

#### DEPARTMENT OF THE NAVY

COMMANDER NAVY REGION HAWAII 850 TICONDEROGA ST STE 110 JBPHH, HAWAII 96860-5101

MAY 23 2019

5750 Ser N4/0533 May 15, 2019

CERTIFIED NO: 7016 0910 0001 0891 7390

Ms. Roxanne Kwan Hawaii State Department of Health Environmental Management Division Solid and Hazardous Waste Branch Underground Storage Tank Section 2827 Waimano Home Road #100 Pearl City, HI 96782

Dear Ms. Kwan:

SUBJECT: UST PERMIT APPLICATION FOR RED HILL BULK FUEL STORAGE FACILITY, JBPHH, OAHU, DOH FACILITY ID NO. 9-102271

The Navy submitted a permit application on 13 March 2019 for Red Hill Bulk Fuel Storage Facility (RHBFSF). Based upon DOH feedback, the application has been revised and shall replace the original submittal.

This letter and its enclosures provide information that does not fit into the application form "Application for an Underground Storage Tank Permit – Form No. 2" and are incorporated into the permit application.

The confidential/redacted information has been provided in full to the DOH; however, the Navy considers this information to be confidential under the Hawaii Revised Statutes (HRS) 342L-15 and does not concur with and will not allow its public release. The documents containing the exact location of the sensitive infrastructure comprising the system to include pipelines, hydrants, fill stands, etc. is for official use only and cannot be disclosed to the public because the impact of any damage caused to this system is so great, that it could cause irreparable harm to the government. Additionally, the technology and methodology used in these reports is proprietary to the contractor. Disclosure of their processes and procedures would result in significant competitive harm to the contractors. The government is bound not to disclose the information for other than official use by contract, federal law, and the Trade Secrets Act.

The revised Application for an Underground Storage Tank Permit – Form No. 2 is being submitted as Enclosure 1.

A Location Map of the Red Hill storage tanks is provided as Enclosure 2. A Location Map of the surge tanks and piers is provided as Enclosure 3. A Location Map of the Hickam airfield hydrant system, which includes hydrant pits and product recovery tanks, is provided as Enclosure 4.

#### Primary Containment Material

The RHBFSF tanks F-1 to F-20 and F-ST1 to F-ST4 are constructed of reinforced concrete and lined with steel. The primary containment material is steel.

#### **Facility Piping**

Tank and piping diagrams for Defense Fuel Support Point (DFSP) Pearl Harbor and Hickam Airfield Hydrant System are provided as Enclosure 5. The diagrams indicate which segments of piping are in contact with the ground and have corrosion protection (dashed line), and which segments are above ground (solid line). All piping is single wall steel.

#### Piping - Release Detection

The piping for tanks F-1 to F-20 and F-ST1 to F-ST4 that is located between the tank and the first valve (nozzle piping) is considered and tested as part of the RHBFSF tanks. Information on tank tightness testing is presented in the "Tanks - Release Detection" section, below.

The piping located inside the RHBFSF tunnel is above ground; therefore, no release detection method for this above ground piping is checked in Section XI.11 on pages 6, 10, 14, 18, and 22 of the permit application form.

A line tightness test is performed annually on petroleum pipeline segments located outside the RHBFSF tunnel and fully or partially in contact with the ground. In January 2019, the leak detection rate per test section volume met the requirements of HAR §11-280.1-44(4)(A)(i), except for one pipeline section. This pipeline section was subsequently removed from service until it is repaired by replacement. See excerpts from the 2019 Annual Leak Detection Testing Report of 35 Sections (57,136 Feet) of Petroleum Pipelines of March 2019, which are provided as Enclosure 6. Information on the petroleum pipeline segments located outside the RHBFSF tunnel and fully or partially in contact with the ground is presented on pages 19 to 22 of the permit application form, in the column labeled "Pipelines Located Outside Tunnel."

An annual static liquid pressure test is performed on pier pipelines to confirm that no leaks occur under static liquid pressure at least 1.5 times the maximum allowable working pressure as required in 33 CFR 156.170. This meets the requirements of HAR §11-280.1-44(4)(A)(i). In January 2019, the pier pipelines passed the annual static pressure testing. See excerpts from the

2019 Annual Static Liquid Pressure Testing Report of Three Sections (20,706 Feet) of Petroleum Pier Pipelines of March 2019, which are provided as Enclosure 7.

The annual line tightness test of the piping associated with tanks PRT-Diamond Head and PRT-Ewa meets the requirements of HAR §11-280.1-44(4)(A)(i). Results for the January 2019 leak detection testing are presented in Table 2-1 of Enclosure 6. Test Section 10, "Type III PRT Issue," is the piping associated with tank PRT-Ewa, and Test Section 13, "AMC PRT Issue," is the piping associated with tank PRT-Diamond Head.

#### Piping - Cathodic Protection

All piping segments that are in contact with the ground are protected by an impressed current cathodic protection system. A detailed description of the system, including a description of rectifiers, system drawings, and location of anode beds, can be found in the two most recent Annual Pearl Harbor Cathodic Protection Survey Reports and Annual Hickam Cathodic Protection Survey Reports. Excerpts from these reports are provided as Enclosures 8 and 9, respectively.

### **Product Recovery Tanks**

Tanks PRT-Diamond Head and PRT-Ewa are protected by an impressed current cathodic protection system. A detailed description of the system, including a description of the rectifiers, system drawings, and location of anode beds, can be found in the two most recent Hickam Cathodic Protection Survey Reports. Excerpts from these reports are provided as Enclosure 9.

#### Tanks - Release Detection

A tank tightness test is performed on tanks F-2 to F-18 and F-20, and tanks F-ST1 to F-ST4 semi-annually, unless they have been emptied for the Clean, Inspect, Repair (CIR) process. The tank tightness test meets the 0.5 gallon per hour leak rate as specified in HAR §11-280.1-43(10)(A). See excerpts from the *Final 2018 Annual Leak Detection Testing Report of 17 Bulk Field-Constructed Underground Storage Tanks at Red Hill Fuel Storage Complex* of January 2019, which are provided as Enclosure 10.

### Method of Product Dispensing

Tanks F-ST1 to F-ST4 are not storage nor dispensing tanks, instead they serve as surge tanks to allow for the buffering of product pressure throughout the system during product movement. They have no ability to dispense fuel.

# Overfill Prevention Equipment

Tanks F-1 to F-20 and F-ST1 to F-ST4 are equipped with an Automated Fuel Handling Equipment (AFHE) Industrial Control System (ICS) inventory monitoring based on Automatic Tank Gauging (ATG) equipment overflow protection sensors and equipment that de-energizes the pump and shuts an isolation valve to prevent overfilling each UST once the fuel level in the tank reaches no more than 95% full.

The AFHE system operates 24 hours a day, 365 days a year, and is a continuously manned and monitored system, equipped with both a high and high-high level alarm, with high alarms set at a level of no more than 90% full.

# Airfield Piping

Information on the airfield piping has been added to pages 23 to 26 of the UST permit application form. All of the piping is underground, as shown in Enclosure 5 and the figures of Enclosure 6. Table 2-1 of Enclosure 6 provides a summary of the 2019 annual leak detection testing results for each of the 21 sections of airfield piping. Test sections 11, 12, 13, 14, 15, 20 and 21 are associated with the Diamond Head Piping Loop. The other fourteen sections are associated with the Ewa Piping Loop.

If you have any questions regarding this matter or need any additional information, contact Ms. Raelynn Kishaba by phone at (808) 471-1171, extension 233 or by email at raelynn.kishaba@navy.mil.

Sincerely,

M. R. DELAO

Captain, CEC, U.S. Navy

Regional Engineer By direction of the

Commander

#### **Enclosures:**

- 1. Revised DOH Form No. 2, Application for an Underground Storage Tank Permit for Red Hill Bulk Fuel Storage Facility, DOH Facility ID No. 9-102271 of May 15, 2019
- 2. Location Map of Red Hill Storage Tanks
- 3. Location Map of Surge Tanks and Piers
- 4. Location Map of Hickam Airfield Hydrant System
- 5. REDACTED Tank and Piping Diagrams for DFSP Pearl Harbor and Hickam Airfield Hydrant System
- 6. REDACTED Excerpts from 2019 Annual Leak Detection Testing Report of 35 Sections (57,136 Feet) of Petroleum Pipelines of 14 March 2019, prepared for Defense Logistics Agency Energy, submitted by Michael Baker International
- 7. REDACTED Excerpts from 2019 Annual Static Liquid Pressure Testing Report of Three Sections (20,706 Feet) of Petroleum Pier Pipelines of March 2019, prepared for Defense Logistics Agency Energy, submitted by Michael Baker International
- 8. REDACTED Excerpts from July 2017 and February 2018 Annual Pearl Harbor Cathodic Protection Survey Reports
- 9. REDACTED Excerpts from September 2016 and January 2018 Annual Hickam Cathodic Protection Survey Reports
- 10. REDACTED Excerpts from Final 2018 Annual Leak Detection Testing Report of 17 Bulk Field-Constructed Underground Storage Tanks at Red Hill Fuel Storage Complex, Joint Base Pearl Harbor-Hickam, Hawaii of 23 January 2019, prepared for Defense Logistics Agency Energy, submitted by Michael Baker International

Blind copy (via email) to: LCDR Blake Whittle, NAVSUP FLC Pearl Harbor John Floyd, NAVSUP FLC Pearl Harbor Brian Inouye, NAVSUP FLC Pearl Harbor NAVFAC HI Counsel

# Enclosure 1

### SOLID AND HAZARDOUS WASTE BRANCH

**Underground Storage Tank Program** 

MAY 23 2019 A

2827 Waimano Home Road #100 • Pearl City, Hawaii 96782

Phone: 808 - 586- 4226 • Fax: 808-586-7509 • http://health.hawaii.gov/shwb/underground-storage-tanks/ CNRH LETTER 5750 SER N4/0533 OF MAY 15, 2019 IS INCORORATED BY REFERENCE AND MADE A PART OF THIS APPLICATION

# APPLICATION FOR AN UNDERGROUND STORAGE TANK PERMIT

Return completed for		State Use Only					
Solid and Hazardous Waste Branch Underground Storage Tank Program 2827 Waimano Home Road #100 Pearl City, Hawaii 96782  Facility ID Number: 9-102271  Type Of Notification: Installation and Operation (\$300)  Operation (\$300)  Modification - except for temporary & permanent closure (\$200)			Date received: Permit Number: Permit Fee: Date Paid: Receipt Nunmber: Comments:				
	I. LOCATION O	F TANK(S)			1-7 X= X= X=		
Red Hill Bulk Fuel Storage Facility			John Floy	/d			
Facility Name or Company Site identifiers			-	Location	Contact Person		
Red Hill Location Address (P.O. Box not acceptable)	Aiea City	Hawaii State	96701 Zip Code	Oahu Island	99010006, 99010001, 11012003, 11012004  Tax Map Key #		
(808) 473-7801	(808)	473-7815					
Location Phone # (w/ area code)	Location Fax	x# (w/ area code	e)				
II. CON	ITACT PERSON IN	CHARGE OF	TANK(S)				
LCDR Blake Whittle			Regiona	Fuels Office	cer		
Name		to and success to the second	Job /	Position Title	9		
1942 Gaffney Street, Suite 100		JBPHH		HI	96860		
Mailing Address		City		State	Zip Code		
(808) 473-7833 (8	08) 473-7815		blak	e.whittle1@	navy.mil		
Phone # (w/ area code)	Fax # (w/ area code)			E-mail Ad	Idress		

Facility ID No.	9-102271
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	III. OWNER O	F TANK(S)		**
US Navy - COMNAVREG H	I			
Owner Name (Corporation, Inc	dividual, Public Agency, or Other Entity)			
850 Ticonderoga Street, Sui	to 110	JBPHH	Н	96860
Mailing Address		City	State	Zip Code
(808) 471-3926 Phone # (w/ area code)	(808) 473-5024 Fax # (w/ area code)		marc.delao@navy.mil E-mail Address	
Priorie # (w/ area code)	rax # (w/ area code,		E-mail Address	
	/. OPERATOR OF TANK(S) (if sam	e as Section III	l, check here 🔲 )	
Naval Supply Systems Com	mand Fleet Logistics Center Pearl Ha	rbor		
Operator Name (Corporation,	Individual, Public Agency, or Other Entity	y)	· · · · · · · · · · · · · · · · · · ·	
1942 Gaffney Street, Suite 1	100	JBPHH	н	96860
Mailing Address		City	State	Zip Code
(808) 473-7833	(808) 473-7815 Fax # (w/ area code		blake.whittle1@navy.m E-mail Address	il
Phone # (w/ area code)	Fax # (w/ area code	<b>)</b> .	E-mail Address	
	V. CONTR	ACTOR		
N/A		<u> </u>	I/A	
Company Name			Contact Person Name	<b>,</b>
N/A		N/A	N/A	
Mailing Address		City	State	Zip Code
			N/A	
Phone # (w/ area code)	Fax# (w/ area code	)	E-mail Address	·····
)				Andronalistican on a description of the second
	VI. TYPE OF	OWNER	,	^
Federal Government (Mili	tary) Federal Governmen	t (Non-Military)	State Government	
Local Government	Marketer	((von-wintery)	Non-Marketer	
	/II. TYPE OF FACILITY (Select the	appropriate fa	cility description)	
Airline	Contractor Petroleur	m Distributor	Service Centers/Auto Repair	/Maintenance
Auto Dealership	Farm Police St	ation	Trucking/Transporter	
Baseyard	Fire Station Resident	tial	Utilities	
Car Rental	Gas Station Resort/H	lotel	Wastewater Treatment Plants	s
Cleaner/Laundromat	Golf Course School		Wholesaler/Retailer	
Communication Sites	Hospital Other (E	<sub>xplain)</sub> Fuel Sto	orage and Airfield Hydrant Sy	stem
₩ <sub>e</sub>			**	

Facility	ID	No.	9-102271

VIII. FINAN	ICIAL RESPONS	SIBILITY (Chec	k all that apply	)		
Commercial Insurance	etter of Credit	Local	Government Bond	d Rating Test		
	Surety Bond	[]	Method Allowed (			
	rust Fund		ot: State or			
	olin koli alek ishe mendalah alek koja likelik balan sa aleh mena ili pasa kija (sela likelik berlambark berla		in friendstate von friendstade friendstade friendstade friendstade framen friendstade framen friendstade framen fr			
	IX. FACILI	TY DRAWING	an a			
Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:  A. The property boundaries of the facility;  B. Identification of streets, roads and nearby bodies of water;  C. Identification of nearby facilities;  D. Tax Map Key (TMK) Numbers;  E. Location of buildings at the facility;  F. The approximate dimensions of the property boundaries and major buildings;  G. Location of all USTs and dispenser pumps (identified by number/s consistent with the tank & dispenser pump numbers in Sections XI and XII), and associated pipings; and  H. Indication of North/South direction.						
Include a map showing the location of the tanks level of detail such that the site would be easily	with respect to nea	<b>ATION MAP</b> arby landmarks	The map should in	ndicate roads and	l landmarks to a	
XI. DESCRIPTION (	OF TANK(S) (Co	mplete for eac	h tank at this lo	ocation)		
Tank Number	Tank No. F-1	Tank No. F-2	Tank No. F-3	Tank No. F-4	Tank No. F-5	
1. Status of Tank (Mark only one)						
A. Currently in Use		<b>V</b>	<b>✓</b>	<b>✓</b>		
B. Temporarily Out of Use	<b>√</b>				<b>✓</b>	
Date of Installation (month/year)	10/1942	09/1942	01/1943	11/1942	12/1942	
3. Estimated Capacity (gallons)	12,000,000	12,000,000	12,000,000	12,000,000	12,700,000	
A. Compartmentalized? Yes/No	No	No	No	No	No	
Estimated compartment capacity (gallons)						
B. Manifolded? Yes/No	No	No	No	No	No	
4. Substance Stored						
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A	
B. Diesel						
C. Gasohol (Including ethanol blends) Specify product grade	N/A	N/A	N/A	N/A	N/A	
D. Kerosene						

Application for an Underground Storage Tank Permit - Form No. 2 Date: July 16, 2018  $\,$ 

Tank Number	Tank No. <u>F-1</u>	Tank No <u>. F-2</u>	Tank No. F-3	Tank No. F-4	Tank No. F-5				
E. Used Oil/Waste Oil									
F. JP-4									
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS#)	N/A	N/A	N/A	N/A	N/A				
H. Mixture of Substances (Please specify)	N/A	N/A	N/A	N/A	N/A				
I. Other, please specify.	EMPTY	F-24	F-24	F-24	EMPTY				
5. Substance Compatible with Tank and Piping? Yes/No	N/A	Yes	Yes	Yes	N/A				
6. Tank (Mark all that apply)									
A. Manufacturer and Model	Field- constructed	Field- constructed	Field- constructed	Field- constructed	Field- constructed				
B. Underwriters Laboratory No.	N/A	N/A	N/A	N/A	N/A				
C. Primary Containment Material or Single-	Walled Tank								
i. Fiberglass reinforced plastic									
ii. Steel	V	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>				
iii. Other, please specify.									
D. Secondary Containment Material									
i. Fiberglass reinforced plastic									
ii. Steel									
iii. Other, please specify.	N/A	N/A	N/A	N/A	N/A				
iv. None	<b>V</b>	<b>√</b>	<b>✓</b>	<b>V</b>	<b>✓</b>				
E. Corrosion Protection (except Fiberglass	reinforced plastic	tanks)		I	·				
i. Fiberglass coated steel									
ii. Double-walled steel									
iii. Impressed current system									
iv. Sacrificial anode system									
v. Corrosion expert determination									
vi. Other, please specify.	N/A	N/A	N/A	N/A	N/A				
7. Piping									
A. Manufacturer and Model	Unknown	Unknown	Unknown	Unknown	Unknown				
		·							

Tank Number	Tank No. F-1	Tank No. F-2	Tank No. F-3	Tank No. F-4	Tank No. F-5
C. Primary Containment Material or Single-	Walled Piping	ne. A veni alita del filo adoles e colto di adole di adole de un setta a specia iniziato per que y i prodefici	en der verfande gegen den die een verde die de stel de verde gegen de value dat die verde die verde gegen gege	<del>«Ресублічников под настройников под настройн</del> а под настройна под	and a second
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Steel	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>V</b>
iv. Other, please specify.	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Lined trench					
iv. Other, please specify.					
v. None	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
E. Corrosion Protection (except fiberglass r	einforced plastic	piping)			
i. Fiberglass coated steel					
ii. Impressed current system					
iii. Sacrificial anode system					
iv. Corrosion expert determination					
v. Other, please specify.	N/A	N/A	N/A	N/A	N/A
8. Method of Product Dispensing					
A. Unsafe Suction (valve at tank)					
B. Safe Suction (no valve at tank)					
C. Pressure	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	$\checkmark$
D. Not Applicable					
9. Spill prevention equipment					
A. Manufacturer and Model	N/A	N/A	N/A	N/A	N/A
B. Capacity (gallons)					
10. Overfill prevention equipment	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
A. Automatic shutoff device (flapper)     Make and Model					
B. Overfill alarm Make and Model	See cover letter	See cover letter	See cover letter	See cover letter	See cover letter
C. Ball float valve Make and Model					

Tank Number	Tank N	lo. <u>F-1</u>	Tank N	loF-2_	Tank N	loF-3_	Tank N	lo. <u>F-4</u>	Tank N	lo. F-5
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing		NA	<b>✓</b>	NA	<b>✓</b>	NA	<b>✓</b>	NA	<b>✓</b>	NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
I. Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	No	NA	No	NA	, No
If <b>YES</b> , specify type.										
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the Department. Please specify										

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4	·		N/A
5		·	N/A
6			N/A
7			N/A
8			N/A
9	'		N/A
10			N/A
11			N/A
12			N/A

Facility ID No	o. 9-102271

VIII. FINAN	CIAL RESPONS	SIBILITY (Chec	k all that apply	)		
Financial Test of Self Insurance	etter of Credit urety Bond rust Fund	Other I	Government Bond Method Allowed ( ot: State or	Specify)	су	
	IX. FACILI	TY DRAWING	ng dia ang ting di dia mang dia pigang at an bang di manjan an mendangan di pinggan di menghapan menggin	indem en primer plant men i fantale for men i de en fan de nie i de en de 19 generalie en de 19 generalie.	Colline in Collins is the second and believe the Collins of the Co	
Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:  A. The property boundaries of the facility;  B. Identification of streets, roads and nearby bodies of water;  C. Identification of nearby facilities;  D. Tax Map Key (TMK) Numbers;  E. Location of buildings at the facility;  F. The approximate dimensions of the property boundaries and major buildings;  G. Location of all USTs and dispenser pumps (identified by number/s consistent with the tank & dispenser pump numbers in Sections XI and XII), and associated pipings; and  H. Indication of North/South direction.						
				itte anders den settle process till det der den statistist i server til den sett per det se seks sette se det s	MARIN yanni i bir bir i bir ay dalah saya i bir dalah saya i bir dalah bir dalah ili bir dalah saya bir gili bir ay dalah biri.	
Ievel of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of detail such that the site would be easily level of details and the site would be		mplete for eac	h tank at this lo	ocation) Tank No. F-9	Tank No. F-10	
Status of Tank (Mark only one)	Ma Pala silanda da Maria da <del>Talanda da</del> Si			The state of the s	The state of the s	
A. Currently in Use		<b>I</b>		<b>V</b>		
B. Temporarily Out of Use						
Date of Installation (month/year)	12/1942	05/1943	03/1943	02/1943	01/1943	
3. Estimated Capacity (gallons)	12,700,000	12,700,000	12,700,000	12,700,000	12,700,000	
A. Compartmentalized? Yes/No	No	No	No	No	No	
Estimated compartment capacity (gallons)						
B. Manifolded? Yes/No	No	No	No	No	No	
4. Substance Stored		•			<u> </u>	
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A	
B. Diesel						
C. Gasohol (Including ethanol blends) Specify product grade	N/A	N/A	N/A	N/A	N/A	
D. Kerosene						

Application for an Underground Storage Tank Permit - Form No. 2 Date: July 16, 2018  $\,$ 

Tank Number	Tank No <u>,</u> F-6	Tank No. F-7	Tank No. F-8	Tank No. F-9	Tank No. F-10
E. Used Oil/Waste Oil					
F. JP-4					
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS#)	N/A	N/A	N/A	N/A	N/A
H. Mixture of Substances (Please specify)	N/A	N/A	N/A	N/A	N/A
Other, please specify.	F-24	JP-5	JP-5	JP-5	JP-5
Substance Compatible with     Tank and Piping? Yes/No	Yes	Yes	Yes	Yes	Yes
6. Tank (Mark all that apply)					
A. Manufacturer and Model	Field- constructed	Field- constructed	Field- constructed	Field- constructed	Field- constructed
B. Underwriters Laboratory No.	N/A	N/A	N/A	N/A	N/A
C. Primary Containment Material or Single-	Walled Tank				
i. Fiberglass reinforced plastic					
ii. Steel	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
iii. Other, please specify.					
D. Secondary Containment Material	,				
i. Fiberglass reinforced plastic					
ii. Steel					
iii. Other, please specify.	N/A	N/A	N/A	N/A	N/A
iv. None	<b>√</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>7</b>
E. Corrosion Protection (except Fiberglass	reinforced plastic	tanks)			
i. Fiberglass coated steel					
ii. Double-walled steel					
iii. Impressed current system					
iv. Sacrificial anode system					
v. Corrosion expert determination					
vi. Other, please specify.	N/A	N/A	N/A	N/A	N/A
7. Piping					
A. Manufacturer and Model	Unknown	Unknown	Unknown	Unknown	Unknown
B. Underwriters Laboratory No.	Unknown	Unknown	Unknown	Unknown	Unknown

Tank Number	Tank No. F-6	Tank No. F-7	Tank No. F-8	Tank No. F-9	Tank No. F-10
C. Primary Containment Material or Single-	Walled Piping	<del>биндоліва із косіоністі станости пост</del> ення і за постення	обрання в нес в насамового собо бого до состоя на нестоя на се насамова на постоя на постоя на постоя на се на	AZACCOTTE DOGUNIA GRADONICO TRADA ACCIDITACIONE DI PRESENTA	от подыте основнит выпользования выстрения выпользования выстрения выпользования выпользования выпользования выпользован
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Steel	<b>V</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>V</b>
iv. Other, please specify.	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Lined trench					
iv. Other, please specify.					
v. None	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
E. Corrosion Protection (except fiberglass r	einforced plastic p	oiping)			
i. Fiberglass coated steel					
ii. Impressed current system					
iii. Sacrificial anode system					
iv. Corrosion expert determination					
v. Other, please specify.	N/A	N/A	N/A	N/A	N/A
8. Method of Product Dispensing					
A. Unsafe Suction (valve at tank)					
B. Safe Suction (no valve at tank)					
C. Pressure	<b>V</b>	<b>✓</b>	<b>V</b>	<b>√</b>	<b>✓</b>
D. Not Applicable					
9. Spill prevention equipment					
A. Manufacturer and Model	N/A	N/A	N/A	N/A	N/A
B. Capacity (gallons)					
10. Overfill prevention equipment	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
A. Automatic shutoff device (flapper)     Make and Model					
B. Overfill alarm  Make and Model	See cover letter	See cover letter	See cover letter	See cover letter	See cover letter
C. Ball float valve Make and Model					

Tank Number	Tank N	lo. <u>F-6</u>	Tank N	<sub>lo.</sub> F-7	Tank N	<sub>lo.</sub> F-8	Tank N	lo. F-9	Tank N	lo. <u>F-10</u>
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing	<b>V</b>	NA	<b>V</b>	NA	V	NA	<b>V</b>	NA	V	NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	No	NA	No	NA	No
If YES, specify type.										
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the Department. Please specify										

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4			N/A
5			N/A
6			N/A
7			N/A
8			N/A
9			N/A
10			N/A
11			N/A
12			N/A

Facility	ID	No.	9-102271

	Nederonopolity program, e sporta il processio per porta il sue escribio.								
VIII. FINAN	ICIAL RESPONS	SIBILITY (Chec	k all that apply	)					
Financial Test of Self Insurance	etter of Credit Surety Bond Trust Fund	Other	Government Bond Method Allowed ( ot: State or	Specify)	cy				
				B. NOVERTHAN DOWNER OF WARRENING MICHAEL TAY COMMISSION OF THE COM					
Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:  A. The property boundaries of the facility;  B. Identification of streets, roads and nearby bodies of water;  C. Identification of nearby facilities;  D. Tax Map Key (TMK) Numbers;  E. Location of buildings at the facility;  F. The approximate dimensions of the property boundaries and major buildings;  G. Location of all USTs and dispenser pumps (identified by number/s consistent with the tank & dispenser pump numbers in Sections XI and XII), and associated pipings; and  H. Indication of North/South direction.									
Include a map showing the location of the tanks level of detail such that the site would be easily  XI. DESCRIPTION 0	with respect to neal located.  DF TANK(S) (Co	mplete for eac	h tank at this lo	ocation)					
Tank Number	Tank No. F-11	Tank No. F-12	Tank No. F-13	Tank No. F-14	Tank No. F-15				
Status of Tank (Mark only one)  A Correctly in Line									
A. Currently in Use  B. Temporarily Out of Use	<u> </u>								
2. Date of Installation (month/year)	02/1943	03/1943	03/1943	03/1943	04/1943				
3. Estimated Capacity (gallons)	12,700,000	12,700,000	12,700,000	12,700,000	12,700,000				
A. Compartmentalized? Yes/No	No	No	No	No	No				
Estimated compartment capacity (gallons)									
B. Manifolded? Yes/No	No	No	No	No	No				
Substance Stored	•		•						
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A				
B. Diesel									
C. Gasohol (Including ethanol blends) Specify product grade	N/A	. N/A	N/A	N/A	N/A				
D. Kerosene									

Tank Number	Tank No. <u>F-11</u>	Tank No. F-12	Tank No. F-13	Tank No. F-14	Tank No. <u>F-15</u>
E. Used Oil/Waste Oil					
F. JP-4					· .
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS#)	N/A	N/A	N/A	N/A	N/A
H. Mixture of Substances (Please specify)	N/A	N/A	N/A	N/A	N/A
I. Other, please specify.	JP-5	JP-5	EMPTY	EMPTY	F-76
Substance Compatible with     Tank and Piping? Yes/No	Yes	Yes	N/A	N/A	Yes
6. Tank (Mark all that apply)			<b>,</b>	<u></u>	
A. Manufacturer and Model	Field- constructed	Field- constructed	Field- constructed	Field- constructed	Field- constructed
B. Underwriters Laboratory No.	N/A	N/A	N/A	N/A	N/A
C. Primary Containment Material or Single-	Walled Tank	***************************************			
i. Fiberglass reinforced plastic					
ii. Steel	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
iii. Other, please specify.					
D. Secondary Containment Material			-		
i. Fiberglass reinforced plastic					
ii. Steel					
iii. Other, please specify.	N/A	N/A	N/A	N/A	N/A
iv. None	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>V</b>
E. Corrosion Protection (except Fiberglass	reinforced plastic	tanks)			
i. Fiberglass coated steel					
ii. Double-walled steel					
iii. Impressed current system					
iv. Sacrificial anode system					
v. Corrosion expert determination					
vi. Other, please specify.	N/A	N/A	N/A	N/A	N/A
7. Piping					
A. Manufacturer and Model	Unknown	Unknown	Unknown	Unknown	Unknown
B. Underwriters Laboratory No.	Unknown	Unknown	Unknown	Unknown	Unknown

Tank Number	Tank No. F-11	Tank No. F-12	Tank No. F-13	Tank No. F-14	Tank No. F-15
C. Primary Containment Material or Single-	Walled Piping	and the second secon	Benthalung Androin (1964) i 1964 an 19	American in the control of the contr	диностичност поставляющий доставлений поставлений поставляющий поставляющий поставляющий поставляющий поставля
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Steel	$\overline{\checkmark}$	<b>✓</b>	<b>✓</b>	<b>✓</b>	$\checkmark$
iv. Other, please specify.	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground
D. Secondary Containment Material			The same and the s		
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Lined trench					
iv. Other, please specify.					
v. None	<b>V</b>	<b>√</b>	<b>√</b>	<b>✓</b>	$\checkmark$
E. Corrosion Protection (except fiberglass r	einforced plastic ¡	oiping)			
i. Fiberglass coated steel					
ii. Impressed current system					
iii. Sacrificial anode system					
iv. Corrosion expert determination					
v. Other, please specify.	N/A	N/A	N/A	N/A	N/A
8. Method of Product Dispensing					
A. Unsafe Suction (valve at tank)					
B. Safe Suction (no valve at tank)					
C. Pressure	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>V</b>	$\checkmark$
D. Not Applicable					
Spill prevention equipment					
A. Manufacturer and Model	N/A	N/A	N/A	N/A	N/A
B. Capacity (gallons)					
10. Overfill prevention equipment	V	$\checkmark$	<b>✓</b>	<b>✓</b>	<b>✓</b>
A. Automatic shutoff device (flapper)     Make and Model					
B. Overfill alarm Make and Model	See cover letter	See cover letter	See cover letter	See cover letter	See cover letter
C. Ball float valve Make and Model					

Tank Number	Tank N	lo. <u>F-11</u>	Tank N	o. <u>F-12</u>	Tank N	lo. <u>F-13</u>	Tank N	lo. <u>F-14</u>	Tank N	lo. F-15
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing	<b>✓</b>	NA	<b>✓</b>	NA	V	NA	<b>\</b>	NA	<b>V</b>	NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	No	NA	No	NA	No
If YES, specify type.										
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the Department. Please specify										

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4			N/A
5			N/A
6			N/A
7			N/A
8			N/A
9			N/A
10			N/A
11			N/A
12			N/A

Facility ID No.	9-102271
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VIII. FINAN	ICIAL RESPONS	SIBILITY (Chec	k all that apply	)	
Commercial Insurance	etter of Credit	Local	Government Bond	d Rating Test	
	urety Bond		Method Allowed (	<u>-</u>	
	rust Fund			Federal Agen	
	The source of th		nga kandangan kandangan kandangan kandangan kangan kangan kangangan kangan kangan kangan kangan kangan kangan k		ر المراجع و المراجع و المراجع المراجع و المراجع و المراجع و المراجع و
	IX. FACILI	TY DRAWING	i graj gravi se ere e e e e e e e e	in a seem to be a	a de la careca de la como de seu de la como
Include a drawing showing the general layout of scale. This drawing should show the following:  A. The property boundaries of the facility; B. Identification of streets, roads and near C. Identification of nearby facilities; D. Tax Map Key (TMK) Numbers; E. Location of buildings at the facility; F. The approximate dimensions of the program of the pr	by bodies of water perty boundaries a pos (identified by r	; and major building	gs;		
Include a map showing the location of the tanks level of detail such that the site would be easily I	with respect to nea				i landmarks to a
XI. DESCRIPTION C	)F TANK(S) (Co	mplete for eac	h tank at this k	ocation)	
Tank Number	Tank No. <u>F-16</u>	Tank No. F-17	Tank No. F-18	Tank No. F-19	Tank No. F-20
Status of Tank (Mark only one)			<del></del>		<b>.</b>
A. Currently in Use	<b>✓</b>		<b>V</b>		
B. Temporarily Out of Use		<b>✓</b>		<b>✓</b>	
2. Date of Installation (month/year)	05/1943	05/1943	05/1943	06/1943	07/1943
3. Estimated Capacity (gallons)	12,700,000	12,700,000	12,700,000	12,700,000	12,700,000
A. Compartmentalized? Yes/No	No	No	No	No	No
Estimated compartment capacity (gallons)					
B. Manifolded? Yes/No	No	No	No	No	No
4. Substance Stored					
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A
B. Diesel					
C. Gasohol (Including ethanol blends) Specify product grade	N/A	N/A	N/A	N/A	N/A
D. Kerosene					

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Tank Number	Tank No. F-16	Tank No. F-17	Tank No. F-18	Tank No. F-19	Tank No. F-20
	Tank No. <u>** 27*</u>	rank No.	Tank No.	rankino.	Tank No.: ==
E. Used Oil/Waste Oil			TR KOOTANOTHI BARRARING RINKARTU OORMIAANIMI		
F. JP-4					ANTONIO CONTROLO CONT
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS#)	N/A	N/A	N/A	N/A	N/A
H. Mixture of Substances (Please specify)	N/A	N/A	N/A	N/A	N/A
I. Other, please specify.	F-76	EMPTY	JP-5	EMPTY	JP-5
Substance Compatible with     Tank and Piping? Yes/No	Yes	N/A	Yes	N/A	Yes
6. Tank (Mark all that apply)					
A. Manufacturer and Model	Field- constructed	Field- constructed	Field- constructed	Field- constructed	Field- constructed
B. Underwriters Laboratory No.	N/A	N/A	N/A	N/A	N/A
C. Primary Containment Material or Single-	Walled Tank				·
i. Fiberglass reinforced plastic					
ii. Steel	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
iii. Other, please specify.				-	
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Steel					
iii. Other, please specify.	N/A	N/A	N/A	N/A	N/A
iv. None	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>√</b>
E. Corrosion Protection (except Fiberglass	reinforced plastic	tanks)			
i. Fiberglass coated steel					
ii. Double-walled steel					
iii. Impressed current system					
iv. Sacrificial anode system					
v. Corrosion expert determination					
vi. Other, please specify.	N/A	N/A	N/A	N/A	N/A
7. Piping					
A. Manufacturer and Model	Unknown	Unknown	Unknown	Unknown	Unknown
B. Underwriters Laboratory No.	Unknown	Unknown	Unknown	Unknown	Unknown

Tank Number	Tank No. F-16	Tank No. <u>F-17</u>	Tank No. F-18	Tank No. F-19	Tank No. F-20
C. Primary Containment Material or Single-	Walled Piping				
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Steel	<b>V</b>	<b>✓</b>	<b>√</b>	$\checkmark$	$\checkmark$
iv. Other, please specify.	Piping is above ground				
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Lined trench					
iv. Other, please specify.					
v. None	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
E. Corrosion Protection (except fiberglass r	einforced plastic p	piping)			
i. Fiberglass coated steel					
ii. Impressed current system					
iii. Sacrificial anode system					
iv. Corrosion expert determination					
v. Other, please specify.	N/A	N/A	N/A	N/A	N/A
8. Method of Product Dispensing					
A. Unsafe Suction (valve at tank)					
B. Safe Suction (no valve at tank)					
C. Pressure	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>▲</b>	<b>\</b>
D. Not Applicable					
9. Spill prevention equipment					
A. Manufacturer and Model	N/A	N/A	N/A	N/A	N/A
B. Capacity (gallons)					
10. Overfill prevention equipment	<b>V</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
A. Automatic shutoff device (flapper)     Make and Model					
B. Overfill alarm Make and Model	See cover letter				
C. Ball float valve Make and Model					

Tank Number	Tank N	lo. <u>F-16</u>	Tank N	lo. <u>F-17</u>	Tank N	lo. <u>F-18</u>	Tank N	lo. F-19	Tank N	lo. <u>F-20</u>
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing	<b>✓</b>	NA	<b>✓</b>	NA	<b>✓</b>	NA		NA	V	NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	No	NA	No	NA	No
If YES, specify type.										
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the Department. Please specify										

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4			N/A
5			N/A
6			N/A
7			N/A
8			N/A
9			N/A
10			N/A
11			N/A
12			N/A

Facility	ID No.	9-102271

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VIII. FINAN	CIAL RESPONS	SIBILITY (Chec	k all that apply	)	e etc. e i sperius a serie i é incerni únice tris, que trotes			
Financial Test of Self Insurance	etter of Credit urety Bond rust Fund	Other	Government Bond Method Allowed ( ot: State or	<del>-</del>	cy			
	IX. FACILI	TY DRAWING						
Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:  A. The property boundaries of the facility;  B. Identification of streets, roads and nearby bodies of water;  C. Identification of nearby facilities;  D. Tax Map Key (TMK) Numbers;  E. Location of buildings at the facility;  F. The approximate dimensions of the property boundaries and major buildings;  G. Location of all USTs and dispenser pumps (identified by number/s consistent with the tank & dispenser pump numbers in Sections XI and XII), and associated pipings; and  H. Indication of North/South direction.								
X. LOCATION MAP  Include a map showing the location of the tanks with respect to nearby landmarks. The map should indicate roads and landmarks to a level of detail such that the site would be easily located.  XI. DESCRIPTION OF TANK(S) (Complete for each tank at this location)								
Tank Number	Tank No. F-ST1	Tank No. F-ST2	Tank No. F-ST3	Tank No. F-ST4	Pipelines Located Outside Tunnel			
Status of Tank (Mark only one)					Outside Funner ::			
A. Currently in Use	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>			
B. Temporarily Out of Use								
2. Date of Installation (month/year)	07/1942	07/1942	07/1942	07/1942				
3. Estimated Capacity (gallons)	400,000	400,000	400,000	400,000	31,665			
A. Compartmentalized? Yes/No	No	No	No	No	No			
Estimated compartment capacity (gallons)								
B. Manifolded? Yes/No	No	No	No	No	No			
4. Substance Stored								
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A			
B. Diesel								
C. Gasohol (Including ethanol blends) Specify product grade	N/A	N/A	N/A	N/A	N/A			

Application for an Underground Storage Tank Permit - Form No. 2 Date: July 16, 2018  $\,$ 

D. Kerosene

Tank No: F-ST1	Tank No. F-ST2	Tank No. <sup>F-ST3</sup>	Tank No. F-ST4	Outside Tunnel
1 1 1				
			<u> </u>	
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
F-24	JP-5	F-76	F-76	F-24, F-76, JP-5
Yes	Yes	Yes	Yes	Yes
Field- constructed	Field- constructed	Field- constructed	Field- constructed	N/A
N/A	N/A	N/A	N/A	N/A
Walled Tank				
			П	П
<u> </u>	<u> </u>	<b>√</b>	<u> </u>	
	_			
N/A	N/A	N/A	N/A	
<b>V</b>	<b>√</b>	<b>√</b>	<b>√</b>	
reinforced plastic	tanks)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
N/A	N/A	N/A		
	_			•
Unknown	Unknown	Unknown	Unknown	Unknown
	N/A F-24 Yes  Field-constructed  N/A Walled Tank  N/A  N/A  Valled Tank  N/A  N/A  N/A  N/A  N/A	N/A N/A  F-24 JP-5  Yes Yes   Field-constructed  N/A N/A  Walled Tank	N/A N/A N/A  F-24 JP-5 F-76  Yes Yes Yes  Field-constructed constructed  N/A N/A N/A  Walled Tank  N/A N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A  N/A N/A	N/A         N/A         N/A         N/A           F-24         JP-5         F-76         F-76           Yes         Yes         Yes    Field-  constructed  Field- constructed  Field- constructed  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/

Tank Number	Tank No. F-ST1	Tank No. F-S12	Tank No. F-ST3	Tank No. F-ST4	Pipelines Located Outside Tunnel
C. Primary Containment Material or Single-	Walled Piping				•
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Steel	<b>✓</b>	V	<b>\</b>	<b>V</b>	<b>✓</b>
iv. Other, please specify.	Piping is above ground	Piping is above ground	Piping is above ground	Piping is above ground	
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Flex piping					
iii. Lined trench					
iv. Other, please specify.					
v. None	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>
E. Corrosion Protection (except fiberglass r	einforced plastic p	piping)			
i. Fiberglass coated steel					
ii. Impressed current system					<b>\</b>
iii. Sacrificial anode system					
iv. Corrosion expert determination					
v. Other, please specify.	N/A	N/A	N/A	N/A	
8. Method of Product Dispensing					
A. Unsafe Suction (valve at tank)					
B. Safe Suction (no valve at tank)					
C. Pressure					
D. Not Applicable	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	
9. Spill prevention equipment					
A. Manufacturer and Model	N/A	N/A	N/A	N/A	N/A
B. Capacity (gallons)					
10. Overfill prevention equipment	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	
A. Automatic shutoff device (flapper)     Make and Model					
B. Overfill alarm Make and Model	See cover letter	See cover letter	See cover letter	See cover letter	
C. Ball float valve Make and Model					

Tank Number	Tank N	lo <sup>F-ST1</sup> _	Tank N	lo. <sup>F.ST2</sup>	Tank N	lo <sup>F-ST3</sup> _	Tank N	lo <sup>F-ST4</sup> _		s Located Tunnel
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing	<b>✓</b>	NA	<b>✓</b>	NA	<b>✓</b>	NA	<b>✓</b>	NA		NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	No	NA	No	NA	N/A
If <b>YES</b> , specify type.										
J. Line tightness testing	NA		NA		NA		NA		NA	<b>✓</b>
K. Other method approved by the Department. Please specify										

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4			N/A
5		·	N/A
6			N/A
7			N/A
8			N/A
9			N/A
10			N/A
11			N/A
12			N/A

Facility ID No.	9-102271
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					emperating the the subsequence and it is subsequently to reference as a productive subsequently and it is a series of the subsequently		
VIII. FINANCIAL RESPONSIBILITY (Check all that apply)							
Commercial Insurance	Commercial Insurance						
Financial Test of Self Insurance	Surety Bond	Other	Method Allowed (	Specify)			
Guarantee	Trust Fund	<b>✓</b> Exemp	ot: State or	<b>✓</b> Federal Agen	су		
	IX. FACILI	TY DRAWING	i Salan di Barangan ya Pangajian ini kunga di pangan katanan ili kungan katanan ili kungan katanan ili kungan				
Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:  A. The property boundaries of the facility; B. Identification of streets, roads and nearby bodies of water; C. Identification of nearby facilities; D. Tax Map Key (TMK) Numbers; E. Location of buildings at the facility; F. The approximate dimensions of the property boundaries and major buildings; G. Location of all USTs and dispenser pumps (identified by number/s consistent with the tank & dispenser pump numbers in Sections XI and XII), and associated pipings; and H. Indication of North/South direction.							
X. LOCATION MAP  Include a map showing the location of the tanks with respect to nearby landmarks. The map should indicate roads and landmarks to a level of detail such that the site would be easily located.  XI. DESCRIPTION OF TANK(S) (Complete for each tank at this location)							
Tank Number	Tank No. PRT. No. Plannord	Tank No. Ewa	Tank No. Loop	Tank No. Ewa	Tank No		
Status of Tank (Mark only one)	•						
A. Currently in Use	<b>✓</b>	<b>V</b>	<b>√</b>	<b>✓</b>			
B. Temporarily Out of Use							
Date of Installation (month/year)	07/2010	05/2006	09/2011	06/2006			
Estimated Capacity (gallons)	2,000	4,000	236,579	59,500			
A. Compartmentalized? Yes/No	No	No	No	No	N/A		
Estimated compartment capacity (gallons)							
B. Manifolded? Yes/No	No	No	No	No	N/A		
Substance Stored				<u> </u>			
A. Gasoline (Specify product grade)	N/A	N/A	N/A	N/A	N/A		
B. Diesel							
C. Gasohol (Including ethanol blends) Specify product grade	N/A	N/A	N/A	N/A	N/A		

Application for an Underground Storage Tank Permit - Form No. 2 Date: July 16, 2018

D. Kerosene

Tank Number	Tank No. PRT.	Tank No. PRT-	Tank No. Loop	Tank No. Flying Loop	Tank No
E. Used Oil/Waste Oil					
F. JP-4					
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS#)	N/A	N/A	N/A	N/A	
H. Mixture of Substances (Please specify)	N/A	N/A	N/A	N/A	
Other, please specify.	F-24	F-24	F-24	F-24	
Substance Compatible with     Tank and Piping? Yes/No	Yes	Yes	Yes	Yes	N/A
6. Tank (Mark all that apply)	·				
A. Manufacturer and Model	Steel Tank Institute/STI-P3	Steel Tank Institute/STI-P3	N/A	N/A	
B. Underwriters Laboratory No.	UL-58	UL-58	N/A	N/A	
C. Primary Containment Material or Single-	Walled Tank	-			
i. Fiberglass reinforced plastic					
ii. Steel	<b>✓</b>	<b>✓</b>			
iii. Other, please specify.	N/A	N/A	N/A	N/A	
D. Secondary Containment Material					
i. Fiberglass reinforced plastic					
ii. Steel	<b>✓</b>	<b>√</b>			
iii. Other, please specify.	N/A	N/A			
iv. None					
E. Corrosion Protection (except Fiberglass	reinforced plastic	tanks)			
i. Fiberglass coated steel					
ii. Double-walled steel	<b>√</b>	<b>√</b>			
iii. Impressed current system	<b>√</b>	<b>√</b>			
iv. Sacrificial anode system					
v. Corrosion expert determination					
vi. Other, please specify.	N/A	N/A			
7. Piping					
A. Manufacturer and Model	Unknown	Unknown	Unknown	Unknown	
B. Underwriters Laboratory No.	Unknown	Unknown	Unknown	Unknown	

Tank Number	Tank No. Head	PRT. Tank No. Ewa	Diamond Tank No: Loop	Tank No. Flying	Tank No			
C. Primary Containment Material or Single-Walled Piping								
i. Fiberglass reinforced plastic								
ii. Flex piping								
iii. Steel	$\overline{V}$	$\overline{\checkmark}$	$\overline{\checkmark}$	<b>V</b>				
iv. Other, please specify.	N/A	N/A	N/A	N/A				
D. Secondary Containment Material								
i. Fiberglass reinforced plastic								
ii. Flex piping								
iii. Lined trench	<b>✓</b>	<b>✓</b>						
iv. Other, please specify.	N/A	N/A	N/A	N/A				
v. None			<b>✓</b>	<b>V</b>				
E. Corrosion Protection (except fiberglass reinforced plastic piping)								
i. Fiberglass coated steel		-						
ii. Impressed current system	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>				
iii. Sacrificial anode system								
iv. Corrosion expert determination								
v. Other, please specify.	N/A	N/A	N/A	N/A				
8. Method of Product Dispensing								
A. Unsafe Suction (valve at tank)								
B. Safe Suction (no valve at tank)								
C. Pressure			<b>✓</b>	$\checkmark$				
D. Not Applicable	<b>✓</b>	<b>√</b>						
Spill prevention equipment								
A. Manufacturer and Model	N/A	N/A	N/A	N/A				
B. Capacity (gallons)								
10. Overfill prevention equipment	<b>✓</b>	<b>✓</b>						
A. Automatic shutoff device (flapper) Make and Model								
B. Overfill alarm Make and Model	Veeder-Root TLS-350 PLUS	Veeder-Root TLS-350 PLUS						
C. Ball float valve Make and Model								

Tank Number	Tank N	PRT- Diamond Head	Tank N	PRT- IO. Ewa	Tank N	Diamond Head Piping Loop	Tank N	O . Evra Piping	Tank N	lo
11. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing		NA		NA		NA		NA		NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring	<b>✓</b>		$\checkmark$							
H. Statistical inventory reconciliation										
I. Automatic line leak detectors (Yes/No)	NA	No	NA	No	NA	N/A	NA	N/A	NA	N/A
If YES, specify type.										
J. Line tightness testing	NA	<b>✓</b>	NA	<b>✓</b>	NA	V	NA	V	NA	
K. Other method approved by the Department. Please specify	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Dispenser Unit	Manufacturer of Dispenser	Dispenser Serial #	Under Dispenser Containment installed (Yes/No) - Installation Date
1			N/A
2			N/A
3			N/A
4			N/A
5			N/A
6			N/A
7			N/A
8			N/A
9			N/A
10			N/A
11			N/A
12			N/A

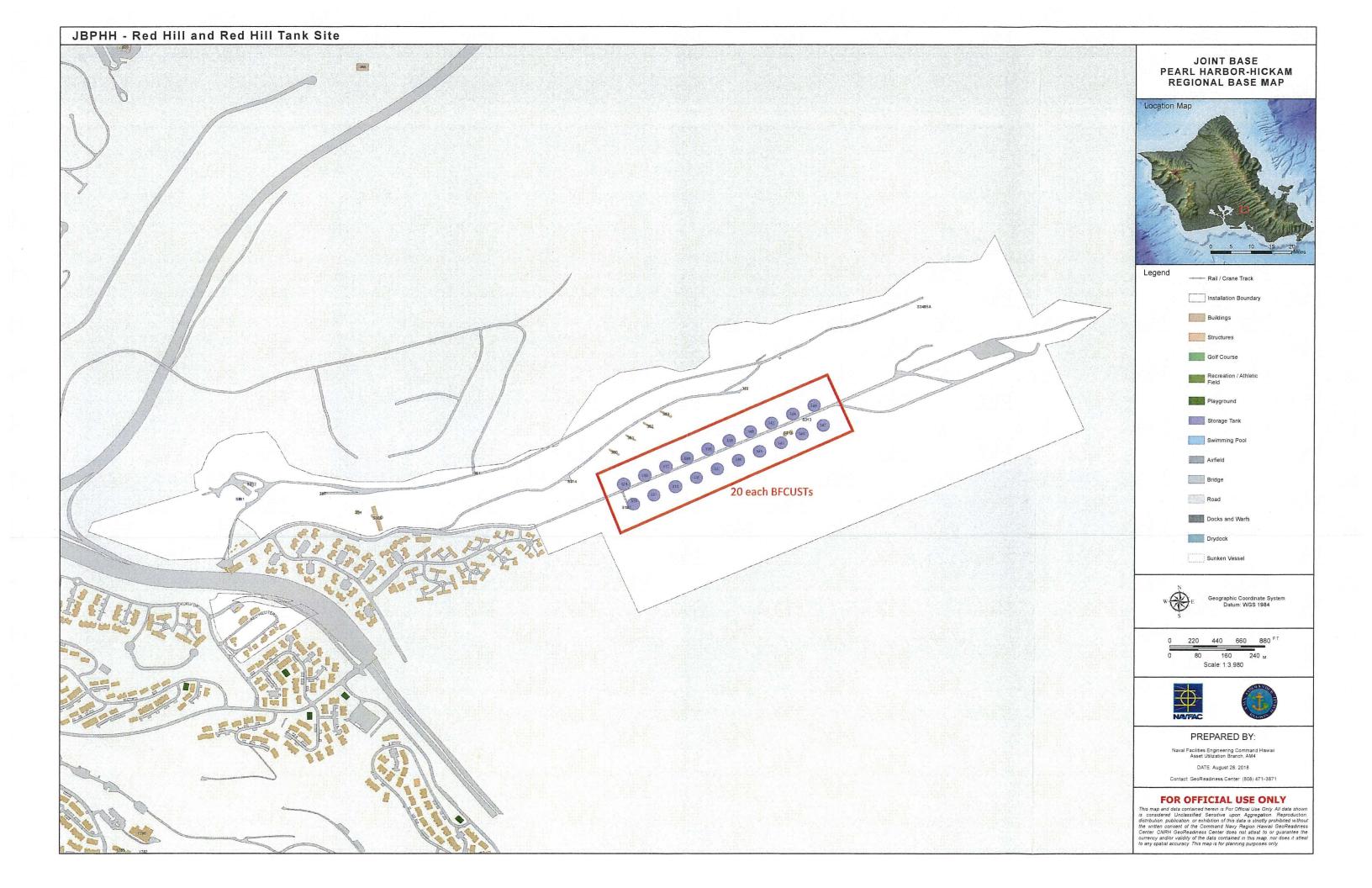
### XIII. OPERATOR'S CERTIFICATION (Read and sign after completing all sections)

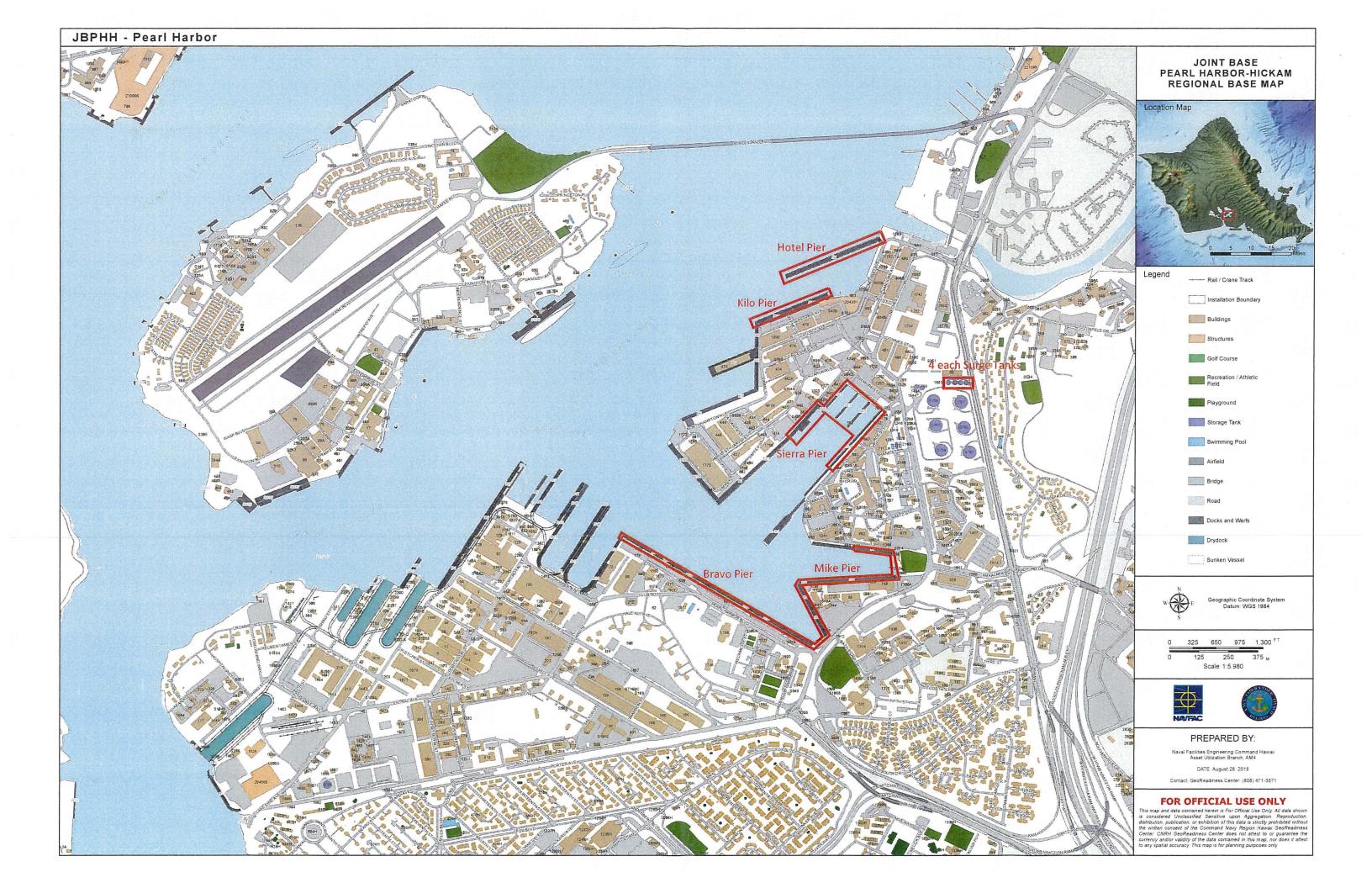
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

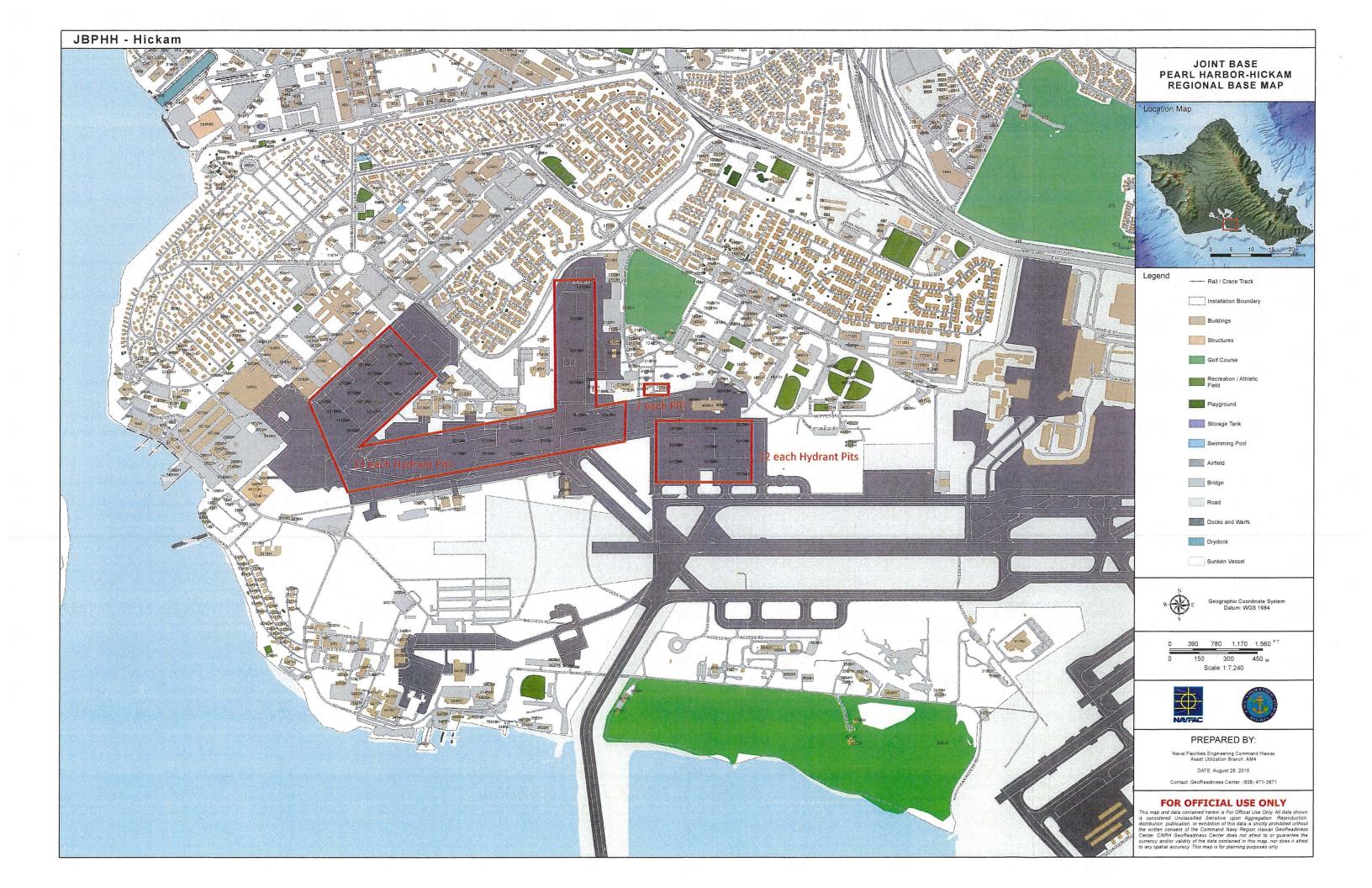
	LCDR BI	Regional Fuels Officer Official Title			
Name of opera	ator or operator's authorized				
Signature			Date Signed		
Status of Sign	atory (Mark as appropriate)				
1.	Corporation:	principal executive officer duly authorized representative			
2.	Partnership:	general partner			
3.	Sole proprietorship:	proprietor			
4.	Government entity:	principal executive officer			
		☐ranking elected official ☑duly authorized employee			
		Eddiy datherized employee			
	rmation is true, accurate, an		le for obtaining the information, I believe that the  Regional Engineer		
Name of owner	er or owner's authorized repr	Official Title			
TNAME OF OWNE	Man Man Sauthonized text	escriptive (Citility of Type)	15 May 19		
Signature			Date Signed		
Status of Sign	atory (Mark as appropriate)				
1.	Corporation:	principal executive officer duly authorized representative			
2.	Partnership:	☐general partner			
3.	Sole proprietorship:	proprietor			
4.	Government entity:	principal executive officer			
		ranking elected official			
		LIduly authorized employee			

CNRH LETTER 5750 SER N4/0533 OF MAY 15, 2019 IS INCORORATED BY REFERENCE AND MADE A PART OF THIS APPLICATION

# Enclosure 2

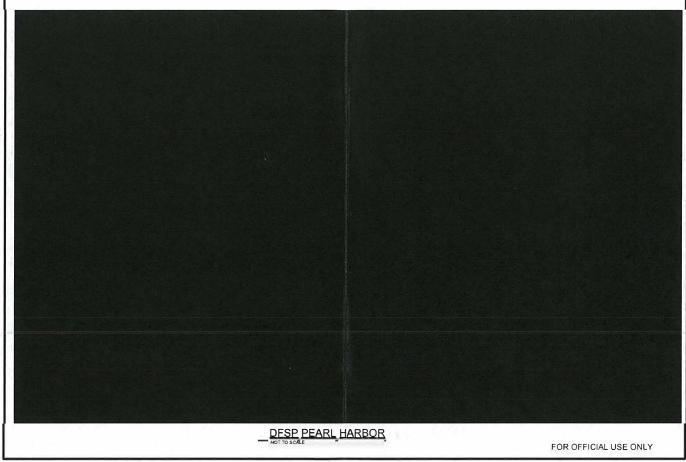






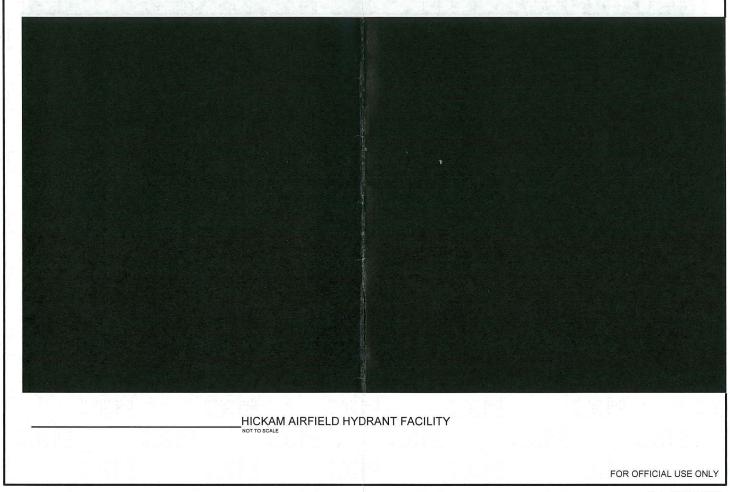
# Exemption (b)(3)

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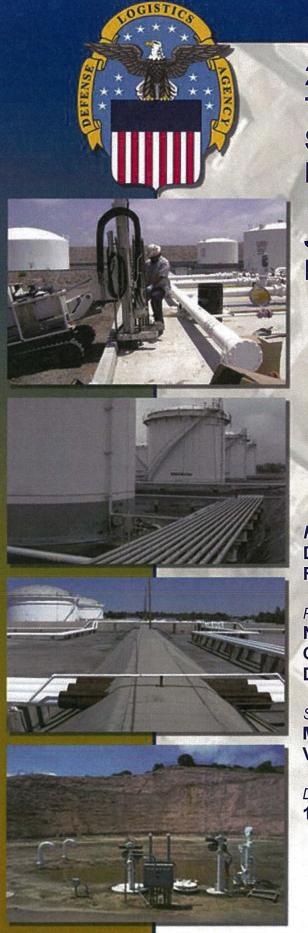
Date: 23 Feb 2017

# FOR OFFICIAL USE ONLY: PRIVILEGED, subject to claim under 5 U.S.C. 552(b)(3); 10 U.S.C. 130(e). Contains information subject to a claim of privilege under U.S.C. 130(e), such information and the pages containing such claims remain the property of the United States Navy and cannot be released without the review and written permission of the United States Navy



Date: 23 Feb 2017

# Exemption (b)(3)



2019 ANNUAL LEAK DETECTION TESTING REPORT OF 35 SECTIONS (57,136 FEET) OF PETROLEUM PIPELINES

JOINT BASE PEARL HARBOR -HICKAM, HAWAII

Prepared for:
Defense Logistics Agency Energy
Fort Belvoir, Virginia

Prepared under:

Naval Facilities Engineering Command Atlantic Contract N62470-16-D-9007, Delivery Order N6247019F4016

Submitted by:

Michael Baker International Virginia Beach, Virginia

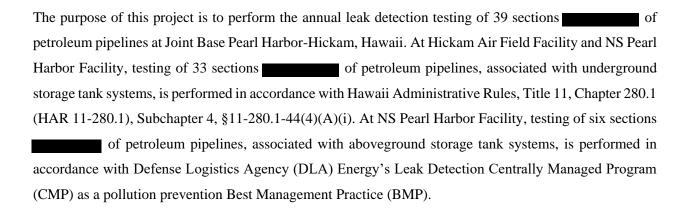
Date:

14 March 2019

Michael Baker

Project: 170482 Task: 4.1.071A

#### **EXECUTIVE SUMMARY**



Upon mobilization and system review, the 39 sections were revised as follows:

- The following five sections were not tested due to being temporarily out-of-service:
  - VS 8/9 VC 38
  - o Tank 55 Valve 1406B ADIT 1 PH
  - *Tank 54 VS 8/9*
  - o Truck Rack VC 12
  - VS 8/9 VC 12 (FORFAC)
- The length of one section (*Truck Fill Loop*) was permanently decreased from due to a new isolation valve being installed.
- One section (*Hickam Transfer VS 50 Filter Pad*) was temporarily separated and tested as two sections (*Hickam Transfer VS 50 IVP 78* and *Hickam Transfer IVP 78 Filter Pad*).

The final 2019 annual leak detection testing event included 35 sections (57,136 feet) of petroleum pipelines.

The annual leak detection testing of 34 sections of petroleum pipelines was performed, by (b)(4) between 8 and 28 January 2019, with no detectable leak above the test methods' minimum detectable leak rates (MDLRs), resulting in passing tests. The annual leak detection testing of the remaining one section, Tank 47 - VS 8/9, of petroleum pipeline was performed, by (b)(4) on 24 January 2019, with a detectable leak above the test method's MDLR, resulting in a failing test. A leak confirmation/leak locate is being performed under a separate project.

In accordance with HAR 11-280.1-44(4)(A)(i), leak detection testing of the following three sections of petroleum pipelines must be performed prior to returning to service:

- VS 8/9 VC 38
- Tank 55 Valve 1406B ADIT 1 PH
- Tank 54 VS 8/9

In accordance with DLA Energy's Leak Detection CMP, as a pollution prevention BMP, leak detection testing of the following two sections of petroleum pipelines should be performed prior to returning to service.

- Truck Rack VC 12
- VS 8/9 VC 12 (FORFAC)

In accordance with HAR 11-280.1-44(4)(A)(i), semi-annual leak detection testing of the following four sections of petroleum pipelines, must be initiated on or before the semi-annual anniversary date of 10 July 2019 due to the MDLRs exceeding the maximum leak detection rate per section volume in accordance with HAR for annual testing.

- Hydrant Issue Type III PH to IVP 1 and 4 to HSV Issue
- Hydrant Return IVP 2 to Type III PH
- Hydrant Issue IVP 1 to IVP 2
- AMC Hydrant Loop Outlet Row 1

In accordance with HAR 11-280.1-44(4)(A)(i), annual leak detection testing of 33 sections petroleum pipelines must be initiated on or before the anniversary date of 8 January 2020.

In accordance with DLA Energy's Leak Detection CMP, as a pollution prevention BMP, the annual leak detection testing of six sections of petroleum pipelines should be initiated on or before the anniversary date of 17 January 2020.

The semi-annual testing will be repeated in 2019 and the annual testing will be repeated in 2020 under the DLA Energy's Leak Detection CMP, in accordance with HAR 11-280.1-44(4)(A)(i) and as a pollution prevention BMP; other regulatory obligations are the responsibility of the base and the service.

Exemption (b)(3)

Table 1-1: Project Scope Summary: Hickam Air Field Facility

Fuel System	Test Section	Designation <sup>1</sup>	Product	Diameter (Inches)	Length (Feet)	Total Length (Feet)	Volume (Gallons)	Comments
	1	Truck Fill Loop	F-24					Total length permanently decreased from due to new isolation valve
	2	Hydrant Issue – Type III PH to IVP 1 and 4 to HSV Issue	F-24			_		None
	3	Hydrant Return – IVP 2 to Type III PH	F-24					None
	4	Hydrant Issue – IVP 1 to IVP 2	F-24					None
	5	Hydrant Return – IVP 3 to IVP 2	F-24					None
	6	Type III PH Generator Fill	F-24					None
	7	Hickam Transfer VS 14 – VS 50 <sup>2</sup>	F-24					None
	8	Hickam Transfer VS 50 – Filter Pad	F-24					Temporarily tested as two sections (8A and 8B)
F-24 - Pipeline -	9	Hydrant Issue – IVP 2 to IVP 3	F-24					None
Type III Hydrant / Pearl Harbor Receipt	10	Type III PRT Issue	F-24					None
Line	11	Filter Pad to AMC PH	F-24					None
	12	AMC Generator Fill	F-24					(1) skillet required
	13	AMC PRT Issue	F-24					None
	14	AMC Hydrant Loop Outlet Row 1	F-24					None
	15	AMC Hydrant Loop Outlet Rows 2 & 3	F-24					None
	16	Type III PH to AMC PH – Crossover (Issue and Return)	F-24					None
	17	Filter Pad to Type III PH	F-24					None
	18	Truck Offload Stand to Filter Pad	F-24					None
	19	HSV Return to Type III PH	F-24					None
	20	AMC AST 1 and 2 Issue Line	F-24					None
	21	AMC AST 1 and 2 Receipt Line	F-24	<u> </u>				Temporarily installed jumper hose between receipt lines

### Table Note:

- 1. Sections associated with the F-24 UST AHS are tested in accordance with HAR 11-280.1-44(4)(A)(i).
- 2. Section designation updated.

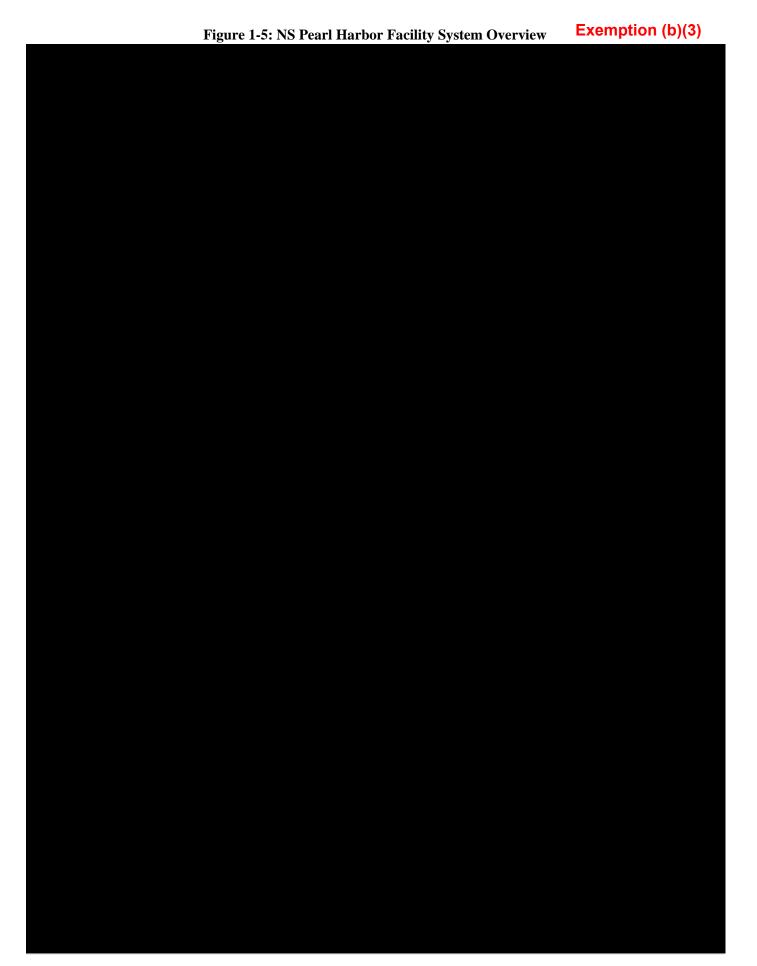
Exemption (b)(3)

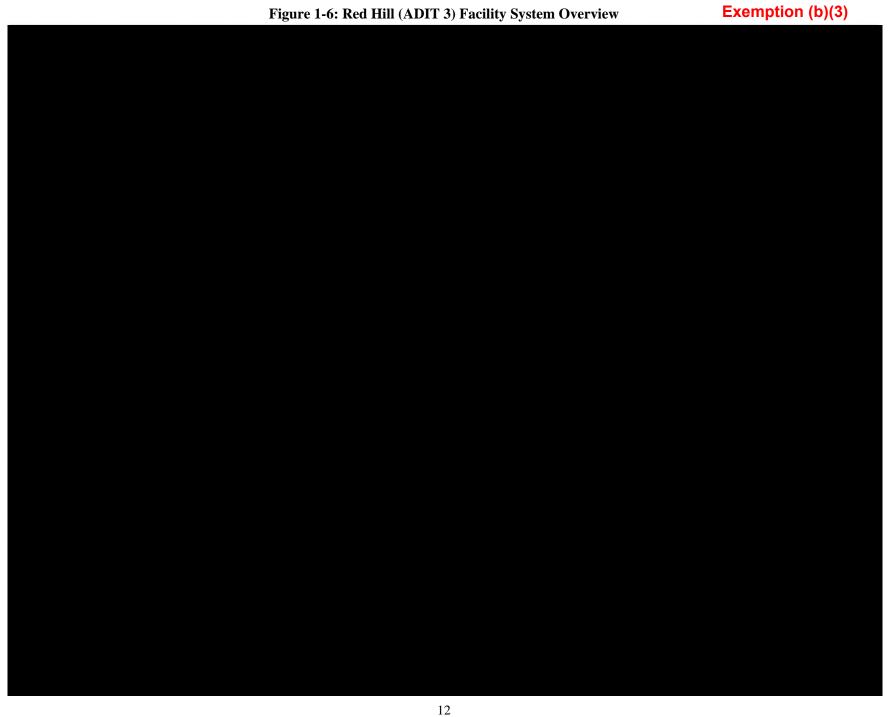
Table 1-2: Project Scope Summary: NS Pearl Harbor Facility

Fuel System	Test Section	Designation <sup>1, 2</sup>	Product	Diameter (Inches)	Length (Feet)	Total Length (Feet)	Volume (Gallons)	Comments
	1	Truck Rack – VC 1 (F-24 Issue)	F-24					Temporarily disassembled from additive injector port
	2	VS 8/9 – VC 1 <sup>3</sup>	F-24					None
	3	Tank 46 – Valve 1421C	F-24					None
	4	Truck Rack – VS 1C (F-24 Issue)	F-24					None
	5	Truck Rack – VS 1C (F-76 Issue)	F-76					Temporarily removed thermal relief piping
	6	Tank 48 – VS 8/9 <sup>3</sup>	F-76					None
	7	Truck Rack – VS 1C (JP-5 Issue)	JP-5					None
	8	Tank 301 – VS 1A <sup>2</sup>	MP					Temporarily removed camlock fitting
	9	Truck Rack – VC 12 <sup>2</sup>	FOR					Not tested due to being temporarily out-of-service
	10	Truck Rack – VS 1A <sup>2</sup>	MP					(1) skillet required
Transfer Pipelines	11	VS 8/9 – VC 38 <sup>3</sup>	F-76					Not tested due to being temporarily out-of-service
	12	Tank 55 Valve 1406B – ADIT 1 PH	JP-5					(2) skillets required  Not tested due to being temporarily out-of-service
	13	Tank 53 – North Road Tie In (NI1)	F-24					None
	14	VS 1A – VS 2A <sup>2</sup>	MP					None
	15	Tank 54 – VS 8/9 <sup>3</sup>	F-76					Not tested due to being temporarily out-of-service
	16	VS 8/9 – VC 12 (FORFAC) <sup>2, 3</sup>	FOR					(1) and (1) skillet required  Not tested due to being temporarily out-of-service
	17	Tank 47 – VS 8/9 <sup>3</sup>	F-76					None
	18	ADIT 3 – Tank S311 <sup>2</sup>	FOR					None

#### Table Note:

- 1. Sections associated with the F-24 and JP-5 UST AHSs are tested in accordance with HAR 11-280.1-44(4)(A)(i).
- 2. Sections associated with the MP and FOR AST systems are tested in accordance with the DLA Energy's Leak Detection CMP, as a pollution prevention BMP.
- 3. Section designation updated.



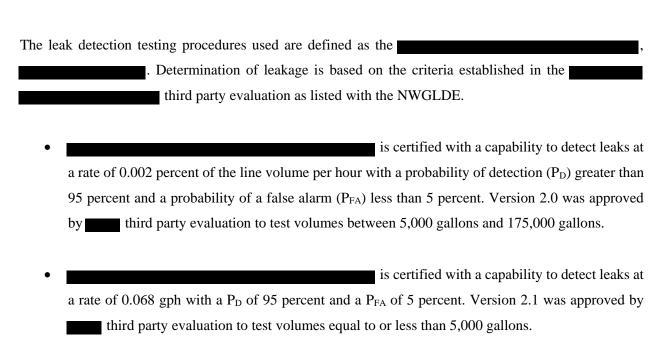


### 1.5 Project Team

Michael Baker subcontracted to perform the leak detection testing. Field-testing oversight, coordination with facility fuel representatives, quality assurance/quality controls, and final report preparation and submission were provided by Michael Baker personnel.

### 1.6 Qualifications of Testing Procedures Used

The leak detection testing in this report was performed at normal operating pressure or higher with a test method listed with the National Work Group on Leak Detection Evaluations (NWGLDE) as described below.



### Table 2-1: Results Summary: Hickam Air Field Facility

### Exemption (b)(3)

Fuel System	Test Section	Designation <sup>1</sup>	Product	Length (Feet)	Volume (Gallons)	Reference Pressure <sup>2</sup> (psi)	Certified MDLR <sup>3</sup> (gph)	Test Date	Result
	1	Truck Fill Loop	F-24				0.26	11 January 2019	Pass
	2	Hydrant Issue – Type III PH to IVP 1 and 4 to HSV Issue	F-24				$0.67^{5}$	10 January 2019	Pass
	3	Hydrant Return – IVP 2 to Type III PH	F-24				$0.67^{5}$	10 January 2019	Pass
	4	Hydrant Issue – IVP 1 to IVP 2	F-24				$1.09^{5}$	10 January 2019	Pass
	5	Hydrant Return – IVP 3 to IVP 2	F-24				0.39	10 January 2019	Pass
	6	Type III PH Generator Fill	F-24				0.07	9 January 2019	Pass
	7	Hickam Transfer VS 14 – VS 50	F-24				0.43	22 January 2019	Pass
	8A <sup>8</sup>	Hickam Transfer VS 50 – IVP 78	F-24				0.27	14 January 2019	Pass
	8B <sup>8</sup>	Hickam Transfer IVP 78 – Filter Pad	F-24				0.20	14 January 2019	Pass
F-24 - Pipeline -	9	Hydrant Issue – IVP 2 to IVP 3	F-24				0.48	10 January 2019	Pass
Type III	10	Type III PRT Issue	F-24				0.07	9 January 2019	Pass
Hydrant / Pearl Harbor Receipt	11	Filter Pad to AMC PH	F-24				0.07	11 January 2019	Pass
Line	12	AMC Generator Fill	F-24				0.07	9 January 2019	Pass
	13	AMC PRT Issue	F-24				0.07	9 January 2019	Pass
	14	AMC Hydrant Loop Outlet Row 1	F-24				$0.53^{5}$	15 January 2019	Pass
	15	AMC Hydrant Loop Outlet Rows 2 & 3	F-24				0.41	15 January 2019	Pass
	16	Type III PH to AMC PH – Crossover (Issue and Return)	F-24				0.07	9 January 2019	Pass
	17	Filter Pad to Type III PH	F-24				0.07	9 January 2019	Pass
	18	Truck Offload Stand to Filter Pad	F-24				0.07	11 January 2019	Pass
	19	HSV Return to Type III PH	F-24				0.07	11 January 2019	Pass
	20	AMC AST 1 and 2 Issue Line	F-24				0.11	8 January 2019	Pass
	21	AMC AST 1 and 2 Receipt Line	F-24				0.07	8 January 2019	Pass

### Table Notes:

psi = pounds per square inch

- 1. All sections associated with the F-24 UST AHS are tested in accordance with HAR 11-280.1-44(4)(A)(i).
- 2. Basis for reference pressure: base pipeline integrity management plan, unless otherwise noted.
- 3. MDLR rounded to the hundredth decimal place.

4.

- 5. MDLR exceeds maximum leak detection rate per section volume in accordance with HAR for annual testing.
- 6. Basis for reference pressure: vendor test methodology.
- 8. Test Section 8 temporarily tested as two sections.

### Table 2-2: Results Summary: NS Pearl Harbor Facility

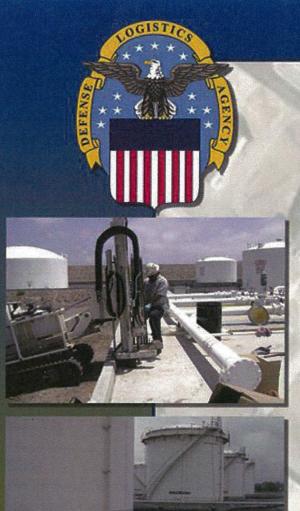
Exemption (b)(3)

Fuel System	Test Section	Designation <sup>1, 2</sup>	Product	Length (Feet)	Volume (Gallons)	Reference Pressure <sup>3</sup> (psi)	Certified MDLR <sup>4</sup> (gph)	Test Date	Result
	1	Truck Rack – VC 1 (F-24 Issue)	F-24				0.07	18 January 2019	Pass
	2	VS 8/9 – VC 1	F-24				0.07	22 January 2019	Pass
	3	Tank 46 – Valve 1421C	F-24				0.07	18 January 2019	Pass
	4	Truck Rack – VS 1C (F-24 Issue)	F-24				0.07	18 January 2019	Pass
	5	Truck Rack – VS 1C (F-76 Issue)	F-76				0.07	23 January 2019	Pass
	6	Tank 48 – VS 8/9	F-76				0.07	23 January 2019	Pass
	7	Truck Rack – VS 1C (JP-5 Issue)	JP-5				0.07	23 January 2019	Pass
	8	Tank 301 – VS 1A <sup>2</sup>	MP				0.07	25 January 2019	Pass
Transfer	9	Truck Rack – VC 12 <sup>2</sup>	FOR				N/A	Not tested <sup>5</sup>	N/A
Pipelines	10	Truck Rack – VS 1A <sup>2</sup>	MP				0.07	25 January 2019	Pass
	11	VS 8/9 – VC 38	F-76				N/A	Not tested <sup>5</sup>	N/A
	12	Tank 55 Valve 1406B – ADIT 1 PH	JP-5				N/A	Not tested <sup>5</sup>	N/A
	13	Tank 53 – North Road Tie In (NI1)	F-24				0.07	22 January 2019	Pass
	14	VS 1A – VS 2A <sup>2</sup>	MP				0.07	28 January 2019	Pass
	15	Tank 54 – VS 8/9	F-76				N/A	Not tested <sup>5</sup>	N/A
	16	VS 8/9 – VC 12 (FORFAC) <sup>2</sup>	FOR				N/A	Not tested <sup>5</sup>	N/A
	17	Tank 47 – VS 8/9	F-76				N/A	24 January 2019	Fail <sup>6</sup>
	18	ADIT 3 – Tank S311 <sup>2</sup>	FOR				0.07	17 January 2019	Pass

#### Table Notes:

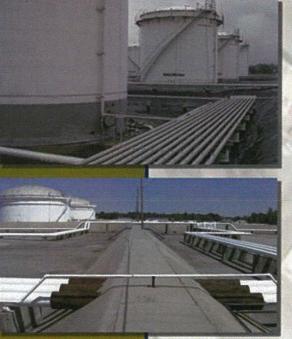
psi = pounds per square inch

- 1. Sections associated with the F-24 and JP-5 UST AHSs are tested in accordance with HAR 11-280.1-44(4)(A)(i).
- 2. Sections associated with the MP and FOR AST systems are tested in accordance with the DLA Energy's Leak Detection CMP, as a pollution prevention BMP.
- 3. Basis for reference pressure: base pipeline integrity management plan.
- 4. MDLR rounded to the hundredth decimal place.
- 5. Not tested due to being temporarily out-of-service.
- 6. Failed due to detectable leak above the test method's MDLR.



2019 ANNUAL STATIC LIQUID PRESSURE TESTING REPORT OF THREE SECTIONS (20,706 FEET) OF PETROLEUM PIER PIPELINES

JOINT BASE PEARL HARBOR -HICKAM, HAWAII



Prepared for:
Defense Logistics Agency Energy
Fort Belvoir, Virginia

Prepared under:

Naval Facilities Engineering Command Atlantic Contract N62470-16-D-9007, Delivery Order N6247019F4016

Submitted by:

Michael Baker International Virginia Beach, Virginia

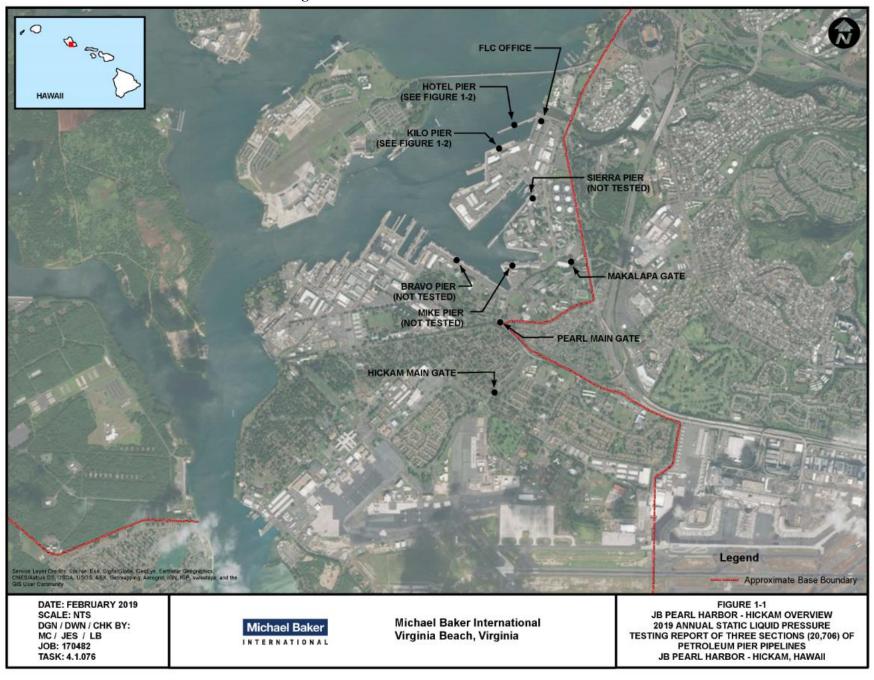
Date:

18 March 2019

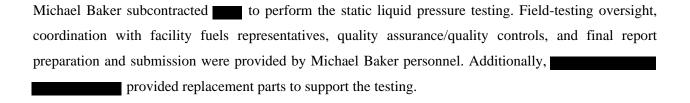
Michael Baker

Project: 170482 Task: 4.1.076

Figure 1-1: JB Pearl Harbor-Hickam Overview



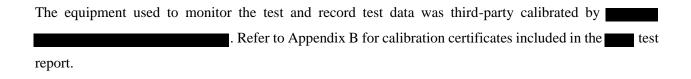
### 1.5 Project Team



#### 1.6 Qualifications of Tester and Testing Procedures Used

Testing was performed per the requirements of 33 CFR 156.170. The test equipment, inspections, procedures, and passing criteria used are in conformance with the following:

- American Petroleum Institute Recommended Practice 1110: Pressure Testing of Liquid Petroleum Pipelines.
- Title 49 CFR Part 195, Subpart E: Pressure Testing.
- California State Fire Marshal's Pressure Testing Requirements for Hazardous Liquid Pipelines.
- American Society of Mechanical Engineers (ASME) B31.3: Process Piping.
- ASME B31.4: Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids.



The supervisor from that was on site during testing has over 20 years of static liquid pressure testing experience with a working knowledge of the applicable regulations and test standards.

### **Table 2-1: Results Summary**

### Exemption (b)(3)

Fuel System	Designation	Product	Length (feet)	Volume (gallons)	Reference Pressure <sup>1</sup> (psi)	Test Date	Result	Comments
	Hotel Pier to PH 59 (JP-5) (Inside and Outside Loop & Tank 55 Fill Line)	· · · · · · · · · · · · · · · · · · ·				Not tested <sup>2</sup>	N/A	None
Transfer Pipelines	Hotel Pier to PH 59 (F-24) (Inside and Outside Loop)	F-24				14 January 2019	Pass (see comments)	Identified weeping pipe plugs in the riser blinds at Stations 2, 5, 6, 26, 28, & 31.3
						29 January 2019	Pass	Replaced plugs and performed 1-hour confirmation test on affected segment only.
	Hotel Pier to PH 59 (F-76)					17 January 2019	Pass (see comments)	Identified weeping hose connection swivels at Stations 11 & 14 and weeping hriser drain valves at Stations 15 & 29.3
	(Inside and Outside Loop)	F-76				29 January 2019	Pass	Replaced swivels with blind flanges and replaced valves. Performed 1-hour confirmation test on affected segment only.
	Kilo Pier	F-76				18 January 2019	Pass	None
	Mike Pier	F-76				Not tested <sup>2</sup>	N/A	None
	Bravo Pier	F-76				Not tested <sup>2</sup>	N/A	None
	Sierra Pier	F-76				Not tested <sup>2</sup>	N/A	None

Table Notes:

N/A = not applicable psi = pounds per square inch

- 1. Basis of reference pressure: 1.5 times the MAWP provided by base personnel.
- Temporarily out-of-service for repairs.
   All visually identified weeps were contained in a pipe trench or by absorbent pads.

#### 3.0 CONCLUSIONS AND RECOMMENDATIONS

### 3.1 <u>Conclusions</u>

The three sections (20,706 feet) of petroleum pier pipelines passed the 2019 annual static liquid pressure testing. Four sections of petroleum pier pipelines were not tested.

#### 3.2 **Recommendations**

In accordance with 33 CFR 156.170, annual static liquid pressure testing of the following four sections of petroleum pier pipelines must be performed prior to returning to service:

- Hotel Pier to PH 59 (JP-5) (Inside and Outside Loop & Tank 55 Fill Line)
- Bravo Pier
- Sierra Pier
- Mike Pier

In accordance with 33 CFR 156.170, annual static liquid pressure testing of seven sections petroleum pier pipelines must be initiated on or before the anniversary date of 14 January 2020 or not less than 30 days prior to the first transfer conducted past one year from 14 January 2019. The annual static liquid pressure testing will be repeated in 2020, under the DLA Energy's Leak Detection Centrally Managed Program, in accordance with 33 CFR 156.170; other regulatory obligations are the responsibility of the base and the service.



### APPENDIX A

**CITED REGULATIONS** 

under §§154.710 and 155.700 of this chapter, has filled out and signed the declaration of inspection form described in paragraph (c) of this section.

- (b) No person in charge may sign the declaration of inspection unless he or she has determined by inspection, and indicated by initialling in the appropriate space on the declaration of inspection form, that the facility or vessel, as appropriate, meets § 156.120.
- (c) The declaration of inspection may be in any form but must contain at least:
- (1) The name or other identification of the transferring vessel or facility and the receiving vessel or facility;
- (2) The address of the facility or location of the transfer operation if not at a facility:
- (3) The date and time the transfer operation is started;
- (4) A list of the requirements in §156.120 with spaces on the form following each requirement for the person in charge of the vessel or facility to indicate by initialling that the requirement is met for the transfer operation; and
- (5) A space for the date, time of signing, signature, and title of each person in charge during transfer operations on the transferring vessel or facility and a space for the date, time of signing, signature, and title of each person in charge during transfer operations on the receiving facility or vessel certifying that all tests and inspections have been completed and that they are both ready to begin transferring product; and
- (6) The date and time the transfer operation is completed.
- (d) The form for the declaration of inspection may incorporate the declaration-of-inspection requirements under 46 CFR 35.35–30.
- (e) The vessel and facility persons in charge shall each have a signed copy of the declaration of inspection available for inspection by the COTP during the transfer operation.
- (f) The operators of each vessel and facility engaged in the transfer operation shall retain a signed copy of the declaration of inspection on board the

vessel or at the facility for at least 1 month from the date of signature.

[CGD 75-124, 45 FR 7177, Jan. 31, 1980, as amended by CGD 86-034, 55 FR 36256, Sept. 4, 1990; CGD 93-056, 61 FR 41461, Aug. 8, 1996]

### § 156.160 Supervision by person in charge.

- (a) No person may connect or disconnect a hose, top off a tank, or engage in any other critical procedures during the transfer operation unless the person in charge, required by \$156.120(s), supervises that procedure.
- (b) No person may start the flow of oil or hazardous material to or from a vessel unless instructed to do so by either person in charge.
- (c) No person may transfer oil or hazardous material to or from a vessel unless each person in charge is in the immediate vicinity and immediately available to the transfer personnel.

[CGD 75–124, 45 FR 7177, Jan. 31, 1980, as amended by CGD 86–034, 55 FR 36256, Sept. 4, 1990]

### § 156.170 Equipment tests and inspections.

- (a) Except as provided in paragraph (d) of this section, no person may use any equipment listed in paragraph (c) of this section for transfer operations unless the vessel or facility operator, as appropriate, tests and inspects the equipment in accordance with paragraphs (b), (c) and (f) of this section and the equipment is in the condition specified in paragraph (c) of this section.
- (b) During any test or inspection required by this section, the entire external surface of the hose must be accessible.
- (c) For the purpose of paragraph (a) of this section:
- (1) Each nonmetallic transfer hose must:
- (i) Have no unrepaired loose covers, kinks, bulges, soft spots or any other defect which would permit the discharge of oil or hazardous material through the hose material, and no gouges, cuts or slashes that penetrate the first layer of hose reinforcement as defined in §156.120(i).
- (ii) Have no external deterioration and, to the extent internal inspection

#### § 156.170

is possible with both ends of the hose open, no internal deterioration;

- (iii) Not burst, bulge, leak, or abnormally distort under static liquid pressure at least 1½ times the maximum allowable working pressure; and
- (iv) Hoses not meeting the requirements of paragraph (c)(1)(i) of this section may be acceptable after a static liquid pressure test is successfully completed in the presence of the COTP. The test medium is not required to be water.
- (2) Each transfer system relief valve must open at or below the pressure at which it is set to open;
- (3) Each pressure gauge must show pressure within 10 percent of the actual pressure;
- (4) Each loading arm and each transfer pipe system, including each metallic hose, must not leak under static liquid pressure at least 1½ times the maximum allowable working pressure; and
- (5) Each item of remote operating or indicating equipment, such as a remotely operated valve, tank level alarm, or emergency shutdown device, must perform its intended function.
- (d) No person may use any hose in underwater service for transfer operations unless the operator of the vessel or facility has tested and inspected it in accordance with paragraph (c)(1) or (c)(4) of this section, as applicable.
- (e) The test fluid used for the testing required by this section is limited to liquids that are compatible with the hose tube as recommended by the hose manufacturer.
- (f) The frequency of the tests and inspections required by this section must be:
- (1) For facilities, annually or not less than 30 days prior to the first transfer conducted past one year from the date of the last tests and inspections:
- (2) For a facility in caretaker status, not less than 30 days prior to the first transfer after the facility is removed from caretaker status; and
- (3) For vessels, annually or as part of the biennial and mid-period inspections.
- (g) If a facility or vessel collects vapor emitted to or from a vessel cargo tank with a vapor control system, the system must not be used unless the fol-

lowing tests and inspections are satisfactorily completed:

- (1) Each vapor hose, vapor collection arm, pressure or vacuum relief valve, and pressure sensor is tested and inspected in accordance with paragraphs (b), (c), and (f) of this section;
- (2) Each remote operating or indicating device is tested for proper operation in accordance with paragraph (f) of this section;
- (3) Each detonation arrester required by 33 CFR 154.2105, 154.2108(b), 154.2109, 154.2110, 154.2111, and 154.2204, or 46 CFR 39.4003, and each flame arrester required by 33 CFR 154.2103, 154.2105(j), and 154.2203 has been inspected internally within the last year, or sooner if operational experience has shown that frequent clogging or rapid deterioration is likely; and
- (4) Each hydrocarbon and oxygen analyzer required by 33 CFR 154.2105(a) and (j), 154.2107(d) and (e), and 154.2110 or 46 CFR 39.4003 is calibrated:
- (i) Within the previous two weeks, or (ii) Within 24 hours prior to operation when the vapor control system is oper-
- ated less frequently than once a week.

  (h) Upon the request of the owner or operator, the COTP may approve alternative methods of compliance to the testing requirements of paragraph (c) of this section if the COTP determines that the alternative methods provide an equal level of protection.
- (i) Notwithstanding the general provisions of 33 CFR 156.107(a) relating to the authority of the Captain of the Port to approve alternatives, the owner or operator may request the written approval of the Commandant (CG-ENG), U.S. Coast Guard, 2100 2nd St. SW., Stop 7126, Washington, DC 20593-7126, for alternative methods of compliance to the testing and inspection requirements of paragraph (g)(3) of this section. The Commandant (CG-ENG) will grant that written approval upon determination that the alternative methods provide an equivalent level of safety and protection from fire, explosion, and detonation. Criteria to consider when evaluating requests for alternative methods may include, but are not limited to: operating and inspection history, type of equipment, new



CONTRACT REPORT
CR-NAVFAC EXWC-CI-18213
CATHODIC PROTECTION OF POL SYSTEMS
2018 ANNUAL SURVEY & REPAIRS
Naval Supply Fleet Logistics Center Pearl Harbor
Honolulu, Hawaii

PRL 18-CP RHL 18-CP

Contract No: N39430-15-D-1633 DO N3943018F4006

Prepared For:

Naval Facilities Engineering and Expeditionary Warfare Center

By:

Pond & Company, Inc. 3500 Parkway Lane, Suite 500. Peachtree Corners, GA 30092

June 2018



For Official Use Only

**Table 5 – ICCP Systems** 

RECTIFER ID	RECTIFIER DC RATING	ANODE GROUNDBED (YEAR INSTALLED)	TARGET STRUCTURES
Rectifier 10	30V / 30A	100-ft deep well, 8 MMO Anodes (2017)	Tank 55 Bottom and Piping
Rectifier 13	30V / 30A	100-ft deep well, 8 MMO Anodes (2017)	Upper Tank Farm Piping
Rectifier 14	30V / 30A	185-ft deep well, 8 MMO Anodes (1994)	Tank 55 Bottom and Piping
Rectifier 20	30V / 30A	100-ft deep well, 8 MMO Anodes (2017)	Piping at VS-3 and Hotel Pier
Rectifier 23	30V / 30A	100-ft deep well, 8 MMO Anodes (2017)	Transfer Line Piping, Piping to Mike Pier and Bravo Pier
Rectifier 24	20V / 8A	Undertank ICCP System – MMO (2005)	Tank 301 Bottom
Rectifier 27	30V / 30A	100-ft deep well, 8 MMO Anodes (2017)	Lower Fuel Yard Piping
Rectifier 46	50V / 30A	Undertank ICCP System – MMO (1999)	Tank 46 Bottom
Rectifier 47	50V / 30A	Undertank ICCP System – MMO (1999)	Tank 47 Bottom
Rectifier 48	40V / 34A	Undertank ICCP System – MMO (2009)	Tank 48 Bottom
Rectifier 53	50V / 30A	Undertank ICCP System – MMO (1999)	Tank 53 Bottom
Rectifier 54	50V / 30A	Undertank ICCP System – MMO (1999)	Tank 54 Bottom

### 3.1 Upper Tank Farm

### Tanks 46, 47, 48, 53, and 54

Tanks 46, 47, 48, 53, and 54 are on-grade carbon steel ASTs that sit upon a ring wall, have an approximate diameter of 164-feet and a height of 40-feet with a capacity of 140,000-barrels. The ASTs are surrounded by a concrete secondary spill containment area with a geomembrane liner system applied to the top of the concrete.

Exemption (b)(3)

Exc	emption (b)(3)
A-4	

	Exemption (b)(3)
A-5	

	Exemption (b)(3)
 A-6	

Exemption (b)(3	<b>3</b> )
A-7	
	Exemption (b)(3

	Exemption (b)(3)



CONTRACT REPORT CR-NAVFAC EXWC-CI-18134 OCTOBER 2017

### CATHODIC PROTECTION OF POL SYSTEMS 2016 ANNUAL SURVEY & REPAIRS

Naval Supply Fleet Logistics Center Pearl Harbor Honolulu, Hawaii

PRL 16-CP RHL 16-CP

Contract No: N39430-15-D-1631, DO 0002

Prepared For:

Naval Facilities Engineering and Expeditionary Warfare Center

By: Burns & McDonnell 9400 Ward Parkway Kansas City, MO 64114

Exem	ption	(b)	(3)
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For Official Use Only

A-3

Ex	emption (b)(3)
A-4	

Exemption (b)(3)

Exemption	(b)(3)

Exemption (b)(3)
A-7

Exemption (b)(3)

Exemption (b)(3)

For Official Use Only

E	Exemption (b)(3)
A-11	

	Exemption (b)(3)
A-12	

	Exemption (b)(3)

C-3 For Official Use Only

#### Enclosure 9



CONTRACT REPORT
CR-NAVFAC EXWC-CI-XXXX
JUNE 2017

#### CATHODIC PROTECTION OF POL SYSTEMS 2016 ANNUAL SURVEY

Hickam AFB Honolulu, HI

HIC 16-CP (Final)

Contract No: N39430-15-D-1631 DO # 002

Prepared For:

Naval Facilities Engineering and Expeditionary Warfare Center

By:

Burns & McDonnell 9400 Ward Parkway Kansas City, MO 64114

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Exemption (b)(3)
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## CONTRACT REPORT CR-NAVFAC EXWC-CI-18200

# CATHODIC PROTECTION OF POL SYSTEMS 2017 ANNUAL SURVEY & REPAIRS

Joint Base Pearl Harbor-Hickam Honolulu, Hawaii

**HIC 17-CP** 

Contract No: N39430-15-D-1678, TO N3943017F4130

Prepared For:

Naval Facilities Engineering and Expeditionary Warfare Center

By:

ENTERPRISE ENGINEERING INC 2525 Gambell Street, Suite 200 Anchorage, AK 99503

April 2018

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Exemption (b)
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Exem	ption	<b>(b)</b>	(3)
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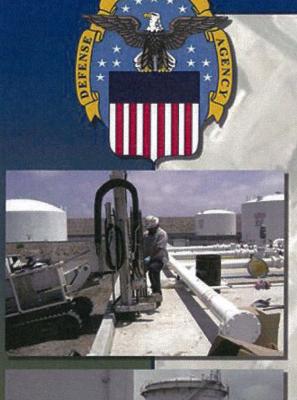
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	Exem	ption	(b)(3)
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Exemption (b)(3
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### Enclosure 10



FINAL 2018 ANNUAL LEAK
DETECTION TESTING REPORT
OF 17 BULK FIELDCONSTRUCTED UNDERGROUND
STORAGE TANKS AT RED HILL
FUEL STORAGE COMPLEX

JOINT BASE PEARL HARBOR-HICKAM, HAWAII



Prepared for:
Defense Logistics Agency Energy
Fort Belvoir, Virginia

Prepared under:

Naval Facilities Engineering Command Atlantic Contract N62470-16-D-9007 Delivery Order N6247018F4143

Submitted by:

Michael Baker International Virginia Beach, Virginia

Date:

23 January 2019

Michael Baker

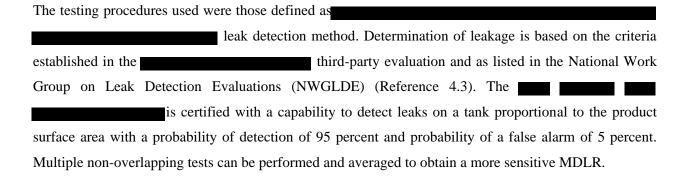
INTERNATIONAL *Project: 1*69227

Task: 3.0

#### 1.5 Project Team

Michael Baker subcontracted to perform the annual leak detection testing. Field-testing oversight, coordination with facility fuel representatives, quality assurance/quality controls, and final report preparation and submission were provided by Michael Baker personnel.

#### 1.6 Qualifications of Testing Procedures Used



This project utilized two test units to perform five 24-hour precision tightness tests per test unit over a 5-day period (120 hours total) for BFCUSTs 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16, 18, and 20. These five 24-hour tests were averaged, meeting project scope 0.5 gallons per hour (gph) MDLR requirements.

This project utilized one test unit to perform two 24-hour precision tightness tests per test unit over a 2-day period (48 hours total) for BFCUSTs S1224, S1225, and S1226. These two 24-hour tests were averaged, meeting project scope 0.5 gph MDLR requirements.

The standard operating procedure includes ensuring that any isolation valve(s) are properly seated (via closing, reopening, and reclosing) and that the bleed ports of double-block and bleed isolation valves are checked for the presence of product at the conclusion of a test.

**Table 2-1: Results Summary** 

Fuel System	Designation	Height <sup>1</sup> (Feet)	Capacity <sup>2</sup> (Gallons)	Product	Test Method	Certified MDLR (gph)	Test Date	Result	Test Product Height (Feet)
	BFCUST 2			F-24	(5) 24-hour tests	0.5	22 November - 27 November 2018	Pass	
	BFCUST 3			F-24	(5) 24-hour tests	0.5	26 October - 31 October 2018	Pass	
	BFCUST 4			F-24	(5) 24-hour tests	0.5	31 October - 5 November 2018	Pass	
	BFCUST 5			F-24	N/A	N/A	N/A	N/A <sup>4</sup>	
	BFCUST 6			F-24	(5) 24-hour tests	0.5	13 November - 18 November 2018	Pass	
	BFCUST 7			JP-5	(5) 24-hour tests	0.5	27 October - 1 November 2018	Pass	
	BFCUST 8			JP-5	(5) 24-hour tests	0.5	11 October - 16 October 2018	Pass	
	BFCUST 9			JP-5	(5) 24-hour tests	0.5	15 October - 20 October 2018	Pass	
Red Hill Underground	BFCUST 10			JP-5	(5) 24-hour tests	0.5	16 October - 21 October 2018	Pass	
Fuel Storage Facility	BFCUST 11			JP-5	(5) 24-hour tests	0.5	5 November - 10 November 2018	Pass	
	BFCUST 12			JP-5	(5) 24-hour tests	0.5	21 October - 26 October 2018	Pass	
	BFCUST 13			JP-5	N/A	N/A	N/A	N/A <sup>4</sup>	
	BFCUST 14			JP-5	N/A	N/A	N/A	N/A <sup>4</sup>	
	BFCUST 15			F-76	(5) 24-hour tests	0.5	21 November - 26 November 2018	Pass	
	BFCUST 16			F-76	(5) 24-hour tests	0.5	22 October - 27 October 2018	Pass	
	BFCUST 17			JP-5	N/A	N/A	N/A	N/A <sup>4</sup>	
	BFCUST 18			JP-5	(5) 24-hour tests	0.5	8 November - 13 November 2018	Pass	
	BFCUST 20			JP-5	(5) 24-hour tests	0.5	10 October - 15 October 2018	Pass	
	BFCUST S1224			F-24	(2) 24-hour tests	0.5	1 November - 3 November 2018	Pass	
Underground Pump	BFCUST S1225			JP-5	(2) 24-hour tests	0.5	18 October - 20 October 2018	Pass	
House Facility	BFCUST S1226			F-76	(2) 24-hour tests	0.5	23 October - 25 October 2018	Pass	
	BFCUST S1227			F-76	N/A	N/A	N/A	N/A <sup>4</sup>	

Notes:

N/A = not applicable

- 1. Tank height is rounded to the nearest foot.
- Tank volume is rounded to the nearest hundred thousand gallon.
   Tank product level is maintained at the test product height or below.
- 4. Tank not tested due to being temporarily out-of-service.
- 5. Tank tested at the current product level, per base request, due to operational issues at the time of testing. Testing at tank high level must be scheduled when tanks return to normal operating levels.

#### 4.0 REFERENCES

- 4.1 "Final 2017 Annual Leak Detection Report of 18 Bulk Field-Constructed Underground Storage Tanks at Red Hill Fuel Storage Complex, Joint Base Pearl Harbor-Hickam, Hawaii"; Prepared for: Defense Logistics Agency Energy, Fort Belvoir, Virginia; Prepared under: Naval Facilities Engineering Command Atlantic Contract N62470-16-D-9007-0004; Submitted by: Michael Baker International, Virginia Beach, Virginia; Date: 23 January 2018.
- 4.2 "Final 2018 Annual Leak Detection Report of Two Bulk Field-Constructed Underground Storage Tanks at Red Hill Fuel Storage Complex, Joint Base Pearl Harbor-Hickam, Hawaii"; Prepared for: Defense Logistics Agency Energy, Fort Belvoir, Virginia; Prepared under: Naval Facilities Engineering Command Atlantic Contract N62470-16-D-9007, Task Order N6247018F4006; Submitted by: Michael Baker International, Virginia Beach, Virginia; Date: 15 June 2018.

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