



Environmental Protection Agency

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Operation Permit

Issued under the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

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| Reference No.: | 20190116-BTAPL |
| Fee: | Large (C1) - US\$1,500 per year |
| Fees Paid: | US\$7,500 (Five (5) years – February 2020 to February 2025) |

Addressee(s): Mr. Brian Tiwarie
Proprietor
BK International Inc.
142, Mudlot, Water Street
Kingston, Georgetown.



Activity: Operation of an Asphalt Plant

Mr. Brian Tiwarie, trading and operating under the name BK International Inc., hereinafter referred to as the "Permit Holder" is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005 and the Environmental Protection (Authorisations) Regulations, 2000, to Operate an Asphalt Plant, situated at Ideal Road, Soesdkye/Linden Highway, hereinafter referred to as the "Project" in a manner indicated in the Application submitted on January 17, 2019 and subject to the terms and conditions set forth herein and in any forthcoming regulations and standards relevant to this project.

Terms and Conditions to be adhered to by the Permit Holder:

1.0 INFRASTRUCTURE

- 1.1 Notify the Agency in writing of any proposed changes to the operation **at least fourteen (14) days** prior to making the change. The notification shall contain a **description of the proposed change in operation**. It is not necessary to make such a notification if an **Application to Vary** this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, or any additional installation, which may have consequences for the environment. Changes to operation may include but not limited to the

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following:

- Changes in construction, structure, or layout of the facility, plant or building;
 - Installation of new and/or changes to equipment, machine, apparatus, mechanism, system or technology serving the facility or operation; or
 - Any technology used or installed at the facility from which effluent may be discharged.
- 1.2 Ensure the provision, maintenance and removal of all completed works, all barriers, equipment/material staging areas, and all support infrastructure, facilities and equipment associated with the Project.
- 1.3 At all times operate the Asphalt Plant in a manner that will cause minimal adverse impact on public health and the environment.
- 1.4 Maintain a vegetated buffer zone around the perimeter of the Project to mitigate the impacts of noise and dust on the surrounding environment.
- 1.5 Maintain the access road to avoid erosion and sedimentation into surrounding water ways.
- 1.6 Implement measures to prevent the escape of fugitive dust from the site, e.g. location and shelter for stock piles and maintenance of roads.
- 1.7 Construct an enclosure for the loading of asphalt to mitigate the impact of fumes.
- 1.8 During the operation of the Asphalt Plant, ensure all fuel is stored away from ignition sources and have 'No Smoking' signs posted where fuel is handled or stored.
- 1.9 Ensure there is adequate Post hazard and warning information in the work area.

2.0 TRAFFIC MANAGEMENT AND PUBLIC SAFETY

- 2.1 Take all necessary precautions to minimise potential adverse impacts on Public Health and the Environment in the transport, storage and handling of operational materials including crusher run, siftings and sand that will emanate as a result of the operation of the Asphalt Plant.
- 2.2 Ensure that adequate traffic control devices, signage, guardrails and warning

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tapes, are installed at work sites. Additionally, ensure that a speed limit is enforced to control traffic speed within the operation area of the Asphalt Plant.

- 2.3 Ensure that access is provided to all properties adjacent to the site for the duration of the contract.
- 2.4 Develop a Fire Prevention Plan in accordance with recommendations from Guyana Fire Service and an Emergency Response Plan. Submit these to the Agency **within four (4) months** of issuance of the Permit.

3.0 EMPLOYEES SAFETY AND HEALTH

- 3.1 Ensure that First Aid Kits and Spill Containment Kits are kept onsite and accessible.
- 3.2 Ensure that workers, at all times, wear Personal Protective Equipment such as protective headwear, safety boots, appropriate dusk mask etc. throughout the operation phase, relevant to their activity at the processing plant.
- 3.3 Ensure that adequate rest room/areas, waste disposal and sanitary facilities are provided at the site for workers.
- 3.4 Ensure training is conducted for all employees in the areas of Occupational Safety and Health, First Aid Response, Emergency Response and Fire Fighting.
- 3.5 Employees should not work shifts in excess of eight (8) hours to reduce fatigue and risks of accidents/injuries onsite.
- 3.6 Construct temporary accommodation to shelter employees from the elements and comply with minimum space standards per worker.
- 3.7 Eye wash fountains and emergency showers should be installed for emergency use.

4.0 NOISE AND AIR QUALITY MANAGEMENT

- 4.1 Comply with the Environmental Protection (Air Quality) Regulations, 2000 and the Environmental Protection (Noise Management) Regulations, 2000.
- 4.2 Comply with the Guyana National Bureau of Standards (GNBS) Guidelines for Noise Emissions into the Environment at a distance of **15 m (50 ft)** from the source or at the location of the nearest receptor, whichever is closer.

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- **Commercial Limits:**

**80 dB - daytime (06:00 h - 18:00 h),
65 dB - nighttime (18:00 h – 06:00 h)**

- 4.3 Ensure that all sound-making devices such as generators, machines, etc., are suitably equipped with silencers or mufflers to reduce noise emission levels and are placed on foundations properly designed to ensure effective damping of vibrations. Additionally, ensure adequate equipment maintenance is provided and obsolete tools and equipment are replaced.
- 4.4 Implement dust control measures at source point to minimise dust pollution during operation of the Asphalt Plant.
- 4.5 Stockpiled materials must be protected, by tarpaulin and/or permanent cover and wind breaker from wind dispersal throughout the project site and beyond.
- 4.6 Implement good housekeeping practices to avoid or minimise the accumulation of dusty materials that have the potential to become airborne, and prompt immediate cleanup of spilled or accumulated materials.
- 4.7 All vehicles transporting raw materials to the site and finished materials from the site must be covered.
- 4.8 Asphalt plants shall follow appropriate measures to prevent pollution and to ensure that:
 - All production machinery and equipment are serviced on a regular basis as per manufacturer's specifications and upgraded, if necessary, in order to meet minimum particulate emission criteria levels; and
 - The proper operational procedures, equipment maintenance and operator training are provided to ensure efficient performance of the equipment.
- 4.9 Excessive emissions of fugitive dust and/or odours from any part of the operation, which cause complaints, may necessitate in-stack and/or ambient air monitoring, and/or the installation of additional air pollution control equipment.
- 4.10 Comply with the *World Health Organisation (WHO) Air Quality Guidelines for Particulate Matter in the Environment*, not exceeding the limits below:

PM_{2.5}: 10 µg/m³ annual mean
25 µg/m³ 24-hour mean

PM₁₀: 20 µg/m³ annual mean

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50 µg/m³ 24-hour mean

4.11 Comply with the *World Health Organisation (WHO) Air Quality Guidelines for Air pollutants in the Environment*, not exceeding the limits below, and not limited to the list of pollutants:

- CO - 9 ppm (8h)
- H₂S - 10ppm (8h)
- NO₂ - 0.1ppm
- VOC - 100 ppm

4.12 Conduct Air Quality Monitoring as per conditions 4.10 and 4.11 on a quarterly basis. Proposed sample points should be submitted to the EPA for approval prior to monitoring. A monitoring report should be submitted to the Agency as part of the requirements for the Annual Report cited at **Condition 8.7**.

5.0 SOIL AND WATER QUALITY MANAGEMENT

- 5.1 Comply with the Environmental Protection (Water Quality) Regulations, 2000.
- 5.2 Take necessary precautions to avoid soil compaction, erosion, siltation and sedimentation during construction by limiting the size of the disturbed area, slope length and gradient and the duration of soil exposure.
- 5.3 Avoid soil and water contamination from fuel, grease, waste oils and other petroleum products. Store all oils, fuel, paints and chemicals in a designated area, 10 m away from watercourses on an impervious base to minimise adverse impacts to the environment in the event of spillage.
- 5.4 Limit the removal of vegetation to the extent necessary for works to proceed. In areas where soils are not to be removed, the grassed vegetation layer shall be maintained, where possible, to protect the soil from erosion and compaction.
- 5.5 Monitor the effluent at the point of release from the internal drainage system into the surrounding drainage. This monitoring must be done twice per year (June and December) and the results, analysis, methodology used and atmospheric conditions at the time the test was conducted submitted to the Agency.
- 5.6 Maintain all surface drains to ensure that they are clear and free-flowing. Monitor drains regularly and immediately clean any blockage discovered.
- 5.7 Not discharge waste water effluent directly into receiving waters without prior treatment. A silt trap should be installed on site mainly to collect runoff to be discharged into external drains.

- 5.8 Treat all wastewater from the operation via the three-stage precipitation tank to remove sediments prior to discharge and monitor the pH of the water before release.
- 5.9 Conduct biannual water quality testing at discharge points at the boundaries of the operation for **Dissolved Oxygen and pH** and submit the results to the Agency as part of the requirements for Annual Report cited at **Condition 8.7**.

6.o. HAZARDOUS MATERIALS/WASTE MANAGEMENT

- 6.1 Prepare and submit to the Agency no later than **forty-five (45) days** after the end of the operating year, a report relating to the activities for the previous year.

The report shall include:

- The identification information of the project.
- Type and quantities of hazardous waste generated.
- Data concerning off-site shipments of waste.
- Any applied treatment standards.
- A summary of any accidents that may have occurred and any action taken.
- Any waste minimisation efforts undertaken by the generator.
- A pollution prevention plan for the project.
- Any other matter the Agency may require.

The Agency considers all materials listed in Schedules I and II of the Environmental Protection (Hazardous Waste Management) Regulations, 2000, to be hazardous. Please see attached list of Hazardous Wastes to be controlled.

- 6.2 Submit the report of activities for the previous year in electronic format acceptable to the Agency along with a hard copy which should be signed by the holder of the Authorisation.
- 6.3 Prepare and submit to the Agency an Emergency Preparedness Plan, within **three (3) months** from the date of the issuance of this Permit, for approval. The plan shall include:
- The accident prevention procedures.
 - First person response.
 - Notification procedures.
 - Location of clean-up equipment.
 - And analysis of potential accident and responses.
 - Material safety data sheets for all materials which could be spilled.
- 6.4 Keep on site books, documents, records or things showing, as the case may be:
- The amount of hazardous wastes generated stored, treated, transported or disposed of.

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- The dates pertinent to the activities referred to above.
 - Signed copies of manifests.
 - Records of test results, waste analyses, Permit and standard conditions required by any authorisation.
 - And any information as the Agency may require.
- 6.5 Ensure that oil/fuel containment adsorbent materials are appropriately stored in slop tanks and disposed of in a manner approved by the EPA.
- 6.6 Construct and store, fuel and waste oil in an impervious, bunded area (secondary containment) to minimise adverse impacts to the environment in the event of spillage. The bunded area must be able to provide 110 per cent containment of the largest container/volume of fuel/waste oil stored on site.
- 6.7 Store all fuel waste above ground level to allow easy maintenance and leak detection.
- 6.8 Ensure that all chemicals used as part of the process are handled, stored and disposed in accordance with their Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS). Post copies of MSDS/SDS sheets in central areas accessible to all staff onsite and make employees aware of their content and location.
- 6.9 Ensure that insect and rodent control measures are implemented by a Person or Company certified by the Pesticides and Toxic Chemicals Control Board to handle pesticides.
- 6.10 Store fuel in a cool, dry place, away from any motor driven machine that can cause sparks.

7.0. WASTE MANAGEMENT

- 7.1 Ensure that portable toilets are installed in accordance with the Public Health Ordinance 1953.
- 7.2 Construct and maintain a septic system on site at all times. The septic tank should not be located within 1.5 m of a building or property boundary and should be accessible for cleaning and de-sludging. Any modification to the Septic tank must be in accordance with the Guyana National Bureau of Standards (GNBS) *Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems*.
- 7.3 Promote good sanitation and solid waste disposal practices at construction sites. In particular, dispose of waste, including liquid/septic wastes at an approved landfill site. Covered garbage receptacles must be placed at strategic locations on sites.

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- 7.4 Promote waste minimisation and the reuse and/or recycling of waste materials and other suitable materials, where practical. Topsoil/overburden and other inert construction waters/materials should be reused, e.g. for reclamation/landscaping after construction works are completed.
- 7.5 Ensure the project site is kept clear, free of all debris, solid waste and other extraneous matter.
- 7.6 Ensure that all wastes are sorted in order to separate reusable/recyclable materials. Hazardous wastes must be properly stored in segregated, leak-proof containers at an appropriate on-site facility until ready for disposal. Disposal of hazardous waste shall be done in a manner approved by the EPA.

8.o. COMPLIANCE MONITORING AND REPORTING

- 8.1 Notify the Environmental Protection Agency within **twenty-four (24) hours** of the occurrence of any environmental emergencies.
- 8.2 Maintain and submit to the Agency records of the type, composition and quantity of contaminant (i.e. any solid, liquid, gas, odour, sound, vibration, radiation, heat or combination of any of them) released.
- 8.3 Notify the EPA of non-compliance with any of the conditions of this Permit and of any accidental discharge of environmental contaminants.
- 8.4 Monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees and all third parties under your direction.
- 8.5 Make all employees/contractors aware of the Conditions of the Operation Permit and provide training on good environmental management practices.
- 8.6 Report to the Agency of non-compliance with the Permit:
 - (i) Within **twenty-four (24) hours** of the time the Holder of Permit becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.
 - (ii) Within **seventy-two (72) hours**, submit to the Agency a written report containing a description of the non-compliance, its cause and the period of non-compliance including exact dates and time.
 - (iii) Submit a report to the Agency indicating the reasons and the anticipated time it is expected to continue if the non-compliance has not been corrected.

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- 8.7 Submit Annual Reports to the EPA on the progress of the operation and compliance with the conditions under which this Permit was granted on or before **March 31** of each year. Please see attached reporting format.

9.0. INSTITUTIONAL AUTHORITY/LIABILITIES

- 9.1 The Permit Holder shall be strictly liable for any loss or damage to the environment through any act caused intentionally or recklessly, through the adverse effect of any discharge or release, or cause or permit the entry of pollution, contaminant in any amount, concentration or level in excess of that prescribed by the regulations or stipulated by any Operation Permit which are attributed to the Project, pursuant to s. 39 and s. 19 (1) and (2) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 9.2 The Permit holder shall be guilty of an offence in accordance with s. 39 (1), (2), (3) and (4) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, which attribute liability for causing material or serious environmental harm by polluting the environment intentionally or recklessly and with the knowledge that material and/or serious environmental harm will or might result. If found guilty of an offence the Permit Holder shall be liable to the penalties prescribed under the said Act.
- 9.3 The Permit Holder shall compensate any Party who suffers any loss or damage as a result of the attributed Project (See: s. 19 (3)(e) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.)
- 9.4 The Permit Holder shall not be indemnified by the Agency for any activity that causes or is likely to cause pollution to the environment, resulting from adverse effects through the discharge, any contaminant in any amount, concentration, ultra hazardous substances, chemicals or otherwise, and shall be rendered liable to prosecution and to penalties prescribed under the Environmental Protection Act and Regulations.
- 9.5 The Permit Holder shall be liable of any gross negligence or willful misconduct caused by the Permit Holder, his Servants and/or Agents, to the environment, biodiversity, protected species and natural habitat with respect to any release or discharge, spill, contaminant fluids, oil or lubricants.
- 9.6 The Agency (EPA) shall notify the Permit Holder immediately of any written claim or notice sent by any Complainant seeking loss or damage for negligence as a result of the Permit Holder's lack of due care and diligence.
- 9.7 Should the Permit Holder contravene or is likely to contravene any condition of this Permit, the Agency (EPA) may serve on him an Enforcement Notice in accordance with s. 26 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

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- 9.8 Where it appears to the Agency that the Permit Holder is engaged in any activity that may pose serious threat to natural resources or serious pollution of the Environment or any damage to public health, issue to the Permit Holder a Prohibition Notice, which may order him to immediately cease the offending activity, in accordance with s. 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 9.9 Failure to comply with the requirements of this Permit shall render the Permit Holder liable to prosecution and to penalties prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and Environmental Protection Regulations, 2000, including civil penalties and injunctive relief.
- 9.10 The EPA reserves the right to conduct regular inspections of the Permit Holder's operation as part of its monitoring and enforcement requirements under the Environmental Protection Act, Cap 20:05, and the Environmental Protection (Amendment) Act, 2005, and Environmental Protection (Authorisations) Regulations, 2000.
- 9.11 The EPA reserves the right to review/amend the conditions and fees attached to this Permit, which also includes the review and/or amendment of Permit Fees in consideration of any changes in fee structure as determined by the Agency for projects of this nature.
- 9.12 The Permit Holder shall at all times, allow entry to the permitted facility to any Officer designated by the EPA for the purposes of conducting inspections or any other legitimate business of the Agency. Pursuant to s.38 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, it is an offence to **assault, obstruct or hinder** an authorised person in the execution of his/her duty under the said Act or its Regulations and the Permit Holder shall be liable to penalties prescribed under paragraph (c) of the Fifth Schedule for doing so.
- 9.13 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 9.14 The Permit Holder is obligated to ensure that the operation is permitted by other relevant authorities.
- 9.15 This Operation Permit is effective for the period stipulated herein, **February 2020 to February 2025**.
- 9.16 This **Operation Permit** shall remain valid until **February 29, 2025**, unless otherwise suspended, cancelled, modified or varied, in accordance with the provisions of this Permit or the Environmental Protection Act, Cap. 20:05, Laws of Guyana, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

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9.17 This Permit must be renewed by submitting a completed *Application Form for Renewal of Environmental Authorisation* to the Agency at least six months before this Permit expires, that is no later than **July 31, 2024**.

9.18 Any late submission of renewal application(s) after the specified date as stated above, shall require the Permit Holder to pay, in addition to the renewal fee, a late penalty fee (accruing at the time such obligation was first owed for renewal) at a rate of **two thousand dollars (\$2,000.00) per day** for every day late, until such renewal application is submitted to the Agency, without prejudice to any other rights of the Permit Holder in connection therewith.

9.19 Failure to comply with the requirements of this Permit shall render the Permit Holder liable to prosecution and to civil penalties and/or injunctive reliefs prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, including under any existing and forthcoming regulations made under the said Act or any other applicable Laws of Guyana.

Signed by _____ on behalf of the Environmental Protection Agency.



Date

12/2/2020

I hereby accept the terms and conditions upon which this Operation Permit is granted and agree to abide by the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, and any forthcoming regulations and standards made under this Act.

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| NAME: | RICKFORD INNISC |
| DESIGNATION: | OFFICE MANAGER |
| DATE: | 13/2/2020 |
| SIGNATURE: | Rickford Innisc |

