Q. **Project B-25, Replace Emergency Diesel Generator (Bay d'Espoir)**
Are there other potential solutions to minimize the risk of a black plant condition occurring and/or to mitigate safety issues if a black plant condition is experienced, other than increasing the emergency diesel generating capacity to 500 kW?

A. There are no other solutions because the emergency diesel generator is the final source of power to provide station service. It is required to be of sufficient capacity and of high reliability. In order to ensure emergency preparedness, the existing emergency diesel generator requires replacement and upgrading to 500 kW. Continuing with the present day underrated emergency diesel generator with its safety and reliability issues, is not acceptable.

It is expected that if the existing emergency diesel generator was properly sized, it would be able to provide the power required in a black plant condition to restart a hydro generating unit under any conditions. In August of 2003, the black plant condition was of a short duration and occurred during the summer when there was no danger of equipment freeze-ups and there were low generation requirements from the BDE plant. In addition, because the event was of relatively short duration, adequate light levels were provided by the battery operated emergency lighting system before the batteries discharged. If during a major winter storm a black plant condition was experienced and the emergency diesel generator failed to meet the required load, there would be a high probability that the remaining generation on the Island Interconnected System would not be able to meet the demand, possibly for an extended period of time. Safety conditions in the plant would also deteriorate under an extended shut, resulting in hazards to personnel due to potential flooding, reduced lighting, loss of DC power, equipment freeze-ups, etc.