

BEFORE THE ENVIRONMENT APPEAL TRIBUNAL

IN THE MATTER OF:

The (Mauritius) C.T. Power Ltd

Appellant

v.

The Minister of Environment and Sustainable Development

Respondent

CN: 02/ 2011

DECISION

This is an appeal against the decision of the Minister of Environment and Sustainable Development [the Respondent] refusing an EIA licence to The (Mauritius) CT Power Ltd [the appellant] for the setting up of a 2 x 55MW Coal fired power plant at Pointe aux Caves, Albion. The decision of the minister was taken on 13 January 2011 and the appellant lodged the present appeal on 15 February 2011 under Section 54 of the Environment Protection Act 2002 [EPA]. It is also worth pointing out at this juncture that the site at Pointe aux Caves is sometimes referred to as Montagne Jacquot.

It is common ground that the application for an EIA licence was rejected by the Minister on the basis of the precautionary principle for the following three reasons:

- (i) The site is not conducive for such a development;
- (ii) The adverse impacts on the residential areas due to the inconveniences and disturbances associated with traffic; and

(iii) The likely health impacts on the inhabitants of the locality and surrounding areas.

The respondent is resisting the appeal

A. Chronology of case

The chronology of the application has been clearly explained by the Director of the Department of Environment (DOE). The application was made since 6 April 2007 and notice published on 14 and 21 April 2007 setting the date limit for comments to 9 May 2007. The Ministry of Environment decided to call for a technical Committee on 6 January 2011 and for The EIA Committee on 13 January 2011. The recommendations were submitted to Minister and on 14 January 2011 Cabinet took note of decision to turn down the application. The decision of the Minister was communicated to the appellant by letter dated 18 January 2011 and was published in the Government Gazette of 22 and 29 January 2011.

The appellant lodged the present appeal on 15 February 2011 containing 8 written grounds of appeal. The Statement of Case was filed on 19 April 2011.

The Statement of Defence of the respondent was filed on 21 June 2011

Hearing started shortly afterwards as early as on 14 July 2011 with the testimonies of three foreign experts called by the appellant, the representative of the proponent as well as the Director of the DOE representing the Minister. Proceedings were closed on 22 February 2012 when both parties filed their respective written submissions.

B. Nature of case before Tribunal

It is provided at Section 23 of the EPA that the Minister must take a decision after having taken into consideration the recommendations of the EIA Committee. Section 54 (1) and 56 (4) of the EPA empowers the Tribunal to hear appeals any decision of the Minister on an EIA under section 23. Any person may appeal within 30 days of the decision, direction, order, or notice referred to in subsection (1) in such form and manner as may be prescribed by regulations and the Tribunal may confirm, amend or cancel any decision, order, direction or notice referred to in section 54.

However it is worthy to note that when there is an appeal before this Tribunal the record of the 'proceedings' such as the Director's Review, the minutes of proceedings of the EIA committee and its recommendations are not brought before it. Indeed Section 55 (3) (a) of the EPA provides that "...all appeals before the Tribunal **shall be instituted and conducted as far as possible in the same manner as proceedings in a civil matter** before a District Magistrate."

In the case of _____, the Court explained the difference between a law which provides for the "powers of a Magistrate in civil proceedings" and "shall take place as though it were a civil case" as follows: "The law says that a Magistrate acting as licensing authority has a wide discretion as to procedure; it also says that, qua licensing authority, the Magistrate shall have all the powers of a Magistrate in civil proceedings. But the law does not say, as everyone seems to have assumed, that the hearing of an application and an objection **shall take place as though it were a civil case.**

We find in the file the whole paraphernalia of particulars, plea, preliminary objection, appearances for the plaintiff and the defendant, examination on personal answers etc., none of which were appropriate.”

In the EPA we find that the Tribunal does not only have the powers of a Magistrate in a civil case but that the procedure is to take place in the same manner as proceedings in a civil matter hence as though it is a civil case. This was clearly explained in the case of **J.M Ricot and Ors. v. Mauriplage Beach Resort Ltd. [2004 SCJ 329]** where it was stated that the "Minister can approve the issue of an EIA licence only after having taken into account all the environmental factors as well as measures which may avoid or minimise adverse effects on the environment, people or society. The decision of the Minister on an EIA is subject to scrutiny on appeal by the Tribunal...It shall, for that purpose, hear evidence before determining whether the decision of the Minister is founded upon, and complies with, the criteria set out under the Act..."

The fact that evidence is adduced at the level of the hearing of an appeal by this Tribunal is a major difference between an appeal from a lower court to the Supreme Court. Another difference as was pertinently stated in the case of **L.C.Entresol and Ors. v. Saltlake Resorts Ltd. [2004 SCJ 305]** the law "does not lay down as prerequisite to the lodging of an appeal the prior submission of comments/ representations to the Director."

The Tribunal is therefore under the legal obligation to hear the views of the appellant and its witnesses but also those of the representative of the Minister having regard to the provisions of Section 55 (3) (b) of the EPA and evidence is adduced in compliance with the law of evidence in force. The role of the Tribunal being to “hear evidence before determining whether the decision of the Minister is founded upon, and complies with, the criteria set out under the Act.”

C. The Grounds of appeal

The Appellant has put forward 8 grounds of appeal to challenge the respondent's decision and which read as follows:

Ground 1

The decision of the Respondent to reject the application made by the Appellant, for an EIA Licence on the basis of the precautionary principle was wrong in law and fact on, inter alia, the following grounds:-

- (a) there was no threat of serious or irreversible environmental damage;
- (b) there was no lack of full scientific certainty as to the nature and scope of the threat of environmental damage;
- (c) all potential threats of environmental damage had been adequately addressed in the Supplementary Environment Impact Assessment Study commissioned by the Appellant ("the SEIA Report") and all possible impacts and level of public concern had been satisfactorily addressed, with the effect that the Respondent has misapplied the precautionary principle in reaching its decision;
- (d) no regard has been given to the fact that all identified concerns raised by the Respondent of real and/or perceived impacts had been adequately addressed and/or mitigation plans had been proposed in accordance with applicable laws of Mauritius and internationally accepted environmental standards.

Ground 2

The Respondent, in reaching the conclusion that, on the basis of the precautionary principle, the site was not conducive for the development of the project, acted unconscionably and wrongly inasmuch as:

- (a) the site for the Project (“the Site”) had been identified and granted by the Government of Mauritius through the Ministry of Housing and Lands;
- (b) a preliminary EIA was conducted by the Government which concluded that the Site was suitable for a coal fired power plant;
- (c) the bringing of the Site into the Project by the Central Electricity Board (“the CEB”), in consideration for shares that were to be allotted to it in the Appellant’s Company, with a view to jointly developing the Project, demonstrates beyond doubt that the Site was, to the knowledge of the Respondent, conducive to the development of the Project;
- (d) a subsequent report by Mott MacDonald commissioned by the Ministry of Environment and Sustainable Development together with the United Nations Development Programme also concluded that the Site was suitable for a coal fired power plant; and
- (e) the SEIA Report commissioned by the Appellant also concluded that the Site was suitable for a coal fired power plant.

In the result, the Respondent is estopped or precluded from taking the current position that the Site is not conducive for the development of the Project.

Ground 3

The decision of the Respondent that, on the basis of the precautionary principle, the Project will cause adverse impacts on the residential areas due to the inconveniences and

disturbances associated with traffic is wrong in law and fact for, inter alia, the following reasons:-

- (a) all issues raised by the Respondent pertaining to the adverse impacts associated with traffic were addressed in a Traffic Management Plan during Operational and Construction Phases of the Project in the SEIA; and
- (b) the conclusion of the SEIA Report stipulates expressly that the mitigation measures set out in the Traffic Management Plans covering both construction and operational phases of the proposed development would not give rise to any transport related environmental impacts.

Ground 4

The decision of the Respondent, on the basis of the precautionary principle, that there is likely to be health impacts on the inhabitants of the locality and surrounding areas as a result of the Project, is wrong in law and in fact inasmuch as the health impact associated with the Project has been fully addressed in the SEIA Report, which concludes that the health risks associated with the Project are so insignificant as not to require any mitigation or measuring action.

Ground 5

The Respondent, in processing the EIA Application for the Project acted in utter bad faith, resulting, inter alia, in unconscionable delays which prejudiced the Appellant.

Ground 6

The Respondent acted arbitrarily by failing to give any proper reasons and/or to provide any rationale for his decision in rejecting the EIA Application in relation to the Project. In the absence of proper reasons and/or rationale in support of his decision, the Respondent had no proper legal basis to reject the application, and the only irresistible inference is that the decision was arrived at for reasons other than the application of the precautionary principle.

Ground 7

In rejecting the Appellant's application on the basis of the precautionary principle when all potential threats of environmental damage had been adequately addressed in the SEIA Report and all possible impacts and level of public concern had been satisfactorily addressed, the Respondent acted frivolously and vexatiously and his decision is a colourable device to prevent the Appellant from implementing its joint project with the CEB, for reasons best known to the Respondent.

Ground 8

By failing to understand and to properly apply the precautionary principle in the context of Mauritius, which does not statutorily provide for the application of this concept, the Respondent misconstrued the provisions of the law and wrongly used his powers to thwart the Appellant's Project causing the latter considerable damage and prejudice in respect of which the Appellant reserves all its rights to the fullest possible extent.

We do not propose to examine each and every ground separately as we feel that it will be more convenient to deal with all the grounds of appeal together.

D. Case for the Appellant

Mr. Stuart Hume as manager of supplemental EIA (SEIA) deposed to the effect that BMT was approached in 2009 by appellant as CT power had an original EIA and a history of correspondences and series of additional studies were required. The Appellant has submitted an EIA for a coal fired power plant. He visited Mauritius to see the site with the aim to meeting stakeholders. He met Mrs. Ng, the Director and her representatives and members of CT power and marine and traffic experts and submitted his “pertinent comments” (Doc. A). Key issues were discussed such as the nature of additional studies for the SEIA report to address the issues raised. The Ministry of Environment had already contacted the UNDP and Mott Mc Donald [MMD] and he agreed to send his SEIA to the UNDP for external review process inasmuch as the type of assessment work is complicated such as air dispersion models, quantitative health impact etc. which ought to be reviewed by experts in their field. Chap 8 of the report is entitled “Review of site selection process” and described the way the development was incorporated in development plans. He referred to various documents such as the physical development plan, the Albion interim plan 2004, the Port Louis planning scheme and Black River Outline planning scheme. He also described the key issues with the different options and 3 sites were identified. The key issues are that land is privately owned, there is limited supply of fresh water and noise from plant which is unlikely to be a problem.

The National physical development plan dated 2003 covering electricity generation was also considered together with bad neighbour developments such as Fort William and Montagne Jacquot which are expressly mentioned in the Albion interim plan in 2004 which is available locally. The long term port development for hazardous cargo and waste was also considered, the Port Master plan, the Port Louis Outline Scheme 2004 with plan which identifies an area of land for a proposed site for CEB for coal storage and the Outline planning scheme for

Black River 2006. No new sites for IPP's have been confirmed but suggested sites are to be located near to Albion and close to Port for import of coal: Montagne Jacquot and Medine S.E. The Montagne Jacquot was designated for coal fired power plant and the advantages of the site are that there were no inhabitants in 2009, no land used for agriculture, no fish landing stations, the coastal site has no fringing reefs and there are no immediate properties; the air emissions will go out to the sea from the stack and the site is close to the Montagne Jacquot water treatment plant. The site description has also been the subject matter in another report by MMD commissioned by UNDP and the Ministry of Environment in December 2008. As regards the K&M report, he has seen and read that report when he was passed a copy of executive summary by CT power which got it from the CEB. He contacted the US Trade and Development Agency and made a request for a full report. It was not a classified document and he was sent a copy of that report from those who commissioned same. A Google print of the site was taken in 2003 (Doc. C) and another one in December 2010 and it could be ascertained that there has been no significant change.

In 2008 MMD made no reference to the K&M report at all but reference has been made to Club Med which opened in 2007. The land at Pointe aux Caves had been earmarked by the Ministry and the site selection was made by K&M, MMD and by himself in 2010 for the purpose of the SEIA. The suitability of land was considered such as ownership in that the Ministry of Housing and Lands leased it to the CEB which in turn allocated it to CT power. Access was taken into account. The proximity to grid was not a factor but proximity to sea was a consideration for the stack emissions. The absence of coral reefs was another consideration as well as the proximity of sewage plant. The nearest residence is Kensington Place which is at 45 m from the site boundary. He further explained that the SEIA addressed issues of noise, odour, light and dust etc. that could be caused and took into account the Club Med hotel and provide for a number of mitigating measures where possible. He was of

the view that there was not any residual issue left. The MMD report was put up 18 months after the coming into operation of Club Med. He considered that the SEIA went beyond the issues raised by MMD in terms of monitoring and management, marine alien species invasion assessment, traffic impact assessment (TIA), health impact assessment (HIA), visual impact assessment (VIA), storm water, ash recovery. He added that he has not been contacted by the UNDP or MMD although he expected a query from those experts. Three sites identified were Montagne Jacquot- subject property, Fort William and Vieux Grand Port area. He is aware that the EIA was rejected by Minister of Environment by letter dated 18 January 2011 which states that the application has been rejected on the basis of precautionary principle for 3 reasons: Not conducive for site development, Adverse impact due to inconveniences associated with traffic and likely health impact on the inhabitants (Doc. F). Mention is made to the “precautionary principle” meaning that activities are not permitted until uncertainties of the impacts identified are suitably low that a decision to be made. In relation to the issues raised (site, traffic and health), the precautionary principle does not find its application as at the end of the SEIA these issues have been addressed so that it was adequate for a decision to be made. There was nothing left uncertain as to the suitability of the site, with regard to nuisances and disturbances associated with traffic. He admitted that there was a gap at the start and it has been filled. There is no residual uncertainty and are sufficiently low that a decision can be made. As for health impact, he was reassured that there was adequate amount of assessment. He also pointed out that the Director did not raise with him any issue of precautionary principle being applied.

Under cross-examination he agreed that there were some serious gaps in the 2007 EIA but did not agree that there was no site selection done. He was passed a copy of a 405 pages long report of MMD by CT power. The report was published on 30 August 2001 and was for the feasibility of a new thermal power project. It is not a specific report but for the pros and

cons. It is a general report and other options to be taken into account. It makes specific reference to Fort William. According to his interpretation of the report, Montagne Jacquot was suitable for a coal-fired plant. He was told by CT Power that the CEB had leased the land to it and he addressed all the remaining issues that ought to be evaluated.

He is not aware whether CT Power had undertaken any study as regards other suitable site or whether there had been any other site selection process. All of the work was based on the Montagne Jacquot site and was guided by the MMD report. In 2009 there was no inhabitant but in close proximity there were residential areas. There would however be no need for any physical resettlement as within the site boundary there was no inhabitants. He added that the Kensington Place inhabitants were consulted and that key stakeholders and groups protested. He expressed the opinion that people always object. Club Med was concerned about the visual impact and negative perceptions of power stations. A meeting was held at Club Med itself. There were also meetings with Ministry of Housing and Lands, Ministry of Agriculture etc. and he found that there was a high level of perceived risks. From the submissions of the EIA in 2007, there were comments and meetings. Notes of meetings were taken down. The original EIA was rejected in the sense that it was not accepted and that further studies were required. Land ownership was not an issue according to his understanding. The 3 letters (G, G1 and G2) concerned only a conditional reservation, that is subject to conditions. He is aware of the policy of the Black River District Council [BRDC] outline scheme. If the site had been earmarked the safeguarding principles in the Outline Scheme would have been implemented but in 2006 the exact location of the power station is shown along with Montagne Jacquot to the North. This follows the site selection study that was done in 2001 and subsequently integrated into the National Development Plan 2003. More importantly, the site selection study was commissioned by the Ministry of Public Utilities and later accepted by the Ministry of Public Utilities. The USTDA Commission and Sheet 1 of

the Development Management Map from the Black River District Council clearly show the location of the Coal-fired Power Plant. The location of a coal fired power plant is found on the Black River Outline scheme. The landscape for visual impact assessment was made 10 km away and it would not be correct to say that the site assessment was taken in isolation. The UNDP report in 2007 concluded why the EIA should not be granted. In the SEIA the original EIA was not taken into consideration as there were some gaps in it. In his report he did consider adjacent property owners and took into account proposed morcellements in the locality. He denied having taken the site in isolation. The purpose of his work was to ensure that the SEIA was produced which was adequate for decision to be made and he was heavily guided by the pertinent comments from Ministry of Environment [MoE].

He explained the methodology in assessing environmental nuisances like odour, dust, air quality changes and noise which is evaluated at the offsite impact: impacts of emissions or concentration of dust along the site boundary. For nuisance the impact is evaluated regarding areas within a grid of the emission points for air quality at 3 kilometers, for noise it is the centre of the generation plant, part of the site for piling activities, again the 3 kilometre grid was used. Any change in the size of the grid is scientific and one has got to be sure that all the relevant key receptors that may occur within the kilometre of the site are captured but one should never go too far as the impacts generally dissipate from the source.

He maintained that the morcellements within the 3 km radius had been considered such as one which is at 170m, a second morcellement south of morcellement Sohawon at 827m and 1046m from the stack, morcellement Roopda at 660m from the site boundary and 870m from the stack, morcellement Geebun at 1928m from the stack and 495m from the site boundary, existing Belle Vue/ Albion area 475m from the site and Petit Verger area 925m from site and 2500 m from the stack. The SEIA identified and evaluated impacts to key environmental and social receptors: the changes that will occur within a 3 kilometre grid for the typical nuisances

were identified. There will be no odour issue in this case but there are air quality issues, there is noise and there is construction dust as well. In addition, CT Power has been advised to have a lighting strategy which avoids light leakage which will turn inwards to ensure that there is no light leakage outside the site boundary. The visual impact of the Power Station was also considered which covers almost half of the island. He agreed that his visual assessment did not show Kensington Place as there were sufficient amounts of viewpoints amounting to 20 which are sufficient in number and nearest viewpoint from stack. The developments were made in full knowledge that there was going to be a coal fired power station since 2001. They ought to have exercised due diligence. Land and Visual impact assessment (LVIA) and landscape assessment are two different issues. In 2007 one Mr. Madhow objected but the Black River Outline Development scheme ought to have been taken that into consideration: Letter of Black River District Council (Doc. N). The Ministry of Environment did not send the SEIA for an external review.

Mr. Roger New, a Principal Highway Engineer, deposed that he was responsible for preparing Chap 4 of EIA p. 51 to 109 of the SEIA. He made use of a number of documents such as the TIA of GIBBS and comments of MMD, the land use and transport plans, DMRB (UK design for Roads and Bridges), UK advice note on contents of TIA's, UK TRICS database. He travelled in summer 2009 to Mauritius and met the representative of the Department of Environment (DOE). He accompanied Mr. Steward Hume and took into account a document called "Pertinent Comments" (Doc. A). One of the reasons given for rejecting the EIA was the adverse impacts on residential areas due to inconveniences and disturbances associated with traffic. However he is of the view that the TIA addressed all consequences associated with traffic. Chap 4 deals with each consideration in turn, in terms of safety and consequences such as site description and highway network, the transport context, outbound and return routes from Port to Site and vice versa, existing transport

network in terms of buses, cycling, existing transport use, road structure and recorded traffic flows. Traffic flows surveys were carried out and he did not rely on the Gibbs report. The key findings were based on UK and US Guidance on traffic assessment in terms of capacities and loadings. Congestion and delays are features on peak period on Motorway M1 but not on minor roads close to the power plant site. Route choice options from the Port to Site and 4 Road Route options were considered in original TIA before coming to the conclusion as to the most appropriate route both at peak and inter-peak hour. Residential areas on the Route and some main sensitive receptors were highlighted to determine whether there is any material impact. In terms of noise and vibrations and based on established science, there ought to be a change in traffic flows of 25% increase or decrease for that change to be perceptible. Air quality was also considered in that vehicles have to be covered and washed both at the port and at the plant so that there would be no transportable dust and coal would be transported after 9:30 up to 16:45. There would be 115 lorry movements at the rate of 1 in every 7 ½ minutes. He is of the view that there will be no problem with the visual amenity due to the size of the lorry and vehicle travellers will not be impacted with the size of the lorries. The threshold of impact on severance will be higher as there need to be a change of 30%. If noise and vibrations not exceeded then no need to consider severance. The Traffic Management and Road Safety Unit (TMRSU) and the Road Development Authority (RDA) were met on 2 occasions and none expressed any concern as regards the operability of road network in terms of capacity and no comment was received from them.

Under cross-examination Mr. New stated that there is a 10 km journey from the Port to the site. The outbound route from the Port to the site will be Maupin road and A1 La Butte to Pointe aux Sables, Montee S to Petite Riviere then to the site and inbound back in same road except to Saint Sacrement, then M1. There is more than enough capacity to accommodate traffic and if there is an issue of illegal parking then illegal parkings need to be

addressed as that cannot affect the rights of free passage. He is of the view that the lorries will not cause the type of clatter caused by lowly maintained vehicles and one of the measures to address noise is driver behaviour. He agreed that at Camp Benoit the road passes through a narrow road and residences and that all along the road there are uninterrupted white lines but he does not agree that there is an issue of safety. The route identified are not too narrow and do not cross small bridges. The survey was carried out from 28 Sept to 4 October for a week and schools were running. In order to prevent fine and fugitive dust the lorries will be washed each time they come to the plant and coal will be covered with tarpaulin. In order to prevent emissions from the trucks there is an undertaking from the promoter that there would be a regime of regular servicing. Vibrations on humps and noise clatter are due to loose fittings. There would be monitoring and measures would be implemented. Inter-peak hours are nowhere close to the capacity of the road and the Gibbs report is wrong when it stated that the road is saturated. He admitted that there may be some delays but an average of 7.5 minutes per lorry is maintained, that is 16 coal-loaded lorries in an hour. Other lorries will be at the rate of 1 lorry every hour to give a total of 22 lorries. He did not agree that 16:45hrs is peak hour but is between peak and non-peak.

Under re-examination the witness stated that vehicle-washing facilities were considered in the TIA and the amount of trips could be reduced and coal could be carried on Saturdays which is 10% operation margin.

Mrs. Allison Searl, a member of UK Department of Environment on air quality standards and advisor to UK Government, deposed as the author of Chap 6 of the SEIA. She stated that it would not be correct to say that there has been no authoritative report as to health risks to plants, animals or humans. Regarding the issue of stack exhaust emissions that would give rise to loss of life expectancy to those living near the power plant, she pointed out that life expectancy in Mauritius is 72 years and air pollution has a small influence on life

expectancy compared to smoking, poverty. Poverty itself causes loss of life expectancy of 12 years whereas stack emission is expected to cause loss of life expectancy of 3.5 hours, which is small over a life expectancy of 72 years. Particulate matter [P.M] and exposure to small dust, industrial pollutions is expected to affect the population on 830 days for every year that the plant operates hence only a few minutes per individual. At individual level, the expected effect is to be quantified in minutes not days. About 6 to 18 emergency admissions is expected due to nitrogen dioxide and sulphur dioxide but for the full life time of 25 years of the plant. Relying on the air dispersion modeling using recognized software, she concluded that pollutant concentrations will be on the sea or area fairly close to the plant and stack emissions will be negligible. She also indicated that there exist no safe level of air pollutant and concentrations around the site will be acceptable. The plant will not bring significant health impact and the effects will be negligible on health of the Mauritian Population as coal is not a major source of dioxins emissions. As regards the impact on mortality, which cannot be easily detected, she is of the view that the power plant will have a small risk which is absolutely negligible: 0.0005% increase equating to a mortality of 0.001. In terms of health care, the expected increase in bronchitis is 0.0015% of annual primary care consultation which is a small proportion; 0.0025% of extra consultations over 25 years per person. As asthma is concerned, rates were assumed as UK studies and Constituency no. 20 which will be the area which is more likely to be affected. Cardiovascular effect will account for less than 1 death for that period, that is less than 0.002%. There will be no detectable impact on health.

The purpose of a HIA is to make an assessment of potential health impact for an informed decision-making and a HIA is not required in the UK. The potential advantages of the project is securing energy which is key to economic growth. In some countries, in the Middle East, in respect of container type power plant, the impact is greater than from larger power plant and

from stack. The stack will be 110m high and the impact of the plume, which will come up, will be negligible as there will be good dispersion. The stack of St Louis station is much lower than 110m. The risk is a difficult concept to explain. Bronchitis is a common illness the expected rise will be 6 more over 25 years which is small in magnitude and none will be attributed to the power station. Ash from coal power plants can be buried if precautions are taken and a properly engineered landfill will be needed.

Under cross-examination Mrs. Searl stated that it would not be possible to do an epidemiological study for Albion, as she does not have specific data for Albion. She added that Mauritius is not going to be dramatically different as there are areas of poverty across the country. The prevalence of respiratory diseases is unlikely to be dramatically different. Given the small change in air quality no in-depth investigation was required. The risk of child having asthmatic systems is relatively small. They are prone to respiratory infections and having a power station will not contribute significantly but marginally greater. The information gathered for Mauritius is the 2000 census, the WHO country profile for 2002 and a paper of Mrs. Fakim in 1992. Mauritius is a young population. In view of air quality modeling it can be concluded that the impact would be negligible. The design of the plant is for 3% to 4% of Sulphur in the coal. She admitted that a HIA of the increase in traffic has not been investigated, as there will be no significant change. She was asked to do a HIA resulting from stack emissions. If coal is burnt in a clean way, it does not lead to health concerns.

Mr. Shamsir Mukoond , corporate and research manager of CEB and chairman of the Committee overseeing the Pointe aux Caves coal fired plant. He explained that the CEB received this project through the Ministry of Public Utilities which itself was communicated through the BOI: a Letter of intent dated 26 April 2006 addressed by BOI to appellant (Doc. V) was issued. The present project is for a 2x 55 MW plant instead of a 3x 50 MW one. Mr. Mukoond went on to explain that there is long term planning and analysis of demand and

supply at the CEB in order to determine the optimum size of a plant: over investing will mean high energy costs and under investing will mean shortage. The CEB determined that a 100 MW was needed. After discussions the promoter was requested to downsize the project to a 2x 55 MW is maximum capacity but power will be 100 MW. A jetty would be required in case of a 3x50 MW plant. The modification will mean that there will be land transportation of coal instead of by sea. He maintained that the site at Pointe aux Caves is the best site for a coal fired power station and he relies on a document prepared by a US based company, K&M, to which he had access inasmuch as it is the working document on CEB bases itself for its future expansion plan. By letter dated 29 June 2006 the Ministry of Housing approved an industrial lease to the CEB at the Montagne Jacquot area in partnership with CT Power. CEB would have contributed to an equity participation in virtue of leasehold rights. Further lease of land granted by a letter dated 27 October 2008 in which the Ministry of Housing informed the CEB the grant of an industrial lease with rent of RS 480000 per annum to be sub-leased to CT power at full market rate. The CEB has agreement with 5 Independent Power Producers [IPP]: CTBV in the North, FUEL in the East, CEL Beau Champs, CTBS South, CT Savannah in the South. In all cases the agreement reached were with the Sugar Sector companies using bagasse and coal but CTBS uses exclusively coal. The use of bagasse and coal is seasonal so that when bagasse is not available coal is used exclusively. 55% of the electric energy comes from Sugar Sector and CTMC is the importer of 55000 T of coal so that there is no control over the price of coal. **In agreement with CT Power, the CEB will purchase coal from South Africa meeting requirements.** The CEB has reached agreement with CT Power in respect of the design and built of the plant as well as a power purchase agreement.

The CEB through CEB Investment Co Ltd. has entered into a shareholding agreement with CT Power. In his opinion all 5 IPP's use coal in view of the fact that the IPP operate with bagasse, which is available for 6 months only; and bagasse is not optimized for coal

operation thus resulting in 26% of coal efficiency. CT power will use pulverized coal with higher efficiency hence with 32% efficiency thus 20% less coal will be needed. Had the plant been operation in 2006 the CEB would have reduced both the amount of energy bought from the IPP's and fuel oil resulting in savings of RS 5 million a year. Energy on diesel oil is costing twice as much as it would have been with CT Power. The witness added that if the project is realized in a timely manner important economic benefits will accrue including impact on the tariff itself. The burning of 50000 T by CT Power will produce fewer ashes. The CEB has entered into way-leaves agreement with Medine SE. He admitted that there are disputes concerning other land owners such as Cie de Gros Cailloux as well as a Sugarcane grower. He also admitted that the CEB sent an email to the effect that it will inject cash instead of leasehold rights and he wrote to CT Power that the EIA should be fine basing himself on the K&M report which already incorporated a Preliminary Impact Assessment Report [PIAR]. On 18 July 2010 there was a CEB blackout and a PNQ was asked by Opposition in Parliament and with a coal power plant CEB will have enough base load. As regards the Fort Victoria project such investment was not intended but in view of the delay in the CT power project CEB could not do otherwise in order to avoid shortage of power supply. The ash from burning of coal is spread.

Under cross-examination Mr. Mukoond confirmed that he is deposing on behalf of CEB and have authorization of CEB to do so. He also explained that since the PIAR looked at various factors and after having looked at the report and, based on his experience, he was of the view that said should not have any problem in securing an EIA licence. In his opinion although the feasibility study was for 2001 the report was still applicable in 2008 inasmuch as for national projects, the study for such year is not meant for that year only. He agreed that when project will be realized all mitigation measures have to be taken. He has knowledge on the technical part of the project as well as its impact thus he has had to look at EIA. It was

not his responsibility to assess the traffic impact and health impact. He agreed that there was another project at Fort William. The report (K&M Report) addressed 3 major locations: Albion, Fort William and Bois des Amourettes. Fort William was earmarked as being best for a co-generation system. The least cost option will be for a coal power plant and the eventual coal power plant was to be located at Albion. One option to be analysed was ship bunking. As for the letter of the Ministry of Housing in June 2006, the application was explicitly made for a power plant and all agreements signed are with condition precedent. He agreed that studies have to be made as well as mitigation measures to be taken to minimize any impact. He maintained that a jetty would only be required if going on the full scale power plant and additional land is being looked for with a view to increase the capacity of the plant. The project was given to the CEB by the Ministry of Public Utilities. The jetty issue was dealt with at the level of the CEB for a 3x50 MW plant but the project was downscaled to a 2x55MW without a jetty with transportation of coal by truck. It is understood that the power purchase agreement has been signed subject to a number of conditions and permits required by law and if those conditions are not fulfilled then the agreement will lapse. The CEB looked at the projects at an affordable cost and the CEB was invited to attend meeting with various stakeholders. As regards the quality of coal, specifications were detailed as grade RB 22 from where coal is actually being imported i.e. same type from same supplier. There can be reduction of emissions based on specifications. It depends on how the power plant is processed so as to conform to environmental requirements.

In re-examination he stated that the CEB do not carry out any HIA or any study but he agreed that emissions at exit should conform to environment standards. The height of the stack at St Louis is 65m where fuel oil is being used.

Mrs. Jowaheer, representing the proponent, deposed to the effect that ever since April 2007 she has been responsible for the present power plant project. She deposed about the project

as well as the stages through which the application went through before its rejection. The promoter is CT Power holdings and in collaboration with KTA Holdings Berhad of Malaysia which is an engineering firm providing services in power generation. There are a number of IPP's already in Mauritius such as Fuel, Central Thermique du sud (CTDS), Compagnie Thermique de Savannah Limitee (CT South), and Centrale Thermique de Belle Vue (CTBV). CTDS is fully coal whereas others are mixed coal and bagasse. Doc V is a letter from BOI addressed to Mr. Subramaniam as President of CT Power Ltd referring to a policy decision. Originally the project was for a 3x 50 MW plant but it was the decision of the CEB to come with a 2 x 55 MW plant. The project is that of an IPP in which the CEB will have 26% holdings (minorité de blocage). The CEB was to work out with the Ministry of Housing regarding land and will contribute to land whereas the proponent was to prepare an EIA report (Doc. H). On 6 April 2007, the Department of Environment [DoE] acknowledged receipt of the application and the location of the proposed project being Pointe aux Caves. (Doc. Y).

According to her, the plant is more efficient than a coal-bagasse plant as more efficient and sophisticated machinery will be used. The DoE wrote back to proponent and requested for various information. There were various exchanges by way of letter requesting for further information such as desalination plan, spill contingency, storage of coal as well as a number of plans and site location plan indicating distance of residences from eastern boundary of the site. On 16 August 2007 the DoE requested her, for the third time, to resubmit in 15 copies information on cooling water, plans of the site, ash disposal system, air emissions, desalination, clean technology and was asked to address the effects of the undertaking on the environment. On 16 Nov 2007, the Director wrote to proponent about a meeting with stakeholders at Albion health Community Centre. On 11 Jan 2008 additional information was requested. For the remaining part of year 2008 the DoE was not heard of until 04 Sep 2009

when the DoE sent a copy of “pertinent comments”. By that time the services of BMT Cordah were enlisted to make sure that all requirements of MoE were met and to prepare a supplemental EIA [SEIA] (Doc. B). The pertinent comments of DoE were addressed. According to her, the proponent has satisfied all the requirements of the DoE and approximately 7 million USD have been spent already.

On 13 January 2011 she heard on the media that the project has been rejected but received a letter to that effect on 26 January 2011. She maintained that the Precautionary Principle was never part of any discussion. The First EIA was submitted to Mott Mc Donald [MMD] for its opinion and she is aware that MMD recommended that the project should be granted an EIA subject to conditions. The proponent was informed that licence was rejected on precautionary principle as the site is not conducive but that issue was addressed by Mr. Hume. She added that in view of the evidence of experts, the grounds to reject the application are baseless and unreasonable. According to her information the morcellement permit of Societe Roopda has not been issued. She therefore moves that the Tribunal to direct that the proponent be granted a licence for the project and set aside the decision of the Minister.

Under cross-examination Mrs. Jowaheer did not agree that the EIA was deficient although several requests had been sought. She added that the proponent never refused to do any study but has done much more studies than required. The requirements highlighted by MMD had been met by adding on the Gibbs report. She agreed that in the Executive Summary it is stated that no site selection study was carried out but the land was given by the CEB who is a partner in this project. It would not be true to say that there were no consultations. According to her, since the sewage plant next to Kensington Place is not considered as a nuisance, it should be the same for a power plant. She also proceeded to the Ministry of Housing and Lands and purchased two plans so as to know which development has been

approved. As regards the difference in the coal quality referred to as containing 0.56% sulphur and in the SEIA as 3.02% sulphur content, she is of the opinion that it is for the MoE to look at technical issues. According to her production will be of better quality than existing ones inasmuch as best studies and much more than required had been done. She also learnt that the SEIA was not referred to MMD for review. The Precautionary principle was not discussed with her. She disagreed that coal is not classified as clean energy. In June 2008 a coastal marine survey was carried out and on 15 July 2008 an ecological study report was provided. As from end 2008, the process to have an independent consultant was initiated by the MoE. As for the lease agreement, there is a condition that of an EIA licence should be obtained. Although she agreed that K&M spoke about the need for a jetty, she added that such was the case for a 3 x 50 MW but since the CEB has decided for a plant capacity of 2 x 55 MW it is no longer appropriate to have the jetty. Up to date there are no inhabitants in the locality except for 15 farmers. Regarding the Kensington place she explained that the Letter of intent was given in 2006 at a time when Kensington was already there and she cannot give an answer as she is not a technical person. There were queries from the MoE on 5 different occasions and it would not be correct to say that it was CT Power which gave information in a piece-meal fashion. She did not agree that the MoE was right to reject the EIA.

E. Case for the Respondent

Mrs. Ng, Director of Department of Environment, deposed on behalf of the Minister. Her testimony spanned over 200 pages and we do not propose to reproduce her evidence in full. Below is a gist of her evidence.

Mrs. Ng went through all the procedural aspects of the present application, publication in Gazette and 2 dailies with public comments and a joint site visit is effected. The proponent

was requested to give some clarifications or comments which were then circulated to the various stakeholders before a meeting of the Technical Committee to make recommendations which are then submitted to Minister for decision to be taken. The decision is published in Gazette and dailies and communicated to proponent. Minister may also ask for technical committee.

A brief chronology of the case was given by the witness: The present application was received on 6 April 2007 and notice published on 14 and 21 April 2007 with date limit set down to 9 May 2007. On 11 April 2007 EIA report circulated as well as invitation for joint site visit. Following the site visit on 19 April public comments received, including Hanoomansing and Others requesting for additional time. Rooplall and Beerjeraz, Societe Gros Cailloux etc... On 11 May further information was requested and the proponent was written to arrange for a presentation at the project site. However the meeting was rescheduled. It was found that the information submitted by the proponent did not address all the issues and the aerial photo did not indicate forthcoming development, the site location plan was not drawn by a sworn land surveyor and information about the thermal plume was not submitted. The meeting was held by proponent on 29 June 2007 and the promoter was unable to answer the questions put and directed all queries to the MoE. On 2 July 2007 the application was circulated to the various Ministries for their views. On 20 July 2007 following public comments a notice was served on the MoE. A second series of additional information was sought from the proponent which was circulated later to all Ministries for their views. On 16 August 2007 proponent was written again and it was told that the information requested had not been addressed properly. The *Forces Vives* wrote and reiterated for another consultative meeting and the proponent was written back to sort out the apprehensions. On 16 Nov 2007 proponent was asked to resume consultative meetings and response to clarifications requested were being awaited. On 27 Nov 2007 proponent stated that the issues raised will

require due time and due process. On 11 Dec 2007 the proponent wrote to schedule meetings with the *Forces Vives*.

On 11 January 2008, additional information was provided and the decision was taken that information will be opened for public comments at the request of the *Forces Vives*. In view of complexity of project, its location, the technology proposed and scale, public outcry and national concern, the MoE decided to appoint consultants to help evaluation and to provide views on the adequacy of EIA. The terms of reference were worked out and the services of experts at the cost of RS 2 million were sought. Public and stakeholders comments were received in the meantime. At the closing date, on 25 March 2008 no bid was retained for consultancy services and Cabinet was informed on 26 March 2008. The UNDP was contacted and on 27 July 2008 Mott Mc Donald [MMD] was appointed to carry out the assessment of the EIA. Copy of the final report submitted by MMD was received and the EIA committee on 3 July 2009 required the proponent to carry out the additional studies proposed by MMD. On 11.08.2009 Proponent was informed and recommendation of EIA Committee and on 19.08.2009 she was informed that BMT Cordah was retained to prepare a supplementary EIA [SEIA]. On 7 April 2010 CT Power informed that first part of the SEIA was ready and on 16 June 2010 CT Power submitted the SEIA. The whole process started again. On 25 June there was a request for extension of time up 21 July 2010 and on 13 August 2010 an addendum was received. On 20.12.2010 the proponent wrote to enquire about the status of the project. On 6 January 2011 the MoE decided to call a technical Committee following which the Director's review was submitted. The EIA Committee met on 13.01.2011 and the recommendations were submitted to the Minister. On 14 January 2011 Cabinet took note of decision to turn down the application. On 18 Jan 2011 a letter was written to proponent which was returned undelivered. The decision was published on 22 and

29 January 2011 in Government Gazette. On 31 January 2011 a letter was received from the proponent to the effect that the Minister did not adopt other options provided in the law.

According to the 6th Schedule of the EPA, a number of authorities and Ministries form part of the EIA Committee. The views of the following authorities and Ministries were received: the Black River District Council [BRDC] (Doc. AM), the Ministry of Health (Doc. AN), the Road Development Authority [RDA] (Doc. AP), the Traffic Management and Road Safety Unit [TMRSU] (Doc. AQ), the Ministry of Industry (Doc. AR), the Ministry of Agro-Industry and Fisheries (Doc. AS and Doc. AW), the Ministry of Public Utilities (Doc. AT), the Municipal Council of Port Louis (Doc. AU), the Ministry of Housing and Lands (Doc. AV), the Ministry of Tourism (Doc. AX) and the Ministry of Local Government (Doc. AY).

In addition to all the views reference has been made to the MMD report as the level of dissatisfaction is great especially concerning the scale of the project and the pulverization of coal. The original EIA report (also referred to as the Gibbs report) was deficient and the Department want to see to it that all safeguards are there. The MMD report (Doc. D) was commissioned by the MoE and UNDP on Code Sharing basis at the cost of RS 900,000. MMD was commissioned to examine the Gibbs report and additional material submitted by CT Power.

Regarding the issues of traffic she stated that the number of trips has moved from 30 to 150, that is a lorry crossing every 3 minutes. In the SEIA the sulphur content of the coal has increased to above 3% and as per World Bank Guidelines there is a need for a desulphurization plant.

Following MMD report, the EIA Committee recommended further studies and Ct Power was given a document containing "Pertinent Comments" (Doc. A). The SEIA was submitted in 2 parts in June 2010 and in August 2010. In Jan 2011 a technical held to discuss on salient

road is narrow, the area is built up with a residential area all along the route, there are vehicles parked on the road, bus stops with no laybys, humps and continuous white line. The TMRSU did recognize the problem of traffic and the EIA did not address the traffic issue. People are already protesting against road saturation and mention is made of the Bullion bridge which is very narrow. People did comment on the negative impact. These nuisances and inconveniences had been considered by EIA Committee together with the issue of dust that would be caused.

The likely health impacts such as annoyance on the road have not been considered. The SEIA has concentrated on air emissions. Things are different in that in the Gibbs report the sulphur content was less than 1%. In the SEIA the sulphur content is stated to be more than 3%. Yet in the HIA parameters of the Gibb report were taken into account thus based on wrong figures. No specific study was made but a desk review based on findings in other countries was made. Stress and mental unrest and traffic impact associated with air emissions have not been taken into account. No survey on residence has been carried out.

Under cross-examination the witness stated that final MMD report was circulated on 21 January 2009 and on 3 July 2009 additional studies were recommended. On 7 April and 14 May 2009 CT power wrote to MoE and the documents were circulated to all Ministries for comments. The views of the various authorities had to be waited for. The report from MMD did not refer to the K&M report but MMD mentioned the Kensington Place. Comments and views on the SEIA were received on 20 September 2010. On 20 December 2010 a letter was received from the proponent pressing for information about the status of its project and it was decided to set up a Technical Committee in December 2010. Letter was issued on 4 January 2011. At the end of the meeting of the Technical Committee there was consensus on the recommendations to be made to the EIA Committee which sat at 9:30 or 10:00 and lasted for 1h45mins. Everybody in the EIA Committee, including persons not members of the

Committee, was communicated with MMD report and the SEIA. A brief overview was given as well as the objectives of the technical committee. Site selection was addressed. It was pointed out that the NDS made reference to the site and that K&M recommended the site. Traffic was discussed and TMRSU stated that the road infrastructure could support the project and do not foresee any traffic problems but might be alternative access such as Pointe aux Sables Road. TMRSU highlighted that road safety was not a problem night transportation of coal was also considered. She stated that in spite of the TMRSU, the view of the Committee ought to be taken as a whole. The EIA Committee was convened to meet on 13 January 2011. The minutes of Technical Committee were dated and signed on the very day of the sitting of the Technical Committee although dated 13th January and she drafted the Director's review on that date itself. She denied that during the meeting with Mr. Hume she told him that there would be a peer review as it was deemed not necessary by the team of people working on the EIA. According to her, the Technical Committee and the Ministries do have the expertise.

Air emissions were discussed and the Committee considered the health of people. On the HIA the Technical Committee did not consider all other forms of health impact such as handling of coal, noise pollution as the SEIA was available. The MoE has no resources to ensure compliance and monitor existing coal fired power plant. The EIA is an engagement of the proponent and MoE can revoke an EIA. She agreed that the Ministry of Health did not say anything concerning the impact of air emissions but it was only that of the Committee.

According to her many authorities did not respond to the SEIA especially two major Ministries: the Ministry of Agriculture and the Ministry of Local Government. Between March and July there was an EIA Committee meeting and the proponent's application was submitted in July as the views of the two major authorities/ stakeholders were still being awaited. The SEIA was submitted on 16 June 2010 and the marine study on 13 August 2010

which were then circulated to various Ministries. The last Ministries to give their views were the Ministry of Finance on 27 December 2010 and the Ministry of Local Government on 12 January 2011, on the day of Technical Committee met.

As regards the airport development, consultation took place at late stage three weeks after the process. MMD was asked to review the Gibbs report and MMD submitted the draft report on 03 October 2008. She maintained that there was no request for it to be modified. It is agreed also that in the World Bank report 2009 regarding the World Bank Safeguard Review as to how far the laws of Mauritius are in line with World Bank policies, three projects were examined including the Mauritius CT Power and Airport extension project. The Director's review was written by a whole team and the Environment Assessment Division is headed by Mr. Heeramun. The notes of the Technical Committee were incorporated in the Director's review. She was of the view that it is pointless to identify who pointed out each issue but she confirmed that the Ministry of Housing and Lands did not share the view of the majority. The MOH stated that transport of coal at night will be highly disturbing as they concurred with MMD. There was consensus at the meeting but they will stand guided by the official views of their respective ministries. The Technical Committee addressed its mind to the site issue which needed to be investigated upon. The EIA Committee of 13th January 2011 had for its agenda the approval of minutes, matters arising, proposed coal fired power station: a large project and copies of Director's Review were circulated.

The representative of the Ministry of Housing and Lands left after giving her views as she was agreeable to clustering of polluting activities next to Montagne Jacquot and the project could not be refused solely on planning grounds. At the EIA Committee the MPI, the Ministry of Industry, the RDA, the TMRSU were absent but the Committee had the required quorum. She agreed that the TMRSU did not raise any issue of disturbances associated with traffic and that the National Development Strategies [NDS] had made reference to the potential of

the site for a coal fired power station. The minutes of proceedings of the Technical Committee are kept in a red file and as such are considered to be confidential. She maintained that she never said that she was against the CT Power project. For the most part of discussions on the CT Power project at the EIA Committee it was Mr. Heeramun who made the most part, then the members were asked for their views. She admitted that Dr. Soonarane said that coal is a viable option. After discussion the EIA Committee was of the view not to proceed with the project and the reasons for rejection were agreed upon. The promoter did carry out a health impact assessment [HIA]. The other coal power producers were probably asked to carry out a traffic impact assessment [TIA]. As for Belle Vue (CTBV), the plant is at 1km from habitation; for CTAS St Aubin 2 Km away. She also agreed that the independent evaluation and assessment by MMD concluded that the EIA should be granted but with mitigating measures that would adequately address the impacts. At the time of MMD report Kensington place already existed. On 15 July 2009 the Department of Environment had no preconceived idea that the site was not proper for a coal fired power plant but had apprehensions. A Health Impact Assessment is not in the law. Measures had to be taken to control dust particles with adequate buffers. For the MoE there is a difference between a potential site and a conducive site. The site selection has not been carried out by K&M which was a feasibility study to plan for energy needs. The scope of the work was for land development potential exercise and engineers, geologists and traffic experts, scientists from different backgrounds are consulted. She agreed with the Preliminary Environmental Report [PER] in 2001 but there was no site selection in 2007 and a “feasibility study” is not a “confirmed study” The site was proposed.

Mrs. Ng agreed that the National Development Strategy 2003 [NDS] (Doc. BI) has not been modified as well as the Outline Schemes under Municipal Council of Port Louis [MPL] and Black River District Council [BRDC]. The Black River Outline Scheme [BROS] was prepared

in 2006 and is an approved scheme under Town and Country Planning Act. It is agreed that the scheme was modified in 2001 with an approved version dated Sept 2011: GN 165 /2011 referring to the Outline Scheme 2006 (Doc. BK) with the modified one (Doc. BL). Policy E1, ID4, SD4 includes a power station but the site is not conducive in relation to surrounding environment such as residential developments. **At no time did she say that the site was not suitable** and the BRDC must take into account the outline scheme. BRDC had apprehensions but had to stick to outline schemes. There are many developments in place such as the Infosys Park and there have been moves to have the stone crushing plant to be moved away and relocated due to changes in that nonpolluting activities have been earmarked. Huge plots of land are being parceled out.

On the issue of health, the witness stated that the SEIA was thoroughly reviewed although not all aspects of the SEIA would be reviewed in the Technical Committee as it is for the members to raise issues. On 12 January 2011 certain issues were discussed and a representative of the MoH was in attendance. He did put forward the views of his Ministry which were not put in the letter (Doc. AN) especially in relation to noise and traffic and the transport of coal at night which would likely disturb the residents. She agreed that Health, traffic, coal transportation, release from stack exhaust emissions, air pollution were taken on board in the MMD report where Sulphur dioxide will emanate from coal of less than 1% of Sulphur but that has changed to 3% and the issue was both raised in the Director's Review and discussed in the EIA Committee. It was stated that acidic gases will be released. The issue was raised but not written down. She admitted that that issue is not addressed in the Statement of Reply. The proponent should have known what the likely health impact would be and the issue of 3% of Sulphur was not cleared from the proponent. Sulphur is an element which becomes a compound through combustion and according to World Bank Guidelines; above 3% flue gas control has to be provided. If less than 1% of sulphur no

mitigation measure is to be undertaken. She did not agree that the EIA is compliant with World Bank Guidelines. In the SEIA there is no mention of additional mitigating measure that had to be taken. She did not agree that there was confusion between Sulphur content and Sulphur trioxide. The emissions in the SEIA could be those of the worst case scenario. With sulphur content of 3% in the coal it would be difficult to reach the standard of emissions unless mitigating measures are taken. She maintained that quality of life is also important and is not necessarily negligible. She agreed with what Dr. Searl has written but was of the view that certain data cannot be extrapolated to Mauritius. According to her the impacts would not be insignificant.

In re-examination, Mrs. Ng agreed that for the airport development study for the SSR Terminal Expansion public consultation has been shortened. The public was given 20 days to respond and no public comment was received. As for the World Bank Report Safeguard Diagnostic Review, guidelines are followed under aegis of Ministry of Finance such as safety issues, natural habitat, environmental assessment and the CT Power project was also submitted. Morcellement projects that require an EIA are those of more than 5 ha. The K&M report considered the issues of zoning, type of terrain, access roads, noise generation have to be considered. The stand of the respondent is that the development is not conducive. It is not the stand that the site is not suitable. The terrain, traffic, emissions are considerations that led the respondent to say that the site is conducive at the present type.

F. Admitted facts and issues

Section 15 (2) (b) of the EPA provides that “No proponent shall commence or cause to be commenced –

(a)...

(b) a proposed new undertaking specified in Part B of the Fifth Schedule, without an EIA licence.

Power generating plants, as the present project, are listed as no. 36 in Part B of the Fifth Schedule and for which an EIA is required.

Section 18 EPA prescribes the requirements of an EIA report, particularly Section 18 (2) (a) to (o) which “shall contain a true and fair statement and description of the undertaking as proposed to be carried out by the proponent, and shall include -

- (a) the name and address of the proponent;
- (b) the ownership of the undertaking and of the land on which it is being conducted;
- (c) the name, address and qualifications of the consultant who prepared the EIA;
- (d) the precise location and surroundings of the undertaking, the zoning of the site and the number of similar undertakings in the area;
- (e) the principle, concept and purpose of the undertaking;
- (f) the direct or indirect effects that the undertaking is likely to have on the environment;
- (g) an assessment of the social, economic and cultural effects which the undertaking is likely to have on the people and society.
- (h) any actions or measures which the proponent proposes to take to avoid, prevent, change, mitigate or remedy, as far as possible, the likely effects of the undertaking on the environment;

- (i) an assessment of the inevitable adverse environmental effects that the undertaking is likely to have on the environment, people and society, where it is implemented in the manner proposed by the proponent;
- (j) an accurate assessment of the irreversible and irretrievable commitment of resources which will be involved in the undertaking, where it is implemented in the manner proposed by the proponent;
- (k) any alternative manner or process in which the undertaking may be carried out so as to cause less harm to the environment;
- (l) an environmental monitoring plan;
- (m) information pertaining to the decommissioning of the project at the end of its life cycle and associated impacts, proposed measures to return the site as far as possible to its former state, or rehabilitation measures;
- (n) in the case of a new infrastructure proposal, an environmental management plan to be implemented during the construction phase; and
- (o) such other information as may be necessary for a proper assessment and review of the potential impact of the undertaking on the environment, people and society.

It is admitted that a feasibility study was carried out by K&M Engineering and Consultation Corporation [K&M] for a new thermal power plant in Mauritius in 2001. In view of the documents produced and the fact that they have not been challenged, it is proved that the Ministry of Housing and Lands approved an Industrial Lease to the CEB in a letter dated 29 June 2006, on a plot of state land of an extent of 80 arpents in the Albion 1, Montagne Jacquot area for the development of a coal power station in partnership with the appellant on the understanding that the CEB's contribution to its equity participation in MCTP will be satisfied partly in terms of its rights in the leasehold land. The Ministry of Housing and Lands

further informed the CEB in a letter dated 15 September 2006 that the Government has approved the grant of an additional plot of state land of an extent of approximately 12 arpents at Albion, Montagne Jacquot (also referred to as Pointe aux Caves) for the purpose of implementing a coal fired power station in partnership with the appellant and on 27 October 2008, the Ministry of Housing and Lands informed the CEB that the Government had approved the grant to the CEB of an Industrial Site lease to expire on 30 June 2028 with a rent of MUR 480,000 per annum for the purpose of setting up a coal power station project at Pointe aux Caves, Albion. It was stated that the CEB would be allowed to sub-lease the site to the appellant at full market rate and that the lease agreement would be finalised upon obtention of an EIA licence.

The Board of Investment in a letter dated 21 April 2006 (Doc.v) informed the appellant that further to a policy decision of the Ministry of Public Utilities which had been conveyed to it, the application for an investment certificate, Power Industry, had been favourably considered under the Investment Promotion Act 2000 for the setting up of a "3x50" MW coal power plant, subject to certain terms and conditions including (i) a lease agreement between the Ministry of Housing and Lands and MCTP being signed, (ii) a power purchase agreement between the CEB and MCTP being signed, and (iii) an EIA licence being received from the Department of Environment. An application for an EIA licence on the basis of an EIA Report prepared by Gibb (Mauritius) Ltd [Gibb Report] dated 6 April 2007 was made to the respondent.

It is however admitted by the appellant that the Gibb report contained certain deficiencies or at least inaccuracies: Mr. New himself, a witness for the appellant, stated that the Gibb Report was wrong to have concluded that the road was saturated. Mr. Hume, for his part, admitted that there was a gap at the start but he was of the view that the SEIA has filled it.

Subsequently, from September 2008 to December 2008, two independent consultants, Mott MacDonald [MMD] and Global Coastal Strategies, were commissioned by the United Nations Development Programme [UNDP] and the Government on a Code-Sharing basis to undertake a technical review of the EIA submitted by the appellant for the Pointe aux Caves coal fired plant. The Gibbs report was found to be lacking in several aspects and the appellant then retained the services of BMT Cordah and submitted a supplementary EIA [SEIA] in 2 parts in June 2010 and in August 2010 following communication from the Director of the Environment of a document entitled "Pertinent Comments from the Final Report of the Consultants for your guidance to conduct the EIA Supplemental Study" relating to comments from the Consultants of the Ministry of Environment to assist the appellant to conduct an EIA Supplemental Study. A Traffic Impact Assessment [TIA], a visual impact assessment [LVIA] and a Health Impact Assessment [HIA] were carried out by the proponent although it is common ground that there was no legal obligation for the proponent to carry any HIA.

The composition of the EIA Committee is provided for by law in the 6th Schedule to the EPA 2002 and the following ministries and departments comprise the Committee: Agriculture, Fisheries and Marine Resources, Health, Industry, Local Government, Public Infrastructure, Housing and Lands, Water Resources and Waste Water

In a gist, the views of the following members of the EIA Committee on the project are as follows:

- (i) The Ministry of Public infrastructure [MPI] wrote three letters dated 30 April 2007, 13 November 2007 and 14 July 2010 that the RDA has no objection to the project subject to a number of conditions such as provision of street lighting, drainage layout, upgrading of road and improvement of junction with Albion Road (Doc. AP) together with a letter dated 20 July 2010 to the effect that the TMRSU is agreeable with the

proposed development subject to a number of conditions. It also mentioned that the TIA “has addressed the major vehicular traffic issues” (Doc. AQ);

(ii) The Ministry of Industry, Commerce and Cooperatives has also written, on 24.04.2007 it has no objection to the setting up of a coal fired power plant at pointe aux Caves subject to obtaining necessary permits and clearances. (Doc. AR);

(iii) The Ministry of Agro-Industry and Fisheries has also indicated by letter dated 27 April 2007 that the National Parks and Conservation Service as well as the Conservator of Forests have no objection to the project (Doc. AS). It has been pointed out also to the Land Use Department on 19.04.2007 that the site is located “outside settlement boundary”; The Fisheries department also proposed mitigating measures concerning effluent discharge into the ocean together with a number of other conditions and stated, in a letter dated 10 December 2007, that it has no objection to the implementation of the project (Doc. AW);

(iv) On 22.11.2007 the Ministry of Health wrote that clearances should be obtained from the Ministries of Housing and Lands, Environment, Local Government, Agro-Industry and Fisheries and Public Utilities thus putting the onus on other ministries. It stated that, in the event the other agencies do not have any objection to the project, a number of measures have been recommended. In short, the Ministry of Health did not express any objection to the project as such relying principally on the stand of the other ministries/agencies (Doc. AN);

(v) The Ministry of Public Utilities wrote on 21 May 2007 to give the views of three bodies namely, the Water Resources Unit [WRU], the Central Water Authority [CWA] and Wastewater Management Authority [WMA]. Only the Wastewater Management Authority expressed clearly that it has no objection to the project subject to conditions. The CWA merely laid down a number of conditions especially the

preservation of groundwater quality whereas the WRU prescribed a number of conditions in a letter dated 08 October 2010 (Doc. AT);

(vi) The Municipal Council of Port Louis pointed out, on 13 August 2007, that the site location is astride the Council area of Black River and that of Port Louis and it stated that it has no planning objection to the proposed development (Doc. AU);

(vii) The Ministry of Tourism, which is not part of the EIA Committee, did not object to the project right away. Instead recommendation is being made for mitigative measures to address identified impacts “were an EIA licence to be issued to the promoter”;

(viii)

(ix) The Ministry of Local Government did not object to the project but instead recommended certain measures to be taken the proposed dedicated landfill together with a fall back solution for the disposal of the ash;

(x) The Ministry of Housing and Lands wrote on 13 July 2010 that it has no planning objection to the proposed development subject to conditions (Doc. AV);

(xi) Only the Black River District Council [BRDC] expressed its apprehensions concerning the project due to the fact that it is located in the proximity of residential areas. In a letter dated 16 August 2007 it expressed its concerns about the use of the transport routes which might represent a threat to residential amenities. The issue was also raised about Policy ID4 to the effect that bad neighbor development should not prejudice the expansion of growth zones. On 8 Nov 2007 BRDC wrote again expressing serious concern that the project may potentially prejudice the expansion of growth zone, and would hence conflict with policy ID4. However the BRDC did not object to the project but proposed that “the polluting component of the project that comprises of the stack should have been ideally located within the buffer of the Montagne Jacquot Sewerage treatment Plant in order to reduce the potential risk of the project on Albion residential areas.”

G. Analysis and Discussion

The present application has been rejected “on the basis of the precautionary principle”. The appellant, under the opinion expressed by Mr. Hume explained that the “precautionary principle” means that activities would not be permitted until uncertainties of the impacts identified are suitably low for a decision to be made. He maintained that in relation to the issues raised (site, traffic and health) for refusing the licence, the precautionary principle does not find its application inasmuch as at the end of the SEIA these issues have been addressed so that it was adequate for a decision to be made. We shall therefore examine what is the Precautionary Principle and whether such a principle finds its application in the present case.

- **The Precautionary Principle**

Section 2 of the Environment Protection Act 2002 (EPA) provides for the principle of environmental stewardship as follows:

“It is declared that every person in Mauritius shall use his best endeavours to preserve and enhance the quality of life by caring responsibly for the natural environment of Mauritius.”

The Precautionary Principle has not been made part of the domestic law but is a sound approach considering the concept of environmental stewardship declared by the EPA, and as was rightly contended by the respondent in his Statement of Reply, the precautionary principle is inherent to all applications for an EIA Licence. This Principle was formulated for the first time in 1992 following the Rio Conference. Principle 15 of the Rio Declaration states as follows:

"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are **threats of serious or irreversible damage, lack of full scientific certainty** shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

« En cas de risque de dommages graves ou irréversibles, l'absence de certitude scientifique absolue ne doit pas servir de prétexte pour remettre à plus tard l'adoption de mesures effectives visant à prévenir la dégradation de l'environnement. ».

There is no case law in Mauritius which has examined that principle. However the matter has been thoroughly examined in Australia in the case of **Telstra Corporation Limited v. Hornsby Shire Council [2006] NSWLEC 133** which is a decision of the New South Wales Land and Environment Court delivered by Preston CJ on 24 April 2006. It was held that the principle would apply when two prior conditions exist: (1) a threat of serious or irreversible damage and (2) scientific uncertainty as to the extent of possible damage.

"The application of the precautionary principle and the concomitant need to take precautionary measures is triggered by the satisfaction of two conditions precedent or thresholds: a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage. These conditions or thresholds are cumulative. Once both of these conditions or thresholds are satisfied, a precautionary measure may be taken to avert the anticipated threat of environmental damage, but it should be proportionate: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 155."

Once both conditions are present a precautionary measure may be taken to avert the anticipated threat of environmental damage, **but it should be proportionate**. It was also held that the principle should not be used to try to avoid all risks. As regards the test to be

used to assess those threats of causing serious or irreversible damage and scientific uncertainty we propose to refer extensively to what the Court held:

“The assessment involves ascertaining whether scientifically reasonable (that is, based on scientifically plausible reasoning) scenarios or models of possible harm that may result have been formulated: World Commission on the Ethics of Scientific Knowledge and Technology, *The Precautionary Principle*, UNESCO, Paris, 2005 at p. 31.

The threat of environmental damage **must be adequately sustained by scientific evidence**. As was held in *Monsanto Agricoltura Italia v Presidenza del Consiglio dei Ministri*, European Court of Justice, Case C-236/0 (13 March 2003) at [138]:

“not every claim or scientifically unfounded presumption of potential risk to human health or the environment can justify the adoption of national protective measures. Rather, the risk must be adequately substantiated by scientific evidence”.

In *Daubert v Merrell Dow Pharmaceuticals* 509 US 579 (1993) at 589-590; 125 L Ed 2d 469 (1993) at 481, the United States Supreme Court held that in a case involving scientific evidence, the evidence must pertain scientific knowledge. The adjective “scientific” implies a grounding in the methods and procedures of science and the word “knowledge” connotes more than subjective belief or unsupported speculation. The requirement that expert evidence pertain to scientific knowledge establishes a standard of evidentiary reliability.

Determining the existence of a threat of serious or irreversible environmental damage does not involve, at the stage of assessing the first condition precedent, any evaluation of the scientific uncertainty of the threat. That evaluation comes in the following steps of analysis.

If there is not a threat of serious or irreversible environmental damage, there is no basis upon which the precautionary principle can operate. The precautionary principle does not apply, and precautionary measures cannot be taken, to regulate a threat of negligible environmental damage: N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005 at p. 163.

This was the conclusion in *Alumino (Aust) Pty Ltd v Minister administering the Environmental Planning and Assessment Act 1979 (NSW)* [1996] NSWLEC 102 (29 March 1996) where the evidence established that the development could be operated in a way which would not have any significant environmental consequence: at pp. 15-16. So too in *Hutchison Telecommunications (Australia) Pty Limited v Baulkham Hills Shire Council* [2004] NSWLEC 104 (26 March 2004), where compliance of a development with the relevant standard for the protection of public health and safety by a significant margin meant that there was no threat of serious or irreversible damage to public health and safety from the development, and hence no basis on which to apply the precautionary principle”

Scientific uncertainty

The second condition precedent required to trigger the application of the precautionary principle and the necessity to take precautionary measures is that there be “a lack of full scientific certainty”. The uncertainty is as to the nature and scope of the threat of environmental damage: *Leatch v National Parks and Wildlife Services* (1993) 81 LGERA 270 at 282.

Assessing the degree of scientific uncertainty also involves a process of analysis of many factors: see A Deville and R Harding, *Applying the Precautionary Principle*, Federation Press, 1997 at pp. 31-37. The assessment of the degree of uncertainty might include consideration of the following factors:

- (a) the sufficiency of the evidence that there might be serious or irreversible environmental harm caused by the development plan, programme or project;
- (b) the level of uncertainty, including the kind of uncertainty (such as technical, methodological or epistemological uncertainty); and
- (c) the potential to reduce uncertainty having regard to what is possible in principle, economically and within a reasonable time frame.

One issue that the formulation of the precautionary principle raises is **how much scientific uncertainty must exist**. On a literal reading, the threshold is crossed whenever there is a lack of “full” scientific certainty. Yet, such a literal interpretation of the principle would render this condition meaningless.

Certainly, **of environmental damage would be an unattainable goal**: *Nicholls v Director-General of National Parks and Wildlife* (1994) 84 LGERA 397 at 419. It is impossible to be completely certain about the threats of environmental damage: C Barton, “The status of the precautionary principle in Australia: Its emergence in legislation and as a common law doctrine” (1998) 22 *Harvard Environmental Law Review* 509 at 518.

It cannot be unequivocally stated that a particular phenomenon will never cause adverse effects. This is because a null hypothesis can never be proven through processes of inductive logic. Indeed, this point is made in the Australian Standard RPS3

at p. 41. Karl Popper, the eminent scientific philosopher, has also explained why it is impossible to prove, with certainty and finality, a scientific theory. No matter how many positive instances of a generalisation are observed, it is still possible that the next instance will falsify it. However, a sound and reliable scientific theory will be one which, while being capable of being falsified, has been put to the test and has resisted falsification whenever it is put to the test: see K Popper, *Conjectures and Reputations*, 5th ed, Routledge, London, 1989, p 37 and *Daubert v Merrell Dow Pharmaceuticals* 509 US 579.”

The principle therefore implies that there is a responsibility to protect the public from exposure to harm when it is shown that scientific investigation has found a plausible risk which can only be relaxed if further scientific findings provide evidence that no harm will result and once the Precautionary Principle is raised with the two conditions established (risk of serious damage and lack of scientific certainty), the burden of proof shifts on the proponent to show that this threat is negligible.

The above analysis in Australia has also been the stand of the European Commission. The European Commission Communication on the Precautionary Principle issued on 2 February 2000 notes the following: "The precautionary principle applies where scientific evidence is insufficient, inconclusive or uncertain and preliminary scientific evaluation indicates that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen by the EU". It also earmarked 5 principles that should be taken into account for measures based on the Precautionary principle which are:

1. la proportionnalité entre les mesures prises et le niveau de protection recherché ;
2. la non-discrimination dans l'application des mesures ;

3. la cohérence des mesures avec celles déjà prises dans des situations similaires ;
4. l'examen des avantages et des charges résultant de l'action ou de l'absence d'action ;
5. le réexamen des mesures à la lumière de l'évolution des connaissances scientifiques.

Having regard to the above principles, we find that the use of coal for the production of electricity is not a new adventure for Mauritius. The evidence of Mr. Mukood, representing the Central Electricity Board (CEB) is quite revealing. There is evidence placed before us that many Independent Power Producers (IPP's) such as the Centrale Thermique de Belle Vue (CTBV), FUEL in East, CEL at Beau Champs which use a mixture of bagasse and coal to produce electricity for 6 months and when bagasse is unavailable, coal is exclusively used instead. There is unrebutted evidence also that the CEB has power purchasing agreements with all the 5 IPP's which are Sugar Sector companies and that up to 55% of energy comes from Sugar Sector. There is evidence that among those IPP's CTBS in the South operate solely and exclusively on coal. It is contended by the appellant that it will be using a much more efficient technology through the pulverization of coal which will ensure better burning of the coal in that lesser coal would be used to produce a specific amount of electricity. There is no evidence to contradict Mr. Mukood that the proposed use of pulverized coal will result in higher efficiency of up 32% thus using 20% less coal than systems using non-pulverized coal.

It is undeniable that the burning of coal emits pollutants such as fine particulates ($PM_{2.5}$), ground level ozone, nitrogen oxide, an ingredient of smog, sulfur dioxide which causes acid rain; and other lower fractions of pollutants such as mercury, arsenic etc. In 2008 the World Health Organization (WHO) and other organizations calculated that coal particulates pollution cause approximately one million deaths annually across the world.

In its news release dated 21 December 2011, the world renowned United States Environment Protection Agency (US EPA) wrote that power plants are the largest U.S. source of several harmful pollutants. They are responsible for about 50 percent of mercury emissions, and 77 percent of acid gas emissions. They are also the leading source of emissions of other toxics, including arsenic, nickel, selenium and hexavalent chromium.

We are of the view that the Precautionary Principle as applied in Australia and the European Union are sound and reasonable and should be the yardstick for Mauritius as well. There are no scientific uncertainties about the effect of coal burning both to human health and to the environment and the likely damage which such a process would have on the environment inasmuch as judicial notice can be taken that coal power plants are a feature both in the UK and the US. As we alluded to above the US EPA has carried out extensive studies on the subject and has proposed mitigating measures. In other countries reputed to have one of the most stringent environmental standards coal fired power plants are in operation such as the Kendal Power Station, South Africa, Avedøre Power Station in Denmark and the Hazelwood Power Station in Victoria, Australia.

In Mauritius itself there are already a number of coal fired power stations in operation in respect of which the respondent had had the opportunity to consider in the past. It cannot be said that there are scientific uncertainties and risks of serious or irreversible damage to the environment. Hence for the existing IPP's to be allowed to operate on coal either exclusively or partly available mitigating measures had been prescribed so as to render any risk negligible both for the human health and for the environment. We cannot but agree with Mr. Hume when he stated that the Precautionary Principle cannot be applied in the present case and that issues have been addressed so that it was adequate for a decision to be made.

In the Statement of Reply the respondent has however pointed out that the application for the EIA was refused not solely on the basis of the precautionary principle but on the grounds relating to the location of the site, adverse effects of traffic and likely health impacts on inhabitants of the locality and surrounding areas. It is contended that the appellant was given an opportunity to address each of these issue but that it “failed to propose adequate mitigation to these issues”.

Apart from the issues relating to Health, traffic and site, the other technical aspects of the project are not being contested. We now propose to deal with the three grounds on which the application for the present EIA has been rejected to determine whether those issues had been addressed by the appellant and whether the mitigation measures proposed are adequate. We shall deal with the issue of (1) traffic, then (2) health and lastly (3) site selection.

i. Traffic

One of the reasons given by the respondent to reject the present application was that there would be adverse impacts on the residential areas due to the inconveniences and disturbances associated with traffic. We have the version of the respondent against that of Mr. New. The Respondent further averred at paragraph 19 of his Statement of Reply/ Defence that the SEIA was still deficient as it failed to address and propose adequate mitigation measures with respect to the fact that traffic congestion will be compounded by the additional traffic generated and that no proper measures were proposed to address the nuisances and inconveniences associated with the traffic that would adversely impact on the highly residential areas along the transportation route. The SEIA did not take into consideration the number of trips to be generated for the transportation of diesel and

chemicals and the inconveniences and disturbances that additional traffic would pose to the inhabitants along the coal transportation route.

(a) Road congestion

The Director of the Department of Environment pointed out that in the first EIA report (the Gibbs report) coal transportation would have been 900 tonnes resulting in 30 trips from the port area to the site. The amount of coal transportation has now been increased to 1260 tonnes which would require 115 trips per day. She relied on the MMD report which stated that traffic will cause inconveniences as from 30 trips but now with 115 trips daily it would be more inconvenience and disturbances. The issues that were taken into account were that the road is narrow; the area is built up, the presence of residential area all along the route, parking on road, bus stops with no laybys, humps, continuous white line for no overtaking. The SEIA did not refer to those traffic issues. It is stated that people are already protesting against road saturation and there had been comments as to the narrowness of Bullion Bridge. All these nuisances and inconveniences had been considered by EIA Committee.

We find that the appellant did cause a Traffic Impact Assessment (TIA) to be made and incorporated in Chapter 4 of the SEIA so that it could not be said that the issue of traffic was not considered. A survey was carried out from 28 September to 4 October for a week and at a time when schools were running and it was found that congestion and delays are features on peak period on M1 but not on minor roads close to the power plant site. The roadmap such as the site description and highway network, the transport context and outbound and return routes from Port to Site and vice versa were all considered and four Route options were considered in original TIA. The residential areas on the Route were highlighted together with some main sensitive receptors in order to determine whether there are any material

impacts or consequences associated with traffic. It was found that only a change in traffic flows of 25% increase or decrease for that change to be perceptible and the suggestion was made to have 115 lorry movements daily with coal transportation starting after 9:30 up to 16:45 at the rate of 16 lorries per hour: 8 in one direction and 8 in the other direction, that is one lorry each 7 ½ minutes. It was pointed out that the route identified is not too narrow and do not cross small bridges and that the traffic during inter-peak hours is nowhere close to capacity of the road. It was suggested to the witness that during that period schools were closed, as there were examinations and that there were closures due to swine flu. Quite the opposite, Mr. New maintained that schools were running: "The schools were running. We not only confirmed independently, but when we went there, there were school children...My advice at that time was that these were normal school periods and the amount of school children were observed, it does not indicate that there was any unusual circumstances...we were informed that the schools were operating as usual." However no evidence has been adduced to contradict the assertions of Mr. New which remains unrebutted.

We must also point out at this juncture that although the respondent has indicated that the TMRSU recognized that there would be a problem of traffic, none of its representative has been called. Contrarily to what has been stated before the Tribunal we note that in a letter dated 20 July 2010 the TMRSU expressed its agreement with the proposed development subject to conditions but this without mentioning that the TIA "**has addressed the major vehicular traffic issues**" (Doc. AQ).

(b) Road safety and parking

The respondent is of the view that the fact that the transport of coal would be undertaken at high frequency and would be crossing regions that are highly residential, the inconveniences

As regards illegal parking we find that this cannot be a factor to be taken into account in considering inconveniences or disturbances associated with traffic. It is a fact illegal parking is a source of inconvenience as it impinges on rights of others for free and uninterrupted passage. Illegal parking is itself an offence punishable by law and amount to unnecessary obstruction of traffic. Instead of using illegal parking as a ground to refuse the present licence, we agree that illegal parking need to be addressed by the relevant law enforcement authorities including the use of the wheel clamps and repression, if necessary. The fact that there are uninterrupted white lines on a large portion of the road would increase safety by preventing overtaking at dangerous spots.

The Tribunal was told that TMRSU did recognise the problem of traffic which we are unable to find in the light of the written position taken by it. It is true that mention is made of the “already congested area of La Butte” in Doc. AQ but alternative route has been proposed by the TMRSU. Had there been a change in position on the part of the TMRSU, then that authority should have been called to give evidence to explain the discrepancy between its views given in writing and its alleged subsequent position at the Technical Committee prior to the EIA Committee. Not only was the TMRSU in a better position to comment on traffic and road safety issues such as congestion, narrowness of roads, inconveniences and disturbances but the record shows that in fact the TMRSU submitted, in writing, that it had no objection to the project. In addition on 14 July 2010 the RDA also expressed no objection to the project subject to a number of conditions such as provision of engineering details, pavement structure, street lighting, drainage layout, upgrading of road and improvement of junction with Albion Road (Doc. AP). We note that the only negative comment about traffic jams comes from the BRDC in Doc. AM in which reference has been made to the road network of Albion and Petite Rivière being highly used by lorries, that road traffic is often impeded by heavy vehicles which often cause traffic jams on the Black River Road- which is

not supported by the other authorities responsible for road network and traffic. In any case that remarks from the BRDC were made in August 2007 at a time when the TIA in the SEIA had not yet been carried out in June 2010.

It was further contended that the transport arrangements for the other IPP's are different and that the region where the lorries would pass is highly built including residential areas. We have not been persuaded of same. When coal is transported to Fuel in the East or to CTDS and Central Thermique de Savannah in the South the heavy vehicles do cross areas which are more densely populated than Petite Rivière or Albion. The areas of Terre Rouge, D'Épinay, Mare d'Australia, Bon Accueil or Lallmatie along the Old Flacq Road for Fuel or Pailles, Nouvelle France, La Flora, Souillac or Surinam are all residential localities and as yet no complaint from the inhabitants of those areas has been brought to the attention of this Tribunal and we do not believe that the quality of life of those inhabitants are less important than the residents of Albion or Petite Rivière. We take judicial notice of the fact that all along the journey from Port Louis to the Albion Junction there are very few residentially built areas and the heavily built areas consist mainly of shops, commercial buildings, automobiles and bus garage, the GRNW and Canal Dayot, the Bell Village bridge, two football grounds, industrial zones of Plaine Lauzun and Petite Rivière and two cemeteries whose inhabitants, we have no doubt, will indeed be inconvenienced and disturbed by the traffic. We believe that all of the three sites having the potential for a coal fired power station (Médine, Henrietta and Montagne Jacquot) according to the BROS, the site of Montagne Jacquot will have the least impact on traffic inasmuch as to proceed to Médine, HGV's will have to take the same route up to the Albion Junction and in addition cross through the village of Bambous and as to Henrietta which is more inland the traffic is likely to affect the town of Vacoas Phoenix and Curepipe.

We fail to see how the respondent can speak about dangerous traffic conditions, inconveniences and disturbances associated with traffic or negative impact on amenities when the two bodies concerned with traffic and road amenities expressed no reservation. On the contrary, it has been proposed that the road infrastructure be improved and upgraded, hence made safer, at the cost of the promoter and Mr. New stated that in none of those meetings held with the RDA, the Ministry and the TMRSU was there any concern raised on “the operational ability of the highway network to accommodate the flows of traffic which would be generated by this particular proposal, operational in terms of both capacity and safety. No concerns were raised at all.” We wish to add that in order to ensure better safety the promoter could be required, as part of the conditions for the upgrading of the road, to also provide handrails.

(c) Jetty construction

At paragraph 28(e) of the Statement of Reply and in answer to paragraph 35(e) of the appellant’s Statement of Case, it is stated that the SEIA report referred to the "Fort William Thermal Power Project Feasibility Study" according to which the **Montagne Jacquot site was found feasible for a power plant taking into consideration the implementation of a coastal jetty.** There is evidence that the construction of a coastal jetty for the transportation of coal was being contemplated by the proponent in line with the K&M report. However Mr. Mukood who represented the CEB, explained that the project as it is now does not require the construction of a jetty for the transportation of coal which would be required if the project was to go on the full scale power plant of 3x 50 MW. The project was downsized at the request of the CEB and Mr. Mukoond made it clear that the issue of the jetty was dealt at the level of the CEB for a 3x 50 MW power plant but the decision was taken to downscale the project to a 2x 55 MW without a jetty and transportation of coal to be made by truck instead.

We find that the reason put forward for downsizing the project at the request of the CEB is sensible being that overinvestment will result in an increase in the price of electricity whereas under investment will result in shortage of electricity

We therefore find that the decision not to proceed with the construction of a jetty is not of the proponents doing but following consultations with the CEB which recommended that coal be transported by truck resulting from the downsizing in the capacity of the plant from a 3x 50 MW to a 2x 55 MW. It is worth noting also that there is evidence from the CEB that the project was “given to us by Ministry of Public Utilities” and that additional land was being looked for in order to increase the capacity of the plant so that It is also established that there is an intention of increase the capacity of the plant but which could not go ahead due to shortage of land. We are of the view that when the capacity of the power plant will be increased then a jetty will need to be built, which will not be possible if the project is implemented inland such as Henrietta. The proximity of the sea and the lack of fringing reefs would allow the construction of a coastal jetty as and when the need arises. In any case it is always open to the respondent to insist on the construction of such a jetty after the coming into operation of the power plant during expansion process or where traffic conditions worsen subject to an EIA in accordance with item 7, Part B, Fifth Schedule to the EPA.

ii. Health Issues

It is stated in the SEIA that over the 25 years plant lifetime, stack exhaust emissions will give rise to a loss in life expectancy of up to about 3.5 hours for those living and or working near the power plant and that at the population level, PM emissions may give rise to loss of life expectancy up to 830 days/yr. There would be no additional deaths expected but may lead to between 6 to 18 extra emergency hospital admissions primarily due to increased nitrogen dioxide and sulphur dioxide concentrations, up to 5 extra primary health care consultations

and 6 extra cases of bronchitis, 1 to 6 days of exacerbated asthmatic symptoms per year across the whole population; The risks to health are greatest where the predicted increments in pollutant concentrations are highest and those most at risk include the elderly, those with pre-existing respiratory and cardiovascular illness and very young children. Cardiovascular effects may be greatest in older people with pre-existing illness or other cardiovascular risk factors such as poor diet. The magnitude of the predicted impact is relatively small and emissions from the plant may contribute, alongside many other environmental factors, to the development of evident signs of cardiovascular illness in one or two individuals over a 25-year plant lifetime.

We also find that the stand of the respondent concerning the likely health impacts are not supported by the Ministry of Health on whose responsibilities matters relating to health depends did not express any straightforward objection to the project in Doc AN but instead made recommendations to minimize dust, smokes, emissions, vibrations, noise etc. and to ensure that Stack emissions from Power Plant to be within permissible limits as per EPA 2002 (Standards for Air). Surprisingly, it is also admitted under cross-examination by the respondent that the Ministry of Health did not say anything concerning the impact of air emissions but it was only the EIA Committee which did.

(a) Air Pollution

Based on the above impacts identified in the SEIA, Chapter 6, the respondent contended that the impact is not negligible although the SEIA report on the predicted health impacts was found to be insignificant by the proponent. It is also averred that there is no authoritative report/evidence to substantiate that there is no danger to human, animal or plant health both in variety and magnitude, nor did the appellant proponent carry out surveys on residents

within certain radius from similar types of plant; and over and above, the likely health impacts on the inhabitants of the locality and surrounding areas, the inconveniences and disturbances associated with the traffic will add on the health impacts.

Mrs. Searle has explained that the proposed stack will be 110m high so that the plume from the stack will have negligible impact inasmuch as there will be good dispersion. She has explained to us that the stack at the St Louis station is much lower than 110m, which is only 65m according to Mr Mukoond from the CEB. It has been pointed out that due to the direction of the wind, the height of the stack and the dispersion of the emissions the immediate surroundings of the power plant will not be affected. We find her conclusion to be sound and reasonable particularly taking into account the direction of the South East Trade Winds which blow for 9 months out of 12 carrying out the emissions out to the sea. The only time when the emissions from the stack will go inland is for the remaining 3 months when the Malgache wind blows westwards. We do note also that for other coal power plants or mixed coal-bagasse power plants, the Malgache wind will have the same effect affecting inland areas. As for the 100% coal power plant in the South, the effect of the South East Trade Wind is more likely to be dispersed inland over the central plateau and the western areas before reaching the sea and this 9 months out of 12 whilst for the remaining 3 months the stack emissions are being dispersed onto the Grand Port and Flacq area.

As concerning the likely impact on mortality Mrs. Searl admitted that the power plant will have a small risk which will be absolutely negligible at the rate of 0.0005% increase which equate to a mortality of 0.001 although she admitted that such an impact cannot be easily detected. As regards health she found that in terms of health care and bronchitis is same 0.0015% of annual primary care consultation, a small proportion of 0.0025% over 25 years in respect of extra consultations per person which is negligible. As asthma is concerned, rates

were assumed as for UK studies with Constituency no. 20 which could be the area which is more likely to be affected. Increase in cardiovascular problems could account for less than 1 death for that period, which is less than 0.002%. The Director pointed out that although the impact on mortality appears negligible (3.5 hours for a life expectancy of 72 years) the impact on the quality of life should not be disregarded. She expressly referred to the case of someone who would be suffering from cancer. We know, as a fact that dioxins and furans are suspected to be the cause of cancer and Mrs. Searl has stated that coal burn is not a major source of dioxin emission particularly not in a modern coal-fired power station but nonetheless metal dioxin emissions from the stack because in principle coal does contain trace metals as well as the presence of chloride had been considered. Additionally no oncologist or any specialist from the Ministry of Health has been called to sustain the fears of the respondent against the version of the proponent that the health impacts would be negligible.

Taking into account the unrebutted evidence of Mrs. Searl we are unable to agree that there is no evidence to substantiate that there is any danger to human although, admittedly, no study has been carried out regarding the likely impacts on animals and plants. We wish to emphasize that the area has no conservation value as pertinently pointed out by the Ministry of Agro-industry and Fisheries (Doc. AS) to the effect that the site is densely covered with exotic grasses and only sparsely with eucalyptus trees, there are no rivers and wetlands near or on site which is surrounded by a cliff, sugarcane and waste land. There are no endemic bird and other wildlife which was observed and that **“it is apparent that the site has no conservation value for terrestrial biodiversity”**.

As regards surveys on residents within certain radius from similar types of plant over and above, the likely health impacts on the inhabitants of the locality, we believe that it was for

the respondent to adduce evidence to establish that the health of residents living within a certain radius of similar plants are affected so as to disprove the assertions of Mrs. Searl who maintained that the health impacts would be negligible.

This having been said, we find that it is generally accepted that the burning of coal do emit pollutant and that clean coal is achieved by the provision of appropriate mitigating measures. In the United States alone, the United States Environmental Protection Agency (US-EPA) estimates that a range of 13,000 to 34,000 preventable premature deaths will be avoided by the reductions in PM_{2.5} and ozone. In April 2007 Supreme Court of the United States in the case of **Massachusetts v. EPA** interpreting the Clean Air Act as giving the EPA authority to regulate CO₂ emissions ordered the EPA to review whether CO₂ emissions pose a threat to public health or welfare. Complying with the Court order, the EPA Administrator, Mrs. Lisa Jackson, submitted a finding to the White House in late March 2009 indicating that human health and welfare are indeed threatened by CO₂ emissions.

If our memory serves us right we know from our Chemistry lessons that the burning of coal also releases pollutants which include fine particulates (PM_{2.5} and PM₁₀), ground level ozone, nitrogen dioxide and sulphur dioxide which, without the use of available pollution control technology, is bound to affect the quality of life and health.

There is evidence that on 12 Jan 2010 certain issues were discussed at the Technical Committee. A representative of the Ministry of Health was in attendance and he did put forward the views of his Ministry which, we were told, were not put in the letter (Doc. AN) in relation to noise and traffic especially the transport of coal at night is likely to disturb the residents. The impacts of the release from stack exhaust emissions, air pollution were taken on board where Sulphur dioxide will be from coal of less than 1% of sulphur but this has changed to 3%. An issue, which was raised in the Director's Review and discussed in the

EIA Committee. It was stated that acidic gases would be released. We note however, as rightly pointed out by the proponent that such concerns were not addressed in Statement of Defence by the respondent and no evidence has been adduced to explain the alleged departure in the stand of the Ministry of Health from its views submitted in writing and the discussions at the Technical Committee.

We do note that the issue of percentage of sulphur content in the coal has been made a live issue and much discussion has been made about the chemical composition of the sulphur such as sulphur dioxide or sulphur trioxide.

True it is that according to World Bank Guidelines if the sulphur content of the coal is at 3% or more then flue gas control have to be provided and where the sulphur content is less than 1% then no mitigation measure is to be undertaken. The proponent is of view that the sulphur content is less than 3% whereas the reading of the respondent is that there will be more than 3 % sulphur. It is contended that the SEIA no mention of additional mitigating measure that had to be taken. Not agree that I was confused between Sulphur content and the Sulphur trioxide. The emissions in the SEIA could be those of the worst case scenario. However pollution control technology is available to mitigate considerably the impact of such pollutants. We do not wish to enter such a debate and the reason being that Mauritius is to follow the best practice available. We find that whilst the present case was still being heard the US EPA has now proposed the Mercury and Air Toxics Standards (MATS) regulations which require all coal plants to use the technology which is available to substantially reduce mercury emissions. Stringent new regulations have been issued under the Clean Air Act which require all sources of hazardous air pollutants to install maximum achievable control technology and to achieve such a reduction in emissions, the EPA is expected to require coal-fired power plants to install a combination of SO₂ emissions controls, NO_x emissions controls, and fabric filters. In that respect, the US EPA signed a rule, on 16 December 2011,

to reduce emissions of toxic air pollutants from power plants. In its news issue the US EPA wrote the following:

“MATS applies to EGUs larger than 25 megawatts (MW) that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. The final standards will provide certainty to the power sector and level the playing field by setting nationwide emissions limits. All power plants will have to limit their toxic emissions ultimately preventing 90 percent of the mercury in coal burned at power plants from being emitted into the air.

For all existing and new coal-fired EGUs, the rule establishes numerical emission limits for mercury, PM (a surrogate for toxic non-mercury metals), and HCl (a surrogate for all toxic acid gases). The rule establishes alternative numeric emission standards, including SO₂ (as an alternate to HCl), individual non-mercury metal air toxics (as an alternate to PM), and total non-mercury metal air toxics (as an alternate to PM) for certain subcategories of power plants.

The standards set work practices, instead of numerical limits, to limit emissions of organic air toxics, including dioxin/furan, from existing and new coal- and oil-fired power plants. A range of widely available and economically feasible technologies, practices and compliance strategies are available to power plants to meet the emission limits, including wet and dry scrubbers, dry sorbent injection systems, activated carbon injection systems, and fabric filters.”

In conjunction with the issue of sulphur content in the coal, two main criticisms have been leveled by the respondent concerning the HIA submitted by the appellant which are that (1)

although it has been pointed out that although loss of life expectancy is likely to be negligible (3.5 hours) over the 25 years life of the plant nevertheless the quality of life would be affected; and (2) the HIA has been conducted in respect of the stack emissions only without consideration of the likely impact on health due to disturbances and inconveniences caused by the traffic of passing lorries. The concerns of the respondent for the quality of life of the people of Mauritius is indeed laudable but would that mean that development should be halted?

In a publication by the World Health Organization (WHO) on Diesel Engines, issue 10, December 1996, it was stated that there is concern about the possible human health implications of diesel exhaust emissions. Diesel exhaust emissions were evaluated in 1988 by the WHO International Agency for Research on Cancer and classified as Group 2A (probably carcinogenic to humans). However this year itself on 12 June 2012, the International Agency for Research on Cancer (IARC), which is part of the World Health Organization (WHO), today classified diesel engine exhaust as carcinogenic to humans (Group 1), based on sufficient evidence that exposure is associated with an increased risk for lung cancer. Does that mean that such engines are being or will be banned from our roads along which the bulk of the population resides? Since 1988 up to 2012 no such measures have been taken to ban diesel powered vehicles yet it cannot be said that the quality of life resulting from the fumes of those types of vehicles have not been negatively affected. Mitigating measures are being taken to control the opacity of the emissions but no action is being taken to ban the use or import of diesel powered vehicles. On the contrary, the Tribunal takes judicial notice of the fact that the statistics show that there are thousands of new vehicles on the road every year including diesel powered vehicles.

Similarly we take the view that although there is abundant findings that the burning of coal releases a number of dangerous elements, mitigating measures have to be taken to control stack emissions so that it conforms to, say, the National Ambient Air Quality Standards (NAAQS) proposed by the US-EPA as we have highlighted above or the recommendations of the European Energy Agency [EEA] or at least with WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide 2005. We are of the view that the health of the people of Mauritius should be of utmost importance and that there should not be any vain debate about the percentage of sulphur in the coal which, according to the respondent and Mr. Hume, could vary between 1% to 4%. We are of the opinion that mitigating measures to control the emission of particulates (PM_{2.5} and PM₁₀), ground level ozone, nitrogen dioxide and sulphur dioxide have to be implemented and that the most stringent standards in respect of stack emissions have to be applied.

As regards the impact caused by passing lorries carrying coal, raw and construction materials, Mr. New has made it clear that, in order to be perceptible, an increase of at least 25% in the traffic is required- this has not been rebutted by evidence and furthermore most of the coal transportation will be effected during off-peak hours when there is low traffic and when the majority of the people are attending work and children are at school. The stand of the respondent is, to say the least, incongruous. Whilst it is admitted that no HIA is required for an EIA the respondent is basing himself on that HIA to say that the proponent has failed to consider the health impact caused by the increase in traffic by concentrating itself on the stack emissions. We are left to wonder whether the stand of the respondent would have been the same had the proponent not submitted any HIA. The stand taken by the respondent is sending the wrong signal in the sense that future proponents would be discouraged into carrying out any HIA which in any case they are not bound to carry out. We fail to see how the impact of increase in vehicular traffic has not been taken on board by the appellant in the

SEIA. He added that **emissions from the trucks have been considered and there is going to be a regime of regular servicing.**

Mrs. Searl was also of the same opinion. She stated the health impact of the traffic has not been investigated because there is not going to be any significant increase in traffic flow, no significant change in the air quality. In calculating what the air quality impacts would be, then “you are talking of lots of zeros before you get to a number. So, nobody would dream of doing a health impact assessment on the basis of 6 or 7 trucks moving an hour, it has nothing in terms of emissions. The traffic impacts of this development are so slight that they will immediately screen out in terms of the health issue. Certainly traffic emissions taken as a whole are a health issue probably here as they are anywhere else because traffic uses our streets ... There are thousands of vehicles moving, they are operating around Port Louis on a daily basis, the truck moving as such will make no effective difference to people exposed in traffic routines, will not have any effective impact on their health...but the risks, the impacts of stack emissions are negligible; impacts of the increase traffic emissions would be less negligible. Nobody would dream of doing an assessment for such a low increase in traffic ...”

As regards the issue of dust in the area we find that the following had been addressed by Mr. New who stated that vehicle washing facilities have been considered in the TIA and that coal will be covered with tarpaulin to prevent fines and fugitive dusts from escaping. Vehicles covered and washed both at port and at plant to prevent transportable dust. There will be washes each time vehicle come to the plant. We must further add that coal should, as far as possible, not be stored in the open and that closed storage should be considered. We also recommend that the waste water used in washing the trucks carrying coal should not be rejected in the open but should be recycled or treated at appropriate treatment plants to prevent the risk contamination of ground water resources by mercury.

(b) Noise Pollution

On this issue, Mr. New has assured the Tribunal that the number of humps to manage speed has been considered. Discussions were held with the RDA. He agreed that the humps will have some impacts on the noise that some vehicles cause as they pass over them. He added that the HGV's, in view of their construction and proposed operational transport management plan which will cater for their proper maintenance, will not cause the type of clatter of poorly maintained lorries which is due to loose fittings. An additional measure is by addressing driver behaviour. On this account, it has been submitted that the measures are idealistic and fail to take into account local specificities and that the measures depend on the individuals concerned so that defaults are bound to occur. We do recognize there are risks of defaults in any activity but that does not mean that because, for example, there is a risk of default on the part of bus drivers who pass their competency test, buses would not be allowed on the roads. It is not because some would fail their exams that children should not go to school. We believe that the real issue is not the risk of default but one of training/ education and enforcement.

iii. Siting and Location of project

Having regard to paragraph 28 (b) of the respondent's statement of reply, it is admitted that preliminary EIA study was conducted in 2001 by the Government which concluded that the site was suitable for a coal fired power plant but it is argued that in the meantime all the parameters have not remained static, significant developments have taken place in the area.

We note also that the averments of paragraphs 38 and 39 of the Appellant's Statement of Case that "All the experts who have addressed their minds to the specificity of the site for MCTPS's project have unanimously concluded that the site is, contrary to the Respondent's unsubstantiated stand, **conducive to such a development**. These experts include not only those commissioned by MCTP but also experts commissioned by the public authorities themselves, including the Ministry of Environment and the Ministry of Public Utilities (now the Ministry of Renewable Energy and Public Utilities).

The averment that "the suitability of the site is **fully addressed** in chapter 8 of the SEIA Report." have not been specifically denied by the respondent in paragraph 29 (a) to (d) of the Statement of Reply. Besides Mrs. Ng representing the respondent made it plain that it is nowhere stated that the site is not suitable and the respondent is not saying that the site is not suitable. What is being stated is that the site is not conducive in relation to surrounding environment such as residential development etc. In that regard, one of the grounds for rejecting the EIA application was that "the site is not conducive for such a development". It can therefore be said that the fact that the NDS or the Outline Scheme for Black River District have earmarked the site at Montagne Jacquot, Pointe aux Caves to be suitable for the setting up of a coal fired power plant is not in issue. We also note that MMD (Doc. D) came to the conclusion at p. 20-22 that the site cannot be ruled out for the purposes of setting up a coal fired power plant.

At this stage, it is also worth recalling the concerns of the hotel already in operation in the vicinity, namely the Club Med which were referred to by the Ministry of Tourism, Leisure and External Communications (Doc. AX) on 04 February 2009. One of the concerns expressed in November 2007 was the visual impact of the stack. It is to be pointed out that those concerns were expressed before the SEIA (Doc.B) and a Landscape and Visual Impact Assessment

was carried out and incorporated in the SEIA at Chapter 7 in June 2010. We have not been informed of any other concerns of Club Med following the SEIA and the respondent did not raise any issue about this aspect. In any event, the Ministry of Tourism is not part of the EIA Committee as per the 6th Schedule of the EPA 2002.

We note in passing that the grounds on which the EIA has been rejected were issues raised by residents/ promoters/ land owners in the locality (see Documents I,J,K,L,M,N,P,Q,R,S). One of the objectors was Société Gros Cailloux expressing its concerns about the accessibility of the site, the transport of coal referring to a total of 54 trips daily and stating that traffic on the Petite Rivière Road up to Port Louis is already a nightmare at peak time. One Mr. S. D. Madhow, a nearby or adjacent landowner, referred to the nuisances associated with dust, smoke, smells, parking and traffic and the fact that he has a development permit that has been issued for the sub-division of 6 lots for residential purposes. On the issue of the suitability of the proposed site, Société Gros Cailloux objected on the grounds that the area is being earmarked for tourism projects such as Club Med hotels and IRS projects, 9th Livingwood projects, Morcellement Gamma, Morcellement Compagnie de Gros Cailloux Ltée. Société Sohawon which is the proposed residential project through a letter from Krishna Dwarka Associates Ltd and Mr. Hanoomansing objected to the project site stating that they want to put up a high class development there. The latter stated that he has a hotel project in the vicinity, a version taken on board by the respondent who referred to the fact that “there is the hotel and the development coming up. In the public comments received many of these people have said that they want to build a hotel.” The respondent is therefore praying in aid the different views expressed by the persons, both physical and corporate, against the project. Mrs Ng expressly referred in her cross-examination to lands belonging to Madhoo and Roopda in Document BD, *morcellements* Soobrah and Gurburrun. She further referred to land owners adjacent to the plot of land

(earmarked for CT Power) such as the housing estates by *société des promotions résidentielles Ltée* for 140 lots. which is Kensington place situated at some 400 metres from the CT power plant. It is admitted that during a technical committee it was stated that in view of the high quality residential and commercial development occurring in the vicinity for the project, the proposed site for the power plant was not found to be appropriate and the proposed development was not found to be conducive. Apart from the proposed morcellements and hotels, the Infosys development has been mentioned, the relocation of a stone crushing plant that were due to changes to nonpolluting activities which have now been earmarked. Mrs. Ng admitted in cross-examination that in 2001 the K&M report stated that the site “there is no cohabitation around and that it is a potential site at that time.”

We would pause here to add however that none of those persons who have expressed reservations or objections have been called to give evidence to substantiate their respective objections. None of them have made any motion for intervention, as interested parties which were open to them in view of the rules of procedure akin to a civil case before the District Courts which the Tribunal has to follow under Section 55 (3) (a) of the EPA.

The proponent has submitted that the public interest takes precedence over private interests and this is so in planning law. We subscribe to such a stand and refer to the following extract from **A Practical Approach to Planning Law by Victor Moore, 7th Ed., Blackstone Press Limited, London 2000, at p. 210**: “It is constantly said that the object of planning control is to restrict private development in the public interest and not in the private interest.” Having the above in mind, we now proceed to examine the different planning documents referred to us:

(a) The Black River Outline Scheme

The Black River District Council (BRDC) is the local planning authority under the Town and Country Planning Act for land falling under the jurisdiction of the Black River District area. The outline scheme was modified in 2001 and now we have an approved version dated September 2011 (Government Notice No. 165 of 2011) which declares the modification to the Black River District Council Outline Scheme to be in force and it also warns local authorities of the provisions of Section 14(3) that “as from the date of publication of this notice no authority shall pass or approve any plans for building or development that contravenes the development of the Black River District Council Outline Scheme.” [BROS]

As provided in the BROS in 2006 as amended in 2011 (Doc. BL), mention is made that no new sites for IPP’s “**have been confirmed to date**”, that is at the time of the drafting of the BROS but it went on to say that “it has been suggested that there might be **suitable sites close to the coast**, either **near Albion** which would be relatively close to the port and therefore **convenient for imported coal**, or on Médine Estate”

Policy SD4 concerns development of land outside settlement boundaries and it is common ground that “there is a presumption against development outside settlement boundaries unless the proposal and the fourth bullet says is considered a bad neighbour development as defined in policy ID4” It is also common ground that the plot of land on which the proposed power plant is to be built is situated “outside the limit of settlement boundaries”. In fact the Land Use Department of the Ministry of Agro-Industry and Fisheries did state, in a report dated 19.04.2007, that the site is located “outside settlement boundary” (Doc. AS).

As rightly pointed out by the proponent who referred to the Justification Section which referred to possible sites in the District to include Montagne Jacquot, Henrietta and Medine

S.E. as well as the justification Section to Policy ID4 that preference should be given to proposals for bad neighbour developments “which can be clustered to share a buffer zone” which we must point out was and has been to stand of the Ministry of Housing and Lands in compliance with Planning Instruments.

The Town and Country Planning Act and the definition of an “outline scheme” means a scheme prepared under section 11 which shall be prepared by the Town and Country Planning Board [TCPB] “in consultation with the committee and subject to the Minister’s approval” which shall make provision for the matters set out in the First Schedule, and may make provision for any of the matters set out in the Second Schedule and shall specify and define clearly the area to which it relates, and shall include a plan in which shall be shown the extent of the scheme and such other matters as can conveniently be included. Under Section 14 an Outline Scheme is sent for approval to the President of the Republic and published in the Gazette.

The legal force of an outline scheme is described in Section 14(3) which reads as follows:

14 Approval of an outline scheme

1. ...
2. ...
3. As soon as a notice has been published under subsection (2), the scheme shall have full effect, and **no authority shall pass or approve any plan for building or development that contravene the scheme.**

We note that the BRDC, the appropriate local authority (Doc. AM), did not express clear objections to the project. In a letter dated 08 November 2007, the BRDC agreed that according to the the Outline Scheme for the district of Black River, the site is situated at a

distance of approximately 500 m from the edge of the growth zone, that the site situated on the northern part of Albion village is presently bare land and not under cultivation for agricultural purposes and that “In line with policy ID4 for bad neighbour development, we are of the view that **the polluting component of the project that comprises the stack** should have been ideally located within the buffer of the 'Mt Jacquot Sewerage Treatment Plant- in order to reduce the potential risk of the- project on the Albion residential areas.” We agree with this opinion expressed by the BRDC which we find to be sound and reasonable.

However the BRDC pointed out that morcellements are located at more or less 660 m from the site except for a proposed morcellement Sohawon which will be at a distance of 170 m from the site, pending approval by all relevant authorities together with a site earmarked for Infosys (Business Park) is found in the vicinity of the project site adding that “given that the character of this area is predominantly residential, this Council is of view that there should be a general presumption for future large scale residential development thereat.” At this juncture we are at a loss to understand the stand of the BRDC as we are left to wonder how can there be a presumption for future large scale residential development where there are bare lands, where a site had been earmarked for business purposes (Infosys) and where a sewerage treatment plant has been set up. In any event the proposed morcellement is awaiting approval from all relevant authorities.

According to the Black River Outline Scheme [BROS] potential sites for the setting up of IPP's are Henrietta, Médine S.E and Montagne Jacquot. The present project is at Montagne Jacquot and we find that the other potential sites also have the same difficulties in that to Médine is close to the village of Bambous and Henrietta to the towns of Vacoas, Phoenix and Curepipe.

(b) The National Development Strategy

The second planning instrument referred to is the National Development Strategy 2003 [NDS] and Planning Policy Guidance 2004 [PPG] (Doc. BI) which were adopted under the Planning and Development Act 2004 [PDA] such that although the NDS was prepared in 2003, it is now a planning instrument under the PDA 2004. Part III deals with the issue of “Planning” and Section 12 provides as follows:

12. National Development Strategy

(1) The Minister shall cause to be prepared, and shall adopt and maintain and keep under regular review a National Development Strategy, which shall –

(a) state the aims, objectives, policies and strategies through which the objects of this Act shall be achieved;

(b) consist of plans, policies and guidelines with mechanisms for their implementation, which aim at creating and stimulating investments in the public and private sectors so that economic growth and social development in relation to land development can be undertaken in a sustainable and equitable manner, so as to maintain and enhance the natural and built environment;

(c) outline the resources to be committed for its implementation.

(2) The National Development Strategy shall prevail over any other planning instrument to the extent of any inconsistency.

(3) The National Development Strategy shall be made available –

- (a) for public inspection at the Ministry, the offices of the Commission and each local authority during normal office hours;
- (b) for access on the website of the Ministry;
- (c) for purchase by any member of the public.

13. Planning

- (4) Every development plan shall comply with any planning policy guidance issued by the Minister under section 13, which is relevant to the subject matter of that development plan.
- (5) A development plan shall be prepared, with due regard to –
 - (a) national economic development plans and programmes;
 - (b) the National Development Strategy.
- (6) In determining the degree of detail and the scope of the content

It is common ground that the National Development Strategy and Policies 2003 (Doc. BI) in Policy E1-Sites for new power stations, mentions that potential sites need to be identified by CEB in conjunction with the Ministry of Public Utilities and the planning authorities within revised Local Plans and safeguarded from development. It is provided that reference should be made to policy ST3 regarding buffer zones for bad neighbour developments and that development potential close to these sites need to be planned in an integrated area-wide approach with suitable buffer areas **up to 1 km from sensitive land uses** being established.

In 2001 the Government had commissioned K&M to evaluate siting and Land Use. The study was funded by the US Trade and Development Agency and the report contained a reservation regarding its use. There is however evidence from Mr. Hume that such a report is readily available and he has been handed a copy by those who funded study and Mr. Mukoond was cross-examined on that report. It has therefore come to light that K&M Report

carried out a feasibility study for a new thermal power plant in Mauritius in 2001 and addressed 3 major locations: Albion, Fort William and Bois des Amourettes. Fort William was earmarked as being best for a co-generation system whereas an eventual coal power plant was to be located at Albion. As submitted by the respondent, it is also not challenged that in 2001, following the K&M Report, the above site was found to be acceptable and this at a point in time when the area of Pointe aux Caves did not comprise much residential development but it is contended that it is no longer the case at present. The site at the time of application was located at only 435m from existing residential dwellings, namely the Kensington Place, and the site was not considered to be conducive for a coal fired power plant.

Although there were some reservations that reference be made to the K&M report by the appellant in view of a legal notice in the said report, we note that extensive reference has been made to that report by the respondent. On the official side, we also find that on the 27 September 2010, that is 9 years later, the then Ag. Prime Minister (Dr. R. Beebeejaun) made a formal declaration in Parliament, referring to the K&M Report, that “the capacity expansion plan for the period 2006-2013 included a coal fired plant at Pointe aux Caves and that the site had been chosen by the Consultant K&M Engineering of USA in 2002 **as the best potential site for a coal fired power station.** (Doc. W). Although the NDS provides that development proposals close to the potential sites for power generation need to be planned in an **integrated area-wide approach** with suitable buffer areas up to 1 km from sensitive land uses being established, we would emphasize here the stand of the representative of the Ministry of Housing and Lands which is itself responsible for the preparation of the NDS, who gave the views of the Ministry before leaving the EIA Committee insisting that she **was agreeable to clustering of polluting activities next to Montagne Jacquot and could not be refused solely on planning grounds:** an approach similar to the stand taken by the

We do not agree with the respondent's views that the suitability or conduciveness of the site had not been considered by the appellant. The evidence adduced before us shows that the site had already been earmarked by the Outline Schemes and the NDS to accommodate a coal fired power plant at Pointe aux Caves near Montagne Jacquot. Mr. Hume stated that the following had been considered such as the non-existence of land being used for agriculture, no fish landing stations and the coastal site has no fringing reefs. The proximity of the sea was taken into account as the stack emissions will go out to the sea, the proximity of sewage plant at Montagne Jacquot water treatment plant which itself constitutes bad neighbourhood is close to the site. There is also no issue regarding the ownership of the land since the Ministry of Housing and Lands had leased the plot of land to the CEB which in turn had allocated it to the proponent. The proximity of the Club Med hotel was also taken into consideration. Access to the site was also taken into account as well as the fact that in 2009 there were no inhabitants at the site. There is evidence that the morcellements within the 3 km radius had been considered such as one which is at 170m, a second morcellement south of morcellement Sohawon at 1046m from the stack, morcellement Roopda at 660m from the site boundary and 870m from the stack, morcellement Geebun at 1928m from the stack and 495m from the site boundary, existing Belle Vue/ Albion area 475m from the site and Petit Verger area 925m from site and 2500 m from the stack. It was also pointed out by Mr. Hume that the SEIA identified and evaluated impacts to key environmental and social receptors: the changes that will occur within a 3 kilometre grid for the typical nuisances were identified; air quality, noise and construction dust had been addressed. The visual impact of the power station was also considered which covers almost half of the island.

It is true that the nearest residential development, that is Kensington Place, is found at only 450 m from the site and that the northern part of Albion is predominantly residential but the Supplemental EIA (SEIA) addressed the issues such as noise, odour, light and dust etc. that

could be caused. There is no evidence adduced before the Tribunal as to when Kensington Place was granted its development permit and since it falls within the buffer of up to 1 km prescribed by the NDS, we can safely assume that that residential development was in existence well before the coming into force of the BROS in 2001 and the NDS in 2003. At any rate it is in evidence from Mrs. Ng that at the time of MMD study in 2008 the Kensington Place was already in existence. Hence at the time of the drafting of the NDS and the BROS the Planning Authorities were aware of the presence of the Kensington Place when it was recommended and later incorporated in the NDS that the potential site for a coal fired power station would be at Pointe aux Caves itself located at an area already having as bad neighbour the sewage treatment plant at Montagne Jacquot. It is in that perspective that the establishment of buffer areas are prescribed to be “up to 1 km from sensitive land uses” and not “at least 1 km” meaning that buffer areas could be less where land availability is constrained.

Prospective or intended residential or hotel developments ought to have taken the NDS into account as required by law and we cannot but agree with Mr. Hume when he stated that the developments were made in full knowledge that there was going to be a coal fired power station since 2001 and that due diligence ought to have been exercised.

Taking into account the outline scheme and the NDS, the possibility of the setting up of a coal fired power station was not remote as already forming part of the planning strategy of the Government and we are of the opinion that it is for the to-be residential and hotel developments which ought to have taken that possibility into account and not the other way round. To hold otherwise would result in annulling the statutory force of the PDA in that the planning and development strategy of the Government would be unenforceable or inapplicable all the more so when no amendment to the NDS has been made to date to convert the planning strategy of having a potential site for a coal-fired power plant at Pointe

aux Caves into sites for locating non-polluting activities as the respondent would have us to believe. We are also of the view that since the NDS is binding on the State and that it shall prevail over any other planning instrument to the extent of any inconsistency, the intention of private parties to develop surrounding land for residential or commercial use cannot be made to prevail over the policies and strategies of the State established by way of an Act of Parliament more particularly that a number of those prospective developments are being made after the coming into force of the NDS so that there is in addition the application of what is known as the “ *p r i d a n t é r i o r i t é .* ”

(c) Albion Interim Action Area Plan (26 April 2004)

The SEIA reviewed the above Action Plan which was still in its draft version. No official copy has been provided to the Tribunal so that we have to rely on what has been reported in the SEIA which in any case stood unchallenged. It was stated that the major recommendations of the Albion Interim Action Area Plan are to consolidate Albion as a major development area by making provisions for the following major proposals:

- earmarking land for residential development to accommodate population expected over the next 10 years;
- promotion of a mixed business centre to focus commercial, office and recreational development;
- creation of local road linkages to connect these; and
- relocation of ‘dirty activities’ which are stated to include for example, pig breeding, and sewerage treatment plants.

It has been stated in the SEIA that the said Interim Action Area Plan 2004 has remained silent about the coal fired power plant. Our attention has also been drawn to the fact that the Port Master Plan had “earmarked” the site for long- term port development in connection with the storage of hazardous cargo or waste whereas it has not been so earmarked for a coal fired power plant. This goes in line with the idea of clustering polluting activities next to Montage Jacquot. In any case we find that neither the Interim Plan 2004 nor the Port Master Plan 2002 cannot go against the NDS, unless the latter is duly amended and which has been given such statutory force by virtue of the PDA 2004. In case of conflict between planning instruments, the law provides that the NDS _____
_____. Had the Albion Interim Action Area Plan 2004 been already in force and superseded the NDS we feel that the Ministry of Housing, responsible for the preparation of both the NDS and Interim Action Area Plan would not have agreed to give a lease to the CEB for the setting up of a coal fired power plant at Pointe aux Caves in 2006: letters from the Ministry of Housing dated 29 June 2006, 25 September 2006 and 27 October 2008 in which it has been clearly stipulated that the lease is for the purpose of implementing a coal fired power station in collaboration with the proponent.

We finally note that the independent consultant hired by the respondent, namely MMD concluded that although no site selection study was undertaken by the Proponent in support of the choice of Pointe aux Caves (which we find was not required in view of the input of the land by the CEB) but “based on a high level review of site selection criteria we do not consider that the site would have been ruled out for consideration for a power plant” and “given the immediacy of the need for additional power generation and the likely size of plant required to meet the increasing demand a dedicated coal fired power plant would be an appropriate choice and therefore the Pointe of Caves project is not inconsistent with the options available.” MMD considered the engineering, environmental, availability and planning

issues and concluded that “the Pointe aux Caves site would not have been ruled out as unacceptable during a site selection process...” on each of the four criterion.

For the reasons we have given above we find that the reasons put forward by the respondent to say that the site is not conducive for the proposed development has not been proved on the balance of probabilities: the preponderance of the evidence tilting heavily in favour of the appellant. We find that in addition to our reasons given above the socio- economic benefits should also weigh heavily in considering whether the site is conducive to the proposed project.

G. Socio-economic benefits

It has been submitted that there is no indication that the Respondent actually carried out a balancing exercise between the benefits and potential negative impacts of the proposed power plant nor did the Ministry of Health or its representative highlight the health benefits of a stable power supply without blackouts to Mauritians. It was however highlighted also that the CEB was losing millions of rupees because it had to use diesel powered generators. We agree that a balancing exercise has to be carried out wish to lay emphasis on the conclusion of MMD at its Executive Summary stating the following:

“Balancing the needs for new generation, the environmental aspects of the site, the potential impacts from the Project and the mitigation that can be incorporated to reduce the impacts, we conclude that the project **should be granted an EIA licence subject to conditions to address the identified impacts.**”

We believe that the proposed project will be conducive to economic benefits although the site was stated as not being “conductive” to the development. We have taken good note that the

CEB is actually spending twice as much on fuel to produce electricity than it would have if the 100 MW was produced by means of coal and which could result in savings of up to RS 5 million yearly. This in turn would result in stabilization of energy tariffs which then would benefit electricity-dependent industries in particular and the population as a whole. A stable power supply is also not to be ignored as we have been told that 100 MW was what the CEB expected to be required in the near future- and this was the main reason for downsizing the project from 150 MW to 100 MW. Any reasonable citizen will prefer to have stable electricity supply than to have blackouts and power cuts due to shortage of energy supply. We have not been told what would be the activities of the Infosys project which we understood to be linked with the IT sector and/or outsourcing services. The commitment of land for the Infosys (Business Park) project is in no way in conflict with the present project inasmuch as computer related activities require stable and affordable power supply. We are aware that according to what had been planned the stack was to be situated closer to the proposed morcellement Roopda (see plan Doc. AH) but in order to address any negative feelings, we are of the view that the stack should be located within the buffer area of the Montagne Jacquot sewage treatment plant which is already excluded from development with its offices and a green belt nearer the residential, business and commercial zones instead.

The diversification of electricity production by reducing dependency on fuel oil is also to be considered inasmuch as coal, we have been told, will be imported from South Africa which is not far from the country and would cost less in terms of freight and a more secured source of raw materials than fuel oil especially taking into account the increase in price of oil, instability in oil producing countries, threats of piracy, increase in prices of freight.

On the social side, the road infrastructure will be improved at the promoter's cost especially at the Albion junction and other roads to be provided with street lighting hence benefitting the

inhabitants of the locality. In addition to that there will be foreign direct investment worth RS 1.5 billion resulting in creation of jobs such drivers, helpers, operators etc...which could also be beneficial to people in the locality together with the development of associated collateral economic activities. We are told, and it has remained unrebutted, that the process to be used will result in coal being 32% more efficient thus 20% less coal will be needed and with 50,000 tonnes of coal used less ash will be disposed.

H. Determination and Conclusion

Any development or activity is not without impact on the environment but a right balance has to be struck between the need for development and the environment considering the benefits on the one hand and the threats to the environment on the other. On the evidence placed before us we are of the view that the benefits to the economy, the provision of relatively low cost of electricity generation, diversification of sources of production of electricity, security in supply of electricity for the industries and for the people in general clearly outweighs the possible inconveniences that could be caused.

It is to be reminded, as we have earlier alluded to, that this Tribunal does not as the Supreme Court in a Judicial Review application where the record is brought for review. The law provides that evidence be adduced as if a civil case and each party has the burden to establish his contention on the balance of probabilities. In accordance with the law of evidence admitted facts and issues need not be proved, however contested issues have to be addressed by adducing appropriate evidence. The respondent's objection that there will be adverse impacts on the residential areas due to the inconveniences and disturbances associated with traffic, the likely health impacts on the inhabitants of the locality and surrounding areas and that the site is not conducive to the development have not been

supported by any proper expert evidence in his respective field except the version of the Director of the Department of Environment; and likely health impact remained hypothetically “likely” against the HIA.

For all the reasons we have given we find that the appellant has established its case against the respondent on the balance of probabilities. The EPA 2002 provides that the Tribunal may confirm, amend or cancel any decision, order, direction or notice referred to in section 54. We therefore amend the decision of the Minister rejecting the EIA licence to grant the appellant an EIA licence to proceed with the setting up of a 2x 55 MW coal-fired power plant at Pointe Aux Caves, Montagne Jacquot including, but not limited to the following conditions together with other conditions to be determined by the Department of Environment:

- i. Conditions for the control of mercury, acid gases, soot and particulates such as PM₁₀ and PM_{2.5}, the installation of a combination of SO₂ emissions controls, NO_x emissions controls and fabric filters as well as measures that would ensure that stack emissions should comply with the most stringent standards of the WHO, the US EPA or the EEA and the EPA 2002 (Standards for Air);
- ii. Transportation of coal should be done strictly off peak hours as from 9:30 hrs up to 14:30 hrs. and after 18:00 hrs. up to 21:00 hrs. at latest;
- iii. Coal to be stocked in such a way so as to avoid dispersion through wind;
- iv. Effluents resulting from the washing of lorries to be treated so as to avoid any risk of contamination of ground water by heavy metals such as lead and mercury;
- v. The stack to be located in the buffer area of the Montagne Jacquot Sewerage treatment plant with offices closer the residential and commercial zones;
- vi. The provision of landscaping for green areas at the boundary between the site and residential/business/commercial areas;

- vii. In addition to the provision of street lighting as proposed by the RDA, the proponent to provide for handrails for the security of the inhabitants of Camp Benoit;
- viii. Ashes to be disposed of in appropriate mono landfill;
- ix. Compliance with the conditions and requirements set down by all the agencies and authorities forming part of the EIA Committee;
- x. Implementation of all measures proposed in the SEIA;
- xi. Unrestricted access to enforcement agencies of the State to carry out surprise checks and for the collection of stack emissions for analysis.

P.M.T Kam Sing

H. Gunesh

B. Sewraj

Chairperson

Member

Member

Dated 16 July 2012