



#### **FUEL STORAGE TANK AND CONTAINMENT FACILITIES**

**DESIGN REPORT AND DRAWINGS** 

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## FUEL STORAGE TANK AND CONTAINMENT FACILITIES



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## FUEL STORAGE TANK AND CONTAINMENT FACILITIES





#### 1. GENERAL

SNC Lavalin Stavibel inc. has been mandated by Agnico Eagle to design the Infrastructures for the Whale Tail Project. The Amaruq property is a 408 square kilometer (km²) site located on Inuit-Owned Land approximately 150 kilometers (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut. The deposit will be mined as an open pit (i.e. Whale Tail Pit), and ore will be hauled by truck to the approved infrastructure at Meadowbank Mine for milling. The Project facilities will consist of a personnel camp, power plant, maintenance shop, tank farm, a water and sewage collection and treatment system, haul roads, access roads. As a result of development, Agnico Eagle is also expanding the width of the existing exploration access road to a haul road to accommodate increased traffic and haul trucks (approved under pre-dev. licence 2BC-WTP1819).

Infrastructures are designed to accommodate the personnel, equipment and fuel requirements. Given its location, projects infrastructures were designed to accommodate cold temperatures and permafrost conditions.

#### 1.1 Purpose of the Report

This report is intended to present the design basis and considerations, engineering design and drawings related to the fuel storage and containment facilities that will be installed for Agnico Eagle Mines Limited's, Whale Tail Gold Mine project.

#### 1.2 Operation Authorization

This report essentially provides the information about the final design and construction drawings for fuel tank storage and containment facilities.

#### 1.3 Scope of Work

Agnico Eagle has retained SNC Lavalin Stavibel inc. to design surface infrastructures for the Project, which includes the fuel storage and containment facilities at the Whale Tail site. The report includes an overview of the Codes and Regulations that apply, the design criteria and construction details as well as site-specific considerations for the following facilities:

- One (1) fuel farm containing one (1) field-erected fuel storage tank (1.5 M) complete with a pumping station and ancillaries;
- Secondary containment for the fuel farm.



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#### 1.4 Schedule

The construction and installation of the tank will begin in 2018. Construction of the secondary containment will begin in August 2018. followed closely by the erection of a 1.5 M liter tank and the installation of the pumping station and the piping network. The commissioning of this system must be completed ahead of the first fill, scheduled for October 15, 2018.



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#### 1.5 Inclusions

The following items are included in the design report:

- Field erection of one (1) new vertical 1.5 M liter fuel storage tank;
- Accessories such as couplings, nozzles, stairs, steps, railings, fixed suction and piping;
- Pumping station;
- Piping network;
- Dispensing building;
- Testing, calibration and inspection requirements;
- Instrumentation and control;
- Earthworks;
- Tank foundations;
- Fuel farm secondary containment system with liner .

#### 1.6 Engineering Documents

Table 1 - Engineering documents list

Engineering documents		
Mechanical General Arrangement (GA) drawings		
	Process and Instrumentation Diagram (PID) drawings	
	Platework drawings (By K. Brown Contracting Itd. (KBC))	
Piping drawings		
Structure	Structural steel drawings	
Electrical	Single Line Diagram (SLD) drawings	
	Grounding drawings	
Lighting and services drawings		
Civil / Concrete / General Earth Works drawings		
Structural		



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#### 2. CODES AND STANDARDS

#### 2.1 Compliance for Field-Erected Fuel Tank

The system complies with the latest editions of the Codes and Standards relating to this project (Federal, Territorial, Municipal, NBCC, NFCC, CEC, CSA, NFPA, and API) as well as the directives of the authorities having jurisdiction over this project. Specific codes and standards as: R-125-95 NWT and Nunavut Mine Health and Safety Regulations (Mine Health and Safety Act) and RRNWT 1990, c F-12 Fire Prevention Regulations shall apply.

Additionally, the design and field-erected vertical fuel storage Tank shall conform to API Std. 650 Twelfth Edition - Welded Tank for Oil Storage, including Errata 1 (2013), Errata 2 (2014), Addendum 1 (2014), Addendum 2 (2016) and applicable Appendices.

NBCC National Building Code of Canada

NFCC National Fire Code of Canada

CEC Canadian Electrical Code

CSA Canadian Standards Association

NFPA National Fire Protection Association

API American Petroleum Institute

R-125-95 NWT Consolidated Mine Health and Safety Act

CCME Canadian Council of Ministers of the Environment –

National Guidelines for the Landfilling of Hazardous

Waste Landfills.

#### 2.2 Code Analysis for Field-erected Fuel Tank

The Field-erected Storage Tank System and pumping station design are first based on the compliance with the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (SOR/2008-197). Article 14 (1) of this regulation mentions that for the installation of a fuel storage system, the system has to comply with the applicable requirements set out in the CCME Code of Practice (CCME PN1326).



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Under the CCME, the main design criteria that apply to the design and installation of a new aboveground storage tank are defined in Part 3 and Part 5 applicable to the design and installation of new piping systems.

The Field-erected Storage Tank System design will comply with requirements of CCME 3.6.1(1) for aboveground storage Tank, more specifically API Std 650 for vertical single wall Tank.

In accordance with CCME section 3.3 and 3.4, the storage Tank will be equipped with an overfill protection to prevent spills.

In accordance with CCME section 5.4, all underground piping will be double-walled and installed such that leaks will be collected into an accessible sump.

Reviewing the NFCC latest edition, the main design criteria are defined in Part 4 regarding the flammable and combustible liquids. More specifically applicable are Section 4.1 which provides general information and requirements for fire protection and spill control of flammable and combustible liquid storage systems, Section 4.3 which provides the tank design and construction minimum requirements and Section 4.5 on piping and transfer systems.

Basically, most of the NFCC requirements for tank and piping systems are covered by CCME requirements but give some additional ones. For example, Table 4.3.2.1 defining the minimum requirements for the location of aboveground storage Tank; Point 4.3.2.2 defining the minimum requirements for spacing between Tanks; or point 4.3.6.4.2 requesting that connections for filling or emptying storage Tank shall be kept closed to prevent leakage when not in use.

#### 2.3 Compliance for Secondary Containment

The secondary containment for the aboveground storage Tank will conform to NFCC. The base and walls of a secondary containment will be designed, constructed and maintained to withstand full hydrostatic head and provide a permeability of not more than 10-6 cm/s to the flammable liquids or combustible liquids contained in the storage Tank (art. 4.3.7.2). The Tank located in the fuel farms are placed entirely within a dyke area, with an impermeable barrier in the floor of the containment area and in the dyke walls. A membrane is providing the level of impermeability.

See also section 4.5 of this report for more details.



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A secondary containment will have the minimum volumetric capacity stated in art.4.3.7.3. The fuel farm secondary containment has a greater volumetric capacity than required (see more details in section 4.4 of this report).

#### 3. DESIGN - FIELD-ERECTED FUEL TANK

#### 3.1 General

This section describes the criteria used to design the field-erected fuel storage tank, prepare general arrangements and select equipment and/or materials.

#### 3.1.1 Field-erected Fuel Storage Tank – Whale Tail Fuel Farm

The fuel storage tank will be installed at Whale Tail fuel farm. The site location of the 1.5 M liter Tank is shown on Figure 1 below.

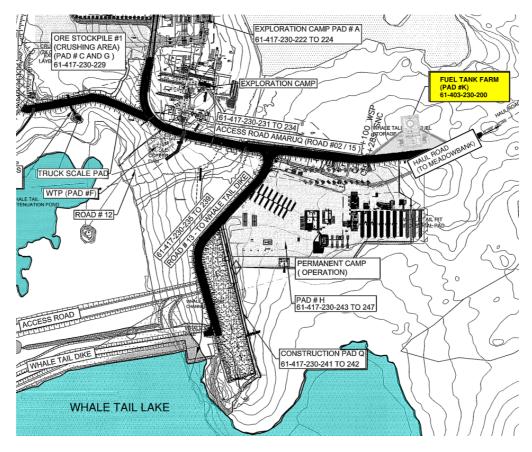


Figure 1 – Whale Tail Fuel Farm Site Overview (extract from drawing 61-403-230-205)



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The Whale Tail fuel farm will be refuelled by fuel truck deliveries from a Baker Lake fuel farm deposit. A system of service pipes allows the fuel truck to be connected to the tank. An automatic valve is activated for refuelling. The tank is connected to a pumping station located outside the Berms.

All surfaces on which the fuel tank and maneuvering areas of the machinery are located are protected from accidental spills by a watertight membrane (geomembrane) that directs the flow to a low point of recovery. This one is built inside the berms of secondary containment.

Construction drawings for the Whale Tail fuel farm are included in Appendix C.



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#### 3.2 Commissioning

The fabrication, erection, inspection, testing, welding and labelling of the vertical Tank will be to the latest edition of API Standard 650. Prior to putting a fuel storage tank in service, the tank will pass quality control checks as per API 650 requirements; finally, the tank will be cleaned, dried, strapped and closed to be ready for service.

#### 3.3 System Operation

System operation for the fuel farm consists of tank loading and unloading and fuel distribution. The following sections describe the operations for the Whale Tail fuel farm.

#### 3.3.1 Whale Tail - Fuel Farm

Fuel will be transferred from the Baker Lake site to the Whale Tail site via tanker trucks. The tanker trucks will be connected to a bottom loading arm and the pumping station will allow the operator to transfer fuel to the tank. The storage tank will be equipped with an overfill alarm system to notify the operator and to automatically stop the pumping operation.

For the loading operation, a pumping station will transfer fuel from the tank to the tanker trucks. The tanker trucks will be connected to a top loading arm and the pumping station will allow the operator to transfer fuel from tank.

For the distribution operation, the pumping station located at the Whale Tail site will be connected to a dispensing building. Equipment located inside the dispenser building will be used to refuel equipment.

#### 3.4 Maintenance / Inspection

A qualified maintenance team will inspect the system (mechanical equipment and piping) on a regular basis as per regulations and codes. Part of the distribution piping will be installed above ground which means any leaks can be detected during the periodic visual inspection. The underground piping is comprised of double walled pipe, and transition sumps will allow for periodic visual inspection.

The field-erected storage Tank shall be inspected externally and internally as per CCME section 8.4 and API 653 standard.



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#### 4. DESIGN OF FUEL STORAGE TANK FARM

#### 4.1 Description of the Fuel Storage Tank Farm

The Project includes the development of one (1) fuel storage tank farm on the mine site: Whale Tail Fuel Farm.

The table below presents the tank main dimensions.

Table 2 - Description of the fuel farm

Fuel farm Description	Mine site fuel farm (Whale Tail)
Product	Diesel
Volume (liter)	1.5 M
Diameter (m)	17.37
Height (m)	7.24

The detailed design of the Fuel Farm is presented in drawings in Appendix C.

#### 4.2 Tank Foundations Design

The tank foundation pad will be 400 mm higher than the surrounding ground with a minimum total thickness of 900 mm of compacted material which includes the liner system. A 1.2 m shoulder will surround the tank with a slope of 1V:1.5H away from the tank. The embankments of the foundation pad will be no steeper than 1V:2H.

The table below presents the design parameters for the tank foundations.



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Table 3 - Design parameters for the tank foundations

Tank Foundation Pad		
Tank Diameter (m)	17.37	
Tank foundation pad top (m)	28.0 x 28.0	
Tank foundation pad average thickness, above surrounding ground (m)	1.8	
Slope on shoulder	1V:1.5H	
Embankment slope	1V:2H	

#### 4.3 Berms Design

The storage tank is enclosed inside Berms in order to contain accidental spillage of fuel product. The Berms are made of granular material and are made impervious with a geomembrane.

The design parameters for the Berms surrounding the fuel Tank are presented in the table below.

Table 4 - Design parameters for fuel farm Berms

Tank Farm Berms		
Berms length	48	
(distance between the outer sides of the Berms) (m)	40	
Berms width	28	
(distance between the outer sides of the Berms) (m)		
Berms height (min) (m)	1.3	
Containment height (m)	1.0	
Berms flat top width (m)	2.5	
Berms embankment slope	1V:2H	
Impervious area (m²)	± 5 000*	

<sup>\*</sup> This includes the base membrane that covers the bottom inside the Berms, the area under the maneuvering area for filling the machinery and the additional waterproof surfaces placed 0.5 m below the stopping perimeters for heavy machinery (double protection for operations).



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#### 4.4 Secondary Containment Capacity

The required capacity of the fuel farms is calculated based on the following codes and regulations:

- National Fire Code of Canada (NFCC);
- National Fire Protection Association (NFPA); and
- Design Rationale for Fuel Storage and Distribution Facility (DRFS).

As per the latest edition of NFCC, art. 4.3.7.3, the required secondary containment capacity for a fuel farm with more than one storage tank must have a volumetric capacity of not less than the sum of:

- a) The capacity of the largest storage tank located in the contained space, and;
- b) 10% of the greater of:
  - i. The capacity specified in Clause (a), or;
  - ii. The aggregate capacity of all other storage Tanks located in the contained space.

The volume occupied by the Tank foundation is taken into account in the total secondary containment capacity.

The height of the secondary containment capacity is 300 mm lower than the Berms' maximum elevation.

Based on the above mentioned, the secondary containment capacity requirements and the available capacity for fuel farms are summarized in the following table.

Table 5 - Fuel farm containment capacity

Fuel farm		
Volume (liter)	1.5 M	
Required Containment Capacity (liter)	1.65 M	
Available Containment Capacity* (liter)	1.79 M	
Is Available containment > Required containment	YES	



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#### 4.5 Secondary Containment Imperviousness

As per NFCC art. 4.3.7.2, the base and walls of the fuel farms secondary containment are designed and will be constructed and maintained to withstand full hydrostatic head and provide a permeability of not more than 10-6 cm/s to the flammable liquids or combustible liquids contained in the storage tank. The Berms area will be impervious in order to avoid any seepage into the environment. A 5.10 mm ES-2 Coletanche geomembrane will provide adequate imperviousness. Technical specifications for the geomembrane are provided in section 5 of this report.

#### 4.6 Secondary Containment Drainage

The finished grade of the secondary containment is sloped away from the Tank in order to drain the runoff water. The bottom of the Berms surface must be built with slopes that will allow accidental spills to be concentrated at a low point. A drainage basin located at the low point allows the recovery by pumping accumulations of rainwater and accidental spills.

As defined in Agnico Eagle Hazardous Materials Management Plan (April 2015), due to melting snow that accumulates over the winter and precipitation, contact water will be collected inside the secondary containment Berms. During visual inspections, the quantity of contact water collected inside the secondary containment Berms will be evaluated. If there is a visible sheen on the contact water or if water withdrawal is deemed necessary, water samples will be collected and analyzed. Accumulated water will be released into the receiving environment only if it meets discharge criteria.

#### 4.7 Distance Restrictions

#### 4.7.1 Minimum Clearances for Tank Farm Design

The minimum clearances that were taken into account in the design of the Tank Farm are:

- The distance between the tank and the toe of the Berms shall not be less than 1.5 m (NFCC, art. 4.3.7.4);
- The distance between the tank and the centerline of the Berms shall not be less than ½ the height of the tank (DRFS art. 4.5);
- The distance between the property limit and the tank shall not be less than 160 ft (48 m) (NFPA 30, table 22.4.1.1);
- The distance between the property limit and the exterior toe of the Berms shall not be less than 3 m (NFPA 30, art. 22.11.2.3);



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- The Tank must be located 9 m away from the public roads and buildings (NFCC, art. 4.3.2.1).

#### 4.8 Inspection and Commissioning

The manufacture and supply of the liner system for the fuel farm will comply with ASTM standard. The manufacturer will provide a certification stating that the material proposed has physical properties that meet the required values. The rolls of liner will be labelled, packaged, shipped, off-loaded, stored and handled by appropriate means to prevent damage to the material.

The subgrade surface will be inspected by the Engineer to verify suitability prior to installation of the liner system. A minimum thickness of fill covering the liner will be maintained for operating equipment over the liner to prevent any damage. The installation of the liner system will be performed by a qualified technician. All seaming, patching, welding operations, and testing will be performed by a qualified technician. Joints/seams between liners panels will be field welded using the manufacturer's recommended procedures and equipment. Any welds that have been rejected will be remedied to satisfactory requirements. The backfill material will be placed in accordance with the drawings and specifications for the maximum lift thickness, compaction requirements and final grade levels. The fuel farm including its liner system installation and testing documentation will be accepted by the Engineer prior to the filling of the storage tank.

A quality control program for seams is proposed during and after installation. This program includes the following procedures:

- Visual testing by a qualified worker: The test is carried out once the bitumen has cooled. The joint is tested with a round-tipped trowel to ensure that the weld is not separating. A special attention must be taken if there is no bitumen bleeding out from the seam. All defects are recorded by the site supervisor in a Data Sheet and clearly marked for repair.
- Ultra-sound testing (non-destructive): The seams are checked using an ultra-sound device. After a calibration test, the ultra-sound machine is placed on the joint with a sufficient quantity of coupling agent to make sure contact between the probe and the membrane is good. To control the seams, the probe must be carried out over the total width of the seam. The results are recorded by the site supervisor and in the case of a defect, additional tests along the same seam are required (in between the failed test and the nearest passed test both sides).
- Vacuum testing (non-destructive): The seams are checked using a vacuum bell. The test is performed using liquid soap as a leakage indicator. If bubbles appear under the bell, the seamed section must be repaired.
- Destructive testing or mechanical resistance of the seams: Tests are done in the field with Leister equipment. A sample of the seam is required for the shear resistance test (ASTM D-7056). The sampled areas are to be repaired by welding a strip of COLETANCHE. The results are noted by the quality supervisor.



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#### 5. EARTH WORKS

#### **5.1 Construction Material Quantities**

The table below presents the estimated in-place material quantities for the construction of the Fuel farms.

Table 6 - Material estimated in-place quantities for the construction of the Fuel farm

ltem		
Granular fill 0-20 (m³)	4 800	
Granular fill 0-50 (m <sup>3</sup> )	0	
Backfill 0-150 (m³)	22 500	
Bituminous Coletanche ES-2 (m²)	5 500	
Total Fill Material Volume (m³)	27 300	

#### **5.2 Construction Material Specifications**

The general requirements for the materials are specified below. The requirements for each of the materials can vary slightly for a specific earth structure to meet specific design intents.

#### **5.2.1 Granular Fill (0-20 mm)**

Table 7 - Granular fill (0-20 mm) - Particle size distribution limits

Particle size (mm)	% Passing
31.5	100
20	90 - 100
14	68 – 93
5	35 – 60
1.25	19 - 38
315 µm	9 -17
80 μm	2.0 -7.0



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#### 5.2.2 **Granular Fill (0-150 mm)**

Granular Fill (0-150 mm) shall consist of hard durable particles, be free of roots, topsoil and other deleterious material and have a particle size distribution as presented in the table below. Processing will be required to achieve the specified gradation.

Table 8 - Granular fill (0-150 mm) - Particle size distribution limits

Particle size (mm)	% Passing
150	100
100	50 - 100
50	25 – 65
25	10 – 40
5	0 - 15

#### 5.2.3 Geomembrane Coletanche ES-2

An impervious Coletanche ES-2 geomembrane will be placed on granular material of minimum 0.3 m thickness order to contain the area in case of a spill. The liner will be a continuous membrane to ensure its imperviousness. The Coletanche geomembrane is based on elastomeric bitumen (ES) with the combination of a non-woven geotextile for mechanical resistance and a specifically designed bituminous binder that guarantees waterproofing, chemical resistance and ageing behavior.

Table 9 - Geomembrane specifications

Composition	Property	Value (oz/yd²)
Glass mat	Reinforcement	1.5
Non-woven geotextile	Reinforcement	7.4
Elastomeric SBS	Binder	126.8
Sand	Surface finish	5.9
Polyester antiriot film	Under surface finish	0.4



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#### Table 10 - Geomembrane specifications (cont'd)

Characteristics					Tolerance	
Characteristic	S	Standard	Units	Values	Min  150  133  139  118  116  103  48  48	Max
Dimensions	Length		ft	259	≥	
Dimensions	Width	-	ft	16.4	2	
Thickness (on finished produc	t)	ASTM D 5199	mils	157	150 173	
Surface mass		ASTM D 3776	oz/yd²	143	133	153
Resistance to tearing	Longitudinal	ASTM D 4073	lbf	185	139	-
	Cross direction			157	118	-
Tensile properties: maximum tensile strength	Longitudinal	ASTM D 7275	Lbf/in.	154	116	-
	Cross direction			137	103	-
Tensile properties: elongation	Longitudinal		%	60	48	-
	Cross direction			60	48	-
Tensile properties: maximum tensile strength	Longitudinal	ASTM D 4595	Lbf/in.	143	108	-
	Cross direction			120	91	-
Tensile properties: elongation	Longitudinal		%	80	60	1
	Cross direction			80	60	-



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#### Table 11- Geomembrane specifications (cont'd)

Characteristics					Tolerance	
		Standard	Unit s	Values	Min	Max
Static Puncture		ASTM D 4833	lbf	119	107	-
Flexibility at low temperature	Surface	ASTM D 5147 °F -4		-		
	Under surface	ASTINID 5147	Г	-4	-	
Water permeability (liquid tightness)		ASTM E 96	m/s	6. 10 <sup>-14</sup>	-	
Gas permeability (gas tightness)		ASTM D 1434-82		< 2.3.10 <sup>-14</sup>	-	



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# APPENDIX A FUNCTIONAL DESCRIPTION



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES





#### **FUNCTIONAL DESCRIPTION – WHALE TAIL FUEL FARM**

#### Unloading tanker (filling tank no. 61TNK40301)

- a. The truck static grounding confirmation energizes the system;
- b. Connect the unloading arm;
- c. A Microload allows the transaction (ID and volume are required) before pumping starts;
- d. The operator pushes the start button. The motorized valve of tank opens. The pump starts after an adjustable time lag;
- e. If one pump does not start, an indicator lights and the other pump starts. If none of the pumps start, the motorized valve closes, the tank selector returns to the neutral position and a system fail signal appears on the control panel;
- f. Pumps run alternatively. A light for each pump are located on the control panel and indicate which pump is running;
- g. Pumping stops at selected volume or when tank is full or after an adjustable operation time;
- h. Stopping the pump closes the motorized valve tank after an adjustable time lag;
- i. Position (OPEN/CLOSED) of motorized valves are indicated on the control panel;
- j. A flow control valve automatically controls fuel flow rate during dispensing;
- k. Pump emergency button stops everything but lighting and cannot be by passed;
- I. Pump interlocks:
  - a. Starting condition that cannot be by passed:
    - i. Truck must be grounded; and
    - ii. Maximum level of diesel in the selected storage tank.
  - b. Running conditions that can be by-passed:
    - i. Microload;
  - c. Safety trip conditions (cannot be by passed):
    - i. Emergency stop button.
- m. Overfill protection of tanks:
  - a. Overfill alarm is composed of one strobe light on tank and one-horn installed near the electrical container (operating area);
  - b. When 95% of a tank capacity is reached (high level from the vibronic level switch), an overfill alarm is activated. Tank strobe light and the horn are activated;
  - c. A tank level high high message will appear on local level indicator; and
  - d. The horn can be manually by passed.
- n. Alarms transmission:



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- a. At least, 4 different alarms must be transmitted to client's remote monitoring system, including but not limited to: Overfill alarm, Emergency stop activated, Temperature alarm, Pumps and valves malfunction alarm; and
- b. Use network system with the PLC to transmit alarm signals to the control room.

#### Loading tanker

- a. The truck grounding energizes the system;
- b. Connect the top loading arm;
- c. A Microload allows the transaction (ID and volume are required) before pumping starts;
- d. The operator pushes the start button. The motorized valve is activated and the motorized valve of tank opens. The pump starts after an adjustable time lag;
- e. If one pump does not start, an indicator lights and the other pump starts. If none of the pumps start, the motorized valve closes, the tank selector returns to the neutral position and a system fail signal appears on the control panel;
- f. Pumps run alternatively. Lights for each pump are located on the control panel and indicate which pump is running;
- g. Pumping stops at selected volume or when tanker is full (tanker level determined visually by the operator) or after an adjustable operation time;
- h. Stopping the pump closes of the motorized valve at tank after an adjustable time lag;
- Position (OPEN/CLOSED) of motorized valves are indicated on the control panel;
- j. Pumping stops when the minimum level of diesel is reached (550mm) inside the tank. In case of emergency (lack of fuel), a manual bypass of these level switches will allow pump to restart.;
- k. A flow control valve automatically controls fuel flow rate during dispensing;
- I. Pump emergency button stops everything but lighting cannot be bypassed;
- m. Pump interlocks:
  - a. Starting condition that cannot be by passed:
    - i. Truck must be grounded.
  - b. Starting conditions that can be by passed:
    - i. Minimum level of diesel in the storage tank.
  - c. Running conditions that can be by-passed:
    - i. Microload; and
    - ii. Minimum level of diesel in the storage tank.
  - d. Safety trip conditions (cannot be by passed):
    - i. Emergency stop button.



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES

**DESIGN REPORT AND DRAWINGS** 



# APPENDIX B Engineering Drawings List



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES



**DESIGN REPORT AND DRAWINGS** 

The following list of drawings covers the technical requirements for this package.

<u>Drawings</u>	<u>Title</u>	Rev
61-403-205-207	403 - COMBUSTIBLE / 205 - P&ID - FUEL / TANK FARM / PUMPING STATION	R3
61-403-205-208	403 - COMBUSTIBLE / 205 - P&ID - FUEL / TANK FARM / FUEL DISPENSING BUILDINGS	R3
61-403-210-203	403 - COMBUSTIBLE / 210 - GENERAL ARRANGEMENT / PLAN VIEW / TANK FARM / LAYOUT	R1
61-403-230-200	403 – COMBUSTIBLES / 230 - GENERAL EARTH WORKS / CROSS SECTION / FUEL TANK FARM #1 - PAD "K" / RETENTION POND AND PAD "K"	R1
61-403-270-232	403 - COMBUSTIBLE / 270 - PIPING / PLAN VIEW, SECTIONS AND DETAILS / FUEL TANK FARM / DIESEL STORAGE AND DISTRIBUTION	R0
61-403-270-233	403 - COMBUSTIBLE / 270 - PIPING / PLAN VIEW, SECTIONS AND DETAILS / FUEL TANK FARM / DIESEL STORAGE AND DISTRIBUTION	R0
61-403-275-200	403 - COMBUSTIBLE / 275 - POWER ELECTRICAL / SINGLE LINE DIAGRAM / 600V DISTRIBUTION	R4
61-403-275-201	403 - COMBUSTIBLE / 275 - POWER ELECTRICAL / PLAN, SECTION AND DETAILS/ FUEL FARM /61PST40301 - PUMPING STATION	R2
61-403-275-203	403 - COMBUSTIBLE / 275 - POWER ELECTRICAL /	R0



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES



**DESIGN REPORT AND DRAWINGS** 

<u>Drawings</u>	<u>Title</u>	Rev
61-403-285-200	403 - COMBUSTIBLE / 285 - SERVICE ELECTRICAL - LIGHT AND DISTRIBUTION/ ARRANGEMENT/ FUEL FARM / LIGHTING LAYOUT	R0
61-408-275-202	408 - ELECTRICAL SUBSTATION / 275 - POWER ELECTRICAL / PLAN, SECTION AND DETAILS / FUEL TANK FARM/ ELECTRICAL SUBSTATION - 61SST40804	R4
61-403-230-200-1	403 - COMBUSTIBLE / 230 - GENERAL EARTH WORKS - CROSS SECTION / FUEL TANK #1 PAD "K" / RETENTION POND AND PAD "K"	R0
61-403-230-200-2	403 - COMBUSTIBLE / 230 - GENERAL EARTH WORKS - CROSS SECTION / FUEL TANK #1 PAD "K" / RETENTION POND AND PAD "K"	R0



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES





APPENDIX C
Engineering Drawings



## FUEL STORAGE TANK AND CONTAINMENT FACILITIES







## FUEL STORAGE TANK AND CONTAINMENT FACILITIES

**DESIGN REPORT AND DRAWINGS** 



# APPENDIX D DRAWINGS FROM K. BROWN CONTRACTING