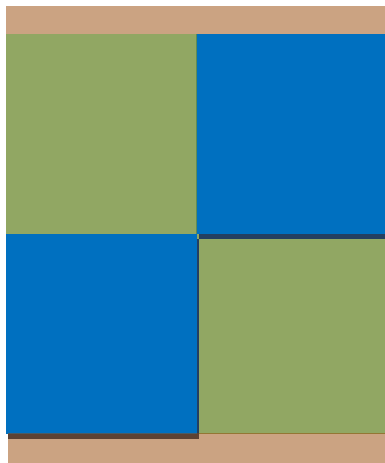


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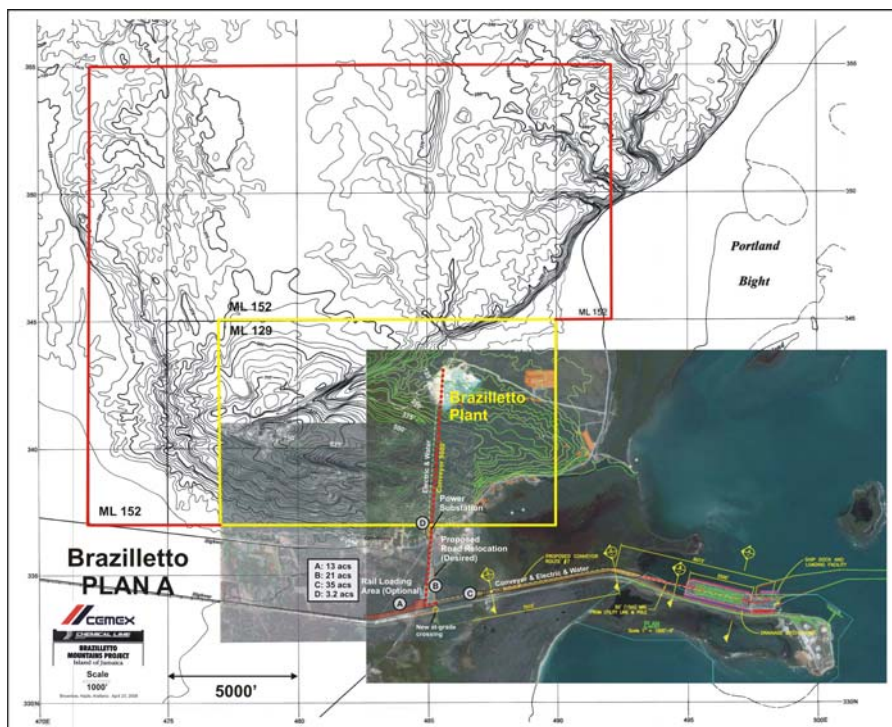
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# REVISED ENVIRONMENTAL IMPACT ASSESSMENT

FOR THE CONSTRUCTION OF  
A PORT AND CONVEYOR CORRIDOR

## MANDATORY PUBLIC MEETING

[Prepared for The National Environment & Planning Agency]



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# **REVISED ENVIRONMENTAL IMPACT ASSESSMENT**

FOR THE CONSTRUCTION OF

## **A PORT AND CONVEYOR CORRIDOR**

AT ROCKY POINT, CLARENDON

Mandatory Public Meeting Report  
on the  
Revised Environmental Impact Assessment  
for  
The Construction of a Port and Conveyor Corridor  
At Rocky Point, Clarendon by Rinker/CEMEX

Held at the  
Church of God in Christ, Salt River, Clarendon  
Wednesday, June 24, 2009

Submitted to:  
National Environment and Planning Agency, NEPA

July 2009

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# **EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

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### *INTRODUCTION*

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The National Environment & Planning Agency (NEPA) mandated that a public meeting be held in respect of the Revised EIA for the proposed construction of a port and conveyor corridor. Using NEPA'S guidelines for public meetings, the meeting was convened at the Church of God in Christ, Salt River, Clarendon on Wednesday June 24, 2009 after public advertisements (see **APPENDIX I**) on various occasions in the Gleaner for a minimum of 21 days prior to the meeting. Copies of the EIA report were placed in the following locations prior to the meeting:

- ✚ Clarendon Parish Library,
- ✚ Salt River Postal Agency,
- ✚ Lionel Town Library and
- ✚ NEPA's website: [www.nepa.gov.jm](http://www.nepa.gov.jm).

In addition to advertising in the Gleaner, the distribution of flyers, posting of notices and using a town crier were additional strategies used to announce the event in the various communities close to the proposed project site.

The meeting was convened under the chairmanship of Ms. Daisy Thomas with a presentation from Dr. Conrad Douglas, President and Managing Director, Conrad Douglas and Associates Limited (CD&A). Several other representatives from Rinker Jamaica Limited, CEMEX, Conrad Douglas and Associates Limited, Clarendon Parish Council, Caribbean Coastal Area Management and NEPA were present. There were 64 persons in attendance at the meeting held at the Church of God in Christ. The attendance register is shown in *APPENDIX V*.

The meeting was recorded *ad verbatim* by a highly qualified and experienced court stenographer.

The salient points of the meetings are listed below and are also illustrated in the pie chart.

### ***QUESTIONS AND ISSUES RAISED BY PARTICIPANTS AT THE MEETING***

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1. How will the project impact on the community and its environment?
2. If the mineral spa becomes contaminated as a result of the project, how will this problem be addressed?
3. What are the potential impacts on water quality from this project?
4. Should the water quality be adversely impacted, what kinds of corrective measures will be put in place?
5. How would persons be compensated for damaged caused to their property from the project operation?
6. How will the project address the noise and dust level that will be generated from its activities?
7. How will the residents benefit from the implementation of the project, especially in light of the lack of potable water?
8. How will the endemic species be relocated should this need arises?
9. Was an impact assessment done for the mangrove rehabilitation?
10. Will there be any impacts on corals where the development of the port is concerned?
11. Have there been any interactions with JPS in light of their proposed coal fired plant several years ago?
12. What provisions will be put in place to ensure that the project will not further worsen the level of power cuts that the community has recently been experiencing?

### ***CONCERNS AND ISSUES RAISED BY PARTICIPANTS AT THE MEETING***

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1. Employment opportunities with preference given to citizen and community members of the neighbouring communities of the project site.
2. Impacts on water quality from the project operation.
3. Impacts the project will have on the mineral spa.
4. A system that will ensure that the interests, safety and well-being of the community members are protected.

5. The benefits the development of the project will bring to the surrounding communities and its members.
6. To consult with members of Mitchell Town community and other communities in light of the plans in place for the quarry development.
7. The potential impacts of the project on the existing housing structures in the area.
8. The potential impacts on endemic species such as the West Indian Whistling Duck as a result of impacts on the mangrove.
9. The possibility of benefitting from the project through the provision of potable water to the communities.
10. Effectively addressing and taking into consideration the concerns and issues raised from previous meetings and consultations.

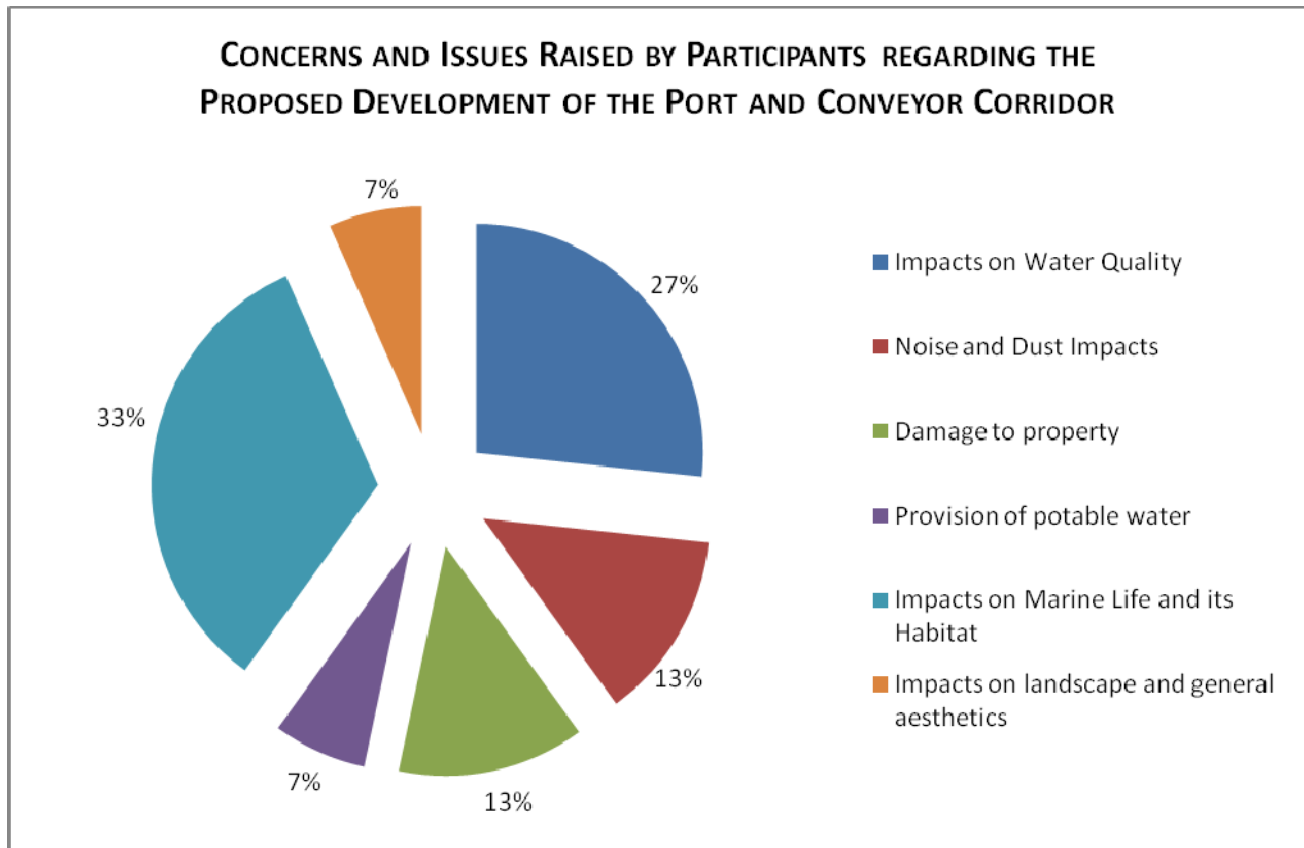


FIGURE 1: CONCERNS AND ISSUES RAISED BY PARTICIPANTS REGARDING THE PROPOSED DEVELOPMENT

## ***CONCLUSIONS***

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The mandatory public meeting on the EIA for the proposed construction of a port and conveyor corridor was presented clearly and thoroughly. Questions and concerns raised by individuals were addressed accordingly. These were diligently recorded ad verbatim in support of the EIA review and permitting process being undertaken by NEPA.



# VERBATIM NOTES

Wednesday, June 24, 2009.

Time: 6:17 p.m.

**CHAIRPERSON:** Good evening everyone, it is now seventeen minutes past 6:00, the meeting is now called to order. Pastor Elliston, could you open with prayer for us, please.

(PRAYER SAID)

I want to welcome Mr. Greg Hazle, Vice President, Rinker; Mr. Juan Arellano, Director of Operations, Rinker, Dr. Conrad Douglas and his team; Mr. Maragh, Councillor; Mr. Singh, Mr. Lancaster, Dr. Sutton, Ms. Parchment, Ms. Blossom Laidlaw, former PR Jamalco, and everybody else who is here; persons from Mitchell Town and all the other surrounding communities; Mr. Derrick Lambert. Just feel very welcome here. I hope we will just sit back and listen to the presentation, and then you know there is going to be a question and answer session after, so you are free to ask whatever questions you want. I now hand over to Dr. Douglas.

**DR. DOUGLAS:** Thank you very much Ms. Daisy. Ladies and gentlemen, on behalf of the Rinker/Cemex and Conrad Douglas & Associates Limited, I take great pleasure in welcoming you to this public meeting, which is one of several meetings that we have been keeping with the various communities in this area. There were some three or so publicly announced voluntary meetings in which you were informed of the project, what it is about, who will be doing it, what are the project objectives, and then there were two mandatory public meetings. This is the second one of the mandatory meetings which is required by NEPA under the NRCA Act. But this is not just a matter of meeting with you as a requirement of the law, we are meeting with you as it is an integral part of the environmental impact assessment process to consult with the people with whom the project will have to be implemented. In other words, those communities, those persons that would be impacted by the project. And this is not anything that is unique to Jamaica, it is something that is universal, and it arises from just simply good professional practice, good corporate practice, and even more so in recent times from Agenda 21 arising out of the Rio Treaty; and in several parts, it states quite explicitly that whenever a project is being contemplated for any area then people who stand to be affected must be consulted. This is the reason we are here this afternoon. Now, I know that there are a number of you who are more than familiar

with this project, because as I said, various meetings were previously held, but I know that there are others who probably are attending for the first time, and for the benefit of those who are attending for the very first time I am going to try and outline what's involved in the project very quickly, and then after that we are going to proceed to a step where we will be receiving questions and answers, and we will attempt as far as possible and practicable to answer those questions this evening, but it is possible that we may not be able to answer all of them. Now, importantly, however, you need to know that in this process we have done exactly what NEPA has required, which is to conduct the EIA and consult with communities and address a Terms of Reference that was approved by them in consultation with several other Government agencies. Now, having done that, NEPA has stated to us, to go back and tell the public what you have done, what are your findings and get the public's view. They said this is the second mandatory meeting, and why I emphasize that this is the second mandatory meeting, it is because even after this meeting is concluded we have to write a verbatim report, and I must tell you that we have one of the best court stenographers in our midst this evening, Ms. Beverley Cole, recording word for word everything that is being said, and we have to submit that report along with a preliminary analysis that must go into NEPA as a part of the entire process. They cannot complete the EIA review without this meeting being held as a part of the public consultation. But, even after that is done the public still has up to 30 days in which to write to NEPA and to state your concern or raise any issues that you might have with the process. I must also remind you that we advertised the project variously, at least four times in the Daily Gleaner and in accordance again with guidelines laid down by NEPA we made available to the public electronically, in soft form and in hard copy form as well, the Environmental Impact Assessment Report, and those will stay in place even after this meeting, so that those of you who feel like you would like to go and refresh yourself concerning the information contained in that report, or simply to just take more detailed notes or something like that, they will be left in place for you to go through and make your notes and state any concern which you may have otherwise.

DR. DOUGLAS: Now, having said that, let me again state that this particular meeting concerns primarily what is called the revised Environmental Impact Assessment for the proposed construction of a port and conveyor corridor, and this is to be developed by Rinker Jamaica at Rocky Point, Clarendon. It is very important that I stress this, because the previous one was the

Environmental Impact Assessment for the same project. However, arising out of concerns expressed in this meeting, and concerns as a result of a review process with NEPA, we have had to again assemble a team of experts drawn from Jamaica and internationally, to assess aspects of the project which NEPA found to be unsatisfactory. And here I speak specifically about the seagrass bed which was to be impacted. They said that it was too large, so we had to look more critically on that, and I will elaborate as we go along. And I am sure some of you have questions. They have also said we had to look again at the mangrove impact, and a few other things, but those were the larger ones, and to not only look at it but to assess it, analyse it, and propose methods by which it could be reduced through being avoided or it could be mitigated, both of which we have initiated with an international team of experts. So we may move to the next slide and begin to look at what is involved in this revision as well. Now, let us look at who Rinker/Cemex are. Again when the project started years ago the Company was known as Rinker. The Company has now been acquired by Cemex and this is why you see it's referred to as Rinker/Cement.

DR. DOUGLAS: But who are these people? Rinker recently acquired exclusive rights of the Braziletto quarry operations, and this was owned formally and operated by Chemical Lime which you are all familiar with, and in 2007 Rinker was acquired by Cemex or the Cement Company of Mexico. That's an abbreviation. Cemex is one of world's largest construction materials companies. The Company has operations in 50 countries. This is really a very serious and large company, and some of these countries, for example, include the U.S., Canada, U.K, France, Austria, Australia, Hungary, to name just a few. The Company employs over 60,000 people worldwide and has annual sales of over US\$25 billion. Now, isn't that attractive? Very, very attractive indeed. I think that if we were to get some of that revenue right now it would solve the economic problems that we have. Right Councillor? Let's go on.

DR. DOUGLAS: Now, construction of a port and conveyor corridor at Rocky Point, Clarendon, that is what they are proposing to do; they are the proponent of, and this is what an application is legally in front of the Natural Resources Conservation Authority, NEPA about. That is what the application concerns, construction of a port and conveyor corridor at Rocky Point, Clarendon. That's what the EIA was done on and that is what was submitted and presented to NEPA against a specific set of Terms

of Reference. The investment is to the order of US\$300 million, and this includes the development of the port facility and the conveyor corridor. Plans to expand the quarry operation is an entirely separate project.

PARTICIPANT: One of the document is \$100 million.

DR. DOUGLAS: Probably for the port side. The total investment at some future dates will be for US\$300 million. So, please correct that for me. Ladies and gentlemen, it will be US\$300 million. Thanks for the correction.

DR. DOUGLAS: So the expansion of the quarry is a separate project, and that will have to be done against a separate set of Terms of Reference and a separate Environmental Impact Assessment. Job Creation: The project has the potential to create several jobs during the construction phase as well as during operation phase. Overall during construction and operation combined it will employ about 380 persons. During operations it will employ about 150 persons full time. Now, I need to tell you, ladies and gentlemen, how important this is in terms of the Jamaican economy in its present state. As you are aware, almost the entire bauxite alumina sector is on its face at this time. Windalco, Ewarton Plant is closed, Windalco Kirkvine is closed. Alpart is closed, and this is accounting for over a billion US dollars in revenue. We will start to experience the shortfall in the very near future. Several hundred persons, skilled and unskilled are out of job. Revenue flows to the Government of Jamaica as a result of that is drying up significantly, and will be dried up for years to come. The second major mineral resource that we have in this country is limestone, and that exist in even greater abundance than does bauxite. It means one has got to find opportunities, for a number of reasons, to develop this resource so that we can try to close this deficit which could throw the country in serious economic turmoil. Having said that we can move to the next phase, where will it be located. The proposed port facility will be constructed at Rocky Point, Clarendon. That is if it receives a permit from NEPA, and this will be in the vicinity of Jamalco's existing Rocky Point port which has been in existence for more than 38 years. There will be the routeing of a conveyor corridor from the proposed limestone plant to the proposed port facility via Rocky Point causeway.

DR. DOUGLAS: If you look at it in terms of the region, the revised -- and you hear we talk about revised, we will go into this in more details -- the revised port is now located around this area here, and this is the ship channel in which the

ships will come to berth up alongside the port. This is what it will be looking like. The conveyor corridor will run along this point and go one of two directions, but most likely in all probability it will probably go on the plains, but we will look at that as we proceed. This is where we are now, and this is revised from what was there before. What was there before extended all the way along here and accommodated a stockpile area for the crushed, sized and washed limestone. This is no longer there, because the seagrass bed that was here was just too extensive at 7.5 hectares, and NEPA requested that we adjust this footprint and make it much smaller, and Rinker selected engineers and ourselves and a team of experts from a company called WilsonMiller, they did exhaustive work to make this adjustment to bring it from 7.5 to 1.19 hectares, but we will go into that a little bit more. Now, in summary, we will have a limestone export facility which is roughly located mid-island Jamaica, and this is not something that one can regard as being novel, it is something that is being worked on for the longest while. The Industrial Development Policy, the most recent one for Jamaica, speaks to the development of a south coast limestone port dedicated to the export of limestone. This is the furthest that this project has ever been taken at this point and we hope it will go much further in implementation.

DR. DOUGLAS: The port will accommodate PANAMEX vessels. That is vessels that has a capacity of 60,000 tonnes at a time, and it is expected that two to three vessels per week will berth at the port, being loaded with the cargo and then set sail. Crushed, washed and sized limestone is the product, and there will be a reserve or a working stockpile at the port of some 90,000 tonnes, and this is to enable filling up one ship with 60,000 tonnes, and having 30,000 tonnes remain behind while you replenish and replenish the stockpile from the conveyor. So there will always be this amount of material there, roughly, so you don't have a ship that is docked up and you cannot fill it with material. The ship channel and turning basin will be developed for vessels to berth by dredging a 100-meter wide area to a depth of 14 meters. The conveyor corridor will be constructed connecting the plant site with the port to transport the material.

DR. DOUGLAS: There are employment opportunities, as I mentioned earlier, some 380 jobs totally with 150 permanent jobs in operation. This on-site peak labour estimate shows what the labour demand will be as the project is implemented, and it corresponds to what I told you about the 380 jobs

totally and 150 jobs permanently. It's 380 during construction, during pre-construction, and during operations we will end up with 150.

DR. DOUGLAS: Most of these things you are familiar with already but we will just tell you what the general geology of the area is. In the port and stockpile area: Area defined by narrow low lying mixed clastic carbonated beaches developed in front of the mangrove and swamps. Consists of alluvial deposits at the surface. More or less similar to what you are seeing out here.

DR. DOUGLAS: Salt Island: The south western and sections of the western coast comprise dense impenetrable mangroves. As you know this is very important, because in this Portland Bight area we still have the largest single stand of mangroves remaining in Jamaica. I need not here emphasize how important this is for the number of natural functions, important functions that it performs. So mangrove is very, very important. It's a very important eco-system which forms habitats for a number of organisms both terrestrial and marine, and so everything has to be done to conserve it and to mitigate the impact and to regenerate it as far as practicable. The eastern coast consists of more or less continuous narrow shingle ridge with mangroves.

DR. SUTTON: Why you talk about the Salt Island, I don't understand? Something is proposed to be done on? Salt Island.

DR. DOUGLAS: Nothing will be done on Salt Island.

DR. SUTTON: Why is it mentioned?

DR. DOUGLAS: We spoke about regional context Dr. Sutton, so we are talking about Portland Bight and Ridge, we didn't necessarily have to have specific activity there.

DR. SUTTON: I thought you might mention the peninsula.

DR. DOUGLAS: Rivers and drainage, the hydrogeological findings: Apart from the two Salt River tributaries there are no perennial streams in the area, but we know that there is an important thermal salt spring, a mineral spring up the road, and this has been taken into account in what we have done as well. This is not expected to be impacted because of the origin and direction. Several brackish springs along the eastern side of the Braziletto

Mountains and Harris Savannah are fed by ground water. Ground water is utilized in the area by industries such as Chemical Lime and Jamalco. Biological Findings: We did both a floral assessment and a faunal assessment. Under floral assessment a total of ten confirmed endemics were encountered. Their occurrence within the flora range from mostly rare to frequent. Two additional species, Agave, which you all are familiar with, and Esbenbeckia, (Wild Orange), were not encountered in the site but are claimed to occur within the area. We just didn't see any when we did our field studies.

DR. DOUGLAS: Faunal Assessment: Seven endemic birds were identified in the area at the time the study was done. At least four species of the snake Arrhyton are known to exist in the Portland Bight area, three of which are endemic. We must state as well that this Portland Bight and Ridge, especially the Ridge, whilst it is a very, very important ecosystem we are dealing with, and while we are talking about an area that is a declared protected area, we must state that some of these characteristics, biological and otherwise are located in other parts of the South Coast of Jamaica also. Now, in terms of the historical heritage findings there are caves, middens, Taino sites and radioactive springs identified further north in the community of Salt River. None of these will be impacted. Artifacts, buildings or areas of historical importance will not be impacted by the proposed project.

DR. DOUGLAS: Previously Proposed Development: Port, this was before we revised the study. The previously proposed development involved the port, which remains the same. The aggregate stockpiling area down by the port has been changed; conveyor corridor linking the stockpiling area to the port. And the main concerns were size of the development, seagrass impact area, seagrass re-planting or relocation. In doing the revision we have addressed these concerns, and as I said we have moved from 7.5 to 1.2 hectares and so on. We will go through this as we go along.

DR. DOUGLAS: Now, this was what the previously proposed development looked like. (Indicating on slide) This was the footprint of the entire port area. Here stockpile, and this hatched in green here is where the seagrass is located. This was what was proposed, and we will now move to look at the revision.

DR. DOUGLAS: Modified Proposed Development: The port remains but it is modified significantly. The conveyor corridor remains, again adjusted. The major



difference is, no major aggregate stockpiling area down by the port side anymore. This has now been taken out or is being considered for a location elsewhere on land. The footprint of this stockpile area is now significantly reduced. The seagrass area that is being proposed for impact now has been reduced from 7.5 hectares to 1.2 hectares, significantly less, about one-seventh roughly of what was being proposed. And I can tell you, ladies and gentlemen, a lot of engineering work, ecological work, marine, terrestrial go into this to come up with this solution. Improved potential for seagrass replanting relocation: After looking at a number of candidate sites one has been identified, and there could be others that could meet the criteria required for re-planting or relocation of seagrass.

DR. DOUGLAS: So this is what it now looks like, the design. You can see it is in this area; it is much smaller; it is in deeper waters. You can see that the impact area the footprint is no longer on top of the seagrass. The footprint is no longer on top of the seagrass, but regardless there will be some impact. (Indicating) That more or less is a drawing of what we have just seen of the port, the turning basin and the ship channel layout. (Indicating) The port layout, (Indicating) and this gives you some more detail. There will still be some seagrass involved, and this is small, but this is what makes it come down to 1.19 to be exact, but 1.2 roughly when you round off the last two digits.

DR. DOUGLAS: The conveyor alignment, this is shown here, where the conveyor is proposed to go. There will be an angle station at this point and it would go to the plant site where the rocks will be washed, and a major stockpiling area will be located for transport via the conveyor to the working stockpile which we described earlier.

PARTICIPANT: Where on that picture is Salt River, and the mouth of Salt River?

DR. DOUGLAS: I don't think we are seeing Salt River here. In doing this, ladies and gentlemen, although we now have a proposed project, which I have just described for you in brief, we had to look at several other possible alternatives, and these included the position of the port. We are looking at closer or further away from the coastline for a number of reasons. Some of them include protection from hurricanes and other natural hazards. Stockpiling was one of the alternatives that had to be examined in detail, and this includes looking at it in deeper waters, or on the plains or within the plant site, the quarry site. The conveyor corridor, the alignment from

plant to port had to be adjusted variously to minimize the impact that this would have on the resources that are in the area, and taking various things into consideration, such as even elevation, which is important, so that you don't cause a shading of some of the plants. Obviously these plants need sunlight for photosynthesis. Stockpiling in deeper waters: This is what it would look like if you were to shift the stockpile that was here originally in the seagrass bed to deeper water. That's basically what it is saying. This alternative is not a practical one, it's not the best one.

DR. DOUGLAS: Port closer to the coastline: This is also a viable and possible alternative, and the impact on seagrass is what is 1.2 hectares in this case. And there is also the benefit of some protection from hurricanes and other natural hazards.

DR. DOUGLAS: This is the one which is further away from the coastline. Now, in this case there is almost zero impact on seagrass. As I mentioned earlier, some of it is inescapable, but it's even less than what you see from the previous slide. Conveyor routes to coastline: This is one possible conveyor route to the coastline. This is another conveyor route to the coastline proposed, and this is also another possible conveyor route to the coastline. The application is concerned with this conveyor route. Seagrass Mitigation Plan: This was the purpose of having the international team from the international experts WilsonMiller come down here. The impacts have been reduced from 7.5 hectares to 1.19 or 1.2 to round it off. The mitigation area, 1.6 hectares, is 1.3 times the impact area. To do this one would utilize suitable spoil material, that is dredged spoil material from channel dredging and facility construction, to fill the area, a previously dredged area. You must note, you know, this is nothing new for this area, because that area has been dredged previously as well. That was done to build the Jamalco Rocky Point port.

PARTICIPANT: Before impact study was of any significance.

DR. DOUGLAS: Maybe if we had doing impact study maybe Jamalco port would not have been built at all, given the richness of the resources in the area. We just have to be practical and face facts about it. The point is, dredging has taken place in the area and we have found one dredged area which could be a suitable candidate for re-planting seagrass after taking certain action. This aspect of the work obviously is not yet concluded, there are other

things that would follow up later on, but I think a significant part of it has been covered.

DR. DOUGLAS: Supplemental transplanting is the method that will be used. Mangrove Mitigation Plan: Now, I need to stress here that this Mangrove Mitigation Plan, as I said before, is equally important to the Seagrass Mitigation Plan, and though mangrove has the ability to regenerate itself quite rapidly, as most of you might have observed from time to time living in this area, let me stress that this is not the impact area of 5.6 hectares, it is impact zone. Most of this area does not have mangroves in it, but it is just a zone in which it is located. You see what I am saying? It is based rather on habitat dynamics rather than on the individual areas covered by the plant. Establishment of tidal connections\flushing channels to provide tidal flushing within previously impacted zone. As you know, construction in the area resulted in, let me say changes in the current regime and flows, and consequently when we speak about tidal connections, what we are saying is, through various means to establish hydrogeological or hydrological connectivity and make the area flushed and regenerate itself, better than it is even now doing.

DR. DOUGLAS: Excavation and re-grading: I told you that dredged spoil will be used and the area that is the site proposed for planting the seagrass will be upgraded and filled to established appropriate mangrove elevations, and then planting of mangroves buttonwoods will take place. This is the area that is proposed for seagrass mitigation, and these other areas here proposed areas for mangrove mitigation. And this is another area in with which you could have some mangrove. (Indicating on Slide)

DR. DOUGLAS: Now, very quickly, the major impacts identified to the ecology and avifauna - proposed port and conveyor construction may impact existing flora and fauna. Visual: Proposed conveyor corridor may have visual impact on surrounding areas. Air Quality: Limited impacts from dust generated throughout construction. Water quality: Limited impacts from dredging exercise throughout construction, which are turbidity and siltation. Noise Impact: Limited impacts from noise generated throughout construction, vibration and noise from operation.

DR. DOUGLAS: Sensitive landscape and water courses: The proposed conveyor may impact on wetlands and surface water resources in the area. Potential environmental impacts which may result from this project implementation

are as follows: Minor change in the drainage regime, the hydrology. Change in run off water quality. Noise and vibration - conveyor and ships. Air Quality: Mainly dust. Socio-economic Considerations: We have to take into account squatting during construction and even afterwards. It could happen. Vending is something that takes place at almost every construction site in Jamaica. There could be an influx of workers seeking jobs, although the policy of Rinker Cement is to employ people from the area firstly, once they meet the qualification criteria and experience required for the jobs that will be available. You are going to still have people from outside the area coming in to get jobs. Tourism options, are very important, and I know that there are various considerations for certain types of tourism activities, including eco-tourism and some people are considering even, I understand, to build rooms in the area. Visual Intrusion and Aesthetic: Always very important, and there is the potential for changes as a result of visual intrusion. I describe one very briefly about the conveyor corridor and the skyscape, and aesthetics as well, there is going to be a change. Loss of Biological Resources: The mangrove 5.6 hectares, that is the impact zone as I mentioned, and the seagrass some 1.19 or 2 hectares.

DR. DOUGLAS: Potential Positive Impacts: Increased foreign exchange earnings, which I described briefly at the very beginning. Improvement in the shipping channel. Additional berthing facilities for Jamaica's south coast, which we seriously lack. Creation of a modern dedicated limestone shipping port is a major infrastructural asset. Increased usage capacity of the port, which I have described in terms of the PANAMAX vessel. Employment Opportunities: Some 90 to 150 persons permanently, and some 380 persons during pre-construction, construction phases and operations combined. In the limestone sector we would have the development of greater persons obtaining jobs and of course they could be trained as well to become skilled labourers. As you are probably aware, a similar type of situation existed in Jamaica's Bauxite Alumina Industry, that in earlier years it was very difficult to find all the skills that were required, and over several years persons were trained and were able to command even the most technologically and scientifically demanding jobs. So these are things that could happen, potential positive impacts if the project is permitted and implemented.

DR. DOUGLAS: Improved Socio-economic Standing: Clearly these benefits would have multipliers to them that would flow to the communities in the area. Every

single job supports at least five other persons, and these persons who are employed will now have to purchase various services directly and indirectly that were not even connected to the specific port. So that there are a number of benefits that could be felt if the project is permitted and implemented. The community stands to benefit substantially through a number of initiatives. This could include, for example, improved supply of water; assistance with the development of playing areas, also with educational areas and so on, but the corporate representatives are here and later on they will answer some of the questions that you might ask. But, this is not a company that simply intends to come and don't be cognizant and integrate with the community in which it plans to operate for years to come. Impact Identification And Mitigation: Removal of vegetation and loss of habitat and the aesthetics. This will be mitigated through landscaping and other related activities, and also through the creation of buffer zones which have been proposed from the very outset and which is included in the plans for the operations. Relocation of endemic species or setting up of nurseries as necessary. And, of course, there is the technology which exist now-a-days to facilitate interventions of this kind with biotechnology and of course genetics being where it is today. Solid waste handling and disposal: Conventional proven best practice methods will be used to ensure that there is no litter. Just recently Cemex was awarded one of the major prizes by the U.S. EPA for their operation of the cement plant in Florida -- they can elaborate on this for you later. Cemex received the award for reducing their carbon emission significantly. The point I am making is that policy wise this is a very serious corporation when it comes to a number of things, and environmental management is one of them that is high on their agenda. So in this instance, maintain and improve existing regime, that method which is in place now. Utilize approved haulage contractors. Incorporate an effective solid waste management plan. Sewage Management: Chemical portable toilets will be used at the port. Hiring the services of certified licensed contractors. These are the two things that will be done. Remember though, we will ensure compliance with NEPA's standards and those of the Ministry of Health and Environment for sewage management. Marine Environment: Potential sedimentation from dredging will be minimized through the use of silt screens during the dredging operation. Mangrove restoration will be greater than three times the proposed mangrove impact area. So that just in case you didn't really succeed 100 percent, if you were to succeed 66-2/3 percent, then you would still have planted and successfully seen to it that even more mangrove is re-established in the area. Relocation and/or

transplanting of seagrass will be the mitigation, and I described that earlier. Drainage: Clearly you are going to do things in the area so inescapable disturbance of the existing drainage features will take place as a result of the project, but this will be kept at a minimum and a new engineered set of drains will be constructed using NWA guidelines for their design and of course to guide their construction. Retaining the existing drainage characteristic where practical, so that we do not bring about any unnecessary changes in the environment. Fugitive Dust, Air Pollution and Noise Vibration: The Company will use high capacity telescopic loaders for loading limestone aggregate, that will be washed and sized, into the PANAMAX vessel. A sound and effective dust suppression regime to minimize dust. Let's face it, you are hardly going to have any dust with the washed limestone. That's part of the reason for washing, to remove the free particles that may be more friable and can become more readily wind blown.

DR. DOUGLAS: Proper maintenance and efficient use of the equipment with appropriate parts such as silencers to minimize noise. Covered conveyor belts; particularly in built up areas and across the main road. These are also known as hooded conveyor belts because they are covered and enclosed. Now, any Environmental Impact Assessment must have the elements of an Environmental Monitoring Plan. The Environmental Monitoring Plan is usually placed as a condition to the permit, which must be developed in even greater detail. An Environmental Monitoring Plan, ladies and gentlemen, has as its primary objectives, ladies and gentlemen, to see to it that actions that is proposed to be taken to ensure that we avoid certain negative impacts, that they are done, and where we propose that certain impacts be mitigated, the Environmental Monitoring Plan sees to it that these are adhered to. It also sees to it that the relevant environmental policies, legislation, regulations and standards are complied with. The frequency of this is determined by NEPA. In most instances you probably start out at two weeks intervals, depending on the intensity of the project, then it probably goes to monthly intervals and then it goes to quarterly intervals. Whatever the frequency, however, it must be done and it must be done from before construction commences, which is what you get from the baseline here, and again during construction and to a certain part, usually six months or even more than that during the operating phase. All of these intervals I mention require that reports are produced on a regular basis, properly documented and supported with appropriate empirical data with properly certified equipment and instruments that are reliable and

dependable, so that the data that is generated will be valid and useful and relevant. So all of this is a part of the project, and the environmental monitoring will therefore be conducted throughout all phases of the project, namely, through pre-construction phase, construction and the operation phase, and this will ensure full compliance with the environmental standards, as I mentioned, and approved guidelines by the regulatory agencies, not only NEPA but all the agencies. NEPA really act on behalf of some of them in terms of monitoring, but when we do the Monitoring Plan, the Monitoring Report is distributed to several relevant related environmental agencies; and we must see that this compliance is consistently achieved.

DR. DOUGLAS: Ladies and gentlemen, you have been a very, very good audience, you have been extremely attentive, you have not been disruptive. In fact, you have even been helpful in assisting me to correct certain things, and so I want to thank you most heartily for the level of participation; that you took the time to come and you participated so kindly and so attentively. So, as we usually say in these consultations; these public meetings are really your meetings. It is the requirement of the law, being more so, it originates from good policy and good professionalism, and so at this stage I am just asking you to ask the questions that you wish to ask, do so in an orderly manner as you have been doing, address the questions through the chair and also note that every single word that you say is being recorded verbatim. I am just reminding you that even after this meeting is terminated today, that those of you still have concerns or anyone not even present at the meeting can write into NEPA and state what the concerns and issues are..

CHAIRPERSON: For this section persons who want to ask questions you can just raise your hand and please state your name.

DR. DOUGLAS: State your name and state the organization or community with which you are affiliated. Let me just point out that there is an attendance register being circulated and we would be very happy if you could sign this.

DR. DOUGLAS: Yes Councillor Maragh.

MR. MARAGH: I am Winston Maragh, Councillor for the Rocky Point division. Sir, at previous consultations you have heard that a lot of concerns were raised by community members in respect of the impact that they believe this project will have on the community and on other areas. Have they been

address? Have they been taken into consideration when submitting your proposal to NEPA? Did you hear concerns such as the mineral bath up there and the dust nuisance? Yes, you did mention something about that. Also the impact on the structure of their houses. Could you tell us exactly if all of those concerns were raised with NEPA and what they said about it.

DR. DOUGLAS: Thank you very much Councillor Maragh. All of those concerns have been documented and have been sent into NEPA and it's a part of what they are taking into consideration in the review process. In respect of the mineral spring, it's a major resource we all recognize, and therefore time was spent on it by the geologist and further consultations carried out with the Water Resources Authority and it is not at risk. In respect of the potential for dust, that has been addressed, in the sense also that we established a number of dust monitors and have recorded what was the present level in the environment and therefore what was the capacity for it to absorb any sort of dust. We found that, yes, it can be done, and at best be compliant with NEPA's standard. In addition to that what has been proposed, and I keep stating and I will state it again, the limestone that is excavated will be crushed, it will be washed, it will be sized. So whatever fine particles, and there is none --this is not like alumina dust, for example, that is a very fine particle, it is rocks that we are talking about. That's one. There is still nevertheless the potential for dust, fugitive dust to be generated, but this will be addressed through a dust suppression regime which involves irrigation of various areas, exposed areas, that could be stockpiles, as necessary, varying with the particular weather condition at the time. You will remember you were one of the persons, and we are glad that you did, who in one of the earlier consultations was quite deeply concerned about the seagrass impact and the mangrove impact. That was placed on the record and of course this is one of the reasons again, ladies and gentlemen, why we have this revised EIA moving from 7.5 hectares in the case of seagrass down to 1.19 and also proposing a mitigation area in addition to that.

MR. MARAGH: Let me just follow up. Considering that you will be moving most of your project area towards the property over here, which is between Salt River and Mitchell Town, I am going to ask you to have a meeting such as this in the community of Mitchell Town to explain to the people there that all of these operations will not emit dust on them over there.



**DR. DOUGLAS:** Councillor Maragh your point is well taken, and it is so well taken that let me say that there are certain conditions precedent which must fall in place, such as Cemex must of course acquire the land successfully in the first instance, which they are working on. And secondly, even after that is done, a separate Environmental Impact Assessment against a set of Terms of Reference must be done appropriate to the whole thing, and I am sure given my experience that air quality assessment is going to be one of the requirements. Having said that, it's not just a matter of measurement, it's a matter to see that the integrity of the air quality is maintained and compliant with what the regulations and standards say, so that there is minimal impact, if any, most of the time on the residents of Mitchell Town. In addition to the physical parameters and the biological and historical heritage that must be done, just to name a few, detailed socio-economic assessment must be carried out. The Company has a policy also in respect of the whole business of structural damage to various structures already in place, houses and so on and so forth, and clearly this will be implemented strictly. I think I can speak authoritatively on their behalf. This usually involves conducting structural integrity surveys before blasting and after blasting, and I would think that there is a policy in place for mitigation in the event that their activities should cause any kind of damage, within reason.

**MR. BARTLEY:** I am DaCosta Bartley, from Country Wide Medical Diagnostic Services. I have a question on the matter of the water quality as it relates to run off water. Your comments earlier suggested that there will be a negative impact on the run off water quality. What I am asking here, and I am bringing to the fore, is that that negative impact on the water quality will also have a negative impact on the actual surface water, especially during high rainfall seasons and stuff like that. What will happen is that that water at collection points will necessarily change the nature of the quality of the water at the collection points where that negative impacted water is collected from a surface hydro-geological and hydrological situation. So there are two aspects to it. What I'd like to find out is what have you found out so far on it (1) and (2) what type of corrective measures? Say, for example, the vegetation that would change. For example, if you are planting say coconuts, coconuts like a more brackish type of environment. What will happen is that the run-off, of the calcium carbonate goes down to say coconut, it will change the nature of the water that is going to be feeding that plant, and I wanted to find out what kind of concerns, how you looked at it, how you plan to deal with it over the long term, short

term and medium term, all of that, because it's going to impact the vegetation and the whole holistic nature of the environment down the road.

DR. DOUGLAS: Thank you very much for raising the point,

DR. DOUGLAS: We recognize the seriousness of this project. Not only in terms of economics, but also in terms of the environmental impact that it would have potentially, and this is why we are here this evening. And let me point out to you in respect of that we did an exhaustive and very intensive environment and baseline study, in which a number of water quality parameters were measured throughout the area, and this is documented in great details in the Environmental Impact Assessment. So that, for example, we did the biological oxygen demand, dissolved oxygen -- a whole host of things, chloride, nitrate and all sorts of other parameters. I am going to ask you if you can revisit that just to satisfy yourself. What we found is that the baseline was largely within compliance with NEPA's standards. Now, in the case of what is proposed here, there will be no chemical pollutants whatsoever that will be generated as a result of the operations, none. The only thing that you probably might have to concern yourself with, if it were to happen from a spill, is oil and grease. Only that, nothing else. When we speak of possibly a deleterious impact on water quality, what we are alluding to is that there could be an increase, slight increase in the turbidity from run off water, as a result of it containing a little bit more suspended particulate matter. That's what I think you mean. Now, the drainage that will be designed: two things you have to bear in mind. The drainage that will be designed will have silt traps inside of them which will capture and minimize the amount of suspended solids under all conditions of rainfall. So that's one. And so this is a part of what will be designed into the entire system.

DR. DOUGLAS: The second thing is calcium carbonate is one of the most important nutrients in all of nature. It does not impact vegetation negatively. As a matter of fact it is important for a number of the physiological functions of both plant and animal life. Just to name a few, in the case of animals, for example, our bones are made of calcium carbonate, our teeth are made of calcium carbonate, egg shells that are laid by chicken are made of calcium carbonate. It is something we cannot do without. In the case of plants, plants need calcium for structuring their cell walls. As you know plant cells are made of calcium pectate. This is where you get most of the

pectins from used to make jams and jellies and that kind of thing. So it does not have that kind of impact. If there is a negative impact that's associated with suspended particulate matter, it is potentially, if it should adhere to the respiratory surface of various kind of organisms, plants and animals, but in terms of ingestion there is no problem with ingestion, except temporarily there could be a reduction in the organism's energy budget, but this is not the case at all, at all, with vegetation generally. So we do not envisage any impact on the vegetation as a result of the slight increase in turbidity. That wouldn't happen during heavy rainfall because there will be engineer designs to deal with it, and even so it's an important nutrient, material. I hope I have answered you.

MR. BARTLEY: You have. However, I would like to point out there is the whole question of neutralization that can take place, and I would not want it to be glossed over and over simplified in that regard, but you have answered it and I take the point. I would say to you though, that in the event of mining, exposure level of that particular material is increased, significantly, by virtue of that, and as a consequence, the impact of say high water surface run off would create a fluid that in some instances would -- I mean the turbidity, for example, that you speak of could change the nature, just for argument sake, of that water going down to say the river down there.

DR. DOUGLAS: Salt River.

MR. BARTLEY: Yes. I am using it as an example. In an instance like that should there be heavy run off that could occur. That would be negative. I was principally dealing with the whole question of vegetation which you have answered reasonably well.

DR. DOUGLAS: Thank you very much for the point. As you think we have answered it effectively, but just again to emphasize that in terms of fine material this will not be a problem with the port because the limestone that is transported there by the conveyor and stockpiled would have been washed, and when the material is being loaded into the ship's hold it is being fed with a telescopic chute, so you need to take those two points into account. In a separate EIA later when you consider the quarrying and the fine material, then probably this is what you meant by utilization, and of course Rinker/CEMEX is aware of the potential for utilization. But, even so, the plan would be for containment of that within an impoundment area.

So that it would not be free and available to be transported by the water during heavy rainfall.

MR. BARTLEY: Okay, thanks.

DR. DOUGLAS: Councillor Barnswell.

MR. BARNSWELL: Good evening. I just want to echo once again the concerns. First I must commend you for revisiting the disturbance of the seagrass area from 7.5 to an 1.5.

DR. DOUGLAS: 1.19 to be exact.

MR. BARNSWELL: Because I am concerned about the environment, not to disturb it or to leave any ugly scar on the environment. I am happy you have taken that into your report.

DR. DOUGLAS: Certainly.

MR. BARNSWELL: What I want to get from this meeting, so I keep echoing, is a document binding the Company that it will adhere to the concerns and address the concerns and issues of residents in the Salt River area and by extension the other communities. (1) How would they be compensated for damage caused to their property by the operation? (2) If the mineral spa is contaminated how will that be addressed? (3) If the minimal spa flow has been disrupted from the operation how will you deal with the situation? The noise and dust pollution, how will it be addressed, and those persons affected how would they be compensated? (5) There will be an office set up for persons to go in and lodge their reports and complaint? (6) The development that will derive from this project -- yes, employment is high on your presentation but the community presently is without potable water, and I know you will be using water with the mining of limestone, how will the residents benefit from tangible development, and I am putting forward potable water for the community of Salt River. Are there any plans ahead to assist the community to get water in their households?

DR. DOUGLAS: You have raised a number of issues Councillor Barnswell, and I am glad you have raised them, because they are all recorded here and will be going forward to NEPA for the entire review process.

Let me point out that a number of things you have raised are policy matters and regulatory matters. The policy matters must be compliant with the policy of the Government of Jamaica, and the legislation and regulation, they must comply with what exist in the standards. So all of those things that require compliance, the Company will comply with them.

**DR. DOUGLAS:**

Now, there are other corporate policy matters that you have mentioned in respect of community outreach programme and community support and so forth. I know, for example, that in the design of the entire project Rinker Cemex has always been quite more than cognizant of the need for water in Salt River. They have designed whatever water they have taken into account for their requirements in the plant, to take additional water to bring water to the community in the area. So they are thinking along that line, and should the project be permitted and goes forward and they acquire the land, clearly this is one of the things that they would do, and when I mention previously about other assistance that they could do, then you know it is not frivolous. To get a binding agreement out of a meeting like this without even a permit in place, obviously, you know that could never be possible. But we understand what you are saying and it is in the record. If they should have a permit they probably won't even have a binding agreement, but they maybe willing to sit with the Community Council and have dialogue about these matters and what can be reasonably done, amicably done, cost effectively done to assist with development. They would probably do it, because obviously it could be in their interest as well as the community's that the residents are developed to their potential and that they are protected as well. They don't want to operate in a disruptive environment; they don't want to take away anything from the environment, they would like to help the environment to grow and to develop. I am certain that you have perceived this in the various exchanges and interactions that you have had with them to date. I don't know if Mr. Hazle or Mr. Arellano would like to elaborate on this particular point. Mr. Hazle is the Vice President for Rinker Cement.

**MR. HAZLE:**

Good evening everybody and thanks again for coming out and continuing to impress me with the level of interest and willingness to participate in

the development of this project; it impresses us as a company. I think what has been stated about policy and posture of the Company towards the communities in which we are going to be involved is as accurate as we can tell you at this point. Obviously, we are demonstrating our willingness to comply with the requirements at this stage of the project, like with the nature of the meetings that we are conducting. We think in our assessment of the needs of community, we are trying to identify all the relevant ones that we have the opportunity and ability to respond to - jobs, water supply. I think just as Conrad has pointed out, it is premature at going to be able to find water of adequate quality to meet potable household needs. We just don't know yet. The Company is prepared to work with the National Water Commission and the local council. I understand that there are a number of projects that are on the books and if we can participate in and help to bring to implementation we will gladly consider it. With respect to responding to people's complaints, our primary objective is to avoid people having to complain, but you know, we realize that we operate in an industry where sometimes unintended consequences are caused. Mr. Arellano here operates one of the largest mines in the United States, in Florida, within very close proximity to neighbours that are much more dense than the ones here, and so we are used to interacting, responding to people's complaints, whether it's concerned with noise or blasting or dust. So far we have demonstrated the ability to co-exist. I know I am not signing a document as you originally stated was your objective, but I am trying to give you some kind of sense as to the posture of the Company towards the issues that you raise.

MS. PARCHMENT: Good night, I am Ingrid Parchment, Caribbean Coastal Area Management Foundation. Just to say that we have reviewed the EIA and sent our comments to NEPA, but there are a few other questions I just want to throw out. The first one, was Jamaica National Heritage Trust consulted in doing your EIA?

DR. DOUGLAS: Yes, they were consulted.

MS. PARCHMENT: How do you propose to successfully relocate endemic species? God has chosen not to do that, why do you want to? You said you are going to be relocating endemic species, how do you plan to do that?

DR. DOUGLAS: We said that whatever technology is available, and there is creative conservation, as I am sure you are aware, and endemic conservation does

not mean taking the particular species outside of its habitat. One can do in-situ biotechnology.

MS. PARCHMENT: That's what you plan to do?

DR. DOUGLAS: I didn't say we plan to do that. I just want to let you know that, for example, Rinker/Cemex has one whole dedicated arm in all of North America and other parts of the world that is dedicated in doing just this alone. As you know, Ingrid, there are various nurseries and so on that have been established and are being established in Jamaica, based on the Biotechnology Centre at the University of the West Indies and also that which is located in the Scientific Research Council of Jamaica, so there is no doubt that things like this can be done and can be achieved.

DR. SUTTON: This is really relating to a different question. Have you done any impact assessment of your proposed mangrove rehabilitation, because what I am noticing from the map which we haven't seen previously of your rehabilitation areas, that mangrove rehabilitation will have serious impact on globally threatened species.

DR. DOUGLAS: Could you elaborate on globally threatened species.

DR. SUTTON: West Indian whistling duck. This species is only found in the West Indies and Jamaica has one of the largest populations in the world. This is not a trivial thing.

DR. DOUGLAS: I am not making it trivial.

DR. SUTTON: What I feel strongly about is that you are talking about a proposed mangrove rehabilitation to areas which already have mangroves and which have threatened species in them which are quite happy in the mangroves as they currently are. So your mangrove rehabilitation will actually reduce the habitat for the very species we are trying to protect, in Ramsar site which is globally important, and in the protected area, so I really would like you to reconsider what you are proposing in terms of your seagrass and mangrove rehabilitation. I do not think those are achieving what you say, because putting back mangroves -- I mean a tree is a tree. What we are looking at here is natural functions and that of biological importance. So just saying we took a tree from here and put a tree somewhere else that does not mean what I see perceive ought to be the objective of this exercise.

DR. DOUGLAS: Thank you very much for your comments, and these are noted. The fact of the matter is that we have to take into account -- as I said we are talking about an impact zone of 5.6 hectares in the case of mangrove, and we are talking about natural habitat. In fact, we have significantly less than the 5.6 hectares.

DR. SUTTON: Which will now be exacerbated by your proposed rehabilitation.

DR. DOUGLAS: One second. You are talking about the most extensive single largest stand of mangrove still remaining in Jamaica, of which that area we are talking about is significantly smaller than the entire area combined. You know that. So what I am saying is that even at this stage -- and we appreciate the cooperation that we have received from CCAM -- this is not yet final and finite, this is proposed, and this is a very, very small area for mitigation inside the entire area.

DR. SUTTON: It is a very important area to the species. I am saying whether or not the total area is small in the overall context of Portland Bight is a separate issue, but the question is whether it's important for the target species.

DR. DOUGLAS: That's the only area in which those whistling ducks are found?

DR. SUTTON: One of the most important areas.

DR. DOUGLAS: We will have to take that into consideration as we move further to address the project.

DR. SUTTON: Could I ask you to send us a copy of the rehabilitation map that you showed?

DR. DOUGLAS: Sure, no problem.

MR. LAMBERT: May I ask a question through the chair to Dr. Sutton? Are those whistling ducks being shot from time to time?

DR. SUTTON: It may well be shot from time to time.

MR. LAMBERT: I haven't heard any objection in terms of those people who shoot birds in the area.

DR. SUTTON: if they are able to shoot them



MR. LAMBERT: But we need to have that objection everywhere, not just in this meeting. I don't hold any brief for these people, but we can't just come here and be just technical. The people live in the area need to know all these things prior, we need education. People like you must come in the area and educate the people.

DR. SUTTON: I do.

MR. LAMBERT: I am really glad for that, and they need to be encouraged, because when you have these sorts of discussions and debates you know it's sort of over your head and everybody else. I am an environmentalist, I understand what you are saying, but I don't hear any large and great objections against privileged people who come and shoot those whistling ducks. Are you aware of it?

DR. SUTTON: I am aware of that, and we are making every effort that we can. What we need to do is have the information from the community when these things happen, and CCAM is very ready to

MR. LAMBERT: I live in the community and I am not aware of your concerns. I am glad you raised it.

MS. PARCHMENT: Any information about those activities can always be reported to us. We will try to see what we can do, but we would also talk to NEPA about that. That's why we have community persons who are acting as game wardens.

MR. LAMBERT: We don't want to have any debate, because NEPA is selective most times. I am not knocking you people, it's good that you do it here.

MS. PARCHMENT: Thank you.

MR. LAMBERT: Derrick Lambert, Environmental Consultant. I grow up in both areas: Mitchell Town and Salt River. I don't have any great, great concern. What I want to do is congratulate you on your presentation, it was a very good presentation in relation to what was put forward in terms of your former project as against what is revised now. Again, education is a very important tool, and when we talk about coming here and having meetings and all that, you must educate the people to let them understand that there are two schools of thought about development. One basically is techno, where technology dominate and we don't care about what happen, maybe like what Alcoa did in the earlier time. Now we live in modern time and

we are more eco-centric, we are cognizant of our surroundings and it's very important that education be made available, and I want to talk to my Councillor, he can have my input; Councillor Barnswell and Councillor Mr. Maragh who is absent, these are the things people need to know. You cannot have development without destruction, but like you use the term over and over again we must have mitigations and monitoring, etcetera, etcetera. My concern is that -- not a great concern either, but you people debating about seagrass bed and mangrove; maybe I should ask what about the corals that might be affected in terms of siltation. In fact, I am nearly 60 years old, I remember when I was very young and Alcoa was doing dredging, they dredged out all the corals and make roads from it, from Rocky Point right down to near Mitchell Town crossing. That was a massive destruction, but I suppose we can't hold Alcoa for that, and maybe we may have to balance it in retrospect as to whether or not the destruction in terms of the natural environment as against what was achieved. That is a debate for Dr. Sutton, myself and others. We are talking about siltation, and as you said it will be minimal, and we can understand that in terms of the fact that you are going to wash your product at the primary stage. There is no rocky shore basically, but we are sandy shore, Dr. Sutton, and we also have fauna and flora in the surrounding. That wasn't touched at all, the emphasis was mostly on mangroves and seagrass bed. Maybe you could lend some thought.

DR. DOUGLAS: Thanks very much for your comment.

MR. LAMBERT: I am not finish yet.

DR. DOUGLAS: I'm sorry.

MR. LAMBERT: Most importantly, you have done the revised aspect of your EIA, and you made mention that you had a series of technical people from abroad, Wilson and whatever the name.

DR. DOUGLAS: WilsonMiller.

MR. LAMBERT: But I learn in environmental class that social learning is very important, did you call in anybody locally to ask them to identify things that experts might have missed?

DR. DOUGLAS: Let me put it this way to you, the entire exercise was one that was responsive.

MR. LAMBERT: I just want to say I am available.

(Laughter)

(A P P L A U S E)

DR. DOUGLAS: Thanks very much, it is on record. I must mention though, you know, you state it so nicely that we all had to laugh, but it's a serious matter. We are environmental consultants on the project and there are certain kinds of expertise which we don't have. (INAUDIBLE) (PASSING TRAIN) And if there are people who are available who are doing this and enjoying success rates of 65 percent and over, then it's only prudent that we bring them in to lend assistance, and that is what must be done in compliance or in responsiveness to NEPA's "no net loss policy" for seagrass and mangrove at this time, and in keeping with the Ministry of Agriculture & Fisheries policy to preserve our seagrass bed and let us try and see how best we can develop Jamaica's fishery, which as we all know is in a less than desirable state at this time. So we are very happy to know. Let me put it this way, ladies and gentlemen, the EIA is still out there in the public domain, at NEPA, all those places, Parish Council, here at the post office and so on. Please bear in mind that as you read the Seagrass and Mangrove Mitigation Plan they are not complete at this moment, because further studies will have to be done. I am glad you put forward the proposition that you did, and it will not go unnoticed as the situation arises. Thank you very much.

DR. SUTTON: Just in relation to that, we had discussed previously, CCAM is very willing to work with you in terms of the rehabilitation plans to make sure of that.

DR. DOUGLAS: I am very happy to hear that. Let me speak a little louder for you Dr. Sutton so the audience can hear. What Dr. Sutton has said is that CCAM, and they have been working and integrally involved, providing assistance with comments, whatever the comments maybe, and they are being taken on board and being taken obviously seriously, and when it comes to sharing of information they have been sharing information with us as the project has progressed, and what Dr. Sutton is now stating is that they will be willing as well, moving forward in the future to work with Rinker/Cemex, ourselves as the case might be, proponents of the project. We all have to come on board, and I think this is the spirit in which Ann has mentioned this, cooperation. None of us have monopoly on knowledge

or wisdom. Some of us know things better than others do, and where they can bring their information and knowledge and expertise, clearly Rinker/Cemex will take this on board in the best interest of the project, in the framework, of course, of practicability and possibility. This has got to be taken into account, because the project must obviously be economically viable, profitable, in the long run.

DR. SUTTON: I have other concerns. You talked about dealing with the landscape issues and I see that this community stand to be very significantly changed by the impact of the conveyor belt which is not the subject of this, the one down the hillside, it's not the subject of this EIA, which seems to be very strange that we are dealing with one project that has 2 EIAs, and that seems odd to me.

DR. DOUGLAS: If I might just add, this matter has come up time and time again, and it's a very important point, and there was a point where we almost suspended the whole business to go for one big EIA, and this has helped to some extent to delay the project at this point. The fact is that the rationale is that there is an existing quarry that is permitted to operate at a maximum of 2 million tons per year. This is the Chemical Lime Company. It has never operated at a level more than 500,000 tons per year, and what we have stated is that even if we were to get this permit and implement the project, before you can develop the wider capacity quarry and ramp it up, then you would have material that you could be exporting. This is what we are saying.

DR. SUTTON: And at the trivial level it is now operating, I understand from your EIA, 26 percent of the people who were asked said that they are already being impacted by the mine. They are being impacted by the mine, more than 26 percent.

DR. DOUGLAS: So that leaves 74 percent that's not being impacted. In terms of the need for transparency, clearly this is an objectively conducted socio economic study, and this is what the finding is. Certain people are being impacted and I am certain that people even above the 26 percent that has been impacted, it's not just negative impact, they are positively being impacted as well.

DR. SUTTON: My understanding that it was negative impact. Let's really not delve on my point. My point is people should try and imagine what it's going to be like with a bridge across the road and a conveyor belt, though you don't say in

your thing about how high it will be. We are talking probably 10 meters or 30 feet, so basically the whole community being able to see this eye-sore, really, even though it's a conveyor belt, an urban landscape element that changes the nature of the community, which is very noisy when it's operating. It's not very noisy when it's operating?

DR. DOUGLAS: No.

DR. SUTTON: I understand from your EIA that it's below the 70 decibels recommended industrial condition for people who work in industrial plants.

DR. DOUGLAS: At the dead of night Ann, yes. Clearly when everything is still then you could hear it, but it will not be operating during those periods at night. Am I correct?

MR. ARELLANO: It's not even worth our time right now to discuss EIA 2 because there is no applications for EIA 2 before NEPA at this moment.

DR. DOUGLAS: She was talking about the conveyor.

MR. ARELLANO: The conveyor that would run to the port would only be running while the ship is on board, and our goal is to load that ship in 20 hours or less.

DR. SUTTON: That's quite a lot of time to be exposed to loud noise.

MR. ARELLANO: Three times a week is what we are going for, our maximum potential.

DR. SUTTON: So 60 hours a week about the equivalent of three 24 hours days in the week you are going to have significant noise. You can hear the noise. Currently the noise from the pumping station can be heard from Rocky Point.

DR. DOUGLAS: At the very worst case this will be at nuisance level. It will not do anything that is injurious to human health.

DR. SUTTON: Noise does not have to be at an injurious level to be disruptive. Exposure to continuous unwanted noise is a threat to human health and sanity.

DR. DOUGLAS: What I am saying is that the operations will be compliant with the standards.

DR. SUTTON: My question again, you say you mitigate visual impact by landscaping, what landscaping will shield the visual impact of the conveyor?

DR. DOUGLAS: There is not much that can be done to shield the conveyor, but it may well be that with the passage of time those areas which there are mangroves.

DR. SUTTON: If you want that to happen you would have to do habitat modification, because in the place you are putting the conveyor, the natural height of the mangrove below that level. Mangrove doesn't grow to that level, meaning the design that you have in place.

DR. DOUGLAS: Let's come back to what Lambert was saying earlier. Ladies and gentlemen, we have to be practical, development cannot take place without some level of environmental loss, it just cannot. This is not the way how thermodynamics work. Nature is not 100 percent efficient in our eyes. It might be in it's own eyes operating as far as its Creator is concerned 100 percent efficient. You cannot do any activity in the environment without some loss. The whole approach, Ann, as you know very well is to minimize this loss as much as possible, and if it is possible to even avoid the loss, then you avoid the loss. As we walk from our cars to come in the room this evening, one or two of us must have stepped on a couple ants and killed them, or a grasshopper. The constant mosquitoes are there, look at everybody fanning and that sort of thing. So you cannot have 100 percent efficiency even with the best technology, the best state-of-the-art technology, you must experience some level of loss, and what we are saying is to keep this at the barest minimum possible.

CHAIRPERSON: Yes.

MR. REID: Neville Reid, Vice President of the Salt River Citizen Association. Question number one, when was this revised EIA submitted to NEPA and how far is the process re NEPA, and finally what's the projected date, possible date for implementation of this project? Thank you.

DR. DOUGLAS: The revised EIA was submitted about three to four weeks ago, I don't remember the exact date, about three to four weeks ago, and this is something that guides when we can keep this meeting, because it must be held at least 21 days after the EIA is submitted and the appropriate notices posted, which was done in various forms in the newspaper, with the town crier with the flyers and letters of invitation and so on. It's about 24 days I

think we had estimated this one would have been, so you can back track to 24 days from today, which is the 24th, and you see where you are.

DR. DOUGLAS: In terms of the implementation, in the event that a permit is given, the proponent takes the decision to proceed with the project, which in all probability it would if it gets the permit, then clearly the estimates from my recollection is that the port would be constructed within 18 to 24 months.

MR. LYN: Mr. Chairman, ladies and gentlemen, my name is Cowel Lyn, I am a civil engineer and my field is civil engineering in the coastal zones. I have come all the way from Kingston to meddle, and I am not so sure that the people of Salt River will be too happy with the issues I am going to raise. It might be introducing a more disturbing note into the whole matter, but I think it is worth hearing this point I am going to raise. I saw the ad in the paper and...

DR. DOUGLAS: Please be assured this is the purpose of the meeting, and as I said earlier on whatever you said is being recorded and it will be reported to NEPA.

MS. LINDSAY: I am hoping very much it will be reported, because I think it is a very critical issue.

DR. DOUGLAS: It will be reported and you must note that it's an objective process, and I hope that what you say will be objective as well. Please proceed.

MR. LYN: We are all aware of the very critical need for energy resource in our country, and it's not something that's crept upon us suddenly, it's something that we have been aware of for a long time. The matter I am going to introduce arose from nearly 20 years ago in the early 1990's, when there was a very concerted effort by JPS to get permit for building a coal fired power station in Portland Bight.

MR. LYN: I have gone on the website and spent a bit of time there looking at your proposals and lo and behold you've retraced all the steps that were undertaken nearly 20 years ago in search of an acceptable site for a major coal fired power station. There were two competing multi-laterals at the time who -- I say competing because they had divergent opinions, both were agreeing to coal coming on as one of the technologies in the mix, but the question of the site, there was divergence, and there were other international agencies who contributed to various aspect of the research.

To make a long story short, we thought we achieved consensus in the early 1990's that Burial Ground Point would be the site of a major coal fired power plant. Now, looking at your layout you are right under the tip of Burial Ground Point. You are establishing a nice turning basin, you are establishing a nice deep access channel, and it has occurred on to me that if we were able to agree on anything on this project, it would be so marvellous to have a concurrence on a multi-user port that could satisfy the load out of the mineral aggregate as well as the materials for the coal fired power plant. Now, this is like double jeopardy on the Salt River people, but we have to recognize that in the overall picture Jamaica is going to have a coal fired power plant, and we have to settle the question of whether we can build it here in Salt River. This is such a glorious opportunity to integrate the two projects. I see all your designs and your conveyor system and all that. I wondered if there had been any interactions between your researchers and JPS. I am not surprised with the several regime changes that have happened in JPS in the past 20 years if all that information is not buried somewhere and nobody has bothered to bring it forward. So, Dr. Douglas, what I am saying is, if there has not been interaction between your team and the JPS planners please go and look for those books. They were funded by World Bank and by CIDA with Japanese money in it as well, and you will see that the layout of the port for the coal fired power plant for JPS, it is almost exactly what you are doing for Rinker.

DR. DOUGLAS: Thank you very much for that very interesting and informative comment, Mr. Lyn. In terms of interaction between Rinker and JPS, yes, there has been some interaction to the best of my knowledge, but it was not in respect of establishing any energy project at all. Certainly I have never heard mention of anything to do with a coal fired power plant in the same location. I need to put that on the table. The interaction was, if necessary, to supply power from them from the national grid. That was the extent of the interaction.

MR. LYN: I am not surprised with what has gone on in the past 20 years.

DR. DOUGLAS: I am just letting you know, and we are becoming transparent in sharing information how that would proceed. The second thing that needs to be taken into account was that we were the ones who did the baseline study, the environmental baseline study, that's Conrad Douglas & Associates Limited, for JPSCo and CIDA, Canadian International Development



Agency, for that proposed coal fired power plant. That proposed plant, because of policy changes in the JPSCo was abandoned, as you know, and therefore it was never pursued any further. In fact, an Environmental Impact Assessment was never even done for that project, because a coal fired plant and the facilities which it needs to support it were never designed. You know that. It was never designed, it was a baseline study that was done to determine what are the physical, chemical and biological parameters that existed in the area as well as a socio-economic one, which would facilitate a design of a power plant that is coal fired and coal handling facilities. That was never done. The policy shift came before even all of that could have been done.

MR. LYN: Not entirely correct, Conrad. Preliminary designs were done, preliminary designs, technical drawings, surveys, bore holes all of those things.

DR. DOUGLAS: Cowel, please, I allowed you to finish, let me finish first and then we can go back.

MR. LYN: But you are saying that wasn't done.

DR. DOUGLAS: What I am saying is that an Environmental Impact Assessment for a designed plant was never done. What was done was an Environmental Baseline Study for the area. That's a big, big, difference. Now a further step if there wasn't a policy shift would have been to do a design and come back for an EIA. I know that you agree with me on that. We need to put that on the table. While preliminary engineering might have been done that was never on the table at that time, because if the baseline, let's say facilitated or permitted it or could guide or inform the design, then the design would have come at a later time. So that was never on the table in the public domain at all. I need to state that to clarify the whole process. Now, the third thing which I must say, Cowel, and this is important, is that the Government of Jamaica within the past two months is on the record as stating that energy supplies for the future, both JPSCo as well as bauxite alumina facilities and others, will be based on liquified natural gas. Nobody has said they excluded coal, let me say that before you say it, but I am saying this is where the policy thrust and direction is, liquified natural gas.

DR. DOUGLAS: Let me state the fourth point. The fourth point is that although the facility is not very far removed from Burial Ground, no way at all is this project physically on the Burial Ground site. In other words, if at any point in the

future any proponent should come and express to the Government of Jamaica and Rinker that they would like to establish a power plant, be it coal, natural gas or whatever, there is nothing so far in this project that says these two facilities are mutually exclusive and cannot accommodate each other.

MR. LYN: Think of the ship turning basin channel and the access channel to the port.

DR. DOUGLAS: Let me tell you something, Cowel, we know that there is some knowledge and some experience which relate to past activities in the area. It is the same kind of thing that if somebody tell you about emerging legislation, legislation that is not on the statute books, legislation that doesn't exist. No one is proposing or has approached Rinker in respect of a coal fired power plant that I know of at this time. Mr. Hazle's hand is up maybe he has better information on that.

MR. HAZLE: I think it is important again to point out the posture we have taken in the whole development effort and the collaboration that we have attempted in the process. You asked about communication with JPS planning partners - - yes, we have done that, both their generation planning and their transmission distribution planning. A lot of our activities are being coordinated through Jamaica Trade and Invest who is familiar with all the project proposals of one type or another in that area. We collaborated with Jamalco who have had their own ideas about participating in the energy sector in Jamaica. So the opportunity for people to see the same synergies that you are talking about tonight has been abundant. We haven't been conducting this in secret, all of the relevant Government agencies have been able to say why don't you do this, have had that opportunity, and people do see some synergies. Jamalco see some synergies for potential long term expansion; we need to accommodate bigger ships, moving bigger cargo. We did talk with the Energy Minister about LNG shifts. This hasn't been conducted in secret where it is just for lack of knowledge why people haven't approached us. We are not closed to any of those opportunities to take advantage of any of the synergies that have potential here, but I think Conrad is correct, we had a meeting with the Minister of Energy and Mining and he reinforced that direction in which they are heading. Again we are open to collaborate with anybody with whom we can co-exist.

DR. DOUGLAS: Thank you very much, Mr. Hazle, I couldn't have said it better. As I said it's not mutually exclusive. He has said it, I don't need to repeat it, and I can see how seriously you take the matter so that you drove down here tonight to articulate it, and it is in the record so it will go forth to them.

MR. LYN: I only hope the Port Authority will take a keen interest.

DR. DOUGLAS: I can ask Mr. Hazle to elaborate. I don't think any project in Jamaica has got the level of attention in terms of designing and modeling for a port that this one has got, and I have been involved with some of the projects. This one has really gone to the hilt, and the Port Authority has been invited to participate. They are the regulatory agency. I won't say anymore I will ask Mr. Hazle to again elaborate.

MR. HAZLE: The Port Authority has been directly involved in another facet of our project. To own and operate a port you need something called a Suffrage Permit, which is administrated by the Ministry of Finance subject to the approval by the Port Authority. So we have had to provide all our design information on the port, where engineers are reviewing it for operational safety, security aspects. So again this whole process has been a very transparent process, wide open.

DR. DOUGLAS: Thanks Cowel. I hope this has helped the situation and we thank you for participating in the meeting and stating the point and it is recorded.

MR. LYN: I am very happy that the matter is in your purview and under your management, because I think we are assured of good judgment in there with you guiding that process.

DR. DOUGLAS: Thank you very much for your comment.

MR. BARTLEY: Was there any consideration for the use of solar energy in terms supplying energy to your plant and perhaps to the JPS grid along the way?

MR. HAZLE: We did approach JPS, we explained to them what our energy requirements were and when we would need them, and their response was they expected to have adequate supplies. We are not really a power developer company, so we don't have the expertise to develop a solar plant as a part of the supply.

MR. BARTLEY: Speaking from my experience, I have a facility whereby we were hauling off a fair bit of wattage off the JPS power line, and I am here to tell you that by the addition of that facility on the existing situation I witnessed power cuts as many as 17 per day in that general area. What kind of provision has been made to ensure that that doesn't happen in this general neighbourhood?

MR. HAZLE: Again it's a matter of how our facility will be served from the grid. We are going to be responsible for putting in certain parts of the distribution and transmission facilities. We are going to be required to put in a sub-station that will directly feed our system. JPS has their own plans for supplementing their generation capacity.

MR. BARTLEY: We know that the LNG project is two years down the road.

MR. HAZLE: Right. As you heard our needs really are going to be based on a two year construction period anyway. Their view of their expansion plan is that our needs coincide with their plans for expansion, and even without the expansion the amount of power we require they feel they can accommodate.

CHAIRPERSON: Any more questions? Everybody satisfied with the answers Dr. Douglas has given? If there are no more questions ...

MS. SIMPSON: Good night I am Vivia Simpson from Salt River. So far the people of Salt River have approved of this project and we thank you for coming, and for Dr. Sutton with the noise that you are saying, we have sound boxes all over, where we have heard sound playing and that doesn't affect us, so I don't think your thing would affect us.

DR. DOUGLAS: Thank you very much for your comment. Ladies and gentlemen, if I can repeat it; Vivia says that you have the best sound system boxes around the place and in fact the dance and the music doesn't affect them negatively. Thanks for the comment.


CHAIRPERSON: Any other concerns or questions? If there are no other concerns I beg to adjourn this meeting. Could we sing one verse of the National Anthem. Please stand. (National Anthem)

CHAIRPERSON: Thanks for coming. Adjournment taken at 8:17 p.m.

# APPENDIX

**APPENDIX I: PUBLIC MEETING ADVERTISEMENTS**

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**Rinker** 

**RINKER/CEMEX**


INVITES YOU TO A  
**PUBLIC MEETING**  
ON THE  
**REVISED ENVIRONMENTAL IMPACT  
ASSESSMENT**  
FOR  
**THE PROPOSED CONSTRUCTION OF  
A PORT AND CONVEYOR CORRIDOR**  
AT ROCKY POINT, CLARENDON

**VENUE: CHURCH OF GOD IN CHRIST  
SALT RIVER, CLARENDON**  
**DATE: WEDNESDAY, JUNE 24, 2009**  
**TIME: 6:00 P.M.**

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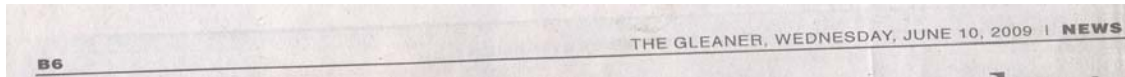
**Figure 2: Advertisement Published for the Mandatory Public Meeting held on June 24, 2009**

**Dates and Sections of the Gleaner Newspaper which featured the Advertisements for the Mandatory Public Meeting**

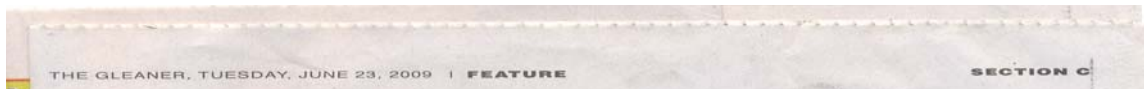
**Page C12, May 29, 2009**



**Page B6, June 10, 2009**



**Section C, June 17, 2009**



**June 23, 2009**

**APPENDIX II: AGENDA**

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# AGENDA



**MANDATORY PUBLIC MEETING PRESENTATION ON THE REVISED ENVIRONMENTAL IMPACT ASSESSMENT CONDUCTED FOR THE PROPOSED CONSTRUCTION OF A PORT AND CONVEYOR CORRIDOR TO BE DEVELOPED BY RINKER JAMAICA LIMITED AT ROCKY POINT, CLARENDON**

**Chairman:** Ms. Daisy Thomas  
Community Liaison Officer

**1. Call to Order**

**2. Prayers**

**3. Welcome & Introductions**

**4. Presentations**

1. Revised EIA Report on the Proposed Construction of a Port and Conveyor Corridor at Rocky Point, Clarendon

Dr. Conrad Douglas  
President & Managing Director  
Conrad Douglas & Associates Ltd.

**5. Questions & Answers**

**6. Adjournment**



## APPENDIX III: FACT SHEET

# FACT SHEET

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**RINKER JAMAICA LIMITED**  
**REVISED ENVIRONMENTAL IMPACT ASSESSMENT**  
FOR  
**THE PROPOSED CONSTRUCTION OF A PORT FACILITY AND CONVEYOR CORRIDOR AT ROCKY POINT, CLARENDON**

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The objective of this meeting is to inform and educate members of the surrounding communities on the Revised EIA report submitted to NEPA in March 2009.

### Summary of the Project Development

- Rinker proposes to construct a port and a conveyor corridor for the transportation and export of limestone aggregates from the Braziletto Quarry.
- The investment is in the order of about US\$300 M.
- An EIA report was submitted to NEPA in May 2008 for review.
- One of NEPA's major concerns was the significant impacts the project will have on seagrass and mangroves.
- A Revised Mangrove and Seagrass Mitigation Assessment was subsequently carried out and included in addition to the modifications made in the project design.
- Modifications made to the port and conveyor are expected to reduce the previous seagrass impact area of 7.5 hectares to 1.19 hectares.
- Impacts on mangrove area have been addressed on the concept of functional dynamic habitat rather than individual trees.

### Where and when the project will be undertaken?

- The Proposed Port Facility will be constructed at Rocky Point, Clarendon, in close proximity to the existing Jamalco Rocky Point Port. This implementation will commence as soon as a Permit and all other associated permits and licences are granted by NEPA, and other relevant Regulatory Authorities.

### How will the project be implemented?

- The proposed Conveyor Corridor will transport the crushed, sized and washed limestone aggregate to the port facility where it will be loaded into 60,000 ton capacity PANAMAX vessels for shipping. A turning basin and channel for vessels to berth will be created by dredging the existing ship channel, where necessary, to suitable depth and width.



**CONRAD DOUGLAS & ASSOCIATES LIMITED**

Telephone: (876) 929-0025/0023/8824

Email: [estech@infochan.com](mailto:estech@infochan.com); [cdaestech@hotmail.com](mailto:cdaestech@hotmail.com)

**APPENDIX IV: THE PUBLIC MEETING PRESENTATION**

Rinker  
Rinker Jamaica Limited  
CEMEX

## RINKER JAMAICA LIMITED

THE REVISED ENVIRONMENTAL IMPACT ASSESSMENT  
FOR  
THE PROPOSED CONSTRUCTION OF A PORT AND  
CONVEYOR CORRIDOR  
TO BE DEVELOPED BY  
RINKER JAMAICA LIMITED  
ROCKY POINT, CLARENDON

WEDNESDAY, JUNE 24, 2009

Rinker  
Rinker Jamaica Limited  
CEMEX

## WHO?

- Rinker recently acquired exclusive rights of the Braziletto Quarry operation.
  - formerly owned and operated by Chemical Lime Plant
- In 2007 Rinker was acquired by CEMEX.
- CEMEX is one of the World's largest Construction Materials Companies
- The Company has operations in over 50 countries, U.S.A, Canada, U.K., France, Austria, Australia, Hungary, to name a few.
- Employs over 60,000 people and has annual sales of over US\$25 billion.

Rinker  
Rinker Jamaica Limited  
CEMEX

## WHAT?

- Construction of a Port and Conveyor Corridor at Rocky Point, Clarendon
- Investment is in the order of US\$300 million which includes:
  - The development of the port facility and conveyor corridor
- Plans to expand the quarry operation (separate project)
- Job creation
  - Pre-construction , Construction and Operation

Rinker  
Rinker Jamaica Limited  
CEMEX

## WHERE?

- Proposed Port Facility will be constructed at Rocky Point, Clarendon
  - In the vicinity of Jamalco's existing Rocky Point Port which has been in operation for more than 38 years.
- Routing of conveyor corridor from the proposed Limestone Plant to the Proposed Port facility via Rocky Point Causeway.

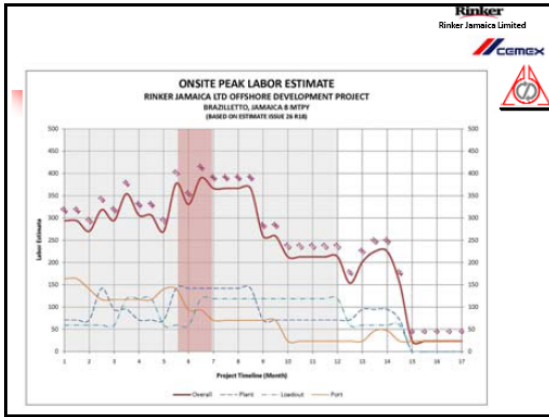
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## Regional Scale

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Rinker Jamaica Limited  
CEMEX

## Project Summary

- Limestone export facility (Port)
  - Panamax size vessels (60,000 tonnes)
  - 2-3 vessels per week
  - Crushed, washed and sized limestone
  - Reserve Stockpile (90,000 tonnes)
- Shipping channel and Turning basin
  - Will be developed for vessels to berth by dredging a 100m wide area to a depth of 14m.
- Conveyor Corridor
- Employment Opportunities



### GEOLOGICAL FINDINGS

**Port & Stockpile Area**

- Area defined by narrow low lying mixed clastic carbonate beaches developed in front of the mangrove and swamps.
- consists of consolidated alluvial deposits at the surface.

**Salt Island**

- The south western and sections of the western coast comprise of dense impenetrable mangrove swamp.
- The eastern coast consists of a more or less continuous narrow shingle ridge with mangroves.

### HYDROGEOLOGICAL FINDINGS

- Rivers and Drainage**
  - Apart from the two Salt River tributaries there are no perennial streams in the area.
- Springs**
  - Several brackish springs along the eastern side of the Brazilletto Mountains and Harris Savanna that are fed by groundwater.
- Groundwater**
  - Groundwater is utilized in the area by industries such as Chemical Lime and Jamalco.

### BIOLOGICAL FINDINGS

**Floral Assessment**

- A total of ten confirmed endemics were encountered
- Their occurrence within the flora range from mostly rare to frequent.
- Two additional species, *Agave harisii* and *Eshenbeckia pentaphylla* (Wild Orange) were not encountered in the site but are claimed to occur within the area.

**Faunal Assessment**

- 7 endemic birds were identified in the area.
- At least four species of the snake *Arrhyton spp.* are known to exist in the Portland Bight area, three of which are endemic.

### HISTORICAL HERITAGE FINDINGS

- Caves, middens, taino sites and radioactive springs were identified further north in the community of Salt River.
  - Will not be impacted
- Artefacts, buildings or areas of historical importance will not be impacted by the proposed project.

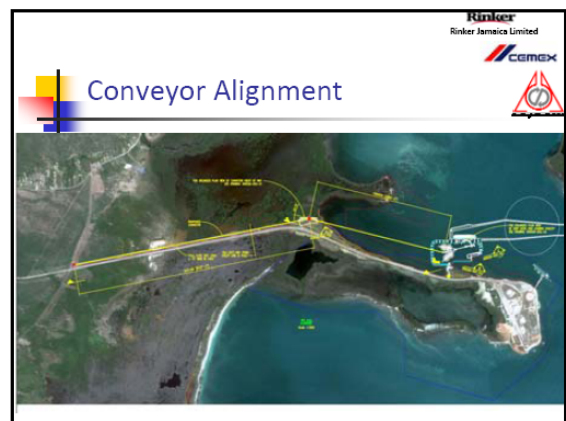
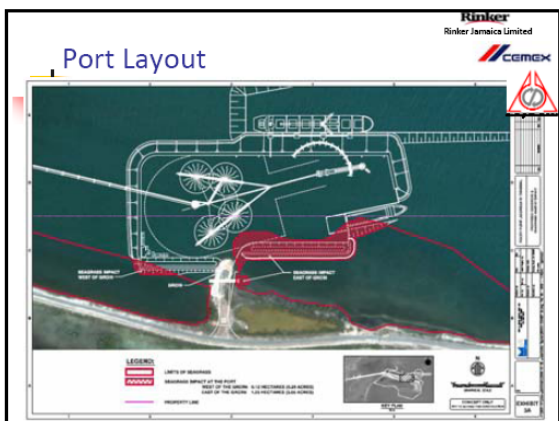
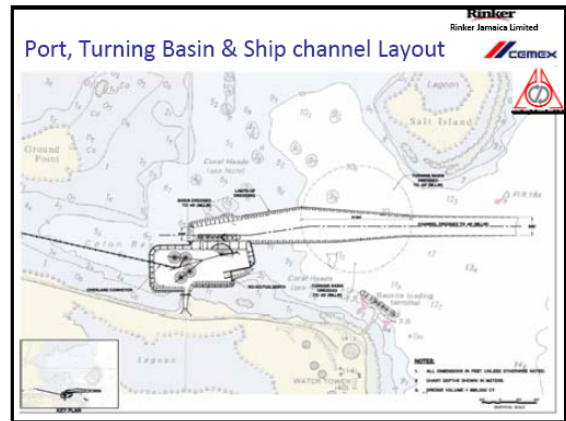
### Previously Proposed Development

- Port
- Aggregate Stockpile area
- Conveyor Corridor
- Main Concerns
  - Size of development
  - Seagrass impact area (7.5 Ha)
  - Seagrass re-planting/relocation



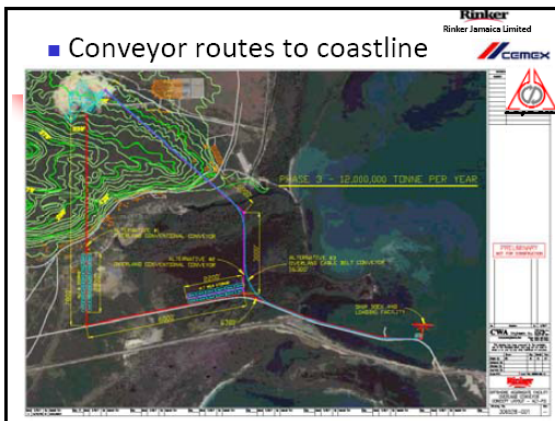
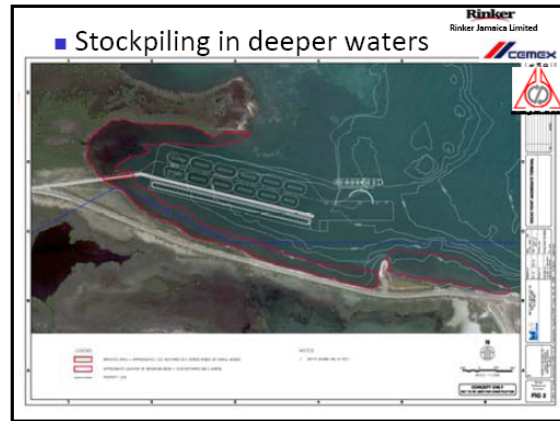
**Modified Proposed Development**

- Port
- Conveyor Corridor
- Major Differences
  - No major aggregate stockpile area
  - Reduced footprint
  - Reduced seagrass impact (from 7.5 to 1.19 Ha)
  - Improved potential for seagrass replanting/relocation



**Alternatives considered**

- Position of Port
  - Closer or further away from coastline
- Stockpiling
  - In deeper waters
  - On plains
  - Within plant
- Conveyor corridor
  - Alignment from plant to port



**Seagrass Mitigation Plan**

- Impacts reduced from 7.5 Ha to 1.19 Ha.
- Mitigation area 1.6 hectare
  - 1.3 times impact area
- Utilize suitable spoil material from channel dredging and facility construction to fill Area K (a previously dredged area) to appropriate elevations to allow natural recovery of seagrasses
- Supplemental transplanting

**Mangrove Mitigation Plan**

- Impact Zone - 5.6 Ha
  - Based on habitat dynamics rather than individual plant area
- Establishment of tidal connections / flushing channels to provide tidal flushing within previously impacted zone
- Excavation/re-grading/filling to establish appropriate mangrove elevations
- Planting of mangroves/buttonwoods




**Major Impacts identified**

Impact	Description
Ecology & Avi-Fauna	Proposed port & conveyor construction may impact on existing flora and fauna
Visual	Proposed conveyor corridor may have visual impact on surrounding areas
Air Quality	Limited impacts from dust generated throughout construction
Water Quality	Limited impacts from dredging exercises throughout construction (turbidity and siltation)
Noise Impact	Limited impacts from noise generated throughout construction, vibration and noise from operation
Sensitive landscapes and water courses	The proposed conveyor may impact on wetlands and surface water resources in the area

- POTENTIAL NEGATIVE IMPACTS**
- Potential Environmental Impacts that may result from this project implementation are as follows:
- Minor change in the drainage regime – Hydrology
  - Change in runoff water quality
  - Noise and vibration
    - Conveyor and ships
  - Air quality (Dust)
    - Construction activities
  - Socio-economic considerations
    - Squatting
    - Vending
    - Influx of workers
    - Tourism options
    - Visual intrusion & aesthetics
  - Loss of biological resources
    - mangroves (5.6 Ha.),
    - seagrass (1.19 Ha.)

- POTENTIAL POSITIVE IMPACTS**
- Increased foreign exchange earnings
  - Improvement in shipping channel
  - Additional Berthing facilities for Jamaica’s south coast
    - Creation of a modern dedicated limestone shipping port
  - Increase usage capacity of port
  - Employment opportunities
    - 90-150 persons
    - In limestone sector (skilled and unskilled)
  - Improved socio-economic standing
    - Community development
    - Increased demand for goods and services nationally

- IMPACT ID & MITIGATION**
- REMOVAL OF VEGETATION, LOSS OF HABITAT, AESTHETICS**
- Rehabilitation thru Landscaping etc.
  - Create buffer zones
  - Relocation of endemic species or setting up nurseries as necessary.
- SOLID WASTE HANDLING AND DISPOSAL**
- Maintain and improve existing regime.
  - Utilizing approved haulage contractors.
  - Incorporate an effective solid waste management plan.
- SEWAGE MANAGEMENT**
- Chemical portable toilets will be used.
  - Hiring the services of certified and licensed contractors.




### IMPACT ID & MITIGATION

#### MARINE ENVIRONMENT

- Potential sedimentation from dredging will be minimized through the use of silt screens.
- Mangroves restoration will be greater than 3 times the proposed mangrove impact area.
- Relocation and/or transplanting of seagrass

#### DRAINAGE


- Inescapable disturbance of the existing drainage features resulting from the project, will be kept at a minimum.
- Implement new engineered drains using NWA guidelines
  - retain existing drainage characteristics, where practical



### IMPACT ID & MITIGATION


#### FUGITIVE DUST, AIR POLLUTION, NOISE & VIBRATION

- Use of high capacity telescopic loader for loading limestone aggregate into PANAMAX vessels.
- A sound and effective Dust Suppression Regime
- Proper maintenance and efficient use of equipment with appropriate parts such as silencers to minimize noise.
- Covered conveyor belts particularly in built-up areas and across main roads.



### ENVIRONMENTAL MONITORING

- Environmental Monitoring will be conducted throughout all phases of the project, namely, Pre-construction, Construction and Operation Phase.
- This will ensure full compliance with environmental standards and approved guidelines by the regulatory agency are consistently achieved.



### QUESTIONS & ANSWERS

# THANK YOU

## APPENDIX V: ATTENDANCE REGISTER

PUBLIC MEETING  
ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED CONSTRUCTION OF PORT &  
TRANSPORTATION CORRIDOR AT ROCKY POINT, CLARENSDON

JUNE 24, 2007

#	Name	Company/Community	Number #
	B. COLE	CD & A	229-0025/8224
	JOLAN BACKFORD	CD & A	"
	WAYNE MARKS	CD & A	"
	ORVILLE GREY	"	"
	DR. CONRAD DOUGLAS	"	"
	MARK SOLAN	Mitchell Town	488-1489
	Paula Solan	Mitchell Town Cl.	862-7994-784-1312
	Lance Smith	Mitchell Town	554-8985
	G. HAZLE	CENEX	561-379-5398
	Daisy THOMAS	SALT RIVER Citizens ASS.	361 95 24
	Johnny Arellano	CENEX	786-412-6938
	Winston MARRAS	Councillor - R.T. DN	375-0139
	A.E. Wilby	New Town H/S	866 8993
	DERECK LAMBERT	SALT RIVER / MITCHELL TOWN	902-4607
	RANDOLPH SMITH	NEW TOWN HAYES PO	446 8553
	RUPERT SMALL	NEW TOWN HAYES P.O.	359 6319
	FRANK ROBERT	RIVER TOWN LTD	322-5193 925-8560
	Blossom Hardlaw	Observer of meeting	924 2902
	Rose Kinnaird	SALT RIVER	56-0549
	Dexter Heath	SALT RIVER	482-1527
	Patrick Mahony	Salt River	310-2748
	Deven Cayle	SALT RIVER	297-0458
	ROY LANKESTER	MONYMUSK GUN ROD TILIER CLUB	9959020
	Josie Parchment	C-CAM	383-2184
	Reville Reed	Salt River vice President Salt River association	890-7454
	Ann Sutton	C-CAM	877-7335
	Nivia Simpson	Salt River C.A.	373-3507
	Gavin Williams	Salt River	436-4789
	HAMLET REED	MITCHELL TOWN P.A.	403-7876
	Errol Morris	NEPA	376-9896
	A. REINBURG	A.H. (C-CAM guest)	
	J. TARDON	SALT RIVER	317-107



#	Name	Affiliation/Community	Number	A
	Agostinho Pennock	NEPA	512-9116	
	Arnette Grant	Salt River	391-1703 367-7757 381-3144	
	Hugh Elliston	Chemical Line Co		
	Marine Campbell	Salt River	365-6216	
	Amy Nelson	Salt River	4677-158	
	Francene Simpson		424-1445	
	Alicia Coore	Salt River	407-1250	
	FRANCES ROSS BAILEY	Salt River	582 42 62	
	Olive Tennant	Salt River	476 3194	
	Sean Bainswell	Parish Councillor	351-8300	
	Rowhan Blake	Parish Planner Parish Council	986 2234/16	
	Gladys Hamilton	Salt River	9789095	
	Maria Morgan	Mitchell Town	482-1784	
	Spencer McManis	Miracle Town	825-1993	
	Lyette Butler	TNM	926-7403	
	Kayla Wong	Salt River	4814502	
	David Ferrica	Salt River	3964076	
	Neville Ritchie	Salt River	3650001	
	Yvonne Hamilton	Salt River	3691973	
	Steve Morgan	Salt River	3617227	
	Michael Williams	Salt River	353-3266	
	Oswald Wong	Salt River	8591594	
	Allayne MITCHELL	SALT RIVER	4297653	
	Cowell Lyn	} Consulting Engineer	} 927-1210	
	Arnette Lyn			
	MAE White	Salt River	362-3749	
	Oloja Pessoa			
	Verbona Duncan	S Salt River	8522659	
	M. Bryan	S. RIVER		
	Claire Mitchell	Salt River	387-6970	
	Kareen Campbell	Salt River		