BULK FUEL ASSESSMENT REPORT

Scammon Bay, Alaska

May 2015

Prepared for:

Alaska Energy Authority

Prepared by:

CRW Engineering Group, LLC
3940 Arctic Boulevard, Suite 300
Anchorage, Alaska 99503

Date: May 27, 2015

Assessor: Steven Hebnes (CRW)

Community Name: Scammon Bay

Population: 528

Local Government(s): City of Scammon Bay, Native Village of Scammon Bay

Contact Info: Jessica Hunter, City Clerk (907) 558-5529
James Kaganak, Askinuk Corporation (907) 558-5411
Richard Charlie, Scammon Bay School (907) 558-6030

Fuel Suppliers: Delta Western, Crowley, Vitus Marine

Bulk Fuel Storage Facility Info:

When the previous assessment was performed in 1998, six bulk fuel facilities were identified (TF 1-6 below). During the site visit for this project three additional tank farms were identified (TF 7-9). Of these facilities, five are eligible for assistance and are included in this report. The tank farms assessed for this project are shown in bold below.

TF1. Askinuk Corporation, Retail Sales
TF2. City of Scammon Bay, Old Water Treatment Plant
TF3. Unknown Tank Farm
TF4. Alaska Army National Guard, Armory
TF5. Alaska Village Electric Cooperative (AVEC)
TF6. Old LYSD School Tank Farm
TF7. LYSD Scammon Bay School
TF8. City of Scammon Bay, Water Treatment Plant
TF9. City of Scammon Bay, Office

Alaska Village Electric Cooperative (AVEC) provides electricity to Scammon Bay via a local diesel power plant..

The various bulk fuel users purchase diesel fuel and gasoline in the spring and fall through one of the regional fuel providers. Fuel is delivered via barge. Tank Farm 1 is filled via a single product, 3" welded steel barge header and fill pipeline located on the south bank of the Kun River on the west end of the community. Tank farm 5 is filled via a single product barge header located at the community boat dock on the south bank of the Kun River. The remaining tank farms are filled by fuel trucks owned by the barge companies.

The Askinuk Corporation operates the sole retail fuel sales business in the community.

Tank Farm #1 – Askinuk Corporation, Retail Sales

Owner/Phone #: Askinuk Corporation / (907) 558-5411

Owner Type: Native Corporation

Location: West end of community

Total Evaluation Score (See Scoring Sheet): 130 (240 max)

Regulatory Plans Available: ☒ No ☐ Yes

Spill Response Equipment: ☐ No ☒ Yes

Operator/Training/ Years on the Job: James Kaganak/Unknown/>10 years

Distance from Moorage to Barge Header: <50-feet

Facility Description:

The Askinuk Corporation tank farm is located west of the community. The tank farm includes seventeen single wall, welded steel ASTs (twelve vertical tanks, four horizontal tanks, and one horizontal, dual product dispensing tank). The dispensing tank is supported on steel skids and the remaining horizontal and vertical tanks are supported on timbers. Several tanks are severely dented and exhibit deep pitting. The facility is within a lined earthen dike. Although the liner appears liquid tight, several dike walls have settled, substantially reducing the capacity of the containment dikes. The fill material below the tanks appeared to contain a high fine content which has caused some significate settlement and several tanks are leaning. The facility is fenced.

Facility piping consists of a 3-inch welded steel manifold with flanged steel isolation valves and flex connections. Some flexible hose is also employed in the piping system. All tank connections are located at the bottom of the tanks except for the horizontal dispensing tank which is plumbed from the top of the tank. Two centrifugal pumps mounted on the end of the dispensing tank pump diesel and gasoline from the bulk tanks to the associated dispensing tank compartment. Submersible pumps in the dual product dispensing tank supply fuel to the dual product dispenser via 2-inch above grade welded steel piping.

Fuel is purchased from a regional fuel provider and delivered by barge. The tank farm is filled via a 3” barge header and 700 LF of 3” welded steel fill pipeline. The barge header and fill pipeline experience significate damage from a past flood which bent much of the pipeline and relocated the header.

Tank Farm 1 – Askinuk Corporation										
Tank No.	Dia.	Height/ Length	Vertical/ Horizontal	Tank Type	Product	Tank Penetration Below Fuel Level	Tank Function	Approx Age (Years)	Listing	Gross Capacity (Gallons)
1	8'-7"	13'-4"	V	SW	G	Y	BF	40	UNK	5,300
2	9'-2"	13'-9"	V	SW	G	Y	BF	40	UNK	6,300
3	11'-0"	13'-9"	V	SW	D1	Y	BF	40	UNK	9,000
4	11'-2"	13'-9"	V	SW	D1	Y	BF	40	UNK	9,300
5	10'-5"	16'-0"	V	SW	D1	Y	BF	40	UNK	9,500
6	10'-5"	16'-0"	V	SW	D1	Y	BF	40	UNK	9,500
7	9'-6"	14'-9"	V	SW	D1	Y	BF	40	UNK	7,200
8	10'-6"	13'-9"	V	SW	D1	Y	BF	40	UNK	8,200
9	11'-2"	13'-9"	V	SW	D1	Y	BF	40	UNK	9,300
10	11'-2"	16'-0"	V	SW	G	Y	BF	40	UNK	11,000
11	10'-10"	16'-0"	V	SW	G	Y	BF	40	UNK	10,300
12	9'-2"	16'-0"	V	SW	G	Y	BF	40	UNK	7,400
13	7'-6"	28'-6"	H	SW	G	Y	BF	20	UNK	10,377
14	7'-6"	28'-6"	H	SW	G	Y	BF	20	UNK	10,340
15	7'-6"	28'-6"	H	SW	G	Y	BF	20	UNK	10,340
16	7'-4"	27'-6"	H	SW	G	Y	BF	20	UNK	8,000
17	7'-9"	16'-3"	H	SW	D1/G	N	RD	20	UNK	5000
									Total Gallons	**146,357**

TANK TYPE: SW = Single Wall, **DW** = Double Wall, **SD** = Self Diked, **PR** = Protected. **PRODUCT: D1** = Diesel #1/Heating Fuel, **D2** = Diesel #2, **ULSD** = Ultra Low Sulfur Diesel, **G** = Gasoline, **AV** = Avgas. **TANK FUNCTION: FD** = Fleet Dispensing, **RD** = Retail Dispensing, **BF** = Bulk Fuel. **LISTING**: **UL** = Underwriters Laboratories, **STI** = Steel Tank Institute, **API** = American Petroleum Institute, **UNK** = Unknown.

Tank Farm 1 - Deficiencies & Recommendations:

Site Location
- ☒ History of flooding
- ☒ Facility threatened by coastal erosion/avalanche/river erosion/other
- ☐ Tank Farm within 100-feet of a well

Secondary Containment
- ☐ No containment
- ☒ Inadequate containment

Foundations
- ☐ Belly of tank more than 12” above grade
- ☐ Insufficient foundation (Logs or < 6-inch timbers)
- ☐ No foundation (tank shell directly on ground)
- ☒ Failing foundation (leaning tank)

Tanks
- ☒Tanks not numbered and labeled
- ☐ Missing or improper emergency venting
- ☐ Missing or improper normal venting
- ☐ Excessive tank corrosion
- ☐ Tanks not listed or designed to current bulk fuel standards (riveted, water tanks, etc.)
- ☐ No overfill protection

Piping
- ☐ No check valve at fill point
- ☐ Missing or inadequate drip pan at fill point
- ☒ Missing pressure relief
- ☐ Improper valve material (brass, bronze)
- ☐ Active leaks
- ☒ Evidence of past leaks
- ☒ Damaged or stressed flex connector(s)
- ☐ Inadequate pipe supports

Electrical
- ☐ Exposed or improper wiring
- ☐ Electrical conduit not supported at code-required intervals (10’ or less)
- ☒ No evidence of grounding

Life, Health & Safety
- ☐ No fence
- ☐ Insufficient Egress
- ☒ Missing or insufficient regulatory signs
- ☒ Missing or insufficient fire extinguishers
- ☒ Regulatory Plans Not Available
- ☐ Dispenser too close to tanks
- ☐ Inadequate separation from buildings
- ☐ Inadequate tank spacing
- ☒ No locks on gates
- ☐ Gravity dispensing
- ☐ Spill response equipment not available

☐ Other (specify):_____

_____

Recommend facility replacement.

Tank Farm 1 - Evaluation Score:

Facility Category	Possible Points	Awarded Points
Site Location		
Site suitable for tank farm	0 points	
< 100 feet from a public well	10 points	
< 25 feet from an eroding bank or beach, or history of flooding	10 points	10
Gasoline tanks < 25 feet from an important building	10 points	
	30 points max.	**10**
Secondary Containment		
*Liquid-tight, lined dike of proper volume and construction, or double wall or self diked tanks	0 points	
*Liquid-tight, lined dike of improper volume or construction	10 points	10
*Fully diked but not liquid-tight (sand bag dike, gravel, torn or missing liner)	20 points	
*Partial or no dike	30 points	
	30 points max	**10**
Foundations		
*Tanks on stable foundations (steel skids, min. 6" timbers, no cribbing)	0 points	
*Tanks directly on gravel pad or light timbers	5 points	
*Tanks directly on tundra or natural soils (no dike or liner, subject to erosion)	10 points	
Tanks leaning considerably or unstable foundations (seismic hazard)	10 points	10
	20 points max.	**10**
Tanks		
*Tanks in fair to good condition (no dents, min. rust, no major repairs needed)	0 points	
*Immediate need of cleaning and painting	10 points	
*Rusted or dented beyond repair or riveted, bolted or other	30 points	30
	30 points max.	**30**
Piping (choose most likely to leak, i.e., victaulic, threaded or welded, only)		
*No piping or welded piping above grade	0 points	0
*Welded piping below grade	5 points	
*Threaded piping above grade	10 points	
*Threaded piping below grade	20 points	
*Victaulic piping above grade	30 points	
*Victaulic piping below grade	40 points	
Rubber hose	20 points	20
Additional for active leaks	20 points	
	80 points max.	**20**
Electrical		
Wiring appears appropriate or there is no wiring.	0 points	
Exposed wiring, improper grounding, etc.	10 points	10
	10 points max.	**10**
Life, Health & Safety		
*Appears code compliant (No extraordinary factors observed)	0 points	
***Low risk** (Minor code violations that could result in personal injury to non-vigilant employees, such as tripping hazards, limited lighting, etc.)	10 points	
***Medium risk** (More severe code violations that increase risk such as lack of security fence, falling hazards, unlocked valves, gravity dispensing, etc.)	20 points	
***High risk** (Situations that pose an immediate threat to safety such as Fire hazards, gas leaks, failing tanks, unstable foundations, etc.)	40 points	40
	40 points max.	**40**
Facility Total	**240 points max.**	**130**

*Indicates that only one of the group should be chosen.

Tank Farm 1 - Photos:

Photo 1 –Tank Farm

Photo 2 – Leaning Tank and Dike Settlement

Photo 3 – Dispensing Tank

Photo 4 – Barge Header

Tank Farm #5 – AVEC Power Plant

Owner/Phone #: AVEC / (907) 536-5211

Owner Type: Power Utility

Location: Center of Community between barge landing and airport access.

Total Evaluation Score (See Scoring Sheet): 30 (240 max)

Regulatory Plans Available: ☐ No ☒ Yes;

Spill Response Equipment: ☐ No ☒ Yes

Operator/Training/ Years on the Job: Daniel Tunutmoak Jr./AVEC Training/6 years

Distance from Moorage to Barge Header: <50-feet

Facility Description:

The AVEC bulk fuel tank farm includes 12 vertical, single wall, BIA style ASTs, one horizontal self diked AST, and one horizontal, double wall AST. The tanks are situated within two separate sand bag diked areas (six tanks in the upper dike and eight tanks in the lower dike). The vertical tanks are supported on light timbers on gravel pads and the self-diked and double wall tanks are supported with steel skids and timber blocking on a gravel pad. The secondary containment dikes are constructed of sand bags with a liner below. All the tanks were recently painted. The facility is fenced and the gate was locked at the time of the inspection.

The tank farm piping system consists of a 3-inch welded steel fill and draw manifold. The system includes steel isolation valves and stainless flex connectors at each tank and a pressure relief valve. A 2-inch diameter pipeline conveys fuel from the tank farm to an interior day tank at the power plant.

Fuel to fill the tank farm is purchased from a regional fuel provider and delivered via a 3-inch barge header and 1,400 LF of buried fill pipeline.

Tank Farm 5 – AVEC, Scammon Bay										
Tank No.	Dia.	Height/ Length	Vertical/ Horizontal	Tank Type	Product	Tank Penetration Below Fuel Level	Tank Function	Approx Age (Years)	Listing	Gross Capacity (Gallons)
1	11'-0"	37'-11"	H	SD	D1	Y	BF	20	UL	25,688
2	11'-6"	40'-0"	H	DW	D1	Y	BF	20	UL	29,813
3	10'-6"	14'-0"	V	SW	D1	Y	BF	40	UNK	8,525
4	11'-0"	13'-3"	V	SW	D1	Y	BF	40	UNK	8,864
5	10'-11"	14'-0"	V	SW	D1	Y	BF	40	UNK	9,177
6	11'-0"	13'-5"	V	SW	D1	Y	BF	40	UNK	8,826
7	10'-6"	13'-5"	V	SW	D1	Y	BF	40	UNK	8,052
8	10'-6"	13'-3"	V	SW	D1	Y	BF	40	UNK	8,041
9	10'-8"	13'-0"	V	SW	D1	Y	BF	40	UNK	7,760
10	10'-8"	13'-9"	V	SW	D1	Y	BF	40	UNK	9,322
11	10'-7"	13'-0"	V	SW	D1	Y	BF	40	UNK	7,987
12	10'-8"	13'-10"	V	SW	D1	Y	BF	40	UNK	9,337
13	10'-1"	13'-0"	V	SW	D1	Y	BF	40	UNK	7,281
14	11'-1"	13'-0"	V	SW	D1	Y	BF	40	UNK	8,649
									Total Gallons	**157,322**

TANK TYPE: SW = Single Wall, **DW** = Double Wall, **SD** = Self Diked, **PR** = Protected. **PRODUCT: D1** = Diesel #1/Heating Fuel, **D2** = Diesel #2, **ULSD** = Ultra Low Sulfur Diesel, **G** = Gasoline, **AV** = Avgas. **TANK FUNCTION: FD** = Fleet Dispensing, **RD** = Retail Dispensing, **BF** = Bulk Fuel. **LISTING**: **UL** = Underwriters Laboratories, **STI** = Steel Tank Institute, **API** = American Petroleum Institute, **UNK** = Unknown.

Tank Farm 5 - Deficiencies & Recommendations:

Site Location

☐ History of Flooding
☐ Facility threatened by coastal erosion/avalanche/river erosion/other
☐ Tank Farm within 100-feet of a well

Secondary Containment

☐ No containment
☐ Inadequate containment

Foundations

☐ Belly of tank more than 12” above grade
☒ Insufficient foundation (Logs or < 6-inch timbers)
☐ No foundation (tank shell directly on ground)
☐ Failing foundation (leaning tank)

Tanks

☐Tanks not numbered and labeled
☒ Missing or improper emergency venting
☐ Missing or improper normal venting
☐ Excessive tank corrosion
☐ Tanks not listed or designed to current bulk fuel standards (riveted, water tanks, etc.)
☐ No overfill protection

Piping

☐ No check valve at fill point
☐ Missing or inadequate drip pan at fill point
☐ Missing pressure relief
☐ Improper valve material (brass, bronze)
☐ Active leaks
☐ Evidence of past leaks
☐ Damaged or stressed flex connector(s)
☐ Inadequate pipe supports

Electrical

☐ Exposed or improper wiring
☐ Electrical conduit not supported at code-required intervals (10’ or less)
☒ No evidence of grounding

Life, Health & Safety

☐ No fence
☐ Insufficient Egress
☒ Missing or insufficient regulatory signs
☒ Missing or insufficient fire extinguishers
☐ Regulatory Plans not Available
☐ Dispenser too close to tanks
☐ Inadequate separation from buildings
☐ Inadequate tank spacing
☐ No locks on gates
☐ No locks on closed tank issue valves
☐ Gravity dispensing
☐ Spill response equipment not available

☐ Other (specify):_____

_____

Recommend resolving above issues. Facility is in overall good condition.

Tank Farm 5 - Evaluation Score:

Facility Category	Possible Points	Awarded Points
Site Location		
Site suitable for tank farm	0 points	0
< 100 feet from a public well	10 points	
< 25 feet from an eroding bank or beach, or history of flooding	10 points	
Gasoline tanks < 25 feet from an important building	10 points	
	30 points max.	**0**
Secondary Containment		
*Liquid-tight, lined dike of proper volume and construction, or double wall or self diked tanks	0 points	0
*Liquid-tight, lined dike of improper volume or construction	10 points	
*Fully diked but not liquid-tight (sand bag dike, gravel, torn or missing liner)	20 points	
*Partial or no dike	30 points	
	30 points max	**0**
Foundations		
*Tanks on stable foundations (steel skids, min. 6" timbers, no cribbing)	0 points	
*Tanks directly on gravel pad or light timbers	5 points	5
*Tanks directly on tundra or natural soils (no dike or liner, subject to erosion)	10 points	
Tanks leaning considerably or unstable foundations (seismic hazard)	10 points	
	20 points max.	**5**
Tanks		
*Tanks in fair to good condition (no dents, min. rust, no major repairs needed)	0 points	0
*Immediate need of cleaning and painting	10 points	
*Rusted or dented beyond repair or riveted, bolted or other	30 points	
	30 points max.	**0**
Piping (choose most likely to leak, i.e., victaulic, threaded or welded, only)		
*No piping or welded piping above grade	0 points	
*Welded piping below grade	5 points	5
*Threaded piping above grade	10 points	
*Threaded piping below grade	20 points	
*Victaulic piping above grade	30 points	
*Victaulic piping below grade	40 points	
Rubber hose	20 points	
Additional for active leaks	20 points	
	80 points max.	**5**
Electrical		
Wiring appears appropriate or there is no wiring.	0 points	
Exposed wiring, improper grounding, etc.	10 points	10
	10 points max.	**10**
Life, Health & Safety		
*Appears code compliant (No extraordinary factors observed)	0 points	
***Low risk** (Minor code violations that could result in personal injury to non-vigilant employees, such as tripping hazards, limited lighting, etc.)	10 points	10
***Medium risk** (More severe code violations that increase risk such as lack of security fence, falling hazards, unlocked valves, gravity dispensing, etc.)	20 points	
***High risk** (Situations that pose an immediate threat to safety such as Fire hazards, gas leaks, failing tanks, unstable foundations, etc.)	40 points	
	40 points max.	**10**
Facility Total	**240 points max.**	**30**

*Indicates that only one of the group should be chosen.

Tank Farm 5 - Photos:

Photo 1 – Tank Farm

Photo 2 – Typical Piping

Photo 3 – Tops of Tanks

Photo 4 – Barge Header

Tank Farm #7 – Lower Yukon School District (LYSD)

Owner/Phone #: Scammon Bay School
Lower Yukon School District / 907-558-6030

Owner Type: School District

Location: East of Community

Total Evaluation Score (See Scoring Sheet): 15 (240 max)

Regulatory Plans Available: ☐ No ☒ Yes

Spill Response Equipment: ☒ No ☐ Yes

Operator/Training/ Years on the Job: Richard Charlie/LYSD Training/7 years

Distance from Moorage to Barge Header: Tanks filled by fuel truck.

Facility Description:

The LYSD tank farm consists of three skid mounted, double wall horizontal aboveground bulk fuel storage tanks (two 30,000-gallon and one 18,000-gallon) and one skid mounted, double wall horizontal aboveground fleet dispensing tank (1,500-gallon). The bulk tanks are filled via a single fill port with integral drip pan and a 3-inch welded steel pipe manifold. Submersible pumps within each bulk tank are used to transfer fuel to the teacher housing, main school building, and backup generator building via buried 1.5-inch welded steel pipelines. The dispensing tank is filled with gasoline via a dedicated fill port with integral drip pan mounted to the tank skids. A submersible pump within the dispensing tank feeds a single product dispenser also mounted to the tank skid. The facility is not fenced.

Tank Farm 7 – Scammon Bay School, Lower Yukon School District										
Tank No.	Dia.	Height/ Length	Vertical/ Horizontal	Tank Type	Product	Tank Penetration Below Fuel Level	Tank Function	Approx Age (Years)	Listing	Gross Capacity (Gallons)
1	11'-0"	43'-6"	H	DW	D1	N	BF	3	UL	30,000
2	11'-0"	43'-6"	H	DW	D1	N	BF	3	UL	30,000
3	9'-0"	35'-0"	H	DW	D1	N	BF	3	UL	18,000
4	5'-4"	10'-6"	H	DW	G	N	FD	3	UL	1,500
									Total Gallons	**79,500**

TANK TYPE: SW = Single Wall, **DW** = Double Wall, **SD** = Self Diked, **PR** = Protected. **PRODUCT: D1** = Diesel #1/Heating Fuel, **D2** = Diesel #2, **ULSD** = Ultra Low Sulfur Diesel, **G** = Gasoline, **AV** = Avgas. **TANK FUNCTION: FD** = Fleet Dispensing, **RD** = Retail Dispensing, **BF** = Bulk Fuel, **DT** = Day Tank. **LISTING**: **UL** = Underwriters Laboratories, **STI** = Steel Tank Institute, **API** = American Petroleum Institute, **UNK** = Unknown

Tank Farm 7 - Deficiencies & Recommendations:

Site Location

☐ History of Flooding
☐ Facility threatened by coastal erosion/avalanche/river erosion/other
☐ Tank Farm within 100-feet of a well

Secondary Containment

☐ No containment
☐ Inadequate containment

Foundations

☐ Belly of tank more than 12" above grade
☐ Insufficient foundation (Logs or < 6-inch timbers)
☐ No foundation (tank shell directly on ground)
☐ Failing foundation (leaning tank)

Tanks

☐Tanks not numbered and labeled
☐ Missing or improper emergency venting
☐ Missing or improper normal venting
☐ Excessive tank corrosion
☐ Tanks not listed or designed to current bulk fuel standards (riveted, water tanks, etc.)
☐ No overfill protection

Piping

☐ No check valve at fill point
☐ Missing or inadequate drip pan at fill point
☐ Missing pressure relief
☐ Improper valve material (brass, bronze)
☐ Active leaks
☐ Evidence of past leaks
☐ Damaged or stressed flex connector(s)
☐ Inadequate pipe supports

Electrical

☐ Exposed or improper wiring
☐ Electrical conduit not supported at code-required intervals (10' or less)
☐ No evidence of grounding

Life, Health & Safety

☒ No fence
☐ Insufficient Egress
☒ Missing or insufficient regulatory signs
☒ Missing or insufficient fire extinguishers
☐ Regulatory Plans not available
☒ Dispenser too close to tanks
☐ Inadequate separation from buildings
☐ Inadequate tank spacing
☐ No locks on gates
☐ No locks on closed tank issue valves
☐ Gravity dispensing
☐ Spill response equipment not available

☐ Other (specify):

Recommend resolving above issues. Facility is in overall good condition.

Tank Farm 7 - Evaluation Score:

Facility Category	Possible Points	Awarded Points
Site Location		
Site suitable for tank farm	0 points	0
< 100 feet from a public well	10 points	
< 25 feet from an eroding bank or beach, or history of flooding	10 points	
Gasoline tanks < 25 feet from an important building	10 points	
	30 points max.	**0**
Secondary Containment		
*Liquid-tight, lined dike of proper volume and construction, or double wall or self diked tanks	0 points	
*Liquid-tight, lined dike of improper volume or construction	10 points	
*Fully diked but not liquid-tight (sand bag dike, gravel, torn or missing liner)	20 points	
*Partial or no dike	30 points	
	30 points max	**0**
Foundations		
*Tanks on stable foundations (steel skids, min. 6" timbers, no cribbing)	0 points	
*Tanks directly on gravel pad or light timbers	5 points	
*Tanks directly on tundra or natural soils (no dike or liner, subject to erosion)	10 points	
Tanks leaning considerably or unstable foundations (seismic hazard)	10 points	
	20 points max.	**0**
Tanks		
*Tanks in fair to good condition (no dents, min. rust, no major repairs needed)	0 points	
*Immediate need of cleaning and painting	10 points	
*Rusted or dented beyond repair or riveted, bolted or other	30 points	
	30 points max.	**0**
Piping (choose most likely to leak, i.e., victaulic, threaded or welded, only)		
*No piping or welded piping above grade	0 points	
*Welded piping below grade	5 points	5
*Threaded piping above grade	10 points	
*Threaded piping below grade	20 points	
*Victaulic piping above grade	30 points	
*Victaulic piping below grade	40 points	
Rubber hose	20 points	
Additional for active leaks	20 points	
	80 points max.	**5**
Electrical		
Wiring appears appropriate or there is no wiring.	0 points	
Exposed wiring, improper grounding, etc.	10 points	
	10 points max.	**0**
Life, Health & Safety		
*Appears code compliant (No extraordinary factors observed)	0 points	
***Low risk** (Minor code violations that could result in personal injury to non-vigilant employees, such as tripping hazards, limited lighting, etc.)	10 points	10
***Medium risk** (More severe code violations that increase risk such as lack of security fence, falling hazards, unlocked valves, gravity dispensing, etc.)	20 points	
***High risk** (Situations that pose an immediate threat to safety such as Fire hazards, gas leaks, failing tanks, unstable foundations, etc.)	40 points	
	40 points max.	**10**
Facility Total	**240 points max.**	**15**

*Indicates that only one of the group should be chosen.

Tank Farm 7 - Photos:

Photo 1 – Scammon Bay School Bulk Fuel Tanks

Photo 2 – Top of Tanks

Photo 3 – Truck Fill Location

Photo 4 –Backup Generator

Tank Farm #8 – City of Scammon Bay, Water Treatment Plant

Owner/Phone #: City of Scammon Bay Operated by ARUC (907) 558-5529

Owner Type: City

Location: South Side of Community near old School

Total Evaluation Score (See Scoring Sheet): 30 (240 max)

Regulatory Plans Available: ☐ No ☒ Yes

Spill Response Equipment: ☒ No ☐ Yes

Operator/Training/ Years on the Job: Larson Hunter/Unknown/Unknown

Distance from Moorage to Barge Header: Tanks filled by fuel truck.

Facility Description:

The City's Water Treatment Plant bulk fuel tank farm consists of two skid mounted, double wall, horizontal ASTs located adjacent to the city-owned Water Treatment Plant (WTP). The tank skids are supported on a gravel pad. The facility is fenced and the gate was locked at the time of the inspection.

Facility piping consists 1-inch threaded steel distribution manifold piping that connects to the WTP interior day tank. Each tank includes a top mounted fill port with integral drip bucket for truck filling. Fuel to fill the tank farm is purchased from a regional fuel provider and transferred from the barge by fuel truck.

Tank Farm 8 – City of Scammon Bay, Water Treatment Plant										
Tank No.	Dia.	Height/ Length	Vertical/ Horizontal	Tank Type	Product	Tank Penetration Below Fuel Level	Tank Function	Approx Age (Years)	Listing	Gross Capacity (Gallons)
1	8'	16'	H	DW	D1	N	BF	7	UL	6,000
2	8'	16'	H	DW	D1	N	BF	7	UL	6,000
									Total Gallons	**12,000**

TANK TYPE: SW = Single Wall, **DW** = Double Wall, **SD** = Self Diked, **PR** = Protected. **PRODUCT: D1** = Diesel #1/Heating Fuel, **D2** = Diesel #2, **ULSD** = Ultra Low Sulfur Diesel, **G** = Gasoline, **AV** = Avgas. **TANK FUNCTION: FD** = Fleet Dispensing, **RD** = Retail Dispensing, **BF** = Bulk Fuel. **LISTING**: **UL** = Underwriters Laboratories, **STI** = Steel Tank Institute, **API** = American Petroleum Institute, **UNK** = Unknown.

Tank Farm 8 - Deficiencies & Recommendations:

Site Location

☐ History of flooding
☐ Facility threatened by coastal erosion/avalanche/river erosion/other
☐ Tank Farm within 100-feet of a well

Secondary Containment

☐ No containment
☐ Inadequate containment

Foundations

☐ Belly of tank more than 12” above grade
☐ Insufficient foundation (Logs or < 6-inch timbers)
☐ No foundation (tank shell directly on ground)
☐ Failing foundation (leaning tank)

Tanks

☒ Tanks not numbered and labeled
☐ Missing or improper emergency venting
☐ Missing or improper normal venting
☐ Excessive tank corrosion
☐ Tanks not listed or designed to current bulk fuel standards (riveted, water tanks, etc.)
☐ No overfill protection

Piping

☐ No check valve at fill point
☐ Missing or inadequate drip pan at fill point
☐ Missing pressure relief
☐ Improper valve material (brass, bronze)
☐ Active leaks
☐ Evidence of past leaks
☐ Damaged or stressed flex connector(s)
☐ Inadequate pipe supports

Electrical

☐ Exposed or improper wiring
☐ Electrical conduit not supported at code-required intervals (10’ or less)
☒ No evidence of grounding

Life, Health & Safety

☐ No fence
☐ Insufficient Egress
☐ Missing or insufficient regulatory signs
☒ Missing or insufficient fire extinguishers
☐ Regulatory Plans not available
☐ Dispenser too close to tanks
☒ Inadequate separation from buildings
☒ Inadequate tank spacing
☐ No locks on gates
☐ No locks on closed tank issue valves
☐ Gravity dispensing
☒ Spill response equipment not available

☐ Other (specify)

_____

_____

Recommend resolving above issues. Facility is in overall good condition.

Tank Farm 8 - Evaluation Score:

Facility Category	Possible Points	Awarded Points
Site Location		
Site suitable for tank farm	0 points	0
< 100 feet from a public well	10 points	
< 25 feet from an eroding bank or beach, or history of flooding	10 points	
Gasoline tanks < 25 feet from an important building	10 points	
	30 points max.	**0**
Secondary Containment		
*Liquid-tight, lined dike of proper volume and construction, or double wall or self diked tanks	0 points	0
*Liquid-tight, lined dike of improper volume or construction	10 points	
*Fully diked but not liquid-tight (sand bag dike, gravel, torn or missing liner)	20 points	
*Partial or no dike	30 points	
	30 points max	**0**
Foundations		
*Tanks on stable foundations (steel skids, min. 6" timbers, no cribbing)	0 points	0
*Tanks directly on gravel pad or light timbers	5 points	
*Tanks directly on tundra or natural soils (no dike or liner, subject to erosion)	10 points	
Tanks leaning considerably or unstable foundations (seismic hazard)	10 points	
	20 points max.	**0**
Tanks		
*Tanks in fair to good condition (no dents, min. rust, no major repairs needed)	0 points	0
*Immediate need of cleaning and painting	10 points	
*Rusted or dented beyond repair or riveted, bolted or other	30 points	
	30 points max.	**0**
Piping (choose most likely to leak, i.e., victaulic, threaded or welded, only)		
*No piping or welded piping above grade	0 points	
*Welded piping below grade	5 points	
*Threaded piping above grade	10 points	10
*Threaded piping below grade	20 points	
*Victaulic piping above grade	30 points	
*Victaulic piping below grade	40 points	
Rubber hose	20 points	
Additional for active leaks	20 points	
	80 points max.	**10**
Electrical		
Wiring appears appropriate or there is no wiring.	0 points	
Exposed wiring, improper grounding, etc.	10 points	10
	10 points max.	**10**
Life, Health & Safety		
*Appears code compliant (No extraordinary factors observed)	0 points	
***Low risk** (Minor code violations that could result in personal injury to non-vigilant employees, such as tripping hazards, limited lighting, etc.)	10 points	10
***Medium risk** (More severe code violations that increase risk such as lack of security fence, falling hazards, unlocked valves, gravity dispensing, etc.)	20 points	
***High risk** (Situations that pose an immediate threat to safety such as Fire hazards, gas leaks, failing tanks, unstable foundations, etc.)	40 points	
	40 points max.	**10**
Facility Total	**240 points max.**	**30**

*Indicates that only one of the group should be chosen.

Tank Farm 8 - Photos:

Photo 1 –City WTP Tank Farm

Photo 2 –City WTP Tank Farm

Tank Farm #9 – City of Scammon Bay, Office

Owner/Phone #: City of Scammon Bay / (907) 558-5529

Owner Type: City

Location: South Side of Community below WTP

Total Evaluation Score (See Scoring Sheet): 40 (240 max)

Regulatory Plans Available: ☒ No ☐ Yes

Spill Response Equipment: ☒ No ☐ Yes, None Observed.

Operator/Training/ Years on the Job: Larson Hunter/Unknown/Unknown

Distance from Moorage to Barge Header: Tank filled by fuel truck.

Facility Description:

The City's Office bulk fuel tank farm consists of one skid mounted, double wall, horizontal, AST located adjacent to the city office. The tank skids are supported by timbers on a gravel pad. The pad is experience some erosion due to drainage. The tank was not fenced. Fuel from the tank is used to fill day tanks at various city buildings in the immediate area. The tank is equipped with a top mounted centrifugal pump and hose real / nozzle assembly to facilitate fuel transfers. The tank is filled through a threaded top penetration via fuel truck.

Tank Farm 9 – City of Scammon Bay, Office										
Tank No.	Dia.	Height/ Length	Vertical/ Horizontal	Tank Type	Product	Tank Penetration Below Fuel Level	Tank Function	Approx Age (Years)	Listing	Gross Capacity (Gallons)
1	5'-3"	18'	H	DW	D1	N	BF	7	FD	3,000
									Total Gallons	**3,000**

TANK TYPE: SW = Single Wall, **DW** = Double Wall, **SD** = Self Diked, **PR** = Protected. **PRODUCT: D1** = Diesel #1/Heating Fuel, **D2** = Diesel #2, **ULSD** = Ultra Low Sulfur Diesel, **G** = Gasoline, **AV** = Avgas. **TANK FUNCTION: FD** = Fleet Dispensing, **RD** = Retail Dispensing, **BF** = Bulk Fuel. **LISTING**: **UL** = Underwriters Laboratories, **STI** = Steel Tank Institute, **API** = American Petroleum Institute, **UNK** = Unknown.

Tank Farm 9 - Deficiencies & Recommendations:

Site Location

☐ History of flooding
☒ Facility threatened by coastal erosion/avalanche/river erosion/other
☐ Tank Farm within 100-feet of a well

Secondary Containment

☐ No containment
☐ Inadequate containment

Foundations

☐ Belly of tank more than 12” above grade
☐ Insufficient foundation (Logs or < 6-inch timbers)
☐ No foundation (tank shell directly on ground)
☐ Failing foundation (leaning tank)

Tanks

☒Tanks not numbered and labeled
☒ Missing or improper emergency venting
☒ Missing or improper normal venting
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Piping

☐ No check valve at fill point
☒ Missing or inadequate drip pan at fill point
☐ Missing pressure relief
☐ Improper valve material (brass, bronze)
☐ Active leaks
☐ Evidence of past leaks
☐ Damaged or stressed flex connector(s)
☐ Inadequate pipe supports

Electrical

☐ Exposed or improper wiring
☐ Electrical conduit not supported at code-required intervals (10’ or less)
☒ No evidence of grounding

Life, Health & Safety

☒ No fence
☐ Insufficient Egress
☒ Missing or insufficient regulatory signs
☒ Missing or insufficient fire extinguishers
☒ Regulatory Plans not available
☐ Dispenser too close to tanks
☐ Inadequate separation from buildings
☐ Inadequate tank spacing
☐ No locks on gates
☐ No locks on closed tank issue valves
☐ Gravity dispensing
☒ Spill response equipment not available

☐ Other (specify)

_____

_____

Recommend resolving above issues. Facility is in overall good condition.

Tank Farm 9 - Evaluation Score:

Facility Category	Possible Points	Awarded Points
Site Location		
Site suitable for tank farm	0 points	
< 100 feet from a public well	10 points	
< 25 feet from an eroding bank or beach, or history of flooding	10 points	10
Gasoline tanks < 25 feet from an important building	10 points	
	30 points max.	**10**
Secondary Containment		
*Liquid-tight, lined dike of proper volume and construction, or double wall or self diked tanks	0 points	0
*Liquid-tight, lined dike of improper volume or construction	10 points	
*Fully diked but not liquid-tight (sand bag dike, gravel, torn or missing liner)	20 points	
*Partial or no dike	30 points	
	30 points max	**0**
Foundations		
*Tanks on stable foundations (steel skids, min. 6" timbers, no cribbing)	0 points	0
*Tanks directly on gravel pad or light timbers	5 points	
*Tanks directly on tundra or natural soils (no dike or liner, subject to erosion)	10 points	
Tanks leaning considerably or unstable foundations (seismic hazard)	10 points	
	20 points max.	**0**
Tanks		
*Tanks in fair to good condition (no dents, min. rust, no major repairs needed)	0 points	0
*Immediate need of cleaning and painting	10 points	
*Rusted or dented beyond repair or riveted, bolted or other	30 points	
	30 points max.	**0**
Piping (choose most likely to leak, i.e., victaulic, threaded or welded, only)		
*No piping or welded piping above grade	0 points	
*Welded piping below grade	5 points	
*Threaded piping above grade	10 points	10
*Threaded piping below grade	20 points	
*Victaulic piping above grade	30 points	
*Victaulic piping below grade	40 points	
Rubber hose	20 points	
Additional for active leaks	20 points	
	80 points max.	**10**
Electrical		
Wiring appears appropriate or there is no wiring.	0 points	
Exposed wiring, improper grounding, etc.	10 points	10
	10 points max.	**10**
Life, Health & Safety		
*Appears code compliant (No extraordinary factors observed)	0 points	
***Low risk** (Minor code violations that could result in personal injury to non-vigilant employees, such as tripping hazards, limited lighting, etc.)	10 points	10
***Medium risk** (More severe code violations that increase risk such as lack of security fence, falling hazards, unlocked valves, gravity dispensing, etc.)	20 points	
***High risk** (Situations that pose an immediate threat to safety such as Fire hazards, gas leaks, failing tanks, unstable foundations, etc.)	40 points	
	40 points max.	**10**
Facility Total	**240 points max.**	**40**

*Indicates that only one of the group should be chosen.

Tank Farm 9 - Photos:

Photo 1 –City of Scammon Bay Office Tank Farm

Photo 2 –City of Scammon Bay Office Tank Farm