# Project Summary Outline

April 2021

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|---|---|
| **Name of Project** | Fuel Import, Storage and Distribution Facility |
| **Name of Company** | United Independent Petroleum Marketing Company Limited |
| **Contact Details** | Kirt Hills, Chief Operating Officer<br>kirthills@Unipet.co<br>+1 (868) 684-2594<br><br>Alfred Arthur, Project Team Leader<br>aarthur@Unipet.co<br>+1 (868) 328-7019 |
| **Date Prepared** | 21 April 2021 |
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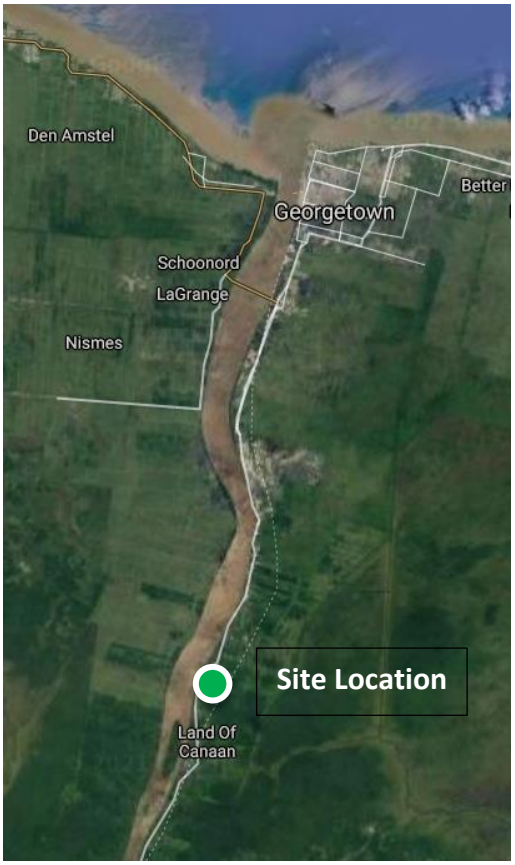
## 2 EXECUTIVE SUMMARY

Unipet is proposing to build a multi-purpose fuel facility at Pant 'P', Land of Canaan, East Bank Demerara (Coordinates 6° 36' 23.6" N Latitude, 58° 12' 29" W Longitude).




The proposed location is on a rectangular lot of land that measures 1.112 hectares which is relatively flat with a maximum elevation change of just over 2 meters and maximum elevation of 5 meters.

This facility will consist of the following:

1. A Bulk Fuel Storage Facility with Gantry Loading, Office buildings and other ancillary infrastructure.
2. A Gas Station and Convenience Store.

The site is an open and largely undeveloped field with a few buildings and ancillary structures within its boundary. The area surrounding the proposed development is industrial/commercial operations.

The overall life of the Project is 30 years with the first 2 years for construction and commissioning.

# 3 INTRODUCTION

## 3.1 COMPANY BACKGROUND

The United Independent Petroleum Marketing Company Limited (Unipet) is a duly registered external company in Guyana with Head Office in Trinidad & Tobago whose core business is in the downstream liquid petroleum industry, complementary energy services and convenience services since 1997.

Unipet is a limited liability company that is privately owned and governed by a Board of Directors.

## 3.2 PROJECT BACKGROUND

The Project site will consist of a Bulk Fuel Storage facility with Gantry loading operations, office buildings and other ancillary infrastructure. Additionally, a Gas Station with a Convenience Store will be constructed. Upon completion the development will house:

- ❑ Bulk Fuel Storage, Gantry & Office:
  - ❑ Steel tanks for a total volume of 1,000 m3:
  - ❑ Each product (Diesel and Motor Gasolene) will be stored in its own bunded area in line with American Petroleum Institute (API) standards;
  - ❑ A four (4) vehicle fueling Gantry;
  - ❑ An office building for 50 employees.
- ❑ A Gas Station and Convenience Store:
  - ❑ Six (6) dispensers;
  - ❑ Two (2) Electric Vehicle (EV) charging stations;
  - ❑ Convenience Store with automatic merchandising machines;
  - ❑ The dispensers will be serviced by piping runs from the Bulk Fuel Storage to the dispensers.

## 3.3 PROJECT SIZE

### 3.3.1 Capital Investment

The capital investment budgeted for this project is $4.9 Million US Dollars.

### 3.3.2 Number of Employees

This project will generate both short-term and long-term employment opportunities. The table below

provides a summary of the likely numbers of jobs created by phase, with the expected level of local content.

| Phase | Locals | Non-Locals | Total |
|---|---|---|---|
| Construction | 65 | 5 | 70 |
| Start-Up | 30 | 6 | 36 |
| Fully Operational | 34 | 2 | 36 |

### 3.3.3 Rates of Production

The rate of production for diesel and mogas is 1,500$m^3$ per month.

### 3.4 ENVIRONMENTAL AUTHORIZATION REQUIREMENTS

The Project Summary is guided by S.11 (1) of the Environmental Protection Act, Cap 20:05, Laws of Guyana. The following outline requirements are referenced in this document as per below:

| No | Outline Requirement | Document Reference |
|---|---|---|
| **1** | Cover Page - Name of Project, Name of Developer/Company, Contact details, Date prepared and by whom | Cover Page 0 |
| **2** | A description of the site which should include the area of influence (spatial and temporal boundaries), location, land requirements (area occupied), layout, identification of receiving water(s), the present land use of the project area and the areas contiguous to it and the location of any existing or proposed intake and discharge structures and the location of any discharge. This information should also be presented on maps. | 4.1 Description of the Site Page 6<br><br>5.1Environmental Characteristics of the Site Page 9 |
| **3** | The project design including:<br>- Activities associated with all development stages from construction to closure: operation and production processes and alternatives considered e.g. provide a guide for all stages of the project from raw material to the finished product.<br>- Source of utility services such as water supply and treatment, energy/electricity and communication, facilities, etc.<br>- Waste management details which should include types of waste and methods of waste disposal/treatment. | 7 Project Design by Stages Page 17 |
| **4** | The project size, e.g. capital investment, number of employees projected for each stage of the project, rates of production, etc. | 3.3 Project Size Page 3 |
| **5** | A non-technical explanation of the project (a summary of what the project is about in layman language). | 2 Executive Summary Page 2 |
| **6** | The duration of the project (for each phase). | 6 Project Timeline Page 15 |
| **7** | Potential effects on the environment which may result from the existence of the project i.e. land, soil, water, air, the use of natural resources, etc. A brief description of each potential effect. | 5.2 Potential Impacts and Mitigation Measures Page 9 |
| **8** | Proposed plans to mitigate environmental impacts. | 5.2 Potential Impacts and Mitigation Measures Page 9 |

# 4 DESCRIPTION OF THE PROJECT

## 4.1 DESCRIPTION OF THE SITE

The proposed location is on a rectangular lot of land that measures 1.112 hectares which is relatively flat with a maximum elevation change of just over 2 meters and maximum elevation of 5 meters.
The site is an open and largely undeveloped field with a few buildings and ancillary structures within its boundary. The area surrounding the proposed development is industrial/commercial operations.

**Figure 1: Site Location Map**


## 4.2 BULK FUEL STORAGE FACILITY

The development of the Bulk Fuel Storage Facility will have a footprint of 7,372 $m^2$. It will be separated from the office area by means of a concrete wall.

The site will have a total volume of 1,000 $m^3$ for Diesel and Gasoline storage. Each product will be located in its own bunded area designed in line with American Petroleum Institute (API) standards. As such the bunds will meet the minimum requirement to hold 110% of the tanks. The bulk storage tanks will be filled via barge twice per month. Pipeline tie back connection points will be created to facilitate barge filling. A total estimated monthly throughput of 1,500 $m^3$ of fuel.

Gantry operations will have the capability to load four trucks simultaneously. The office services will include Maintenance, Laboratory, and Control Room operations. Other ancillary infrastructure will

include:

- An administration building with staff amenities and 40 parking slots for employee vehicles.
- Pump and pipe transfer systems for internal fuels management as well as connecting to the bulk liquids.
- Tank bunding, safety and fire systems including fire water storage, tank cooling and foam systems and stormwater runoff control, capture testing and release systems will be developed at the site.

The water consumption for the office operations for the expected 35 employees will be 4.64$m^3$. This wastewater generated will be approximately 85% greywater (kitchens and bathrooms) and 15% sewage. Sewage will be treated through the use of a septic tank system. Greywater will be discharged into the normal drainage system.

Domestic waste generated is expected to be 55kgs per day during construction and 25.9kg per day during the operational phase. No special solid wastes are expected to be generated.

### Gas Station and Convenience Store

The Gas Station will be situated in the western edge of the site along the East Bank Public Road. It will be separated from the bulk storage facility by means of a concrete wall.

The Gas Station will be serviced by two intermediate above ground storage tanks with appropriate bunding, leak detection and overfill protection.

The forecourt will consist of six (6) pump islands and all pipework will be Polyethylene and double walled. These pipes will be installed below ground around 450mm, and surrounded by loose backfill, sand or pea gravel (minimum thickness of 150mm) and covered with concrete slabs.

The piping will be capable of being tested without major disconnection or disturbing of the pipework and will feature a fallback to the storage tank. The indicated fall back will ensure that the fuel lines will drain of the respective fuel, when the dispensers are not operating. Continuous interstitial monitoring devices will be installed for the interstitial space of the pipework. These devices can detect leaks in double skin equipment, irrespective of fuel volume.

Above ground venting piping systems consisting of galvanized steel pipes and metallic fittings designed to protect against fire, impact and environmental degradation will be installed. These venting pipes and offset filling points will be located above ground. Overspill prevention valves will be installed on the fill line side to avoid fuel entering into the vapour return pipework manifold, in the unlikely event that a storage tank is overfilled.

Non-pressure lines such as suction, offset fill, vent and vapour recovery pipework will be tested by means of air pressure. During the pressure test all elbows and tee fittings will be checked with soapy water for leakage. Other testing on pipework will be carried out according to manufacturer's recommendations.

# 5 ENVIRONMENTAL ASSESSMENT

## 5.1 ENVIRONMENTAL CHARACTERISTICS OF THE SITE

### 5.1.1 Hydrology

The Demerara River is on the western boundary of the site. The site is relatively flat with a maximum elevation of 5 meters and a maximum elevation change of 2 meters across the site.

### 5.1.2 Vegetation

The proposed site and surrounding land uses are industrial/commercial for many years. The vegetation of the site therefore comprises grass and shrubs varying between 1-1.5 meters in height.

### 5.1.3 Noise and Vibrations

The East Bank Public Road is the most prominent source of noise pollutants, given that the noise comes not only from the vehicles themselves, but also from the friction on the road surface.

### 5.1.4 Air Quality and Dust

Traffic, especially when congested, is generally recognized as one of the major sources of air pollution. Given the proximity of the site to a major roadway and the level of activity on this stretch of road air quality in this region is likely to be impacted by this.

## 5.2 POTENTIAL IMPACTS AND MITIGATION MEASURES

The proposed development such as other similar ones might give rise to a variety of environmental effects. At this stage, only preliminary indications of the potential environmental impacts of the proposed service station are being listed below.

### 5.2.1 Impacts & Mitigations for Land & Land Uses

**Impact**

The site earmarked for the proposed development is currently commercial/industrial use area with no known areas of environmental sensitivity.

Further, the nature of the project is such that gross changes to land i.e. cutting and filling to correct for large changes in elevation, clearing of primary vegetation etc. is not required.

All materials generated on the site will be reused in the site development works. As such there is not likely to be the need to dispose of soil or overburden.

The only foreseeable land based impacts for this project would be due to earthworks, the compaction of soil for the installation of a concrete base for bulk storage and Gas Station forecourt and trenching for

installation of walls for bunds and the Gas Station store areas.

**Mitigation**

Given that the proposed activities are likely to reduce the permeability of the soil (through compaction and paving) and this increased runoff the mitigations related to land use are primarily focused on erosion and sediment control.

Mitigation measures to be implemented during the construction phase will consist of best management practices to control erosion and sedimentation. These will include but not be limited to:

- Isolation of Project area – The work site will include perimeter hoardings and temporary fencing to ensure separation of the work site from the public.
- Diverting road runoff – Ensure hot-mix bund is installed adjacent to the proposed works. The hot mix bund is positioned below site hoarding to prevent clean/dirty water infiltrating through the base of the hoardings and divert water to the nearest catchpit.
- Managing surface water – Surface site runoff within the project area will be collected at silt fences ensuring treatment of sediment. Where flows are excessive, or ponding occurs pumping to a settlement tank or similar measure, will be put in place to ensure flows are collected and treated prior to discharge from site.
- Dewatering – Ponding water is to be pumped to a settlement tank or similar for storage and treatment. Water treated through sediment settling is decanted from the settlement tank and discharged to the existing stormwater network or onto a stabilized flat area for sheet flow dispersion to a nearby catchpit.
- Treatment of surface water – Surface site runoff within the Project area will fall to an existing catchpit or proposed catchpit with inlet protection.
- Water Quality – A testing regime will be established at the discharge points to ensure minimum water quality standards are met.
- Temporary and permanent site access - Access routes are expected to be impervious stabilized areas however if bare earth is exposed, stabilized entry/exit points will be provided with vehicle wash-down facilities to prevent transport of sediment off site.
- Dust control – Dust production on site is expected to occur from material stockpiles. Dust will be managed through damping. Construction of stabilized entrances and pathways are provided to limit dust generation. Regular monitoring of dust emissions and minimizing areas of exposed soils to wind through construction staging will also be done.

- Loading trucks – Vehicles such as loading trucks will travel solely along the stabilized access routes and are not expected to be accessing the exposed areas. However, if vehicles access the exposed areas, then a wash-down area and facility is to be provided to ensure vehicles are not carrying loose sediment.
- Wet weather – During an unforeseen rainfall event that limits carrying out the work, the work will be stopped, and the erosion and sediment control measures will be checked to ensure they are operating correctly and upgraded or modified where necessary. Any open exposed areas will be suitably covered in anticipation of a rainfall event.

### 5.2.2 Impacts & Mitigation Measures for Noise and Vibrations

**Impact**

The highway and main road is the most prominent source of noise currently. The main activities related to the proposed development during the construction which are likely to give rise to noise emission and vibrations are demolition of structures, the excavation and the construction of the actual premises.

In the operational stage noise will be generated from vehicle movements, filling station activities, traffic movement within the proposed site and equipment being operated on the site.

**Mitigation**

The selection of low noise pumps, plants and the location of noisy equipment as far away from the residential buildings, as permitted by site perimeter, will ensure that the resultant noise impact related to the operations is insignificant.

All work will take place during normal working hours i.e. 8 am to 5 pm from Monday to Saturday. No work will take place on Sundays and public holidays.

Regarding construction noise and vibration, good construction management practices will be carried out to avoid nuisance to the nearest residential areas. No mitigation measures (other than equipment selection and placement described above) are considered necessary during the operational phase.

### 5.2.3 Impacts & Mitigation Measures for Air Quality

**Impacts**

The main impacts on air quality are expected to be temporary dust emissions during the construction phase. During the operational phase the impact on air quality is likely to be due to concentration of vehicles' emissions within the premises and venting during Gantry filling operations.

**Mitigations**

Dust will be the major inconvenience during the construction period. Thus the construction site will be well prepared, and the construction activity should be well managed so as to minimize the nuisance to neighbouring communities.

To ensure that the air quality is up to standards the following measures should be secured:

- In order to prevent dust generation, covering and wetting heaps of soil and dust would be required.
- Carriers of construction and demolition waste will be adequately covered.
- The proper maintenance and operation of vehicles will be used to minimize vehicle emissions both during construction and operation.
- All the necessary safety equipment should be installed to detect any gaseous emissions.

### 5.2.4 Impacts & Mitigation Measures for Waste Management

**Impacts**

The waste generated during construction will be very limited and any surplus excavation materials that are not reused on site will be returned to the vendor. As a result of these measures, there is expected to be no impact arising through waste generated during the construction phase. It is expected that mainly domestic waste will be generated during the operational phase.

**Mitigation**

With regards to solid waste during construction it is being proposed where applicable reuse practices will be adopted.

### 5.2.5 Impacts & Mitigation Measures for Contaminated Runoff (Water Impact)

**Impacts**

Given that the site is more or less uniformly flat throughout runoff from the site is likely to be minimal under normal circumstances. However, given that heavy earthmoving equipment will be in operation and with the removal of vegetation coupled with the likelihood of pits and hollows being created that can generate runoff channels. Further, given the size of the site and possibility that rainfall intensity runoff control is going to be a significant requirement for this project.

**Mitigation**

During the construction phase of the project runoff will be controlled as follows:

1. The creation of perimeter berms at the boundaries of the development.
2. The installation of silt traps for drains that exit the site.
3. The protection of stockpiles using water resistant geo-textiles materials.
4. All material stored on site will be in specially designated areas allocated for storage of aggregate and will be bermed.
5. The access and egress roads will be kept clear of mud, gravel, and other sediment arising from the proposed project through the installation of:
    a. Wheel wash bays at all entrances and exits.
    b. Drainage systems designed to prevent the pooling of water on the project site.
    c. collection pits/sumps at the final effluent discharge point(s) which will be sampled to ensure compliance with the regulations.

Additional details on mitigation of this impact can be found in the Stormwater Management and Sediment and Erosion Control Plans.

### 5.2.6 Impacts & Mitigation Measures for Accidental Releases (Water Impact)

**Impacts**

An accidental release of liquids during construction will be minimal as there are no plans to have large volumes of liquids on site. The most likely scenario would be the transfer of small quantities from one container to another. Nonetheless arrangements will be put in place to address this risk.

**Mitigation**

The following practices will be employed to mitigate the risks of spills during construction:

- Keep container lids securely fastened at all times.
- Do not leave portable sources unattended (outside);
- Return portable sources to their bermed storage location after use.
- Use pads, drip pans, and funnels when transferring products from a portable container.
- Fully equipped and unexpired Spill Kits will be available on site and personnel will be trained in spill response procedures.
- Protect liquid sources from damage by moving equipment.
- Keep dike valves closed at all times except when discharging clean stormwater from the diked

area.

- Contaminated water within the diked area and piping and dispenser sumps shall be removed and disposed of by a licensed hazardous waste contractor.
- And do not store oil sources near catch basins or floor drains.

# 6 PROJECT TIMELINE

The overall life of the Project is 30 years over 3 Stages and 7 Phases as follows:

| | Stage | Phase | Description | Milestone from day 0 |
|---|---|---|---|---|
| **1** | Construction | 0 | Initiation & Planning | + 4 Months |
| | | I | Construction & Commissioning Bulk Storage & Gantry | + 10 Months |
| | | II | Construction & Commissioning Gas Station and Additional Storage | + 2 Years |
| | | III | Expand Fuel Storage | + 4 Years |
| **2** | Operations | IV | Operate and Maintain Facility | From Phase I |
| **3** | Decommission | V | Decommission/Repurpose Facility | + 29.5 Years |

The final construction schedule will be subject to the outcomes of the detailed design process, the requirements of the principal construction contractor as well as commercial factors.

The Activities of the Operations Stage is detailed on Page 21.

## 6.1 STAGE 1 PHASE 0 INITIATION & PLANNING

Work can only begin by following consent by the EPA to grant development permission. A Project Execution Plan will be developed which would encompass a Construction Management Plan, Health and Safety Management Plan, Environmental Management Plan and Quality Management Plan. A Commissioning Plan would be developed during the construction phase in anticipation of finalizing construction and commissioning the facility.

The Key Activities associated with phase are:

- Business Case
- Feasibility Study
- Project Team Appointment
- Set up Project Office
- Prepare proposal to engage Engineering Consultants
- Apply for outline Approval
- Geotechnical Report
- Develop Designs
- Final Approval

- Develop Quality Plan
- Develop Risk Assessment
- Communication Plan
- Health & Safety Plan
- Formulate Supplier Contracts
- Contractor & Specialist Engagement

### 6.2 STAGE 1 PHASE I CONSTRUCTION & COMMISSIONING BULK STORAGE & GANTRY

Development of all the infrastructure required for the loading Gantry inclusive of piping to the Bulk Fuel Storage area from the Wharf to Tank farm supplying to Gantry to consist of API bunded Fuel Bladders. Additionally, the office will also be constructed.

### 6.3 STAGE 1 PHASE II CONSTRUCTION & COMMISSIONING GAS STATION AND ADDITIONAL STORAGE

Construction of the Gas Station with six (6) dispensers and two (2) EV charging stations. Tie back piping from the dispensers to the Bulk Fuel Storage area.

This phase will have the steel tanks installed in the Bulk Fuel Storage area and the removal of the Fuel Bladders. The Bulk Fuel Storage area will therefore consist of steel tanks and three (3) Fuel Bladders.

### 6.4 STAGE 1 PHASE III EXPAND FUEL STORAGE

This phase will see all of the remaining three (3) Fuel Bladders taken out of service and replaced by steel tanks. The Bulk Fuel Storage area will be in its final configuration of steel tanks.

### 6.5 STAGE 3 PHASE V DECOMMISSION/REPURPOSE FACILITY

At this stage the facility has reached its useful life. There may be opportunities repurpose the facility subject to regulatory approvals and market value at that stage. However, as a default, it will be dismantled/demolished safely, this will be undertaken in conjunction with a decommissioning plan, in addition to approval granted by the relevant authorities in Guyana to deactivate the plant.

# 7 PROJECT DESIGN BY STAGES

## 7.1 CONSTRUCTION STAGE

The following provides a summary of the main elements of the construction program:

- Temporary fencing on the site boundaries for security purposes.
- Earthworks.
- Lining of compound areas with a Geosynthetic Clay Liner (GCL) and crushed rock. The liner rolls would be provided with an overlapping edge, so they may be joined to the next roll. The length of overlap depends on the thickness of liner used. The liner would then be sealed against the sides of the adjacent bund wall footing, which would seal the bund.
- Covering the GCL liner with 150 – 200 mm crushed for protection and confinement of the liner.
- Construction of tanks / tank fabrication using prefabricated materials where possible.
- Construction of the stormwater management system to manage stormwater and potential spill incidents consisting of bunding, site grading, culverts, collection pits, separation and treatment facilities.
- Construction of a series of piping, equipment and structure support foundations which would be constructed for the pumps, pipe supports miscellaneous tanks, access ways, pump enclosure structures, truck loadout structure, fire protection equipment etc.
- Construction of the main access and egress route through the truck loadout facility, and a 6 metre wide site perimeter “fire access road” providing fire fighting appliance access to all parts of the Facility. These roadways would comprise a mixture of concrete, heavy duty asphalt, and chip sealed compacted crushed rock.
- Installation of a series of process pipes and pumping systems to receive and load out the stored product. An extensive fire protection system would be installed. Some of the material would be prefabricated and installed offsite, particularly fuel facility components, thereby reducing the construction activities required onsite, wherever possible.
- Construction of the four bay truck loadout Gantry. The Gantry would have industry standard truck loading equipment installed in a semi-enclosed steel structure with a clad roof and two external side walls.

### 7.1.1 Hydrostatic testing

Following the completion of the main elements of the construction phase, testing and commissioning

would be undertaken. Hydrostatic testing would be undertaken for the fuel storage tanks to ensure all tanks and fuel management systems are sealed and can accommodate the required throughputs and pressures without leaks.

Controlled hydrostatic tests above maximum operating pressures are mandatory and a component of the Company's integrity management program. The primary environmental activities associated with hydrostatic testing of pipelines are water appropriation/diversion (often from a natural waterbody) and it's discharge or return.

**Pre-Test Planning and Preparation**

Well in advance of the proposed hydrotest date, the area where it is to be conducted should be assessed and possibly surveyed for environmentally sensitive receptors.

The securing of necessary permits or approvals for activities such as water withdrawal, disposal or transport will be done. Landowners, public facilities in the area, emergency services personnel (e.g. police and fire departments) and relevant government agencies will also be notified prior to conducting large-scale hydrotests.

**Source**

Water will be sourced from a commercial water supplier (i.e. pipe borne water supply). Where practical the same water will be used to pressure test different tanks in sequence. This will reduce the required volume of water required for this purpose.

**Water Additives**

Given that the source of water will be pipe borne it is unlikely that additives will be required. Water acquired from a municipal source is likely to already contain chemicals such as chlorine and fluoride and as such biocides are not likely to be needed for water from this source. The Company does not use additives such as methanol (antifreeze), corrosion inhibitors and leak detection tracers nor radioactive materials.

**Water Disposal**

Water used to hydrotest clean tanks or new sections of pipe can typically be returned to its source or released. Regulatory approval conditions may require laboratory analyses to verify that the water has not become contaminated during handling. In such situations samples of the source water will be collected and analyzed prior to hydrotesting to ensure that background concentrations of certain parameters are acceptable.

Water used to hydrotest an existing section of pipeline is likely to require treatment prior to discharge. Options include treating and disposing of the water at the test location or hauling to a licensed third-party waste disposal facility.

**Potential Water Sampling Requirements**

Samples are taken to ensure the background chemical parameters of the source water do not adversely affect the discharge limits.

The minimum analytical requirements proposed are:

- Temperature
- pH
- Dissolved Oxygen (DO)
- Total Suspended Solids (TSS)
- Total petroleum hydrocarbons (TPH)

### 7.1.2 Construction Traffic and Access Arrangements

Construction traffic access would be via the East Bank Demerara. It is expected that up to 35 light vehicles per day would access the site during the construction site and up to 10 heavy vehicles (trucks). These truck movements are likely to be spread throughout the day as equipment and materials are required onsite. Although the total construction period is anticipated to occur over a 8.5 month period, maximum traffic levels are expected to be experienced for a period of approximately 6 months during the busiest construction period which is expected to be the tank construction phase.

### 7.1.3 Fencing, Security and Lighting

The Site would be secured sheet hoarding during construction. Access to the site would continue as-is for the duration of construction while the construction site would be restricted to specifically inducted and trained staff and contractors.

### 7.1.4 Construction Workforce

Up to 70 construction related staff are estimated to be required onsite during the peak construction period. Actual numbers would vary based on contractors and work methodology. Typically however there would be fewer that this number onsite at any given time due to the sequential nature of the contraction works limiting project elements that can be constructed simultaneously.

### 7.1.5 Construction Hours

It is proposed that construction activities would occur between 8 am to 5 pm Monday to Saturday. No work on Sundays and Public Holidays.

### 7.1.6 Construction Environmental Management and Monitoring

Prior to construction activities taking place, a Construction Environmental Management Plan (CEMP) would be prepared to address the management of potential environmental impacts associated with construction activities. The CEMP would include as a minimum management measures to address the following environmental aspects during the construction phase:

- Surface Water
- Soils
- Air quality
- Noise and vibration
- Waste

The details regarding the temporary site office, hoarding and access, and signage will be detailed in the construction method statement.

## 7.2 OPERATIONAL STAGE

The main raw materials which will be constantly used are the respective fuels, diesel and unleaded fuels.

### 7.2.1 Access Arrangements

Operational traffic access would be via the road access road from the East Bank Public Road. In order to control vehicle speeds within the site, speed cushions are to be located at strategic locations.

### 7.2.2 Site Operation

The Gas Station will operate on a 24 hour basis. All other plants will operate from 7 am to 4 pm. During normal hours the site will be operable with attendants, whereas, after hours it will be operable using the automatic system. All safety measures, together with the respective operation.

### 7.2.3 Warning Notices

The premises will be outfitted with clearly labelled signage to be placed in prominent areas with highly visible and unobstructed views. The Gas Station will, as a minimum have the following:

- No Smoking
- No Naked Lights
- Highly Flammable
- No Mobile phones
- CCTV in operation

While, notices near dispensers shall indicate the following:

- Highly Flammable;
- No Naked Flames; and
- No Smoking;
- Switch off Mobile Phones.

### 7.2.4 Fire Management

The Facility will be designed to minimize safety risks and hazards associated with operations and fitted with extensive fixed and portable fire-fighting capability. A dedicated firefighting supply of water will be stored adjacent to the truck loading Gantry. Fire pumps and a water ring main will provide firewater to the tanks and road Gantry deluge systems, fixed monitors, fire hose reel sets and fire hydrant connections. The truck-fill stand has fixed automatic foam deluge protection activated by fusible links in the detection lines.

The Fire Safety Systems for the facility would be developed in accordance with the following requirements:

- A fire water tank would provide a minimum of 90 minutes fire water onsite.
- An access fire road around the bund would provide fire tender access as required.
- Two emergency stop buttons shall be fitted on both sides of the filling station; at the entrance

and exit side. When activated the electrical supply of fuel dispensers will be disconnected immediately and no fuel will be dispensed.

- A fireman's switch shall be installed in the forecourt area. It isolates all the electrical equipment being involved in the gas station, except the ones used for fire detection and security surveillance systems.

### 7.2.5 Petroleum Filling Stations

Canopy structure will be at a height of not less than 4.5 metres from finished floor and be of the fire resistance type. Cladding installed will be non-combustible.

### 7.2.6 Spill Prevention and Control

Unipet employees are trained to implement spill prevention practices for work with and around oil sources. Unipet personnel will use spill prevention practices at all times to minimize the potential for a release. These practices will include:

- Keeping container lids securely fastened at all times.
- Not leaving portable sources unattended (outside).
- Returning portable sources to their storage location after use.
- Using pads, drip pans, and funnels when transferring petroleum products from a portable container.
- Protecting oil sources from damage by moving equipment.
- Keeping dike valves closed at all times except when discharging clean stormwater from the diked area.
- Contaminated water within the diked area and piping and dispenser sumps will be removed and disposed of by a licensed hazardous waste contractor.
- Not storing oil sources near catch basins or floor drains; and
- Loading and unloading of petroleum products attended at all times.

Unipet implements spill prevention measures for loading, vehicle filling and truck unloading operations.

### 7.2.7 Dispensing

Dispensing operations will be performed by customers while trained facility personnel are on site. Facility personnel will monitor the fueling area for safe and proper operation and will take immediate action to correct any deficiencies.

Operating instructions are posted for self-service customers. For unattended operation (no facility employee on-site), emergency instructions are also posted; and an emergency stop pushbutton, a manual activation method for the fire extinguisher system and a direct means of emergency communications are available.

### 7.2.8 Draining Containment Areas and Sumps

Sumps are drained only under the direct supervision of facility personnel. Contaminated water is removed for transport off site by a hazardous waste or waste oil contractor.

### 7.2.9 Tests and Inspections

The personnel at the facility shall perform testing, inspection, and maintenance of all petroleum equipment to keep it performing in an efficient and environmentally sound manner. Facility personnel periodically observe the ASTs during operating hours. The ASTs and associated piping and dispensing systems shall be inspected periodically.

Spill response kits kept on site shall also be checked during the AST inspection, and restocked as necessary. The inspection reports shall be kept for at least three years in a file maintained by the senior Line Manager for maintenance. Inspections of the tanks include observations of the exterior of the tank for signs of deterioration or spills (leaks), observations of the tank foundation and supports for signs of instability, and observations of the vent, fill and discharge pipes for signs of poor connection, that could cause a spill.

In addition to these inspections, the facility will periodically verify the integrity of each tank in accordance with an industry standard inspection procedure. The frequency of such testing will be as specified by the selected industry standard procedure.

All petroleum tank and piping problems shall be immediately reported to the senior Line Manager for maintenance. Visible oil spills (leaks) that cause a loss of oil from tank walls, piping or other components shall be repaired or replaced as soon as possible.

### 7.2.10 Training

Unipet shall provide spill training for personnel involved with handling petroleum products. The HSE Manager shall arrange for annual training, which shall include the following training topics:

- An introduction to pollution laws.
- Rules and regulations pertaining to the use and storage of petroleum products.
- Inspection, operation and maintenance of spill equipment, and petroleum storage and dispensing equipment.

- Spill response and cleanup.
- Spill notification and record keeping.
- Spill prevention practices.
- Records of attendance at training and topics covered shall be maintained by the HSE Manager.

### 7.2.11 Stormwater Management

The majority of the site is sealed and would direct clean stormwater to a box culvert stormwater drain. The key aspects of this plan system include:

- Remote retention pond to collect water from the road tankers fill areas, pump bays and inlet manifold areas.
- Testing of water quality prior to release to ensure it meets the WPR, 2019 requirements.
- Prevention of spills.
- Water quality monitoring.
- System maintenance.
- Treatment of water drained from diesel tanks and the first flush pit and remote retention pits that has been pumped to the API separator for final testing to confirm it can be released.
- Contingency plans for the management of contaminated stormwater.
- Staff training.

Site stormwater from the bunded areas and roads would be segregated. Bund stormwater would be retained in the bund until tested and released via the API separator, where it would be further tested before release to the environment a valved outlet pit.