



Government of the Co-operative Republic of Guyana
Environmental Protection Agency



March 31, 2020

Ref: 20200102-MQDAD

Mr. Andre Archer
Chief Operations Officer
Metallica CC Guyana Inc.
3, Public Road, Mc Doom
East Bank Demerara.



Dear Mr. Archer,

Re: Operation Permit for Quarry

The Environmental Protection Agency (EPA) has prepared an Operation Permit for the Quarry located within **Block LM40:M-1**, Omai, Region 8. Your attention is drawn to Clause **12.2** of the Permit which allows for applicable fees to be amended by the Environmental Protection Agency (EPA) as it may determine.

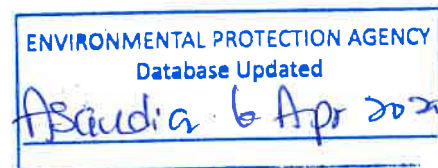
The Agency advises that it is currently in the process of re-evaluating Permit Fees; as such, Permit Fees will be subjected to an increase. The cost for the Operation Permit **at this time** is **US \$875 for five (5) years (i.e., US \$175 per year)**. Payment of this fee, or its equivalent in Guyana dollars, using the Scotia Bank daily exchange rate, should be made by Manager's Cheque, addressed to the Environmental Protection Agency. As per the aforementioned fee re-evaluation, please note that the US\$875 fee constitutes only a partial amount of the expected revised fee.

Please sign the Operation Permit to indicate your acceptance of its terms and conditions and agreement to comply with the statutory requirements of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

Should you have any questions or need clarification, please contact **Mr. Colis Primo** on 225-0506 (Ext. 1297) or email cprimo@epaguyana.org.

Yours Sincerely,

.....
Executive Director
Dr. Vincent Adams
Executive Director



C. Mr. Newell Dennison – Commissioner (Ag.), Guyana Geology and Mines Commission

Ganges St., Sophia, Georgetown, GUYANA.

Tel: (592) 225-5467/5471-5472/6044/6048 | Fax: 225-5481

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"The Environment is Everybody's Business"



Environmental Protection Agency

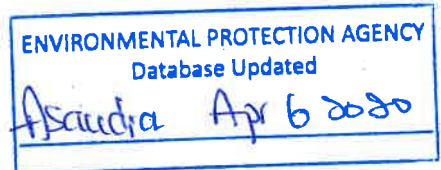
Ganges Streets, Sophia,
Georgetown, GUYANA
Tel.: (592)-225-0506
Fax: (592) - 225- 5481
Email: epa@epaguyana.org
Website: <http://www.epaguyana.org>

Operation Permit

Issued under the Environmental Protection Act, No.11 of 1996, the
Environmental Protection (Amendment) Act, 2005, and the
Environmental Protection Regulations, 2000.

Reference No.:	20200102-MQDAD
Fee:	Small (C2) - US\$ 175 per year
Fees Paid:	USD \$ 875 - (5 years) (March, 2020 - February, 2025)

Addressee(s): Mr. Andre Archer
Chief Operations Officer
Metallica CC Guyana Inc.
3, Public Road, McDoom
East Bank Demerara



Activity: Operation of a Quarry (Quarrying of Aggregates &
Dimension Stones)

Metallica CC Guyana Inc., represented herein by Andre Archer, Director of the said Company, 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 Regulations, 2000, to operate a Quarry located at Block LM40:M-1 at Omai, Region 8, hereinafter referred to as the "Project", in a manner indicated in the Application submitted on January 02, 2020, and subject to the terms and conditions set forth herein and any forthcoming regulations made under the said Environmental Protection Act and/or any other applicable laws, guidelines, best practices and standards relevant to this project.

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

1.0 OPERATION REQUIREMENTS

- 1.1 Notify the Agency in writing and obtain its approval for **ANY** proposed changes in operation of the Quarry at least **fourteen (14) days** before 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, of the installation, which may have consequences for the environment, including but not limited to the following:

[Handwritten signatures and dates]
2020/2020

Operation Permit - Ref. No. 20200102-MDCAD

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

- I. Changes in construction, structure, layout of the facility;
 - II. Installation of new and/or changes to equipment, machine, apparatus, mechanism, system or technology serving the facility or operation; and
 - III. Any technology installed at the facility from which effluent may be discharged.
- 1.2 Apply to the EPA prior to undertaking any developmental activity, such as, but not limited to, **processing and blasting** which may significantly affect the environment and **is not** covered by this Permit.
- 1.3 Operate **only** within the description of the block granted by the Guyana Geology and Mines Commission (GGMC) as is described herein: Point A, located at geographical coordinates of longitude 58°47'2"W and latitude 5°27'53"N, thence at true bearing of 101°, for a distance of approximately 2 mile 661 yards to Point B, located geographical coordinates of longitude 58°45'0"W and latitude 5°27'29"N, thence at true bearing of 128°, for a distance of approximately 1 mile 1265 yards to Point C, located at geographical coordinates of longitude 58°43'49"W and latitude 5°26'34"N, thence at true bearing of 217°, for a distance of approximately 890 yards, to Point D, located at geographical coordinates of longitude 58°44'5"W and latitude 5°26'13"N, thence at true bearing of 310°, for a distance of approximately 1 mile 1013 yards, to Point E, located at geographical coordinates of longitude 58°45'8"W and latitude 5°27'6"N, thence at true bearing of 281°, for a distance of approximately 2 miles 483 yards, to the point F, located at geographical coordinates of longitude 58°47'5"W and latitude 5°27'25"N, thence at true bearing of 7°, for a distance of approximately 850 yards, to the point of commencement at Point A.
- 1.4 Maintain demarcated boundary limits as provided in **condition 1.3 above** for the site claim. Ensure proper signage and security measures to keep unauthorized persons from accessing restricted and high-risk areas.
- 1.5 Provide and maintain adequate fire protection measures such as fire extinguishers and sand buckets, in accordance with approval granted by the Guyana Fire Service.
- 1.6 Ensure that the crushing plant and aggregate screen are operated in strict compliance with the manufacturer's specifications.
- 2.0 EMPLOYEES**
- 2.1 Provide Employees with training on good environmental management practices, occupational health and safety and of their obligations under this Permit on a regular basis.
- 2.2 Prepare and maintain a training file for employees, which should be available upon Officers' request during Compliance Inspection.

- 2.3 Employees must, at all times, be equipped with the necessary protective equipment to their job specification such as; hi-visibility vests, hard hats, gloves, dust masks and appropriate footwear and ensure appropriate utilization of these gears. Prepare and maintain a log of the distribution of Personal Protective Equipment to employees.
- 2.4 Provide well-equipped first aid and snake bite kits at all work sites and ensure that communication and transportation systems are in place to respond to emergencies.
- 2.5 Ensure that proper prophylactic or other acceptable measures are implemented to protect workers and other persons from malaria and other harmful diseases at the project site.
- 2.6 Within the legal powers of the Company, discourage the influx of people into the Mining Concession and do not allow outsiders to settle on its periphery.

3.0 SOIL MANAGEMENT AND CONSERVATION

- 3.1 Maintain natural vegetative cover as far as practical and re-vegetate areas from which vegetation was removed. Retain vegetation in the vicinity of steep slopes occurring at project site.
- 3.2 Consider the weather pattern before initiating major earthworks. Monitor areas of exposed soil during periods of heavy rainfall.
- 3.3 Take necessary precautions to avoid soil compaction, erosion, rutting, siltation and sedimentation during operation by limiting the size of the disturbed area, slope length and gradient, and the duration of soil exposure.
- 3.4 Avoid soil contamination from fuel, grease, waste oils and other petroleum products.

4.0 WATER QUALITY AND DRAINAGE MANAGEMENT

- 4.1 Adhere to the provisions of **the Environmental Protection (Water Quality) Regulations, 2000.**
- 4.2 Implement practical measures to prevent pollution of the Omai River, its tributaries and other streams.
- 4.3 Channel/route constructed storm water cut-off drains into forested or vegetated zones to allow natural filter of drainage waters before entry into the Omai River, its tributaries and other streams.
- 4.4 Ensure that drains are cleared of debris on a regular basis to promote free flow of

water.

- 4.5 Ensure that the areas assigned for storage of fuel, lubricants, and waste oil have an impervious base and are located 10 m away from watercourses, operating areas, drainage lines and major waterways to minimize adverse impacts to the environment in the event of spillage.
- 4.6 Store overburden stockpiles at least 100 meters of any water courses. Runoff from this overburden should not be directed into the area's watershed.
- 4.7 Install sediment control structures such as sediment traps and screens to prevent the inflow of sediments to surface water especially during the area's rainy seasons.

5.0 ROADS

- 5.1 Maintain the access road and mine service roads to conform to the Guyana Forestry Commission's Road Planning Guide as outlined in the Code of Practice for Timber Harvesting, (2002).
- 5.2 Ensure that all reasonable and practical measures such as the provision of turn out drains at regular interval are implemented to reduce/prevent erosion of roads. Runoff from roads, stockpile areas, etc., should not discharge directly to natural water ways such as Rivers and/or creek, tributaries within or contiguous to the Project site.
- 5.3 Ensure that activities as they relate to operation and maintenance of roads, drainage ditches, culverts, etc. are done in a manner that reduces erosion and accidents and ensures usage of road during the wet season by heavy duty machinery.
- 5.4 Establish and maintain partnerships with other stakeholders to ensure that the road(s) connecting to the mine is (are) maintained to an adequate standard.
- 5.5 Crown the running surface of the road with a compacted layer to accommodate heavy duty machinery and design the road to allow water from road surface to run off into the road drainage system to allow for settling/soak away of sediments before entering the area's water shed. Practice road wetting or use of dust suppressants during the dry season to reduce dust and to ensure visibility of vehicular traffic within the project site.
- 5.6 Install adequate safety signs along roads informing users of dangerous bends, crossing of haul trucks, speed limits, etc.

6.0 HAZARDOUS WASTE/MATERIAL MANAGEMENT

6.1 Adhere to the provisions of the Environmental Protection (Hazardous Waste Management) Regulations, 2000.

6.2 Store all oils, fuel, paints and chemicals in an approved manner, such as in drums or surface tanks with impervious bunds to contain spillage. It is an offence to drain fuel/lubricants including waste oils of any quantity from equipment onto the ground or water way.

6.3 Take the necessary precautionary measures during the transport, transfer, use and handling of all hazardous material. In addition, implement a programme to ensure regular and preventative maintenance of machinery and equipment to prevent leaks.

6.4 Not service vehicles in quarries except in instances of emergency repairs.

6.5 Equip all vehicles and equipment with leak minimization and drip pans.

6.6 Ensure all potential spills of fuel, oil, or other hazardous materials are prevented or cleaned up in accordance with the Spill Contingency Plan (pending approval).

6.7 Maintain an emergency spill cleanup kit on site for response to potential spills.

7.0 WASTE MANAGEMENT

7.1 Adhere to the provisions of the Environmental Protection (Litter Enforcement) Regulations, 2013.

7.2 Promote proper solid waste management and disposal practices at your facility. Waste shall not be disposed of in or near the waterways. Reduction and reuse of waste should be promoted.

7.3 Ensure that solid waste pits are located at least one hundred (100) meters away from watercourses, or habitation. The waste sites should be constructed above the groundwater table and lined to the floor with an impervious, earthen or other material to prevent leaching to ground water.

7.4 Maintain good house-keeping, sanitary and hygienic practices and the aesthetic quality of the surroundings at all times.

7.5 Ensure that garbage receptacles are placed in strategic locations within the project site and have separate bins to facilitate the collection and sorting of waste according to

liquid and solids; organic and inorganic; degradable and non-degradable. Used tyres and batteries should be re-used or disposed of in a manner approved by the EPA.

- 7.6 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 tanks 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.

8.0 AIR QUALITY MANAGEMENT

- 8.1 Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 8.2 Take all necessary precautions to reduce air emissions into the environment from the operation. Maintain a vegetative buffer zone between the Quarry and other contiguous land uses to buffer fugitive dust emissions, and to reduce erosion.
- 8.3 Employ all practical measures within the stock pile area to prevent/reduce fugitive dust impacts during the construction and operation phases. Dust-suppression methods such as wetting should be used, as necessary.
- 8.4 Ensure that the generators and machines/equipment are regularly serviced to ensure efficiency and reduce the level of noise produced. Maintenance activities of generators, machines or equipment should be scheduled on a regular basis to avoid inefficiencies and noxious emissions.
- 8.5 Ensure operation of all mechanical equipment is done in accordance with manufacturer's specifications. Additionally, ensure that all mechanical equipment and vehicles are regularly maintained and operated at their optimal levels.
- 8.6 Respond to equipment malfunction or **inefficiencies** which may result in visible emissions to air. In the event of malfunction leading to abnormal emissions the operator shall:
- a) investigate and undertake remedial action **immediately**;
 - b) adjust the process or activity to minimise those emissions; and
 - c) record the events and actions taken.

9.0 NOISE MANAGEMENT AND VIBRATIONS

9.1 Adhere to the **Environmental Protection (Noise Management) Regulations, 2000.**

9.2 Comply with *Guyana National Bureau of Standards Guidelines for the Measurement and Assessment of Noise into the Environment*, where practical:

- Industrial Limits: **100 dB** (Daytime Limits (06:00 h-18:00 h))
80 dB (Night -time (18:00-06:00 h))

9.3 Equip all sound-making devices, e.g. generators, etc. with silencers or mufflers to reduce noise level and/or enclose all sound-making devices in structures constructed with materials of good insulation properties (e.g. hollow concrete blocks, insulation boards, solid clay bricks, etc).

9.4 Ensure that all equipment and machinery are placed on foundations properly designed to ensure effective damping of vibrations.

9.5 Turn off equipment when not in use to avoid unnecessary idling of motors and noise emissions.

9.6 Regularly inspect equipment and machinery to ensure adequate equipment maintenance is provided and obsolete tools and equipment are replaced.

10.0 BIODIVERSITY PROTECTION

10.1 Establish and/or maintain vegetation around production facilities and along access roads to mitigate the impact on terrestrial resources.

10.2 Prohibit employees from the capturing, killing and trading of **all Wildlife** from the project area in accordance with the Wildlife Conservation and Management Act, 2016.

10.3 Report all occurrences of illegal wildlife trapping and trading to the EPA and the Wildlife Conservation and Management Commission (WCMC).

11.0 CLOSURE AND RECLAMATION

11.1 Submit to the Agency a detailed **Project Closure Plan** for review and approval within **three (3) months** of issuance of this Permit. Thereafter, the closure plan will be updated and reviewed at a frequency agreed to with the Agency.

- 11.2 Where applicable, incorporate vegetative debris with top soil to keep active for reuse in reclamation. In addition, practical measures such as growing of vegetation such as shrubs and grasses on topsoil and overburden should be employed to reduce erosion.
- 11.3 Place topsoil where possible, directly onto an area where waste rock has been removed to reduce double handling of soil.
- 11.4 Adhere to the recommendations provided by the Guyana Forestry Commission (GFC) on the species to be used in the reforestation process.

12.0 COMPLIANCE MONITORING AND REPORTING

- 11.1 Submit to the Agency, the **Environmental Annual Report** on the status of the project, progress of the implementation of the monitoring activities and compliance with the conditions contained herein by **March 31** every year (Please see attached, the *Guidelines for the preparation of Environmental Annual Reports*).
- 11.2 Keep all records of environmental monitoring, malfunctions, pollution of the environment, and any failure to comply with requirements as stated in this Permit in an acceptable format, which should be made available to the EPA upon request.
- 11.3 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.
- 11.4 Notify the Agency within **twenty-one (21) days** in event of death, bankruptcy, liquidation or receivership of the Permit Holder or if the Company becomes a party to an amalgamation.
- 11.5 Notify the EPA within **twenty-four (24) hours** of the occurrence of any environmental emergencies such as a sudden onset disaster, accident, natural, technological or human induced factors that cause or threaten to cause severe environmental damage as well as harm to human health or livelihood.
- 11.6 Inform the EPA and the GGMC of the presence of illegal miners within the Concession.
- 11.7 Report to the Agency of non-compliance with the Operation Permit:
 - i. Within **twenty-four (24) hours** of the time the holder of the Environmental 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; and

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

- 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.
- 11.8 Provide all reasonable and necessary access to the facilities by the EPA to conduct regular monitoring of the operations. Additionally, the Permit Holder shall be responsible for the payment for all environmental audits and compliance monitoring associated with this Permit.
- 11.9 Implement relevant measures/agreements to avoid conflicts with other land users/communities. Conflicts should be reported to the relevant authorities if they occur.
- 11.10 Monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees and all third parties under your direction.
- 11.11 Inform the National Trust and Walter Roth Museum if any artifacts of archaeological and anthropological significance are unearthed during Metallica Inc. operations.
- 11.12 Submit to the EPA the results of all periodic audits conducted by the GG&MC.
- 11.13 Immediately notify the EPA of any accidental release of contaminants or incidence of pollution into the environment. The Permit Holder shall provide the financial, equipment and technical capacity to adequately respond to any emergency that may occur on site and emergency response shall be immediate
- 11.14 The Permit Holder shall provide the financial, equipment and technical capacity to adequately respond to any emergency that may occur on site and emergency response shall be immediate.
- 12.0 INSTITUTIONAL AUTHORITY**
- 12.1 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, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, 2000.
- 12.2 The EPA reserves the right to review and/or 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.
- 12.3 Comply with any lawful directions given by the EPA from time-to-time in furtherance of the implementation of any international or other obligation for the environmental

Operation Permit - Ref. No. 20200102-MDCAD

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

protection of Guyana.

- 12.4 The Permit Holder shall compensate any Party who suffers any loss or damage as a result of the attributed Project (s. 19 (3) (e)) EP Act, Cap. 20:05, Laws of Guyana.
- 12.5 Conform to all terms and conditions under which this Permit is granted and be liable for any loss or damage which arises from the project as a result of the Permit Holder's activities or breach of any term or condition of this Permit.
- 12.6 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 12.7 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 Order to immediately cease the offending activity. S 27 EP Act, Cap. 20:05, Laws of Guyana.
- 12.8 Should the Permit Holder contravene or is likely to contravene any condition of this Permit, the Agency (EPA) may serve him an Enforcement Notice in accordance with s. 26 of the EP Act Cap. 20:05, Laws of Guyana.
- 12.9 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 Environmental Authorisation which are attributed to the Project, s. 19 (1) Environmental Protection (EP) Act, Cap. 20:05, Laws of Guyana.
- 12.10 The Permit Holder shall be responsible for the payment of all costs related to the assessment of damage and costs for the independent assessor (s).
- 12.11 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 authorized 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.
- 12.12 This Operation Permit is not the final development consent. Permission must be obtained from other relevant regulatory bodies prior to project implementation.
- 12.13 This Permit is effective from the period stipulated herein (**March, 2020 to February, 2025**).

Operation Permit - Ref. No. 20200102-MDCAD
(Issued under the Environmental Protection Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and Environmental Protection (Authorisations) Regulations, 2000)

- 12.14 This Operation Permit shall remain valid until **February 28, 2025**, unless otherwise cancelled, suspended, modified or varied in accordance with the provisions of this Permit or the Environmental Protection Act, 1996, the Environmental Protection (Amendment) Act, 2005 and the Environmental Protection Regulations, 2000.
- 12.15 This Permit must be renewed by submitting '*an application for renewal of environmental authorisation*' to the Agency at least six months before this Permit expires, that is, no later than **August 31, 2024**.
- 12.16 Any late submission of renewal application (s) after the specified date as stated above, shall require the Permit Holder to pay, in addition to renewal fee, a late penalty fee (accruing at the time such obligation was first owed for renewal) at a rate of **two thousand dollars (GY\$2000.00) 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.
- 12.17 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 (Authorisations) Regulations, 2000, 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.
Dr. Vincent Adams
Executive Director

Date: March 31, 2020

Operation Permit - Ref. No. 20200102-MDCAD

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

I hereby accept the above 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, the Environmental Protection Regulations, 2000, and any forthcoming regulations, guidelines, best practices, and standards made under this Act.

NAME:	Shonellie Lawrence for Andre Huchon
DESIGNATION:	office Manager
SIGNATURE:	Shonellie
DATE:	2/04/2020





PAID
Environmental Protection Agency
APR 03 2020
Ganges Street, Sophia, Georgetown Guyana.
Tel (592) 225-6048/44 225-5471/67 Fax: (592) 225-5481

rate 216 ENS # 007886 dd 02/04/2020
Date: 02/04/2020
No. 17629

Received From:

Metallica CC Guyana Inc

The Sum of: Nine hundred and forty five thousand dollars

\$945,000

For: Five Operation Permits (Block M248/M/000, M248/M/001, M248/M/002, M248/M/003, L M40: M-1)

PAID

☐ Cash ☒ Cheques

Balance due

Amt. \$

Signature:

[Signature]

ENVIRONMENTAL PROTECTION AGENCY
Database Updated
Asandra Apr 6 2020