

APPENDIX E
TERMS OF REFERENCE



BARBADOS LIGHT AND POWER COMPANY

**PROPOSED TERMS OF REFERENCE
FOR THE PREPARATION OF THE ENVIRONMENTAL
IMPACT ASSESSMENT FOR A NEW POWER STATION
SITE IN TRENTS**

Submitted to:

**The Barbados Light and Power Company Limited
P.O. Box 142, Garrison Hill
St. Michael, Barbados, W.I.**

Submitted by:

**AMEC Earth & Environmental,
a division of AMEC Americas Limited
160 Traders Blvd. E., Suite 110
Mississauga, Ontario
L4Z 3K7**

**February 2005
TC042606**

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1.0 INTRODUCTION

This proposed Terms of Reference has been developed in conjunction with Barbados Light and Power Company (BLPC). It follows the requirements set out in the *Environmental Impact Assessment Guidelines and Procedures for Barbados, 1998* and the *Thermal Power - Guidelines for New Plants* in the World Bank Document *Pollution Prevention and Abatement Handbook 1998 - Part III*. The issues and suggested studies are provided herein for discussion purposes with the Town and Country Development Planning Office (TCDPO).

2.0 BACKGROUND

The Barbados Light and Power Company Limited (BLPC) is the primary supplier of electrical energy in Barbados. The Company has a developed infrastructure, comprising generation stations, transmission and distribution systems, maintenance facilities and offices. Presently, BLPC operates three generating stations:

- The Garrison Hill Generating Station;
- The Seawell Generating Station; and
- The Spring Garden Generating Station, which is the main base-load plant and is currently undergoing expansion.

Each of the above sites is essentially developed to its potential and there is insufficient space for expansion to meet future needs. The development of a new site is therefore key to providing additional generation to meet growth requirements. To provide for future capacity and system reliability, BLPC are embarking on the development of a new site at Trents in the Parish of St. Lucy.

3.0 SITE DESCRIPTION

The land is part of the Trents Plantation in the Parish of St. Lucy. It is located approximately 3 km east of the Arawak Cement Company plant, which is situated along the north-western seacoast. The Trents site is relatively flat and comprises two parcels of land, totaling 75 acres.

Access Roads will be provided within the site area for proper access and operation of the plant.

BLPC currently owns land to the south of the Arawak Cement plant complex property. The site has been designated as the *Checker Hall* site. It was intended for BLPC's generating plant expansion but the limited site area and poor foundation conditions have forestalled its

development. It may however be suitable as a fuel oil receiving and storage depot for a generating station developed at the Trents.

4.0 PROJECT DESCRIPTION

The Company is proposing the site for the staged development of 240 megawatts (MW). Two options are being considered:

4.1 Option 1 - Low speed diesels

The proposed project will consist of a phased installation of low-speed diesel units as follows:

- Two units with a capacity of 30 MW each;
- Two units with a capacity of 40 MW each; and
- Two units with a capacity of 50 MW each.

The engines are connected to generator sets to produce most of the power from the shaft. To maximise thermal efficiency, waste heat recovery boilers will be installed on the exhaust from each engine. The steam produced in the waste heat recovery boilers will pass through steam turbine generators to produce additional power and will also be used to preheat the fuel. Each pair of engines will share one steam turbine generator. The resultant configuration is a very efficient form of thermal power generation. BLPC currently uses this form of generation at its Spring Garden Generating Station to provide base load power and the Company has the experience in the mitigation methods to minimise the environmental impacts.

Since direct cooling by seawater is not expected to be feasible, the plant will be cooled either by evaporative cooling towers or radiators. The conceptual design has considered the use of radiators for the complete cooling needs as this has the larger footprint for the site development.

The engines operate by the combustion of heavy fuel oil. The system preheats the fuel for good atomization and combustion. The products of the combustion are expelled from the engines and emitted to the environment. Emissions predominantly include oxides of nitrogen (NO_x), sulphur dioxide (SO₂), carbon dioxide (CO₂), and particulate matter. The engines will be fitted with 'Low-NO_x' burners and electrostatic precipitators to reduce emissions of NO_x and particulate matter respectively. SO₂ emissions are controlled through use of low sulphur fuel.

Fuel oil will be stored on-site in a tank farm surrounded by an impervious dyke to contain spills. The tanks will be heated to maintain the fuel in a state that is easily pumped. Heavy fuel oil will arrive by sea and offloading will occur at the Arawak Cement pier. The oil will then be

transferred to the generating site by pipeline. The fuel will be conditioned and the waste oil sludges will be burned in an on-site incinerator.

Small amounts of diesel fuel will be used for start up, flushing of heavy fuel oil prior to engine shut down and emergency purposes. The diesel will be delivered by road transport.

The electrostatic precipitators will remove particulate matter from the engine exhausts that will require disposal by landfill.

4.2 Option 2 – Combined Cycle

The second option under consideration is to install gas turbine based combined cycle plants since there is a possibility that natural gas from Trinidad could be made available in Barbados within the next few years.

For this option each phase of development will consist of two gas turbine generators exhausting to heat recovery boilers, which provide steam to a shared steam turbine generator. Development will be staged to meet demands as follows:

- 2 gas turbine units and 1 steam turbine generator with a total output of 60MW;
- 2 gas turbine units and 1 steam turbine generator with a total output of 80MW; and
- 2 gas turbine units and 1 steam turbine generator with a total output of 100MW.

Since direct cooling by seawater is not expected to be feasible, the plant will be cooled either by evaporative cooling towers or radiators. The conceptual design has considered the use of radiators for the complete cooling needs as this has the larger footprint for the site development.

Emissions from the combustion of clean-burning natural gas consist of low levels of NO_x, SO₂ and CO₂. The gas turbine generators will be provided with dry low NO_x combustors to reduce emissions.

Natural gas will be supplied to the Trents site through a pipeline. A fuel gas metering facility that includes gas scrubbing, pressure regulation and metering runs will be located near the property limit where the gas supply line enters.

It is further assumed that the gas delivery pressure at the site boundary will be high enough (at least 400 – 500 psig) so that further on-site compression would not be required.

Back-up diesel fuel will be provided to minimize plant outages due to gas supply disruption through pipeline. Road tankers will deliver the diesel fuel and seven days of storage will be provided. The storage tanks will be contained in impermeable dykes for spill protection.

4.3 Additional Site Infrastructure

Each option for generation will have similar supporting infrastructure such as:

- Power house to enclose the low speed diesel units (low-speed diesel option);
- Steam turbine hall for housing steam turbine (combined cycle option);
- Administration building, canteen, maintenance facilities, warehouse and laboratory;
- A water treatment facility for boiler water treatment;
- Deep wells for water supply; and
- A switchyard.

4.4 Construction Requirements

The workforce for site work and building construction will be drawn locally. The work will involve vegetation clearance, site grading, building erection, equipment installation and drainage water management.

The expected first phase of project development will commence construction in 2006 to allow for operations in 2008. The EIA will be completed in 2005 to allow adequate time for government approvals.

5.0 SCOPE OF STUDY

As the proposal to import natural gas is still not finalised, the routing of a gas pipeline is not included in the scope of study. That can be completed as a supplementary study.

It has also been assumed that the use of the Arawak pier will not require modifications that would require a marine impact study. Should the design phase indicate a need for extensions to the pier then the TOR for a marine impact assessment will be completed as a separate study.

Based on an examination of the proposed project development, the main environmental issues requiring study are:

- Air Quality;
- Noise;
- Natural environment of the site and surroundings;
- Removal of water from deep extraction wells;
- Disposition of wastewater;
- Connection to the grid via new transmission lines;
- Management of wastes;

- Economic and other social benefits from the development;
- Traffic;
- Routing of oil pipelines; and
- Environmental management plans.

The proposed TOR related to the identified issues are discussed briefly below:

5.1 Air Quality

Specifications of the proposed electricity generating equipment will be examined in detail to determine the expected release of gaseous emissions to the atmosphere. Emphasis will be placed on the emissions of NO_x, SO_x, CO, CO₂, particulates (TSP or PM10) and any predominant metals such as vanadium. The emissions will be simulated in computer models to determine the dispersion of gases and predict the ground level concentrations. This will be performed using various models such as the USEPA industrial source complex model or AERMOD.

These models will take into account the existing wind climate for Barbados and will construct isopleths of the ambient levels of contaminants in the area under a series of weather conditions. The worst -case condition based on these models will be presented. This information will be supplied to the design engineers for determining the required air quality control system, including the height and other specifications of the exhaust stacks.

Since the prevailing wind direction is toward the west and over the sea, little of the exhaust will pass over land. This is an important issue in the location of the site.

5.2 Noise

Noise investigations will be carried out to determine the daytime and nighttime noise environments. Measurements will be taken at a series of locations surrounding the property where potential receptors occur. The main receptors include residences to the west of the site, the school to the east and the church to the southeast. Long-term records of hourly equivalent sound levels (L_{eq}) and maximum sound pressure levels will be taken using a noise logging dosimeter.

Following determination of the expected noise levels associated with the operation of the plant the resultant noise environment will be predicted. The field measurements will be used to design mitigation measures to meet the World Bank guidelines.

5.3 Natural Environment of Site and Surroundings

This segment deals largely with the terrestrial ecosystem. The main vegetation components will be described together with the main wildlife values. The presence of any local environmentally sensitive areas will be identified. The land resources will be examined and reported in terms of geology, soil conditions, hydrology and hydrogeology.

The atmospheric conditions will be reported in terms of historical temperature variations, sunshine, rainfall and wind directions, speeds and frequencies.

5.4 Removal of Water from Deep Extraction Wells

Water for the steam cycle at each of the optional plants will be obtained from deep extraction wells. These wells will generate sea or brackish water.

Test wells were previously constructed at the nearby Checker Hall site. The data from that drilling program will be assessed in relation to the Trents site and information will be solicited from the Barbados Water Authority on the local aquifer use and the water zones. The investigation will identify the probable flow path of subsurface water in the area.

As part of the geotechnical investigation required for design of the structures, one or more test wells will be installed to determine the yield and the water quality. Water samples will be collected for salinity concentration determination and general chemistry.

5.5 Disposition of Wastewater

The liquid effluents will be assessed in consultation with the design team. Typically these wastewaters originate from the water treatment plant and from the fuel conditioning systems and wash downs. Oily wastewaters are usually treated by separation equipment and water treatment plant wastes by neutralization and precipitation. Each of these treatment technologies is current practice within the industry. The EIA will address the quantities and characteristics of the various wastewater streams and the proposed disposition of the wastewater.

Other wastewater discharges to be estimated and discussed will be sewage from change rooms and toilet facilities. Storm water management issues will also be addressed.

5.6 Connection to the Grid via New Transmission Lines

An assessment of the proposed routing of new transmission lines will be evaluated. Sensitive areas will be documented. Mitigation methods will be proposed as part of an environmental management plan for construction.

5.7 Management of Wastes

The generation of power using oil or natural gas does not result in large quantities of waste. For the combined cycle plant the wastes produced are minimal and are related to maintenance and administrative activities. For the low-speed diesel plant the precipitators will generate waste ash for disposal. The disposal options will be reviewed as part of the EIA.

5.8 Economic and Other Social Benefits from the Development

The expansion proposed will provide very significant benefits to Barbados as a whole. Essentially there is a direct correlation between a country's gross national product and the use of energy.

The immediate economic and social benefits will be evaluated and will consider the provision of employment opportunities during the construction and operations phases of the project and the supply of ancillary services and materials. The expected increased cash flow to the area will be translated into greater revenues for local commercial and institutional operations.

Information on the local infrastructure including education, medical, fire, police will be collected to determine if sufficient excess capacity exists and what new requirements may be necessary. Water and sewage treatment will be briefly discussed relative to the project.

A study will be made of the site and immediate environs to assess the presence of historical and archaeological features that may be affected by the project.

The aesthetics of the plant and opportunities to screen with tree belts and clusters to minimize direct line of sight impacts will be considered.

5.9 Traffic

The proposed road access will be assessed to minimize disturbances to residences consistent with site conditions and local roads. An assessment of the road conditions and current traffic loadings will be made to determine if any upgrading is required.

The main fuels under consideration at this time are heavy fuel oil and diesel. The plan is for the heavy fuel oil to be shipped to the Arawak Pier and transported to the site via pipeline.

For diesel fuel deliveries from the new fuel terminal at Seawell, the routing and effects of additional traffic will be assessed on the existing road infrastructure.

5.10 Routing of Oil Fuel Pipelines

It is proposed to install an oil pipeline from the Arawak Pier to the plant. An assessment of the proposed routing will be undertaken to determine mitigation requirements during construction and operation. Sensitive areas will be logged. The area of study will be 100m on each side of the pipeline.

5.11 Environmental Management Plans

The EIA will provide separate environmental management plans for the construction and operations phases. BLPC already have an environmental management plan for the operation of the Spring Garden Generating Station, which will be adapted for use at the Trents site.

Environmental concerns for the construction phase will be largely related to erosion, water management during high rainfall conditions, fueling of construction equipment, provision of lay-down areas, dust control and safety issues. The environmental concerns during construction of the pipeline and transmission line will be related to the disruption of local streets and its effect on traffic.

The environmental management plans will also make recommendations for monitoring programs during construction and operations.

6.0 RELEVANT AGENCIES

The following agencies will be contacted as part of the program to ensure that the study encompasses all regulatory requirements:

- **Barbados Water Authority:** To consult on water needs of the project (potable only) and for the protection of ground water resources.
- **Chief Fire Officer:** To discuss the provision of support for fire protection services to the plant.

- **Coastal Zone Management Unit:** To ensure that the development conforms with the coastal zone management objectives and the Barbados Physical Plan.
- **Environmental Protection Department:** To ensure that the project proceeds in conformity with government environmental codes and requirements. To discuss various environmental issues associated with the plant development including handling of oily wastes, other classes of liquid and solid waste, management of fuel and oils on site and BLPC environmental management procedures.
- **Ministry of Public Works and Transport:** To discuss the transportation of fuel oil, supplies and existing traffic data. To discuss road access and the placement of the pipeline and transmission line along existing highways.
- **Ministry of Agriculture and Rural Development:** Discussions of the rural development issues related to the plant's construction and operation.
- **RAMCID(Risk Assessment and Monitoring Committee for Industrial Development):** Discussions related to the project design and construction and the potential conflicts with other land uses.
- **Barbados Museum:** Review of local historical and archaeological resources in the area.
- **Civil Aviation Office:** Letter informing the Office of location, stack heights etc.
- **Ministry of Financial and Economic Affairs:** Discussion regarding financial and economic components of the investigations and determining the Ministry's requirements for the EIA
- **Ministry of Tourism:** Discussion relevant to existing and planned tourist and resort facilities.
- **Barbados National Trust:** Contacts relative to historical and other significant local resources.

7.0 PUBLIC CONSULTATION PROGRAM

The EIA will be complemented by a series of public consultation sessions. The objectives of the public consultation program are to:

1. To inform the public of the proposed project, and the schedule for the construction and operation of an electrical generation station to be located at Trents.
2. To solicit information from the public and knowledgeable persons that may be of importance in the preparation of the EIA.
3. To present information gathered by the company on the environment, and details of the various studies planned to address the potential effects.
4. To review with public input, the potential effects that the development could have on the environment.
5. To consider each of the public concerns, address them in the design process and report back to the public the steps and mitigative measures that have been adopted.
6. To prepare documentation of the effects that are partially or completely non-mitigatable.

Open houses and public meetings will be held to provide the public and government with accurate information on the project and progress in the studies.

At each gathering, BLPC will provide a brief review of the progress of the environmental and engineering design work, an indication of the identified concerns and the steps taken to address the issues involved. The review will be written in a clear and non-technical manner to ensure the public is well informed.

FILE No.464 11/15 '05

255

PAGE 1/ 8

Post-it [®] Fax Note		7671E	Date	# of pages
To	<i>Shona Duncan</i>		From	<i>P. Rostern</i>
Co./Dept.			Co.	
Phone #			Phone #	
Fax #			Fax #	

FROM
THE BARBADOS LIGHT AND POWER COMPANY LIMITED
GARRISON HILL, ST. MICHAEL, BARBADOS

REPLIES TO BE SENT TO
FAX NO. 246-425-9255

Date: 15 November 2005

To: AMEC Earth & Environmental
Attn: Mr Peter Rostern

Fax No: (905) 568 1686

From: Mr Arthur Lewis
Senior Generation Engineer – Mechanical Maintenance

Subject: Re: Application No. 3499/11/04C – Generating Plant, Trents, St Lucy

Number of pages including cover sheet: 8

COMMENTS:

Attached please find response that was received from the Town & Country Development Planning Office.

Regards,

May Etta King
for RA Lewis

*If any problems occur with this transmission, please telephone
May Etta King at (246) 417-3201*



Town and Country Development Planning Office

Block C, Garrison, St. Michael, BB14038, Barbados.

Tel. No. (246) 467-3000

Fax No. (246) 430-9392

E-mail: townplanning@gob.bb



Our Ref.: 3499/11/04C

Date: 2005-11-03

Barbados Light & Power Co. Ltd.
C/o Generation Manager
Spring Garden Power Station
ST. MICHAEL

Dear Sirs,

**Application No. 3499/11/04C - Development of an
Electricity Generating Plant for industrial purposes at Trents, St. Lucy**

Reference is made to the above captioned development and the Terms of Reference submitted in support.

You are hereby informed that this document was distributed to the relevant agencies which will comprise the Environmental Impact Assessment panel for this development.

Generally, the Terms of Reference are acceptable. However, additional issues have been identified by the relevant agencies which must be included in your assessment for the Environment Impact Assessment. In this regard you are encouraged to meet directly with the agencies involved to discuss and have clarified any issues raised in their comments.

Attached for your information are the comments from the relevant agencies. The Chief Town Planner looks forward to receiving six (6) copies of the document in due course.

Your continued cooperation is appreciated.

Yours faithfully

P. Bryan
for Chief Town Planner

c.c. Richard Gill Associates Ltd.

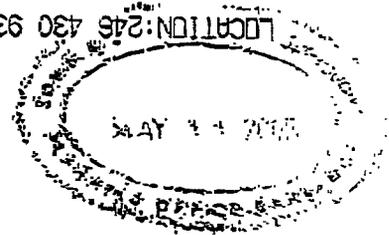
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Attachments

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21

LOCATION: 246 430 9392



MEMORANDUM

FROM: PERMANENT SECRETARY
MINISTRY OF HOUSING, LANDS AND THE ENVIRONMENT
(ENVIRONMENT DIVISION)

TO: Chief Town Planner
Town & Country Development Planning Office

DATE: 2005-05-04

REF. NO.: 8330/9/3 Vol. II

SUBJECT: Re: Application No. 3499/11/04C - Erection of an
Electricity Generating Plant for Industrial Purposes
at Trents, St. Lucy

Reference is made to the memorandum dated 18th March, 2005 received by the Environment Unit on 6th April, 2005 regarding the above captioned subject. The comments of the Environment Unit are as follows:

(a) Introduction

This section should include information on the proposal and a description of the site as well as the neighboring environs.

(b) Background

The background should identify all of the alternative sites and should give an indication as to why Trents, St. Lucy was finally chosen.

(c) Planning Policy, Legislation and Regulations

A section on Planning Policy, legislation and regulations should be included here and a discussion of how the development does or does not conform to future plans for the National Park in which the Checker Hall area falls. This section should also include any local legislation, regulations, regulatory bodies governing environmental quality, health and safety protection of animal and plant species, parks and protected areas, siting and land use control. To this end the National Physical Development Plan (updated 2003), Environmental Management and Land Use Plan can be useful sources of information.

APP 10'

Your attention please

*10 2005-05-11
2115-05-18*

2005-05-12

2005-05-12 2005-05-12

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- 2 -

Chief Town Planner

2005-05-04

(d) Site Description

This section can be incorporated into the introduction. It should include the relevant baseline environmental, biological and economic data. This information would include, an initial description of the physical environment, natural drainage features, air quality, the biological environment and the socio-cultural/ economic climate.

(e) Project Description

This section must be very detailed and should indicate all of the known advantages and disadvantages of having each operating option in place so that the most informed decision can be made.

(f) Scope of Study

The areas included in the scope of study for the Environmental Impact Assessment are adequate. The collection of baseline information must be a priority and details of the potential impacts of the project and the respective mitigative measures to reduce/eliminate any negative impacts, must be outlined by the developers.

(g) Relevant Agencies

Information gathered from this section may also be included in the section on policy and legislation

(h) Public Consultation Program

This section should be renamed Social Impact Assessment (SIA). Section 5.8 entitled 'Economic and Other Social Benefits from the Development' should be included under this section. In addition, a Public Consultation Program is not the same as a Social Impact Assessment (SIA). Such an assessment not only provides an indication of the public's feelings toward such a project in their area, but investigates how they will be affected by it and offers effective mitigation measures.

(i) Recommendations

- (1) Develop an emergency response management plan to address issues such as diesel spills at sea or on land and in the event that there is a possible natural gas explosion.

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- 3 -

Chief Town Planner

2005-05-04

- (ii) There should be some indication given as to the level of CO₂, SO₂ and NO_x emissions that are expected and data on existing level of emissions from the other power stations should be submitted as well. This will be important information when considering the fact that Barbados has acceded to the Kyoto Protocol and therefore has an obligation to limit the level of green house gas emissions as much as possible.
- (iii) There should also be a section which deals with possible human health impacts and mitigative measures. The effects of sulphur dioxide and nitrous oxide on human health and the environment are well known and should be addressed in the document.
- (iv) The two options to be considered should be well detailed and the potential impacts and mitigation measures for each should be included within the document.
- (v) The environmental management plan for the construction phase particularly of the oil fuel pipelines should be very detailed, and deal with minimising any adverse effects, particularly on traffic and the community.

Lorna Inniss
for Permanent Secretary

SW:

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~~Improvement Section
Ministry of Public Works
St. Michael~~

D 410 (05)

RE / T CPO

Have see papers sub. file for your

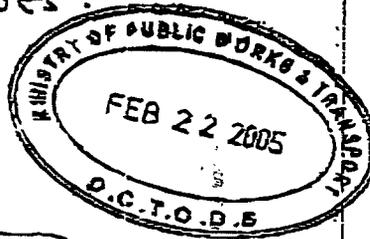
comments.



[Signature]
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(26)

Are two access pts.
off public rd
necessary?



F. Theill
05/02/21

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**Town and Country Planning Applications
 Inspectors Report**

**B'DOS LIGHT & POWER CO. LTD. DEVELOPMENT OF ELECTRICITY GENERATING PLANT FOR
 INDUSTRIAL PURPOSES**

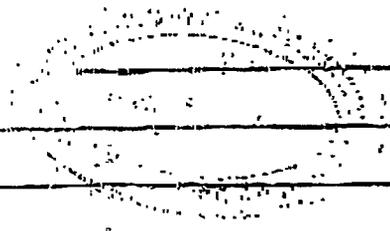
File No: ~~428/11/04~~ 3499/11/04 Inspector: H MORRIS Date: 5/28/05

Is this an:	Yes	No	N/A		Yes	No	N/A
(a) Outline Application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are sight distances adequate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Full Application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Are the following plans submitted:				Are the road construction details satisfactory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(a) Location Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is parking adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Site Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
(c) Road Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Drainage Details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Road Construction Details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the Development take access from a Classified Road? What is Classification?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is any of the following recommended on this Dev.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				(a) Footpath	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				(b) Bus Lay-bys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is this Development affected by:				Is there a water course affected on this Dev.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(a) A.B.C. Hwy.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Scotland Dist. Study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) B.T.M. / B.R.S.I.P	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Drainage Study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) C.D.O	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the applicant observed the relevant:				Are there:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(a) Road Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(a) Sufficient suck wells?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Road Reserve	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(b) Are all low points catered for?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Building Line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		TO BE		
Are the gradients of the roads within the permissible limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is all surface water contained within the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					TO BE		
Are radius curves adequate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there a history of flooding in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REMARKS: GTP
 No objections in principle, extra access point can be used as emergency access only
 applicant must provide a 1.8m wide reinforced concrete footpath and a type 1 bus lay by
 Identify and incorporate any existing drainage features into any stormwater drainage plan for the site.

H. MORRIS 05/05/26

Denitta 05/05/27



AMEC E&E

AEE-DARTMOUTH-NS

FAX:246 425 9255

68:ST 90. 01/11 05 15:39
RX TIME

LOCATION:246 430 9392



MEMORANDUM

FROM: DIRECTOR
ENVIRONMENTAL PROTECTION DEPARTMENT

TO: Chief Town Planner
Attn: Mr. Patrick Bryan

REF: 20/T25

DATE: May 17, 2005

**Re: Application 3499/141/04C -
Erection of an Electricity Generating Plant for Industrial Purposes
at Trents, St. Lucy**

The Terms of Reference for the Environmental Impact Assessment for the above-captioned project are generally acceptable.

2. However, it is noted that two options for the development have been submitted, but there are outstanding matters relating to Option 2 (Combined Cycle) such that the option cannot be fully assessed under these Terms of Reference. This is a cause for some concern, and the EPD would welcome the opportunity to discuss this issue with the developer.

3. It is unclear how the investigations described in Section 5.4, "Removal of Water from Deep Extraction Wells", are intended to inform an assessment of the potential environmental impacts of the extraction of the water. Clarification on this point would be beneficial.

4. The wastewater referred to in Section 5.5, "Disposition of Wastewater", should include, in addition to the sources mentioned in the ToR, wastewater that may be generated in the laboratory and canteen.

5. Our apologies are offered for the tardy submission of these remarks.


Therese N. Yarde
for Director