____			Sump No.: ____			Sump No.: ____			Sump No.: ____		
	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?
Are the lids tight and sealed correctly?			☐			☐			☐			☐
Are the sump walls intact?			☐			☐			☐			☐
Is the sump free of debris, liquid, or ice?			☐			☐			☐			☐
Is the sump free of cracks or holes?			☐			☐			☐			☐
Are sump components leak-free (no leak or drips)?			☐			☐			☐			☐
Is the sump free of staining/new staining?			☐			☐			☐			☐
Are the sensors positioned correctly?			☐			☐			☐			☐
Are the penetrations into the sump in good condition?			☐			☐			☐			☐
Are the test boots positioned correctly and in good condition?			☐			☐			☐			☐
Is the piping and other equipment in good condition?			☐			☐			☐			☐

Dispenser Sumps	Dispenser No.:____			Dispenser No.:____			Dispenser No.:____			Dispenser No.:____		
	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?
Is the sump free of debris, liquid, or ice in the sump?			☐			☐			☐			☐
Is the sump free of cracks or holes?			☐			☐			☐			☐
Are sump components leak-free (no leak or drips)?			☐			☐			☐			☐
Is the sump free or staining/new staining?			☐			☐			☐			☐
Are the sensors positioned correctly?			☐			☐			☐			☐
Are all penetrations into the sump in good condition?			☐			☐			☐			☐
Are the test boots positioned correctly and in good condition?			☐			☐			☐			☐
Is the piping and other equipment in good condition?			☐			☐			☐			☐

Dispenser Sumps	Dispenser No.:____			Dispenser No.:____			Dispenser No.:____			Dispenser No.:____		
	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?
Is the sump free of debris, liquid, or ice in the sump?			☐			☐			☐			☐
Is the sump free of cracks or holes?			☐			☐			☐			☐
Are sump components leak-free (no leak or drips)?			☐			☐			☐			☐
Is the sump free of staining/new staining?			☐			☐			☐			☐
Are the sensors positioned correctly?			☐			☐			☐			☐
Are all penetrations into the sump in good condition?			☐			☐			☐			☐
Are the test boots positioned correctly and in good condition?			☐			☐			☐			☐
Is the piping and other equipment in good condition?			☐			☐			☐			☐

Spill Buckets	Bucket No.:____			Bucket No.:____			Bucket No.:____			Bucket No.:____		
	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?
Are the lids to your spill buckets in good condition?			☐			☐			☐			☐
Is the spill bucket free of debris, liquid, or ice?			☐			☐			☐			☐
Is the spill bucket free of cracks or holes?			☐			☐			☐			☐
Are the drain valves operational?			☐			☐			☐			☐

Piping	Sump: ________			Dispenser: ______			90 Transition______			Bucket: ________		
	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?	Yes	No	Fixed?
Any visible signs of pipe leakage?			☐			☐			☐			☐

FORM 6: PORTABLE CONTAINER INSPECTION CHECKLIST

Instructions: One inspection checklist per drum storage area or mobile generator. Notify Environmental if significant deficiencies are identified.

Regulatory Driver: 40 CFR 112

Frequency: Monthly, not to exceed 35 days between inspections

General Inspection Information:

Site Name: ___________________ Inspection Date: _________________________

Location: _______________Quantity of Drums: ________Volume of Drums: ___________Content: _____________

STI SP001 PORTABLE CONTAINER MONTHLY INSPECTION CHECKLIST

Inspection Guidance:

- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklist for at least 36 months.

Item	Area: ____________		Area: ____________		Area: ____________		Area: ____________	
Portable Container Containment Store								
1. Are all portable container (s) within designated storage area?	Yes	No*	Yes	No*	Yes	No*	Yes	No*
2. Is the containment and storage area free of excess liquid, cracks or fire hazards?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
3. Are drain valves closed and in good working conditions?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
4. Are containment egress pathways clear and any gates/doors operable?	Yes	No*	Yes*	No	Yes*	No	Yes*	No
5. Is the container free of leaks? Note: if "No", identify container and describe leak?	Yes	No*	Yes*	No	Yes*	No	Yes*	No
6. Is the container free of distortions, buckling, denting or bulging?	Yes	No*	Yes*	No	Yes*	No	Yes*	No
Leak Detection								
2.1 Visible signs of leakage around the container or storage area?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
3.0 Container								
3.0 Noticeable container distortions, buckling, denting or bulging?	Yes*	No	Yes*	No	Yes*	No	Yes*	No

Additional Comments: ____

____

____

Inspector: ____________________________________ Date: _________________________

Signature: ____________________________________

FORM 7: NAVFAC-SE ANNUAL RECORD OF MONTHLY AST INSPECTIONS

Refer to STI - SP001 (6th edition) Monthly & Annual checklists for more inspection guidance.

FACILITY: **TANK #:** **BLDG #:** **OWNER:**

YEAR / **< MONTH**	Look for leakage on tank, valves, piping, joints, or surrounding surfaces.	Check fill port spill bucket for damage, debris, or liquids.	Functional level gauge, interstitial monitoring or level sensing device.	Check normal open vent, ensure emergency vent can pop open.	Check interstice or dike for liquids, by sensor, gauge, dipstick, or visual.	Check for water inside bottom of the fuel tank.	Heavy metal corrosion on tank, components, piping, or supports.	Cracks > 1/16 "wide on concrete surfaces of dike, berm, or tank shell.	Labels - ID#, contents, capacity, No Smoking, NFPA diamond.	Check battery powered or electric high level alarm function.	Check integrity of ladder, stairs, or access platform structure.	Ensure tight seal around tank top openings on concrete tanks.	Ensure any containment drain valves are closed. **COMMENTS / NAME & DATE**
JAN	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
FEB	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
MAR	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
APR	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
MAY	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
JUNE	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	

ADDITIONAL COMMENTS:

FORM 7: NAVFAC-SE ANNUAL RECORD OF MONTHLY AST INSPECTIONS

Refer to STI - SP001 (6th edition) Monthly & Annual checklists for more inspection guidance.

FACILITY: **TANK #:** **BLDG #:** **OWNER:**

YEAR **< MONTH**	Look for leakage on tank, valves, piping, joints, or surrounding surfaces.	Check fill port spill bucket for damage, debris, or liquids.	Functional level gauge, interstitial monitoring or level sensing device.	Check normal open vent, ensure emergency vent can pop open.	Check interstice or dike for liquids, by sensor, gauge, dipstick, or visual.	Check for water inside bottom of the fuel tank.	Heavy metal corrosion on tank, components, piping, or supports.	Cracks > 1/16 "wide on concrete surfaces of dike, berm, or tank shell.	Labels - ID#, contents, capacity, No Smoking, NFPA diamond.	Check battery powered or electric high level alarm function.	Check integrity of ladder, stairs, or access platform structure.	Ensure tight seal around tank top openings on concrete tanks.	Ensure any containment drain valves are closed. **COMMENTS / NAME & DATE**
JULY	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
AUG	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
SEP	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
OCT	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	
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DEC	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	Sat [ ] Unsat [ ] NA [ ]	

ADDITIONAL COMMENTS:

NAS CORPUS CHRISTI, TEX.

FORM 8: DEWATERING AND VISUAL MONITORING CHECKLIST

To be completed for Dewatering Equipment Pits/Sumps/Manholes/Wells/ Secondary/Containment/ Transformer Substations/Small Infrastructure Repair Trenches and any other potential discharge to stormwater for **projects less than 1 acre**. **NOT to be used for construction site dewatering, unless it is stated specifically in the Site Specific Stormwater Pollution Prevention Plan, Construction Stormwater Permit, or Notice of Intent and with prior approval from the Environmental Director.** Follow Dewatering SOP: SPCC1

Name:			**Date:**		**Time:**
Email:			**Phone:**		
Last Rainfall:			**Volume Dewatered (gal):**		
Rainfall (in.):			**Rainfall Duration (hrs):**		**Project Acres:**
Location and Project:					
☐ **Pit**	☐ **Sump**	☐ **Manhole**	☐ **Transformer**	☐ **Trench**	☐ **Secondary Containment**
☐ **Other (describe)**					
Source:	☐ **Rainwater (uncovered)**		☐ **Groundwater/Infiltration**		☐ **Potable/Drinking Water**
Other (describe)					

Parameters	No	Yes	Comments (If "yes", list possible source of pollutant(s)).
Color	☐	☐	
Odor	☐	☐	
Floating Solids	☐	☐	
Settled Solids	☐	☐	
Suspended Solids	☐	☐	
Foam	☐	☐	
Oily Sheen	☐	☐	
Other	☐	☐	

*If "Yes is checked, do not discharge to the storm drain. Coordinate with Environmental Dept., 961-5363/2170/5353

**If all responses are "No" advise EV of discharge and submit this form.

Discharge from Secondary Containment:		**Time Valve Opened:**		**Time Valve Closed:**
Discharge Location:	☐ **Storm Drain**	☐ **Stormwater Manhole**	☐ **Grassy Area**	☐ **Oil Water Separator**
	☐ **Drum / Barrel for sampling and proper disposal (contact EV Services)**			
Best Management Practice (BMP)	☐ **Filter Sock**	☐ **Wattles**	☐ **Other (describe)**	
Is sludge being removed?		☐ **No**	☐ **Yes (contact EV Services) 961-3760/6826**	
Volume or weight of sludge removed:		**_____ lbs. / _____ gallons**		
Will filter bag be discarded?		☐ **No**	☐ **Yes (contact EV Services) 961-3760/6826**	
Was an oil-absorbent pad used to remove oily sheen and residue?		☐ **No**	☐ **Yes (contact EV Services) 961-3760/6826**	
Equipment used for dewatering is free of contaminants.		☐ **Yes**	☐ **No Stop! Not eligible for dewatering. New equipment must be used.**	

Please submit forms to: jay.halepeska@navy.mil and tracy.l.faulkner@navy.mil
Include photos and sample results if available. EV Services: 961-5363/961-5355

Maintenance Checklist

Inspection Date_________________ Inspector______________________________________

Note: This checklist is designed for general use. Some items may not apply. All equipment inspections and maintenance should be documented. You are **encouraged** to make copies of this checklist. See the corresponding maintenance procedures and your owner's manual for corrective actions and more details.

Weekly Maintenance:

- ☐ 1. Check leak detector for indication of fluid in interstice. (This is required by warranty.) If checked with a stick gauge, ensure the stick is clean and dry before insertion.
- ☐ 2. Check for leaks on the pumps, filters, hoses, nozzles, joints and fittings.
- ☐ 3. Check nipples, spill containment and manholes for paint or powder coating decay (required by warranty). Check piping and fitting for rust.
- ☐ 4. Check pump meter and reset button.
- ☐ 5. Check fuel gauge for proper operation. If you have a Kruger At-A-Glance Gauge, check the clear cap for weathering or cracks.
- ☐ 6. Check spill containment for debris.
- ☐ 7. Check for small cracks in concrete.
- ☐ 8. Check readability of signs and decals.

Monthly Maintenance:

- ☐ 9. Check for water in the primary tank bottom under the fuel (required by warranty).
- ☐ 10. Visually check the tank, including under the tank for any signs of leakage as required by the Environmental Protection Agency 40 CFR 112.
- ☐ 11. Check leak detector tube cap for corrosion and proper operation. If a Kruger manual leak indicator is installed, remove the red ring and clear cap and check to see that the red indicator moves up and down about 1 inch freely. Also, check for weathering or cracks in the clear cap. If electronic leak detection is installed, check it by using the test button.
- ☐ 12. Check all nozzles, hoses and fittings for wear and tear.
- ☐ 13. Check trigger mechanism on nozzle for metal fatigue or mechanical failure.
- ☐ 14. Check pump motor for signs of over-heating or excessive wear.
- ☐ 15. Check body of tank for cleanliness, need of paint, or rusting where applicable. Check signs and decals for need of replacement. Check slab and supports of unit for structural soundness.
- ☐ 16. Check grounding wires to see that they are properly attached to the tank terminals and grounding rod.

Other Periodic Maintenance:

- ☐ 17. Replace the dispenser filter at least every six (6) months or as needed (mark the date replaced on the filter).
- ☐ 18. Check fuel for bacterial infestation or microbial growth.
- ☐ 19. Have a qualified person periodically check all electrical wiring.
- ☐ 20. Check the emergency relief vent at least once a year by lifting the top cap and releasing it to ensure freedom of movement.
- ☐ 21. At least once a year, remove the leak detection device and check for proper operation.
- ☐ 22. At least once a year, check the calibration of the fuel gauge.
- ☐ 23. Follow the pump manufacturer's recommendation for frequency and procedures of maintenance.
- ☐ 24. Document significant storage events per 40 CFR 112 and your state regulations.

Maintenance Procedures

Please note that item numbers on this sheet corresponds with the item numbers on the Maintenance Checklist. Most of the maintenance requirements and procedures are also covered in the Convault owner's manual.

Weekly Checks:

1. If leak detector indicates fluid in the interstice, remove any devices and determine what the fluid is. Call your Convault representative.
2. If leaks are detected, contact the appropriate authorities as necessary. Tighten, repair as necessary, replace components, or contact your installer or service company.
3. If paint or powder coating deterioration occurs on nipples, spill containment or manholes, clean to bare metal, prime with a good quality zinc based primer, and repaint. If corrosion is severe, contact your Convault representative as soon as practical.
4. If dispenser meter is not working or will not reset, call your service company or installer.
5. If the fuel gauge fails to operate properly, repair/replace it, or call your service company before the next delivery. (It is the owner/operator's responsibility to prevent the overfilling of the tanks. The gauge is part of the required system to prevent overfilling.) If the Kruger cap has deteriorated, it could be allowing rainwater into the primary tank and should be replaced.
6. Keep spill containment clear of debris at all times. A contaminated spill containment will cause the fuel to be contaminated when any spill is released through the drain into the primary tank. Materials such as rags or paper products used to clean the spill containment must be disposed of properly, as they will usually contain fuel from the spill containment.
7. If there are small cracks in the concrete, fill and repair them. If you have questions, call your local Convault representative.
8. If signs or decals lose visibility, order replacements from your local Convault representative before the next time the tank is filled.

Monthly:

9. If there is water in the tank it will collect at the bottom, under the fuel. Water in the tank will cause increased corrosion. If you discover water in the primary tank it must be removed. One method is to pump it out with a "Thief Pump", a small pump that pulls the water from the bottom 1/8" of the tank. Check tank openings for possible water entry points. If you find that you are pumping out more than one half gallon of water for every 1000 gallons of product stored, see your fuel dealer, or call your Convault representative. Also consult item (I) in the maintenance section of the owner's manual.
10. If you detect leakage, determine what the liquid is, if possible, and call your Convault representative and appropriate authorities as necessary.
11. If there are problems with the leak detector tube or lock, clean and lubricate them as necessary. See item (G) in the maintenance section of the owner's manual. If the Kruger leak indicator does not function properly, remove it and repair or replace it. Due to ultraviolet radiation, the clear cap on the Kruger leak indicator will deteriorate over time. If it has deteriorated, it could be allowing rainwater into the interstitial area and should be replaced. New caps and rings or entire units can be purchased from Kruger, your service

company, or your Convault representative. Kruger now offers a guard, which will prolong the life of the cap. If electronic leak detection test fails, call your service company.

12. If nozzles, hoses or fittings exhibit signs of wear and tear, repair/replace as necessary or call your service company.
13. If trigger mechanism on nozzle exhibits signs of metal fatigue or mechanical failure, replace nozzle or call your service company.
14. If pump motor shows signs of overheating or excessive wear, repair as necessary or contact your service company.
15. Clean, paint, and repair problem areas as necessary. Order replacements signs or decals from your local Convault representative If the slab is cracking or settling, contact your local Convault representative <u>and</u> your slab installer. If you have questions, call your local Convault representative.
16. If grounding wires are not attached properly, make appropriate changes or call your installer or your service company.

<u>Other Periodic Maintenance:</u>

17. Filters can be purchased from your Convault representative or local service company. The date can be scratched on with a sharp object, or written with a permanent marker.
18. If bacterial infestation is detected, consult item (H) in the maintenance section of the owner's manual.
19. Repair as necessary. Wiring (other than intrinsically safe items) in a class 1 area requires special sealing to prevent explosions.
20. If the emergency relief vent exhibits signs of motion restriction, promptly call your installer, your service company, or your Convault representative. Proper operation of this device is critical as most injuries and fatalities that happen in conjunction with fuel fires are due to improper, non-functional emergency relief vents or emergency relief vents replaced with normal pipe caps.
21. Most leak detection devices use a float. By removing the device from the leak detector tube and turning it upside down (simulating a floating situation) you can easily check for movement of the float and proper mechanical or electronic indication. If the leak detection device fails to operate properly, call your installer or your service company.
22. The fuel gauge can be checked by "sticking" the tank and comparing it to the gauge reading. Some gauges are more accurate than the stick. If the gauge reading varies substantially from the stick reading, contact the gauge manufacturer or service company. If your stick reads in inches only and you need a calibration chart, contact your Convault representative.
23. Pump maintenance requirements vary by manufacturer. If you have questions, contact your installer, local service company, or the manufacturer of the equipment.
24. If you have a warranty or environmental problem down the road, documentation will be very helpful. We recommend that you keep a copy of the "Maintenance Checklist" with items marked for every maintenance inspection. Notes about problems and corrections can be written on the back of the sheet and used for future reference. Many sites are now required to have a SPCC plan for emergencies on file. If you need a recommendation for companies that do this, please call your Convault representative. **The name, phone number and location of your local representative can be obtained from the Convault web site by clicking on "Local Distributor" and your state or country at http://www.convault.com.**

Naval Air Station Corpus Christi Spill Report Form

IN CASE OF EMERGENCY, CALL 911.
FOR REPORTABLE SPILLS, NOTIFY COMMAND DUTY OFFICER (CDO) 361-534-9093.
SUBMIT THIS SPILL REPORT WITH PHOTOS AND NOTIFY ENVIRONMENTAL DEPT. OF ALL SPILLS, INCLUDING NON-REPORTABLE AND INCIDENTAL SPILLS AT 361-961-5353/3776/5355.
Spillers are responsible for spill cleanup, report, and costs.

Date of reporting:		**Time of reporting:**		**Discharge Prioritization:**	

A. REPORTING AND RESPONSIBLE PARTY INFORMATION

Is the Reporting Party responsible for the Spill?	YES		NO	

	Reporting Party	**Responsible Party**
Name:		
Title and Company:		
Phone No.:		
Email Address:		

INCIDENT INFORMATION

Location of Spill Site:	
Date of Spill, if different from above:	Time of Spill, if different from above:
Description of source of spill:	
Type of substance spilled:	
Quantity of spilled:	Is it reportable:
Description of spill location and surroundings (building numbers, parks, Child Development Center, etc.):	
Did spill impact stormwater conveyance features (drains, inlets, culverts, ditches), water bodies, and lift stations? Explain.	
Actions taken to address the threat or hazard caused by the spill:	

NAME OF THOSE NOTIFIED

Command Duty Officer (CDO): (361-534-9093) Contact Name:	
PWD Environmental: (361-961-5353/3776/5356) Contact Name:	

For CDO or NASCC PWD Respondents after initial notification:

Texas Commission on Environmental Quality(TCEQ) (**Monday - Friday 8am to 5pm**): (361-825-3100)

Contact Name:			
Date contacted:		Time contacted:	

TCEQ **After Hours Hotline:** ChemTel 1-800-832-8224

Date contacted:		Time contacted:	

National Response Center: 1-800-424-8802

Date contacted:		Time contacted:	

Appendix D
Record of Initial Training and Annual Discharge Prevention Briefings

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RECORD OF INITIAL TRAINING AND ANNUAL DISCHARGE PREVENTION BRIEFINGS AND TRAINING

In accordance with §112.7(f)(1), all oil-handling personnel will receive initial SPCC training at least once. At a minimum, the initial SPCC training includes:

- 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 NAS Corpus Christi SPCC Plan

Initial Training will be recorded on the following form.

Record of Initial Training			
Date	**Subjects Covered**	**Employees in Attendance**	**Instructor(s)**

Annual briefings will be scheduled and conducted by the facility owner or operator for operating personnel at regular intervals to ensure adequate understanding of the final SPCC plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Facility operators and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations. Annual briefings will be recorded on the following form.

Record of Annual Briefing			
Date	**Subjects Covered**	**Employees in Attendance**	**Instructor(s)**

Appendix E
Record of SPCC Plan
Five Year Reviews and Amendments

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Record of SPCC Plan 5 Year Review and Amendments					
5 Year Review or Amend-ment No.	Date	Section/ Pages Affected	Description of Changes	PE or POC Name	PE or POC Signature

Appendix F
Assumptions and Calculations

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Assumptions and Calculations

F.1 Spill Scenario Flow Rates and Volumes

"40 CFR 112.7(b): 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 oil which could be discharged from the facility as a result of each type of major equipment failure."

The following flow rate assumptions were used to develop estimates required in **Section 4.2**, as required by 40 CFR 112.7(b). The assumptions are based on industry standards, best engineering practices, personnel interviews, and physical observation. The predicted pathway of spills is described in **Appendix A,** Tank Data sheets and spill flow diagrams. The worst-case potential spill volume of oil that could be released from each facility is equal to the capacity of each tank, as described in **Table 2-3** and **Appendix A**. 40 CFR 112, Appendix E, Section 4.2.1, states "owners or operators of complexes that handle, store, or transport petroleum oils must compare calculated volumes for a most likely discharge per 40 CFR 112.7(c), and a maximum most probable discharge per 40 CFR 112.7(b), and plan for whichever quantity is greater." Calculations required to satisfy those requirements are included in **Table F-1**. For the ASTs with secondary containment dikes, measurements and volume calculations are included in **Section F.2.1** and **Table F-2.**

Aboveground Storage Tanks

Unless specified in **Table 3-1,** all ASTs have satisfactory inspection procedures, security, and secondary containment as required by 40 CFR 112, and have no reasonable potential for occurrence of maximum or worst case failure modes. ASTs are inspected monthly and they have vehicle protection or sufficient containment volumes. The following scenarios are still included as a reference for what may occur during maximum or most likely failure modes at ASTs or fuel transfer areas.

- Combustion source burn rate: 1 gallon per minute (gpm) for an 860 KW generator at full load.
- Corrosion failure of piping: 0.1 gallon per hour.

Loading/Unloading Areas

Potential release volumes and flow rates from various operational scenarios are as follows:

- Delivery truck flow rate – hand nozzle delivery: 10 gpm
- Delivery truck flow rate – quick connect nozzle: up to 250 gpm, average 200 gpm for aircraft
- Standard fuel dispenser flow rate: 10 gpm (based on EPA standard)
- Vacuum truck collection/pumping rate: 240 gpm
- Used oil collection suction loading rate: 10 gpm
- Mobile container filling/un-filling: 5 gpm (conservative estimate)
- Commercial fuel delivery truck unloading: 600 gpm
- Military refueler truck loading: 450 gpm

Flow rates (above) and the estimated maximum and most likely response times (below) are used to determine the estimated release volume of oil for various operational scenarios. Equations are provided in **Table F-1**.

1. Tank overfill by refueler truck (ASTs loaded with small nozzles)

Applicable to containers: 8-TK-16, 10-2, 42-1, 50-3, 50-4, 104-G, 114-T (55-1), 258-1, 340-TK-09, 1099-G (PAR-1), 1260-TK-10, 1289-G, 1292-G, 1700-TK-11, 1700-TK-12, 1700-TK-17, 1717-2, 1797-G, 1804-TK-08, 1804-TK-14, 1846-1, 1870-G, H-100-A

a) 60-second (sec) response time to stop flow when overfill occurs (maximum)
b) 15-sec response time to stop flow when overfill occurs (most likely)

2. Refueler truck hose retrieval leaks (ASTs loaded with small nozzles)

Applicable to containers: 8-TK-16, 10-2, 42-1, 50-3, 50-4, 104-G, 114-T (55-1), 258-1, 340-TK-09, 1099-G (PAR-1), 1260-TK-10, 1289-G, 1292-G, 1700-TK-11, 1700-TK-12, 1700-TK-17, 1717-2, 1797-G, 1804-TK-08, 1804-TK-14, 1846-1, 1870-G, H-100-A

a) 60-sec response time to stop flow when hose fails (maximum)
b) 5-sec response time to stop flow when hose drips (most likely)

3. Tank overfill by refueler truck (ASTs/USTs loaded with quick connect couplings)

Applicable to containers: 7-G, 30-G (10-1), 47-1 / 2, 47-3 / 4, 47-5, 50-1, 50-2, 68-G, 111-G (1742), 118-G (236), 121-G, 154-1, 154-2, 1846-2 (11-1), 227-TK-01, 228-TK-02, 229-TK-03, 232-TK-05, 233-TK-07, 1237-G (2607), 1238-G, 1241-G, 1700-TK-15, 1758-T (1757), 1848-G, 1870-T (1833), GM-1, GM-2, W-1-1, UST-1, UST-2, UST-3

a) 60-sec response time to stop flow when overfill occurs (maximum)
b) 15-sec response time to stop flow when overfill occurs (most likely)

4. Refueler truck hose retrieval leaks (ASTs/USTs loaded with quick-connect couplings)

Applicable to containers: 7-G, 30-G (10-1), 47-1 / 2, 47-3 / 4, 47-5, 50-1, 50-2, 68-G, 111-G (1742), 118-G (236), 121-G, 154-1, 154-2, 1846-2 (11-1), 227-TK-01, 228-TK-02, 229-TK-03, 232-TK-05, 233-TK-07, 1237-G (2607), 1238-G, 1241-G, 1700-TK-15, 1758-T (1757), 1848-G, 1870-T (1833), GM-1, GM-2, W-1-1, UST-1, UST-2, UST-3

a) 60-sec response time to stop flow when hose fails (maximum).
b) 5-sec response time to stop flow when hose drips (most likely).

5. Overfill of refuelers during loading (Aviation Fuel Facility)

Applicable to containers: 1716-1, 1720-2

a) 60-sec response time to stop flow when hose fails (maximum).
b) 15-sec response time to stop flow when hose drips (most likely).

6. Hose retrieval leaks during refueler truck loading (Aviation Fuel Facility)

Applicable to containers: 1716-1, 1720-2

a) 60-sec response time to stop flow following spill (maximum).
b) 5-sec response time to stop flow following spill (most likely).

7. Commercial delivery truck unloading malfunction (Aviation Fuel Facility)

Applicable to containers: 1716-1, 1720-2

c) 60-sec response time to stop flow when hose fails (maximum).
d) 15-sec response time to stop flow when hose drips (most likely).

8. Hose retrieval leaks during commercial delivery truck unloading (Aviation Fuel Facility)

Applicable to containers: 1716-1, 1720-2

c) 60-sec response time to stop flow following spill (maximum).
d) 5-sec response time to stop flow following spill (most likely).

9. Overfill of aircraft tanks during loading (Flight line)

a) 60-sec response time to stop flow following spill (maximum).
b) 15-sec response time to stop flow following spill (most likely).

10. Hose retrieval leaks during aircraft loading (Flight line)

a) 60-sec response time to stop flow following spill (maximum).
b) 5-sec response time to stop flow following spill (most likely).

11. Defueling of refueler trucks spill (Flight line)

a) 60-sec response time to stop flow following spill (maximum)
b) 12-sec response time to stop flow following spill (most likely)

12. Transfer out of tank spill during dispensing (ASTs with dispenser, USTs at NEX Gas Station)

Applicable to containers: 154-1, 154-2, 1846-2 (11-1), 1758-T (1757), GM-1, GM-2, UST-1, UST-2, UST-3

a) 60-sec response time to stop flow from dispenser following spill (maximum)
b) 6-sec response time to stop flow from dispenser following spill (most likely)

13. Hose retrieval leaks during dispensing (ASTs with dispenser, USTs at NEX Gas Station)

Applicable to containers: 154-1, 154-2, 1846-2 (11-1), 1758-T (1757), GM-1, GM-2, UST-1, UST-2, UST-3

a) 60-sec response time to stop flow when hose leaks (maximum)
b) 5-sec response time to stop flow when hose leaks (most likely)

14. Refueler truck shutoff valve leak (unmanned parking area)

a) 12-hour response time to stop flow when valve leaks (maximum).
b) 1-hour response time to stop flow when valve leaks (most likely).

15. Drum and used oil container filling spills (by hand)

Applicable to containers: 1283-1-UCO, 1735-1-UCO, 4008-1 (1737)

a) 30-sec response time to stop flow when filling by hand (maximum)
b) 6-sec response time to stop flow when filling by hand (most likely)

16. Drum and used oil container emptying spills (by diaphragm pump)

Applicable to containers: 1283-1-UCO, 1735-1-UCO, 4008-1 (1737)

a) 60-sec response time to stop flow when emptying by pump (maximum)
b) 6-sec response time to stop flow when emptying by pump (most likely)

17. Used oil container emptying spills (by vacuum truck)

Applicable to containers: 1283-1-UCO, 1735-1-UCO, 4008-1 (1737)

a) 60-sec response time to stop flow when emptying by vacuum truck (maximum)
b) 6-sec response time to stop flow when emptying by vacuum truck (most likely)

18. Fuel line leakage (all generators, boilers, and fire pumps)

Applicable to containers: 7-G, 8-TK-16, 10-2, 30-G (10-1), 42-1, 50-1, 50-2, 50-3, 50-4, 68-G, 104-G, 111-G (1742), 114-T (55-1), 118-G (236), 121-G, 258-1, 340-TK-09, 1099-G (PAR-1), 1237-G (2607), 1238-G, 1241-G, 1260-TK-10, 1289-G, 1292-G, 1700-TK-11, 1700-TK-12, 1700-TK-15, 1700-TK-17, 1717-2, 1797-G, 1804-TK-08, 1804-TK-14, 1846-1, 1848-G, 1870-G, 1870-T (1833), H-100-A, W-1-1

a) Combustion source transfer lines are typically suction feed and gravity return.
b) Supply line flow rate is 1 gpm when not leaking. Return line flow rate will be reduced due to partial fuel combustion. Assume 0.5 gpm for fuel leaking from the hose or piping (that is not completely severed), and equipment gets enough fuel to continue operation.
c) Most likely volume of spill from hose or piping leakage, is based on 10 min response time to stop equipment operation. An alternate (but not as likely) scenario is when the suction hose or piping is completely severed, which will not provide any fuel flow to allow equipment operation.
d) Maximum volume spilled is based on 2 hour response time to stop equipment operation. This could happen if a generator starts automatically and a maintenance person is not present to observe the operation.

19. Corrosion failure of tank piping

Applicable to containers: 7-G, 10-2, 30-G (10-1), 42-1, 47-1 / 2, 47-3 / 4, 47-5, 50-1, 50-2, 68-G, 111-G (1742), 114-T (55-1), 118-G (236), 154-1, 154-2, 227-TK-01, 228-TK-02, 229-TK-03, 232-TK-05, 233-TK-07, 258-1, 1237-G (2607), 1238-G, 1241-G, 1700-TK-11, 1758-T (1757), 1804-TK-08, 1870-T (1833), H-100-A

a) Small diameter steel piping is subject to leaks caused by corrosion failure of threaded joints.
b) Large diameter steel piping is subject to leaks caused by corrosion failure of flange joint gaskets and fasteners.
c) Anti-siphon valves installed on tanks, as recommended under best engineering practices.
d) Maximum threaded pipe size of 2-inch diameter; maximum length of 100-feet.
e) All sites inspected monthly; so longest duration would be until pipe is drained, or 35 days.
f) Assume pipe drainage will be limiting factor on unmanned sites.
g) All piping with pressurized systems manned and viewed daily.
h) For the most likely spill volume, assume large diameter piping with a flange joint leak rate of 0.1 gallon per hour (i.e., drip), that occurs at a manned facility where personnel will discover the leak within 24 hours = 2.4 gallons.
i) Pressurized systems will cease to operate if pump head is lost due to a significant leak.

j) For the maximum spill volume, assume small diameter piping with a threaded joint leak rate of 0.1 gallon per hour, that occurs at an unmanned site, which continues to leak until the length of piping is drained. Volume of piping = 2-inch diameter x 100-feet = 2.18 cubic feet x 7.48 gal/cu ft = 16 gallons.

k) Volume of piping = 2-inch diameter x 100-feet = 2.18 cubic feet x 7.48 gal/cu ft = 16 gallons.

TABLE F-1
Flow Rates and Volumes of Spill Scenarios

Potential Event	Maximum Discharge Rate (gpm)	Response Times (sec)		Maximum Volume (gal)	Most Likely Volume (gal)
		Maximum	Most Likely		
Bulk Storage Areas – 40 CFR 112.8(c)(2)					
1. Tank overfill by refueler truck (ASTs loaded with small nozzles)	10	60	15	10	2.5
2. Refueler truck hose retrieval leaks (ASTs loaded with small nozzles)	10	60	5	10	1
3. Tank overfill by refueler truck (ASTs/USTs loaded with quick connect couplings)	240	60	15	240	60
4. Refueler truck hose retrieval leaks (ASTs/USTs loaded with quick connect)	240	60	5	240	20
Loading/Unloading Areas & Racks – 40 CFR 112.7(h)					
5. Overfill of refuelers during loading (Aviation Fuel Facility)	450	60	15	450	113
6. Hose retrieval leaks during refueler truck loading (Aviation Fuel Facility)	450	60	5	450	38
7. Commercial delivery truck unloading malfunction (Aviation Fuel Facility)	600	60	15	600	150
8. Hose retrieval leaks during commercial delivery truck unloading (Aviation Fuel Facility)	600	60	5	600	50
Fuel Transfer Areas - 40 CFR 112.7(c)					
9. Overfill of aircraft tanks during loading (Flight line)	180	60	15	180	45
10. Hose retrieval leaks during aircraft loading (Flight line)	180	60	5	180	15
11. Defueling of refueler truck spill (Flight line)	20	60	12	20	4
12. Transfer out of tank spill during dispensing (ASTs with dispenser, USTs at NEX Gas Station)	10	60	6	10	1
13. Hose retrieval leaks during dispensing (ASTs with dispenser, USTs at NEX Gas Station)	10	60	5	10	1

TABLE F-1
Flow Rates and Volumes of Spill Scenarios

Potential Event	Maximum Discharge Rate (gpm)	Response Times (sec)		Maximum Volume (gal)	Most Likely Volume (gal)
		Maximum	Most Likely		
Mobile Refueler Parking Area - 40 CFR 112.7(c)					
14. Refueler truck shutoff valve leak (unmanned area)	1	12 hr	1 hr	720	60
Drum and Used Oil Storage Areas					
15. Drum and used oil container filling spills (by hand)	5	30	6	2.5	0.5
16. Drum and used oil container emptying spills (by diaphragm pump)	10	60	6	10	1
17. Used oil container emptying spills (by vacuum truck)	240	60	6	240	24
Other Areas - Generators and Piping					
18. Fuel line leakage (all generators, boilers, and fire pumps)	0.5	2 hr	10 min	60	5
19. Corrosion failure of tank piping	0.1 gal/hr	30 days	24 hr	16	2.4

Maximum Volume = (Maximum Discharge Rate × Maximum Response Time) ÷ 60
Most Likely Volume = (Maximum Discharge Rate × Most Likely Response Time) ÷ 60

F.2 Secondary Containment Calculations

F.2.1 Aviation Fuel Facility ASTs

NAS Corpus Christi, Aviation Fuel Facility, has two single wall, field-erected ASTs (1716-1 and 1720-2) that store F-24 Jet Fuel. Each AST has a separate secondary containment dike, consisting of vertical concrete walls and sloped earthen floors, all covered with a flexible membrane liner. The bulk fuel ASTs sit on top of a circular ring wall foundation with sloped berm, located in the center of each dike. Four-inch bulk fuel pipelines running from the pump house to the ASTs are supported by three square, concrete blocks in each containment. The dike surrounding AST 1720-2 also contains a 55-gallon fuel recovery tank (1720-PRT).

Dike floors are sloped slightly towards low point drains, located in the center of each dike's northern wall, so any accumulation of precipitation or spillage can be drained from the dike to either the storm or sanitary sewer. As a result, the dike depth varies depending on distance from the drain. Depth measurements were taken at each corner and at the drain, by measuring from the dike floor to the top of the vertical dike wall. Depths at 100 points uniformly distributed between field measurements were linearly interpolated and averaged to determine an average dike depth of 4.07 ft for each AST. Dimensions and containment volumes are summarized below.

Properly sized dikes should have adequate containment volume to hold the maximum fill capacity of the single largest AST within the dike, plus sufficient freeboard to collect precipitation from a 25-year, 24-hour storm for NAS Corpus Christi, which is 9 inches or 0.75 feet.

Both ASTs were designed with the same size foundation, which is an obstacle to the spill containment volume. This obstacle includes the volume within the concrete ring wall foundation and inner void space, that is below the AST bottom plate, and above the dike floor level, plus the volume of a sloped berm from the top of ring wall to the dike floor. This volume is calculated using the formula for a cylinder, whose height is the difference in elevation between the top of ring wall (21.36 ft above SL) and the dike floor (16.5 ft above SL) = 4.86 ft per the AST drawing. However, the obstacle volume should be limited to within the dike boundaries, so the average height of dike walls at 4.07 ft will be used for this calculation.

The radius used in cylinder formula is an average of 2 values as measured from the AST center point:
(1) to outer edge of ring wall where top of sloped berm is attached = 19.0 ft to AST shell plating (confirmed with strapping chart) + 9 inch exposed ring wall, taken from AST drawing = 19.75 ft;
(2) to lower edge of sloped berm on the dike floor = 31.8 ft, average of 2 other values as follows. Circumference of AST berms at lower edge as measured on site = 201 and 201.5 ft. Average these together and divide by 6.28 = 32.0 ft radius. Multiple electronic measurements taken from a close-up aerial photo of each AST berm at the lower edge, averaged together = 31.6 ft radius.

AST drawing shows the ring wall berm was designed with upper and lower sections, that have a slightly different slope angle. However, on-site inspection and AST photos show the berm was constructed much closer to a single straight slope, from the top of ring wall to the dike floor, so we used that assumption in this calculation.

AST 1716-1: On site measurements of rectangle shaped dike are 141.5 ft wide x 105.25 ft long. Average dike depth calculated at 4.07 ft. Gross dike volume (before obstacle reduction) = 60,614 ft^3 x 7.48 gal/ ft^3 = 453,393 gal.

Radius from AST center point to the outer edge of ring wall where top of sloped berm is attached = 19.75 ft. Radius to the lower edge of sloped berm on the dike floor = 31.8 ft. Average of 2 values together = 25.78 ft radius. Volume of ring wall + inner void + berm = 3.14 (Pi) x 664.6 (radius squared) x 4.07 (dike wall height) = 8,493.6 ft^3 x 7.48 gal/ ft^3 = 63,532 gal obstacle.

Volume of 3 concrete block supports for pipelines = 3 x 6 ft wide x 1 ft thick x 4.07 ft (high dike) = 73.3 ft^3 x 7.48 gal/ ft^3 = 548 gal obstacle.

Net dike volume (gross minus obstacle volume) = 453,393 gal - 63,532 gal – 548 gal = 389,313 gal.

Freeboard volume = 141.5 ft wide x 105.25 ft long x 0.75 ft high x 7.48 gal/ft^3 = 83,549 gal.

Total Volume Required Including Freeboard = 244,604 gal max fill capacity + 83,549 gal = 328,153

Percent containment = 389,313 gal net dike volume / 244,604 gal max fill capacity x 100 = 159 %

AST 1720-2: On site measurements of rectangle shaped dike are 140.5 ft wide x 105.75 ft long. Average dike depth calculated at 4.07 ft. Gross dike volume (before obstacle reduction) = 60,471.5 ft^3 x 7.48 gal/ ft^3 = 452,327 gal.

Volume of ring wall + inner void + berm is the same as AST 1716-1 = 63,532 gal obstacle.

Volume of 3 concrete block supports for pipelines = 3 x 2.08 ft wide x 1.04 ft thick x 4.07 ft (high dike) = 26.4 ft^3 x 7.48 gal/ ft^3 = 198 gal obstacle.

Net dike volume (gross minus obstacle volume) = 452,327 gal - 63,532 gal – 198 gal = 388,597 gal.

Freeboard volume = 140.5 ft wide x 105.75 ft long x 0.75 ft high x 7.48 gal/ft^3 = 83,353 gal.

Total Volume Required Including Freeboard = 247,627 gal max fill capacity + 83,353 gal = 330,980.

Percent containment = 388,597 gal net dike volume / 247,627 gal max fill capacity x 100 = 157 %

Net dike volume is calculated as:

Equation 1:

$$\begin{aligned} &Available\ Containment \\ &\quad = dike(length * width * height) \\ &\quad - ring\ wall\ obstacle\ (Pi * average\ radius\ 2 * h) \\ &\quad - pipe\ support\ obstacle\ 3 * \left(l_{sup.} * w_{sup.} * h_{sup.}\right) * 7.48 \end{aligned}$$

Percent containment is:

Equation 2:

$$\%\ Containment = \frac{Available\ Containment}{Max\ tank\ capacity} * 100\%$$

Freeboard volume is calculated as follows:

Equation 3:

$$Freeboard\ volume = dike\ (length * width) * 0.75 * 7.48$$

TABLE F-2
NAS Corpus Christi Containment Calculations

Area/Tank ID	Length (ft)	Width (ft)	Second L (ft)	Second W (ft)	Depth (ft)	Required Freeboard (ft)	Blocks in containment (ft^3)	Freeboard Volume (gal)	Dike Volume (ft^3)	Dike Volume (gal)	Largest Container Volume (gal)	Total Required w/Freeboard Volume (gal)	Depth of Oil Associated with Tank Rupture (ft)	Freeboard Depth (ft)	Satisfy 25-yr/ 24-hr Freeboard (9")?	% Containment Volume
114-T (55-1)	8.33	6.08	0.00	0.00	0.83	0.00	0.00	0	42	314	280	280	0.74	0.09	Yes	112%
1716-1	105.25	141.50	0.00	0.00	4.07	0.75	8566.90	83,549	52,047	389,313	244,604	328,153	2.20	1.87	Yes	159%
1720-2	105.75	140.50	0.00	0.00	4.07	0.75	8520.00	83,353	51,952	388,597	247,627	330,980	2.23	1.84	Yes	157%
1804-TK-08	12.75	11.00	6.67	3.50	3.42	0.75	0.00	918	559	4,185	1,000	1,918	0.95	2.46	Yes	419%
DSA-257-21	50.00	14.00	0.00	0.00	1.00	0.75	0.00	3,927	700	5,236	55	3,982	0.01	0.99	Yes	9520%
Facility 305 Mobile Generator MG-1	10.00	10.00	0.00	0.00	1.00	0.00	0.00	25 (note 2)	100	748	250	275	0.33	0.67	Yes	299%
Facility 305 Mobile Generator MG-4	6.00	8.00	0.00	0.00	1.00	0.00	0.00	8 (note 2)	48	359	84	92	0.23	0.77	Yes	427%
Facility 305 Mobile Generator G-70	6.00	8.00	0.00	0.00	1.00	0.00	0.00	12 (note 2)	48	359	115	127	0.32	0.68	Yes	312%
Facility 154 GOV Gas Station Loading / Unloading Area	52.00	14.50	0.00	0.00	1.25	0.00	0.00	0	943	7,050	7,500	150 (note 1)	1.33	-0.08	Yes	94%
Spill Basin 28 Refueler Truck Parking Area	26.50	23.70	0.00	0.00	1.75	0.00	0.00	0	1,099	8,221	5,000	60 (note 1)	1.06	0.69	Yes	164%
Spill Basin 1717 Aviation Fuel Facility Unloading Area / Loading Rack	24.80	24.40	0.00	0.00	2.50	0.00	0.00	0	1,513	11,316	7,500	150 (note 1)	1.66	0.84	Yes	151%
Facility 8 CCAD Fuel Farm Unloading Area	81.00	24.00	122.50	63.00	0.50	0.00	0.00	0	4,831	36,134	7,500	150 (note 1)	0.52	-0.02	Yes	482%

Note 1. For refueling equipment, the volume required is the most likely quantity of oil which may be spilled. This is calculated in Appendix F.

Note 2. Freeboard is required when mobile generator is moved to outdoor location, which can be anytime. Need at least 10 % of tank capacity, subject to PE approval.