



**UNIVERSITY OF THE PHILIPPINES
OPEN UNIVERSITY**

MASTER OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

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**ASSESSMENT OF MONITORING COMPLIANCE TO ENVIRONMENTAL
COMPLIANCE CERTIFICATE (ECC) CONDITIONS: TWO CASES IN METRO
DUMAGUETE, NEGROS ORIENTAL, PHILIPPINES**

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20 May 2016

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This Special Problem of **VITTORIO ALEJANDRE MARCUS G. VINARAO** titled: **“ASSESSMENT OF MONITORING COMPLIANCE TO ENVIRONMENTAL COMPLIANCE CERTIFICATE (ECC) CONDITIONS: TWO CASES IN METRO DUMAGUETE, NEGROS ORIENTAL, PHILIPPINES”** is hereby accepted by the Faculty of Management and Development Studies, U.P. Open University, in partial fulfillment of the requirements for the degree **Master of Environment and Natural Resources Management**.

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DECLARATION

This is to certify that:

- I. The special problem comprises only my original work towards MENRM except where indicated in the Preface
- II. Due acknowledgement has been made in the text to all other material used
- III. The special problem is fewer than 25,000 words in length, exclusive of tables, maps, bibliographies and appendices.

VITTORIO ALEJANDRE MARCUS G. VINARAO

Name

ACKNOWLEDGMENT

The researcher is very grateful to Dr. Ram Plopino, the Thesis Adviser, for his invaluable guidance, insightful suggestions, and unwavering support in the course of doing the study. His generous sharing of his time and expertise, from the problem formulation to its successful presentation and completion, have been instrumental in the researcher's journey.

Sincere gratitude is extended to the Panel of Jurors from the Faculty of Management and Development Studies, led by the Program Chair, Dr. Consuelo Habito. Their questions, insightful comments, and suggestions shaped and enhanced this paper.

The researcher is indebted to the representatives from Orient Foods Industries Corporation (OFIC), Dumaguete Business Park Incorporated (DBPI), and the Environmental Management Bureau (EMB) Provincial Environmental Management Unit (PEMU) in Dumaguete City. They have kindly given their time to share valuable information during the interviews and access to pertinent documents needed for this study.

To my wife, Kathy, and my daughter, Hannah, I want to extend my sincere thanks for your steadfast patience, understanding, constant encouragement, and, most importantly, your fervent prayers throughout the journey or working on this research study. You both have given me the strength and inspiration I need, reminding me about the importance of completing this work. I love you both very much.

Above all, the researcher gives thanks to God Almighty for providing the strength to persevere in moments of discouragements and tiredness and for the grace that has been sufficient at every stage of this work. The researcher is grateful for the ability and intelligence, as well as for the wisdom and guidance, that have kept and

preserved him through good health, safety, and the material resources that enabled the study to be carried out.

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LIST OF ACRONYMS AND ABBREVIATIONS

1. **DBPI** – Dumaguete Business Park Incorporated
2. **DENR** – Department of Environment and Natural Resources
3. **ECC** – Environmental Compliance Certificate
4. **EIA** – Environmental Impact Assessment
5. **EIAM** – Environmental Impact Assessment and Management (Division of EMB, as cited in manuals)
6. **EIS** – Environmental Impact Statement
7. **EMB** – Environmental Management Bureau
8. **EMoP** – Environmental Monitoring Plan
9. **EMP** – Environmental Management Plan
10. **MMT** – Multi-partite Monitoring Team
11. **OFIC** – Orient Foods Industries Corporation
12. **PCO** – Pollution Control Officer
13. **PD** – Presidential Decree
14. **PEIS / PEISS** – Philippine Environmental Impact Statement System
15. **PEMU** – Provincial Environmental Management Unit (of EMB)
16. **SMR** – Self-Monitoring Report

ABSTRACT

Project proponents are mandated by the Philippine Environmental Impact Statement (PEIS) System through the issuance of the Environmental Compliance Certificate (ECC) to prepare Environmental Management Plans (EMPs) and Environmental Monitoring Plans (EMoPs). But studies have indicated that organizations would go through the Environmental Impact Assessment (EIA) process in order to obtain an ECC with none to limited follow-through in terms of implementing the EMPs and EMoPs.

The focus of this study is to examine the actual environmental compliance monitoring conducted by Orient Foods Industries Corporation (OFIC), a food processing facility that is not strictly covered or does not need to undergo the process of the Environmental Impact Assessment (EIA) and get an ECC; Dumaguete Business Park Incorporated (DBPI), that owns and manages a property intended for mixed-use development, thus required to have an ECC; and the Provincial Environmental Management Unit (PEMU) of the Environmental Management Bureau (EMB) that monitors projects in Negros Oriental and Siquijor.

The research design adopts a qualitative case study that looks into pertinent documents, conducts interviews of key personnel, and observes the site of OFIC, DBPI, and the EMB PEMU. The collected data are subjected to thematic and cross-case comparison analysis in order to characterize the policies or practices in monitoring environmental compliance as well as assessing its extent and frequency, and identifying implementation gaps and constraints.

The result of the investigation shows contrasting environmental compliance monitoring practices. OFIC is not strictly covered, but it has an in-house Pollution Control Officer (PCO) that manages and monitors the facility's environmental

requirements by undergoing regular testing of air and water quality and wastewater treatment, submission of self-monitoring reports, and coordination with the EMB for the issuance of its permits and other regulatory requirements. DBPI, on the other hand, is covered by the PEIS system documentary requirements and was issued an ECC. But it has not fully implemented the conditions that were laid down in the ECC, such as organizing a Multi-Partite Monitoring Team, and does not have an accredited PCO or similar technical personnel appointed to manage environmental compliance. The main problem lies in the fact that when the ECC was granted to DBPI, there was no proper turnover of the documents to the new management during organizational transition.

The EMB PEMU has a very lean staff, comprising only of two (2) personnels that include the unit head. With the vast workload of monitoring the entire Negros Oriental province and Siquijor, it became a challenge for this local regulatory agency to do field inspections, reports, and providing guidance and follow-up to project proponents.

The findings indicate that the success of the PEIS system is not only about a project having an ECC and its accompanying strict monitoring requirement, but it also depends on how fully committed and capable the project proponents are as well as the effectiveness of the EMB PEMU to monitor, guide, and ensure that conditions are followed. The study concludes that the monitoring phase is where the PEIS system is put to the test. In projects granted with an ECC, inadequate staffing, poor communication channels and internal systems can pose as a significant challenge to compliance. Consequently, the study recommends that the EMB PEMU should augment its workforce, enhance its presence in the field, and implement systems to help proponents get oriented and be reminded about the roles of the Multi-Partite

Monitoring Teams and the PCO. Furthermore, the study suggests having clear guidelines on delineating the responsibilities of personnel involved in ECC-related tasks when management changes. Finally, the study recommends conducting further in-depth research on how to monitor compliance in other areas and places.

Keywords: Philippine Environmental Impact Statement (PEIS) System; Environmental Compliance Certificate (ECC); Environmental Management Plan (EMP); Environmental Monitoring Plan (EMoP); Environmental Impact Assessment (EIA); environmental compliance monitoring; Provincial Environmental Management Unit (PEMU); Environmental Management Bureau (EMB); qualitative case study; thematic and cross-case comparison analysis; Pollution Control Officer (PCO); Multi-Partite Monitoring Team; Post-ECC monitoring

I. INTRODUCTION

Background of the Study

The Environmental Impact Assessment (EIA) established by the Philippine Environmental Impact Statement (PEIS) System, serves as a guide and mechanism for decision making pertaining to the implementation of development projects. It takes into account the environment during project inception and carries out conditions for its protection by looking into and determining possible negative impacts to the environment and recommends measures to address it through an Environmental Management Plan (EMP) that is embedded into the Environmental Compliance Certificate (ECC).

The DENR Administrative Order (DAO) No. 2003-30, along with its Revised Procedural Manual, prescribes that the EIA application for a project will have to undergo a review to determine if an ECC is needed. If the project is not part of the PEIS System, an ECC is not required, but a Certificate of Non-Coverage (CNC) instead. Additionally, if the project started before 1982 and has not grown or expanded much since then, any formal documentation might not be needed at all.

Project proponents should formulate first an EMP and an Environmental Monitoring Plan (EMoP) as part of the process in securing an ECC. These plans will describe how to address any possible environmental issues the project might cause. The PEIS process wraps up with post-ECC monitoring, validation, and evaluation or audit. The Department of Environment and Natural Resources (DENR) through the Environmental Management Bureau (EMB) is charged to ensure that the project proponents adhere to the EMP and ECC conditions.

But the effectiveness of the PEIS System and EIA process depends on how the project proponents and regulators understand and implement its provisions. Some studies in actual cases have shown that EIA and ECCs are often regarded as procedural requirements to follow, and there is not much effort to put the EMPs into action or adhere to commitments. Additionally, traditional rules-based enforcement is not as effective as it could be (Bravante et al, 2009; Rao et al, 2006). These points are covered in the Review of Literature.

Looking at compliance monitoring, Metro Dumaguete can provide a helpful local perspective of project proponents having different regulatory compliance practices. For instance, OFIC, which is a food processing company, is not covered by the requirement of undergoing the EIA process, but has a Pollution Control Officer (PCO) that regularly coordinates with the EMB. On the other hand, DBPI having been issued an ECC for its mixed-use development, has not fully organized a Multi-partite Monitoring Team or assigned a technical personnel to manage environmental compliance. Meanwhile, the Provincial Environmental Management Unit (PEMU) of the local EMB has only two (2) personnel handling a huge number of projects in Negros Oriental and Siquijor. These cases, when subjected to scrutiny, will show why it is important to investigate how compliance monitoring under the PEIS system is done at the local level in order to identify any gaps in the actual performance of obligations, and consider courses of action to make the monitoring function stronger.

This study will examine the efforts of selected key actors to follow or enforce environmental regulations in Metro Dumaguete by assessing the roles of OFIC, DBPI, and the EMB PEMU in ensuring compliance with the PEIS policies, ECC conditions, and monitoring requirements.

II. REVIEW OF LITERATURE

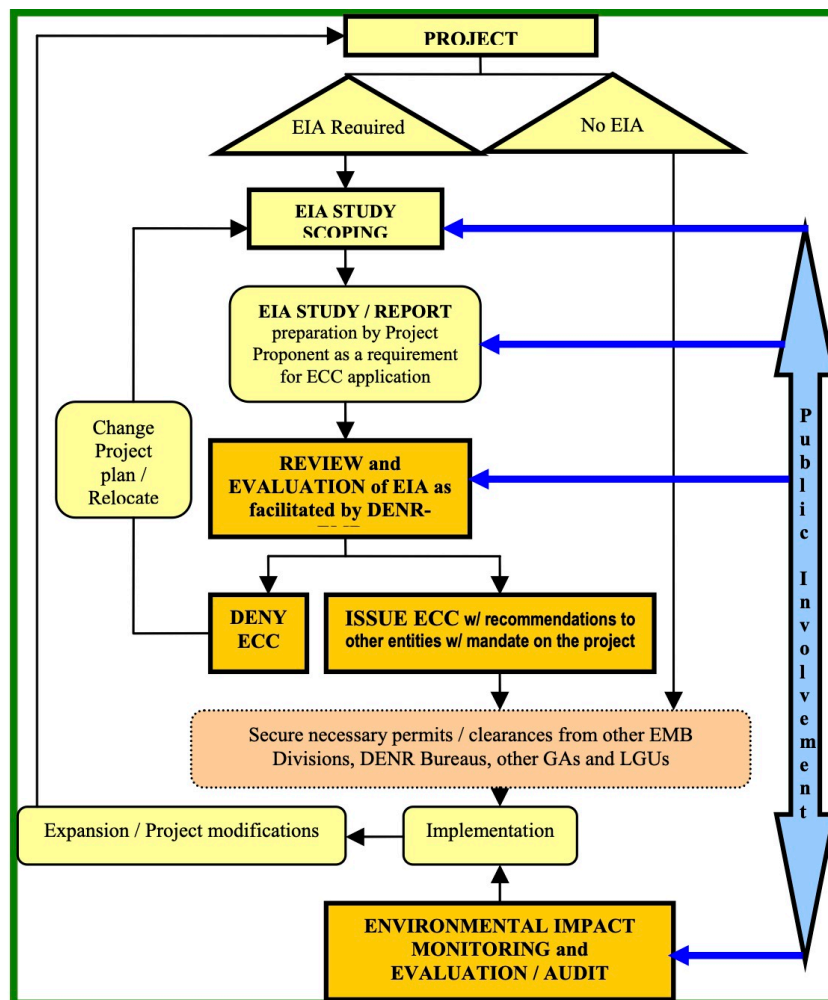
The review of literature starts with a brief background about the Environmental Impact Statement (EIS) system in the Philippines followed by the need to conduct an Environmental Impact Assessment (EIA) to show the importance of assessing development projects that may cause negative impact to the environment. The EIA process is discussed next to understand the application stages for the issuance of an Environmental Compliance Certificate (ECC). The discussion about the EIA practice is likewise important, as the dynamics in going through the process will be revealed as the different actors come into play during the phases of the EIA process. This eventually leads to the implementation of the project where compliance to ECC conditions will be monitored or evaluated by the EMB, which is the focus of this study.

Brief Historical Background of the PEIS

In 1978, President Ferdinand Marcos issued Presidential Decree 1586 to formally establish the Environmental Impact Statement (EIS) system. According to the law, the EIS is anchored on the policy of the state “to attain and maintain a rational and orderly balance between socio-economic growth and environmental protection.”

Tolentino et al. (2011) further rationalizes the Philippine Environment Policy as “an overall environmental policy to be implemented further by laws and other means including direct administrative actions. It is manifested therefore that while in the Philippines, the right to the environment is recognized as a human right, it is also a duty imposed upon the State as well as a responsibility required of individuals.”

Figure 2.1. The Environmental Impact Assessment (EIA) process under the Philippine EIS System *Reproduced from Revised procedural manual for DENR Administrative Order No. 30 series of 2003 (DAO 03-30)*, by Department of Environment and Natural Resources–Environmental Management Bureau, Environmental Impact Assessment and Management Division, 2007, p. 14.



Legend:

- Proponent-driven
- DENR-EMB driven
- Proponent-driven but outside the EIA Process as requirements are under the mandate of other entities
- Public involvement, which typically begins at scoping but may occur at any stage of the EIA process.

The Environmental Impact Assessment (EIA): Its Requirement and Process

The Philippine Environment Policy as previously mentioned calls for the assessment of environmental impact of a development project. Bravante et al. (2009) reveals that an EIA is a widely used tool to properly manage the negative impact of a project to the biophysical environment as well as to humans.

DENR Administrative Order No. 2003-30 sets forth the guidelines in implementing the EIA process, which involves an assessment of environmental impacts based on parameters considering the biophysical as well as social environment of the project that is located in a specific area. Other components of the EIA process will include the preparation of an Environmental Management Plan (EMP), Environmental Monitoring Plan (EMoP), Public consultation or public hearing. After the Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR) makes a review, an Environmental Compliance Certificate (ECC) will be granted.

The EIA process offers good intentions, but Bravante et al. (2009) expressed that they are not followed by project proponents and further suggests that they go with the flow in going through the process as they are just after the money when the development project is issued an ECC, thus can already be implemented with the government being in cahoots.

With regards to the requirement in the EAI process for public consultation and participation, Wood (2003) reiterates through a study conducted by Lohani et al. that in the Philippines, there is lack of it but is quick to suggest that community involvement is already increasingly recognized.

The EIA Practice

Bataineh (2007) conducted a study and found out that to make a project successful in implementing the EIA, knowing everything about the environmental impacts the projects will cause is crucial, as these pieces of information can comprise the criteria from where to evaluate compliance. Likewise important is the active involvement of all stakeholders from the project proponent to environmental authorities that review the EIA, to the project implementors, and auditors in post-project implementation, which include local communities, NGOs in every aspect of the project. Good governance is also a key to good EIA practice.

On the other side of the spectrum, Bravante et al. (2009) and Wood (2003) share the same view about the government policy and policy makers that seem to favor economic development more than environmental protection as shown from the expediency of reviewing the EIA by the EMB as the approval and disapproval of the ECC is by the discretion of the EMB. Bravante et al. (2009) reveals that the EIA process is a way to jump start a project whereby a project proponent, who is just after personal economic gains, wants to start a development project that requires going through the EIA process, goes through it for the sake of following procedures, but without the intention of fulfilling the true intention of performing the assessment. The local government or even the environmental authorities may give a blind eye, because projects would spur economic development, thus expedite its operations.

There likewise emerge some negative attitudes towards the EIA practice as observed by Rao (2000). The study showed that companies comply with meeting environmental standards or adopt environmental management systems because of environmental policies and the influence brought about by pressures from consumers

for the companies to be environment-friendly as the general public is already aware about environmental concerns and the need to care for the environment. Thus, there seem to be no genuine concern for the environment by the companies. Their attitude towards the environment is seen in the light of boosting their sales.

Monitoring Compliance of ECC Conditions

According to Allen (2009), monitoring the environmental impact of a project “allows for better management of the limited and precious resources available.” Project monitoring practices, as observed by Lefèvre et al. (1997) may result in the discovery of gaps between information needs and information provided as well as desirability in the participation of local project actors, which can be immediately addressed. In a study conducted by Maramba et al. (2006), monitoring helped to discover the adverse effect of a project. But in most instances, monitoring is observed by Wood (2003) to be lacking in the EIA process. He further expressed that “projects in developing countries may change substantially between authorization and implementation and environmental controls may not be observed or monitored.”

In the conduct of post ECC issuances, Nakayama et al. (2001) remarked that with regards to development projects there already are initial biases, which can be carried along in evaluating a project, thus influence the evaluation outcome. Wrong assumptions about development projects can emerge, but can only be refuted or validated through baseline research. Furthermore, they seem to suggest that all tables should be turned in conducting an assessment before coming up with a conclusion, because initial biases may prove to be pointing to the other direction. In another study conducted by the same author, EIA can be conducted erroneously due to some

factors, but this will definitely be uncovered during environmental compliance monitoring.

Non-compliance as a result of post-project monitoring should be strictly subjected to legal consequences. Tolentino et al. (2011) asserts that "there is unanimity in the thought that a broad range of sanctions administrative, civil and penal are necessary for proper environmental control. This is because in any society, people will not comply with the law unless there are consequences to non-compliance." But more often than not, erring organizations or companies just get a slap on the wrist or worse, gets away with it.

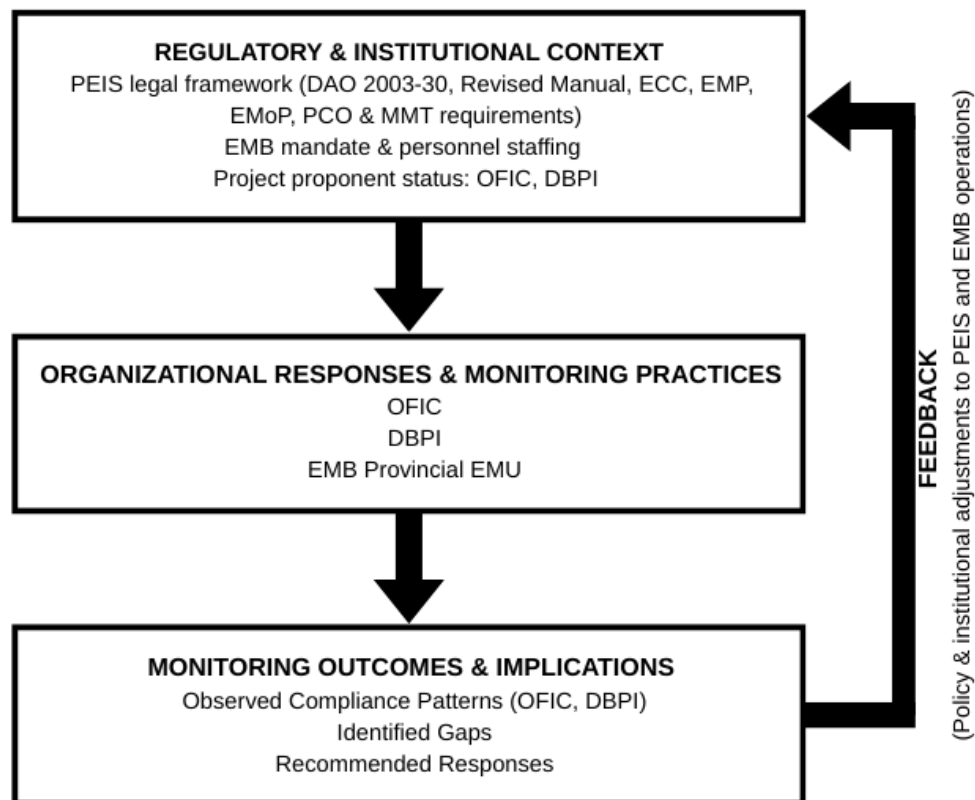
Synthesis

Studies have clearly shown the issues and gaps on the PEIS System. After the issuance of an ECC, the conditions are not seriously taken and unable to perform its supposed function. There is also uncertainty as to how the process of actual monitoring is accomplished on the ground based on the EMP and EMoP during post-ECC monitoring including the limited participation of the community who are supposedly involved. As actual monitoring procedures and its non-fulfillment are not entirely traced, the government seems to be unable to even things out showing bias toward the economic gains of project development over environmental protection. Although sanctions and non-compliance are briefly referred to, how these are actually applied is uncertain giving doubt to its effectivity. Tolentino et al. (2011), Bravante et al. (2009), and Wood (2003) raised concern on the sincerity of the government and project proponents towards the proper implementation of the EIS/EIA system and process despite giving emphasis on its importance and true intention. Bravante et al. (2009), and Wood (2003) noted that the EIA is only part of the procedural step for the

granting of an ECC to project proponents, while Bataineh (2007) and Rao (2000) indicated a poor showing of real commitment and active involvement of project proponents for the successful implementation of the EIA practice. While Allen (2009), Lefèvre et al. (1997), Maramba et al. (2006), Nakayama et al. (2001) presented in their studies that the monitoring process could reveal gaps, errors, and discovery of the project's unfavorable effects, at the same time Wood (2003) discloses frequent neglect of monitoring. Taking all these into account, the literature share the same opinion that the EIA and the eventual granting of an ECC are insufficient enough for a successful PEIS System without having robust and consistent compliance monitoring. The situational investigations shown in the studies agree and points toward a gap between the legal framework of the PEIS System from the EIA to the issuance of ECC with its accompanying EMP and EMoP and the actual enforcement of compliance monitoring on the ground of approved projects. These issues and concerns led the researcher to examine closely the compliance monitoring practices of selected projects in Metro Dumaguete, which is the focus of the study.

Conceptual Framework

Figure 2.2. Conceptual framework of the study showing how the PEIS regulatory context and institutional capacities shape monitoring practices and compliance outcomes in the cases of OFIC, DBPI, and EMB in Metro Dumaguete



For the PEIS System to be effective and successful, there should be a deep understanding of the project and how it will impact the environment through the EIA and post-ECC compliance monitoring that should be dynamic, aggressive, and sustainable. After the EIA approval and the ECC issuance, it is important and critical to enforce proper monitoring of the conditions and the EMP as outlined in the document. The challenge now will be its actual execution that will show the behavior and practices of the project proponent towards their commitment to fulfill their responsibility of implementing the conditions and the performance of the regulatory agency through the EMB PEMU based on its mandated function.

The interrelated interaction of the understanding of the legal frameworks, organizational structure, and organizational responses will reveal the outcome of the compliance monitoring in the case of the selected organizations in Metro Dumaguete as follows:

1. The PEIS legal framework includes the EIA and ECC, EMP, EMoP, SMR, with the formation of a MMT and designation of a PCO as well as the mandate of the EMB. These regulatory and institutional context will define how the compliance monitoring should be undertaken.
2. The organizational structure will define how the regulatory framework will be applied considering the capability and culture of the project proponent and the EMB PEMU. The sincere commitment of the management to fulfill ECC duties and mandated environmental responsibilities and awareness of it, and budget allocation will manifest true behaviors with regards to compliance.
3. The actual monitoring practices will confirm how the legal framework and the key actors establish the outcome perceived in their responses such as frequency of air and water tests, SMR submission, compliance of ECC conditions including the organization of a MMT, as well as how active the involvement of the EMB PEMU will be with regards to inspection scheduling and coverage.

Thus the Conceptual Framework brings together inputs (legal framework and capacities of OFIC, DBPI, and EMB PEMU), processes (the actual conduct of monitoring and reporting of the organizations), and outcomes (observations with

regards to compliance or non-compliance, and gaps) to show the interaction of these factors towards recommending policy and institutional improvements to the monitoring process.

III. STATEMENT OF THE STUDY

According to the Revised Procedural Manual for DENR Administrative Order No. 30, Series of 1003 (2007), the issuance of an ECC to a project proponent does not only entail getting an approval from the EMB to commence a project, but along with it is a formal undertaking of a sworn agreement to fulfill the responsibility of complying with the conditions specified in the ECC including the EMP and the EMoP. This is necessary because the mandate of the PEIS System is to ensure environmental protection from the start of the project to its completion and beyond, through monitoring.

The effectiveness of the compliance monitoring in the EIS process will depend on different factors as to how project proponents would conduct it based on the organizational structure, technical capacity of the personnel, flow of information, and socio-economic standing. The dynamics of these factors are distinct from one organization to the other considering operational procedures and the location of the project.

Studies made on the assessment of the PEIS System points to weak compliance with the EIA requirements due to the fact that project proponents regard the EIA process only as a means to secure an ECC rather than looking at it as a foundation to establish a long term environmental management (Rao et al., 2006; Bravante et al., 2009). On the other hand, the EMB has its own organizational and procedural challenges that affects their efficiency in monitoring local projects.

In the case of Metro Dumaguete, the aforementioned issues will be investigated considering the circumstances of OFIC, a food manufacturing plant that is not covered,

meaning it will not go through the full EIA process and there is no more need for an ECC; DBPI, a covered project that needs to hurdle the EIA process and get an ECC; and the EMB PEMU, the local regulatory agency. The researcher will also look into the compliance monitoring practices of these key actors and will be guided by the following main research question:

- How is the environmental compliance monitoring carried out by OFIC, DBPI, and EMB, and how will this influence potential policy and institutional reforms?

The following are the Specific Questions:

1. What policies, procedures, and regulatory requirements are present in regard to environmental compliance monitoring in the area and how are these implemented?
2. How is the process of monitoring in terms of methods used, personnel involved, tools utilized, and timetable?
3. What is the level of implementation of these policies by the selected key actors?
4. How effective is the current practice as perceived by the key actors? What issues and challenges are encountered in the process of monitoring? How are these addressed?
5. How do the key actors perceive the implementation of EMP in terms of the design, the process of familiarization of stakeholders of the various

components or requirements of the compliance monitoring, and
execution of plan?

IV. OBJECTIVES OF THE STUDY

Based on the Statement of the Problem and Research Questions, the following are the objectives for the study:

1. To describe and analyze the policies, procedures, and regulatory requirements present in regard to environmental compliance monitoring and how are these implemented.
2. To examine the process of monitoring in terms of methods used, personnel involved, tools utilized, and timetable.
3. To assess the level of implementation of the policies.
4. To identify and analyze the current practice of compliance monitoring as perceived by the stakeholders, and how effective it is, as well as the issues and challenges encountered during monitoring, and how are these addressed.
5. To analyze the perception of the key actors with regards to the implementation of the EMP considering the design, the process of familiarization of stakeholders of the various components or requirements of the compliance monitoring, and execution of plan, and propose policy and institutional recommendations to strengthen compliance monitoring.

V. RATIONALE

The PEIS System becomes successful and effective not by the approval or issuance of an ECC, but by complying with the conditions set in the document and other environmental requirements and, more importantly, with the expected proper monitoring over time to ensure environmental protection. This is in line with Allen (2009), where compliance monitoring is viewed as a reflection of the true behavior of project proponents, especially if there is better management in addressing and minimizing the negative impacts together with the efficiency of the regulatory agency in executing its mandated function.

The study looks into the cases of the key actors and highlights the actual practices done with regard to compliance monitoring in their respective organizations to show contrasting levels of implementation and potential gaps that will be identified as OFIC, which is not covered by the PEIS System, and DBPI, having been granted an ECC, are investigated. In the case of the EMB PEMU, the study can offer practical insights into organizational challenges that are identified and analyzed with the aim to improve their system of monitoring projects within Negros Oriental and Siquijor by the recommendation of strategies to efficiently carry out their regulatory function.

Project proponents and organizations that will be going through the process of the PEIS System will greatly benefit from this study through the learnings that the cases offer in terms of compliance monitoring that will serve as a reference to understand their responsibilities after being granted with an ECC. It is the desire of the researcher that project proponents will ultimately view the ECC, not just as a legal document to commence the project, but as a responsibility and commitment to long-

term environmental management by making it as a guide for proper monitoring compliance and a reminder to fulfill it.

Researchers, educators, students, and individuals who may be interested about the PEIS System and the processes involved until the issuance of an ECC and beyond, will benefit as well in this study as it provides the empirical material for classroom discussion, policy analysis, and future research on monitoring compliance as behaviors of project proponents and capacities of the regulatory agency are assessed. The limited sets of cases presented in this study may suggest future directions for comparative work in other locations with more key actors participating.

VI. SCOPE AND LIMITATIONS

Scope of the Study

The focus of the study is on the environmental compliance monitoring practices under the PEIS System and the roles of the key personnel involved in environmental concerns of the selected cases in Metro Dumaguete, Negros Oriental, specifically OFIC, DBPI, and EMB PEMU. The period from when this research study was conducted, during which OFIC and DBPI were operational and with the oversight of the EMB PEMU, is the time scope for this study. Not all documents are complete, comprehensive, or accessible, but the research considered only those that were shared by the key personnels that include the ECC and its accompanying conditions and the EMP, self-monitoring reports (only the 3rd quarter of 2015 was shared by OFIC), permits, and selected environmental test results. These documents are attached in the Annex.

Selected projects that are under the jurisdiction of the EMB PEMU within Metro Dumaguete are covered for the study's geographical scope focusing only on OFIC, DBPI, EMB PEMU of Negros Oriental and Siquijor, three (3) illustrative cases that will undergo an in-depth analysis.. A qualitative case study approach will be the research methodology adopted for this research. This will hopefully provide insights into the dynamics and gaps at the local level that may offer potential improvements as to how compliance monitoring should be implemented under the PEIS System.

Limitations of the Study

This study has several limitations that may affect the completeness and depth of the findings. The first limitation concerns access to information. The research

depends on the willingness of the key actors to allow the researcher to access and review their documents and practices related to environmental compliance. These documents include, among others, the Environmental Management Plan (EMP), the Environmental Monitoring Plan (EMoP), the Environmental Compliance Certificate (ECC) and its conditions, as well as self-monitoring reports and test results for water and air. If project proponents decide to withhold some of these documents, or to give only partial access, the analysis of their actual monitoring practices and level of compliance will be affected.

The second limitation is related to the selection of cases. The study focuses only on two establishments in Metro Dumaguete whose proponents the researcher has personal or professional association with, namely Orient Foods Industries Corporation (OFIC) and Dumaguete Business Park Incorporated (DBPI). This arrangement makes it easier to request interviews and documents, but it also narrows the coverage of the research. The results of the study may therefore not represent the situation of all other projects covered by the Philippine Environmental Impact Statement System, even within Metro Dumaguete or Negros Oriental.

The third limitation involves time and scheduling as the researcher has to complete the study within a prescribed period. Limitations that may pose practical constraints is anticipated that involves the gathering of data that might not be readily available or may take time to locate or release, as well as in the aspect of the coordination process with the key personnel of OFIC, DBPI, and the EMB PEMU that may result in limited future site visits in the duration of the study, follow-up interviews or further clarifications with key personnels.

A fourth limitation anticipated by the researcher is that there might be biases or being selective in the information that the key personnels would share as they would rely on their limited memory or will not disclose sensitive details during the time of interview. This lapse may influence how they will describe and narrate their respective environmental practices including monitoring challenges encountered. Although to enhance data reliability, a mitigation strategy such as cross-checking interview responses vis-a-vis the documents they will provide and site observations might address this bias.

Finally, the scope of the study relies more on the qualitative cases of OFIC, DBPI, and the EMB PEMU in Metro Dumaguete. Granting that the technical data or ECC conditions may be incomplete or not clearly explained, the data interpretation and analysis will focus on monitoring systems and practices rather on the quantitative assessment of environmental performance. The examination of the selected cases will lead to identifying the strengths and weaknesses of compliance monitoring under the PEIS System and recommend potential policy or actual practice adjustments.

VII. DESCRIPTION OF THE STUDY AREA

The study will only consider specific key actors that are located in Metro Dumaguete that are subjected to environmental regulation by the EMB Regional Office in Cebu and the local PEMU. Thus, the following are the selected cases:

1. Orient Foods Industries Corporation (OFIC) – a local manufacturer and exporter of dried fruits located in the Municipality of Sibulan, which is part of Metro Dumaguete, began its operations in 1981 and is therefore not covered by the documentary requirements of the PEIS because it predates 1982 and operates below the prescribed production threshold. But despite this, environmental protection is given importance by the management in its operations by designating an in-house Pollution Control Officer (PCO) among its key personnel to conduct regular monitoring of air emissions and wastewater through regular test procedures to check quality, submission of Self-Monitoring Reports (SMRs), and consultations and coordination with the EMB for the issuance of permit to operate.
2. Dumaguete Business Park Incorporated (DBPI) - owns a 24-hectare property intended for a mixed-use development that is classified as a Group IV co-located project and issued an ECC in 2006. The ECC outlines conditions for environmental protection that requires compliance including the preparation and implementation of an EMP, the creation and establishment of a Multi-partite Monitoring Team (MMT), and other monitoring-related conditions (see Appendix C). But, management has not fully institutionalized the supposed requirements from the ECC, and

no key personnel was designated to handle environmental concerns, such as a PCO.

3. Environmental Management Bureau (EMB) Provincial Environmental Management Unit (PEMU) - is the local government agency that is mandated to oversee the implementation of the PEIS System and includes the environmental compliance monitoring of projects in the province of Negros Oriental and Siquijor. This particular unit that handles field inspections, review of reports, and project coordination, is composed of only two (2) personnel, that includes the unit head or officer.

These cases were selected due to the fact that each represents contrasting situations from one another but under the same regulatory framework, which is the PEIS System. Conjointly, OFIC, DBPI, and EMB PEMU provide a useful basis for examining the dynamics of environmental compliance monitoring in Metro Dumaguete.

VIII. METHODOLOGY

This chapter describes in detail the following sections covered in this study and the procedures applied: research design, respondents, data collection methods and analysis. The deliberate selection of cases, namely OFIC, DBPI, and EMB PEMU, is discussed and highlighted, as well as the collection of information on how monitoring environmental compliance is practiced.

Research Design

The study will adopt a qualitative case study approach that will focus on the understanding of the practices, behaviors, and experiences with regards to the environmental compliance monitoring under the PEIS System of selected key actors in Metro Dumaguete. This kind of study design is seen as appropriate as it allows for an in-depth examination of real-life situations in the actual conduct of monitoring compliance as provided and outlined in the ECC conditions, EMP, and EMoP, and other required documentation as understood, interpreted, and implemented in the local context.

By following this research design method, the aim is not to produce a generalized statistical finding, but to provide instead a detailed outcome that is descriptive and analytical about how the selected key actors would carry out their individual monitoring activities and the various factors that will shape and influence it. The study will look into the monitoring process from the issuance of the ECC and thereafter for projects covered by the PEIS System, or EMP regulatory requirements for non-covered projects that will involve air and water quality tests, reports, and EMB coordination, including solid waste management.

Sampling Procedure and Case Selection

A purposive sampling procedure is adopted in the selection of cases to get the needed information that will best answer the research question from key informants who have experiences with regard to the issue of monitoring compliance. The main criteria for selecting the case-organizations are limited only to the following: (1) location within Metro Dumaguete, making it feasible to reach the respondents and easily access the needed information; (2) status under the PEIS System, whether covered or non-covered, with or without ECC; and (3) experience and practice related to environmental monitoring compliance. Based on these criteria, OFIC and DBPI were selected among the probable list of projects, since the researcher personally knows the managers of the case-projects, which increases the likelihood of securing pertinent documents and consent to conduct interviews of key personnel that is directly responsible for environmental concerns. Included in the selection process is the increased assurance that the project proponents will allow the researcher scrutiny of their monitoring compliance practices.

The EMB PEMU was included as a third case being the lead government agency that is mandated to implement the PEIS System by evaluating EIA applications, issuing ECCs, and monitoring compliance and validation thereof in the Metro Dumaguete area. This agency is very essential for the study in understanding how the agency's obligations for monitoring are coordinated, how compliance monitoring is conducted and verified, and the challenges encountered by the personnel involved in the field.

Respondents

The study will involve the key informants from each case who are directly involved in the monitoring activities, record-keeping, and interactions or coordination with project proponents or the regulatory agency. These are the following:

- For OFIC, the in-house PCO involved in the compliance of environmental requirements and coordination with the EMB.
- For DBPI, the current project manager who may have knowledge about the ECC and its accompanying conditions, including the EMP and monitoring activities the company may have conducted.
- For EMB PEMU, the Provincial Environmental Management Officer assigned in Metro Dumaguete.

Data Collection Methods

Data collection was mainly qualitative and made use of multiple sources to allow triangulation.

1. Document review

The study involves the review of relevant documents, subject to their availability and the willingness of organizations to provide access. These documents include:

- Environmental Compliance Certificate (ECC) of DBPI, including the conditions related to monitoring, mitigation, and reporting.

- Any available EMP and EMoP associated with DBPI's EIS or ECC.
 - Self-monitoring reports (SMRs), laboratory test results for water and air emissions, and permits related to wastewater discharge and air pollution control from OFIC (see Appendices D, E, and F).
 - Internal memoranda, correspondence, and other records that indicate how monitoring is organized and reported within the companies.
 - EMB guidelines and forms used for monitoring, such as standard reporting formats and any checklists or evaluation tools applied in field inspections.
2. Reviewing these documents helps determine what is formally required of the project proponents, what monitoring data are actually generated and submitted, and how EMB documents its oversight and follow-up actions.

3. Key informant interviews

Semi-structured interviews are conducted with the identified respondents from OFIC, DBPI, and EMB. An interview guide, found in the appendices, is prepared based on the study's objectives and research questions and covers the following themes:

- Awareness and understanding of ECC conditions, EMP, EMoP, and other regulatory obligations related to environmental monitoring.
 - Actual monitoring practices (parameters monitored, methods used, frequency of sampling and reporting, use of accredited laboratories, etc.).
 - Interactions between project proponents and EMB, including site visits, submission and review of reports, feedback, and guidance.
 - Constraints and challenges in implementing monitoring activities (e.g., staffing, budget, technical expertise, availability of equipment).
 - Perceived effectiveness of existing monitoring arrangements and suggestions for improvement.
4. Interviews are conducted in person where possible, or through other communication modes if necessary, and are documented through notes and, when permitted, audio recordings for more accurate transcription and analysis.
5. Site observations

Site visits are conducted to OFIC and DBPI, subject to permission from management, to observe physical facilities and, where visible, environmental control and monitoring measures (e.g., wastewater

treatment facilities, emissions control equipment, waste storage areas). Observations focus on general conditions and observable practices and are used to complement and cross-check information obtained from documents and interviews. When feasible, the researcher also visits the EMB office in Metro Dumaguete to observe the working environment of the Provincial Environmental Management Unit, including storage and handling of monitoring records and other documentation practices.

Data Analysis

Data analysis follows a qualitative, thematic approach. First, information from documents, interviews, and observations is organized by case (OFIC, DBPI, EMB) and by key themes related to the research questions, such as: (1) regulatory requirements and policies, (2) organizational arrangements for monitoring, (3) monitoring methods and frequency, (4) interactions between proponents and EMB, and (5) constraints and gaps in compliance.

Second, within each case, the data are reviewed to identify patterns and consistencies, as well as discrepancies between what is formally required (e.g., ECC conditions, EMP and EMoP provisions) and what is actually practiced. For example, the presence or absence of a PCO, the frequency of water and air testing, and the formation of a Multi-partite Monitoring Team are compared against the conditions stated in the ECC and relevant guidelines.

Third, a cross-case comparison is conducted to bring to the fore similarities and differences in the monitoring practices between OFIC and DBPI, and to relate these

to the role and capability of the EMB PEMU as a regulatory agency in the implementation of the PEIS System. Emphasis is given to how a non-covered but proactive company (OFIC) would respond differently to a covered project with an ECC (DBPI) with regards to environmental regulatory requirements and how the EMB PEMU would conduct its monitoring of its assigned area. This comparison will help explain the dynamics of compliance monitoring in Metro Dumaguete that will lead to determine possible areas where policy or institutional improvement and adjustments are necessary.

Finally, the themes that will emerge from the analysis of the cases are used to organize the presentation of the results that will lead to the recommendations on strengthening the monitoring process, improving communication and guidance between the EMB PEMU and the project proponents, and addressing capacity issues affecting the effectiveness of monitoring compliance.

Ethical and Practical Considerations

The study recognizes that the quality and depth of the information gathered will depend on the willingness of the organizations to share and allow access to it. The participation of the key informants is voluntary, and confidentiality of sensitive information that may have been shared is respected. Any limitations that may arise from documents that will be withheld, incomplete records, or constraints in scheduling the interviews and visits are acknowledged and included in the study as limitations that will be taken into account in the interpretation of the findings.

IX. RESULTS

This chapter presents the study findings about the environmental compliance monitoring on the specific cases of OFIC, DBPI, and EMB PEMU. Organized into three (3) main sections, namely: (1) OFIC, (2) DBPI, and (3) EMB PEMU, each of the sections describe the nature of the project or the company or office, the monitoring context, and the observed practices and challenges or issues pertaining to compliance monitoring.

Orient Foods Industries Corporation (OFIC)

A. Company Profile and Regulatory Context

Orient Foods Industries Corporation (OFIC) is a local food manufacturing plant located in the Municipality of Sibulan, which is part of Metro Dumaguete. It produces dried fruits— mango, papaya, coconut, pineapple, and banana— for the local market and for export abroad. The company was registered with the Securities and Exchange Commission in 1981 and started operations shortly thereafter. Under the Revised Procedural Manual for DENR Administrative Order No. 30, Series of 2003, projects that were already operational or implemented before 1982, have not stopped operations for more than five years, and have not undergone modification or expansion within covered thresholds are not required to secure an ECC or any other documentary requirement under the Philippine EIS System. OFIC falls under this category and is therefore not formally covered by the PEIS in terms of EIS/ECC documentation.

In addition, the threshold for food processing industries under the same Manual is set at an annual finished product production rate of 50,000 metric tons. OFIC's

average annual production of finished products is around 120 metric tons, which is approximately 0.24 percent of this threshold, further confirming that the facility is below the capacity levels typically subjected to full EIS requirements.

B. Internal Monitoring Arrangements and Practices

Despite not being covered by the PEIS documentary requirements, OFIC has put in place internal mechanisms for environmental monitoring and compliance with EMB regulations. The company maintains an in-house Pollution Control Officer (PCO), who is accredited by the EMB and serves as the primary liaison between OFIC and the regulatory agency. The PCO is responsible for monitoring the facility's wastewater discharges, emissions from a bunker-fired boiler and a wood-fired furnace, and the generation and handling of solid wastes.

OFIC submits quarterly Self-Monitoring Reports (SMRs) to EMB, as required for regulated facilities, even though it does not hold an ECC under the PEIS (see Appendix D for a sample SMR). The company operates a wastewater treatment facility and conducts annual water quality tests to support the renewal of its Discharge Permit, which is also required for the sanitation component of its business permit renewal (see Appendix E). Test results for conventional wastewater pollutants such as pH, biochemical oxygen demand (BOD), and total suspended solids (TSS) have been reported to be well within, and in fact significantly below, the effluent standards set by DENR under Administrative Order No. 35, the Revised Effluent Regulations of 1990.

In terms of air quality, OFIC conducts emission tests for its bunker-fired boiler and wood-fired furnace and has been issued a Permit to Operate for its air pollution source and control installations (see Appendix F). These activities done by OFIC

indicate the commitment of OFIC to comply with environmental requirements despite not being covered by any documentary requirement under the PEIS System.

C. Interaction with EMB and Observed Compliance

OFIC maintains regular coordination with the EMB through its PCO in order to comply with and fulfill regulatory reporting and permitting requirements. According to the PCO, a designated personnel from the Regional EMB office in Cebu City conducts occasional ocular inspections of the facility. Likewise, the local EMB PEMU in Dumaguete City does periodic follow-up calls to check and know the monitoring activities and efforts of OFIC in relation to the quality of water and air emissions.

It is observed from the information gathered that OFIC exhibits a relatively strong environmental compliance and monitoring practice despite the fact that it is not formally covered by the PEIS system documentary requirement. The management of the company appears to be concerned about the potential impact of its water discharges, air emissions, and solid waste disposal on the surrounding environment and nearby residential areas, thus has institutionalized arrangements in the structure of the company by designating a PCO responsible for conducting regular laboratory tests and reports. This case demonstrates that proactive compliance of environmental requirements through regular monitoring, firm management commitment to fulfill it, and a regular working relationship with the EMB through its local PEMU, can occur even outside the strict coverage of the PEIS System.

Dumaguete Business Park Incorporated (DBPI)

A. Project Description and ECC Status

Dumaguete Business Park Incorporated (DBPI) owns and controls the proposed Dumaguete Business Park Land Development Project covering a total land area of 24 hectares that will have mixed-use facilities such as commercial and residential, and other support facilities and amenities. The property currently has a few structures that were already built that includes the Robinson's Mall with Go Hotel, and two (2) Low-Rise call center buildings, and a new on-going construction of a low-rise building that will contain 40 tiangge-type stalls.

An Environmental Compliance Certificate (ECC) was issued to DBPI on November 26, 2006. Under the Revised Procedural Manual for DENR Administrative Order No. 30, the DBPI project is classified under Group IV as a co-located project, defined as a mix of single projects within a contiguous area under a single area or zone administrator. Due to its classification, this project automatically requires a Programmatic EIS no matter what the capacity or area is, and probable number of locators.

B. Implementation of ECC Conditions and Monitoring Practice

The study reveals that DBPI has not fully institutionalized its environmental management program and compliance monitoring of the conditions provided and outlined in the ECC that was granted. In 2007, a newly appointed head took over the management of the project. There was no proper turnover of pertinent documents related to the ECC, including the Environmental Management Plan and any Environmental Monitoring Plan that may have been prepared during the EIA process.

As a result, the current manager is not fully aware of the existence or details of the EMP and is uncertain about the specific environmental obligations associated with the ECC.

DBPI was reportedly able to observe some ECC conditions during the construction phase of the built structures, such as basic mitigation and housekeeping measures. However, in terms of ongoing monitoring compliance, there has been little action on the part of the current management. One of the key gaps is the non-formation of a Multi-partite Monitoring Team (MMT), which is indicated as part of the general conditions of the ECC (see Appendix C). Furthermore, DBPI does not have a Pollution Control Officer or comparable technical staff to advise management on how to meet the conditions stipulated in the ECC and to organize systematic monitoring of environmental performance.

The current manager expressed the need for the EMB PEMU to provide guidance on the implementation of the ECC conditions. These observed facts have contributed to a weak compliance monitoring by DBPI.

C. Observed Compliance Behavior and Gaps

When compared to OFIC, the DBPI case reflects many of the concerns raised in the literature about EIA and ECC being treated as procedural hurdles rather than as foundations for continuous environmental management. After almost nine years from the issuance of the ECC, DBPI had taken limited initiative in complying with the monitoring-related conditions of the ECC, and environmental compliance monitoring was largely absent beyond some initial measures during construction.

The ECC explicitly states that its conditions should be followed in all stages of project implementation, from pre-construction through operation and, where relevant, abandonment. However, in DBPI's case, the absence of a proper turnover of ECC-related responsibilities from the previous to the current management and the lack of internal expertise have resulted in a situation where management does not fully understand what needs to be done to comply. These particular situations confirm the observations from other studies that the obligations of the project proponents under the PEIS System can actually lose their grip due to the absence of a strong internal environmental management system and external pressure from the regulatory agency represented by the EMB PEMU once project approval is obtained through the issuance of an ECC.

The DBPI experience also reinforces the importance and need for immediate endorsement of information such as the ECC document and the obligations and responsibilities that go with it. When there is a change in the organizational structure and the complete turnover of documents and responsibilities was not made, then the supposed commitments for environmental monitoring and compliance will not be realized, leading to potential environmental risks if they remain unchecked.

Environmental Management Bureau (EMB) – Provincial Environmental Management Unit (PEMU)

A. Mandate and Staffing Situation

The Environmental Management Bureau (EMB) is the agency that is mandated to implement the PEIS system, which includes the review of the EIA applications and the issuance of either an ECC or a CNC depending on the project classification. At the

local level, it is the EMB PEMU located in Dumaguete City that serves as the field office responsible for implementing the EMB functions within Negros Oriental and the island province of Siquijor.

The PEMU has only two (2) personnels composed of the Provincial Environmental Management Officer and an Environmental Management Specialist I. Within their area of coverage, they are responsible for all related activities under the PEIS System and other environmental regulatory tasks that will include project site inspections, review of SMRs, coordination with the local government units and project proponents, and the preparation of necessary reports and documentation.

During the interview, the EMB PEMU officer acknowledged that the unit is under-manned considering the extent of their area of responsibility and the volume and diversity of projects that will require their oversight. The officer noted that the workload continues to accumulate, thus limiting their time available for regular field inspection and comprehensive compliance monitoring.

B. Monitoring Role and Observed Practices

Under the Revised Procedural Manual for DENR Administrative Order No. 30, the EMB is primarily responsible for the overall evaluation and audit of the monitoring at the institutional level done by the project proponents, as well as the validation of the supposed tasks and activities of the Multi-Partite Monitoring Teams. Specifically, the role includes reviewing the monitoring reports, conducting field verification, and taking appropriate actions if non-compliance or adverse impacts are detected during their inspection.

In practice, the EMB PEMU in Dumaguete City conducts its monitoring with its very limited and available staff. EMB PEMU personnel carries out occasional ocular inspections of projects, such as OFIC, and other similarly classified projects and maintains coordination and document follow-up with the project proponents through phone calls. For bigger ECC-bearing projects such as DBPI, the challenge of having a very limited personnel becomes more prominent as they would report difficulty in conducting regular and frequent visits to do compliance monitoring.

The EMB PEMU also processes and reviews SMRs and other submissions that are required from the proponents. But the volume of work relative to staff capacity signifies that not all submitted documents can be given attention to for thorough examination and field verification. The officer expressed the need for at least one (1) additional personnel to handle office-based tasks so that the current two (2) personnels could have more time for field inspection, monitoring, and the preparation of the corresponding detailed reports and documentation.

C. Identified Gaps and Needs in Monitoring

The findings from the case of the EMB PEMU highlight several gaps that affects the effectiveness of the unit to conduct compliance monitoring under the PEIS System in Metro Dumaguete.

First, the very limited personnel greatly limits the frequency of monitoring visits, thus making it difficult for them to maintain systematic oversight of all the projects that have been issued an ECC or are otherwise subjected to environmental regulation. This situation reduces the ability of the EMB PEMU to timely detect non-compliance

and to provide continuous guidance to project proponents needing it, such as DBPI that lacks internal technical capacity to implement ECC conditions.

Second, the EMB PEMU officer noted that in some cases, the ECC applications together with their supporting documents are prepared by external consultants or “preparers” as they are called rather than by the project proponent themselves. In a way, this particular practice can improve the technical and documentary quality of the application, but it creates a risk as the in-depth knowledge of the ECC conditions and EMP commitments can remain only with the preparers because these are not fully and properly endorsed or transferred to the company management once the ECC is granted and the engagement with the consultant ends. As a result, upon receiving the ECC, some of the managing heads or key personnel do not have a clear understanding of the responsibilities that go along with the document, including the required monitoring and reporting obligations, which appears to be the case with DBPI.

Third, there is a need for an effective and stronger information and education activities regarding the importance and meaning of an ECC directed towards project proponents. The EMB PEMU officer recognizes that many project proponents view the granting of an ECC primarily as a permit to start a project rather than a commitment to a sustained environmental management and protection. Noted and recognized as well is the value of having mechanisms such as orientations or consultative meetings before and after the issuance of the ECC to further explain the monitoring roles, responsibilities, procedures, documents required to be submitted, the frequency of reporting, as well as penalties to be incurred for non-compliance.

Finally, the EMB PEMU officer realizes that they should strengthen and actively promote the appointment of a technically qualified PCO by the project proponents, and

there should be proper endorsement and turnover of ECC obligations and responsibilities during management changes.

Cross-Case Insights

Bringing together the three (3) cases, it is evident that environmental compliance monitoring is influenced and shaped by the interaction of the regulatory requirements, organizational capacities, and the actual practice and behavior of the organizations on the ground. OFIC has shown that non-covered projects can exhibit strong monitoring compliance behavior if management is proactive with the designation of a PCO and maintaining regular coordination with the EMB. In contrast, DBPI demonstrates that a covered project with an ECC can have weak monitoring implementation if there is no designated technical personnel to handle environmental concerns and no proper endorsement or transfer of information with regards to the ECC once there is a change in management. On the regulatory side, the very limited personnel of the EMB PEMU with the heavy workload they have limits their ability to effectively deliver the expected level of monitoring projects and proper guidance to project proponents as envisioned in the PEIS System. These findings point to a need to strengthen both the external regulatory capacity and the internal organizational arrangements and behaviors if the PEIS System is to achieve its intended goal of ensuring the effective environmental compliance of ongoing projects.

X. ANALYSIS AND DISCUSSION

This chapter will highlight the main findings of the study based on the PEIS System that defines the EIA process, the ECC issuances, and compliance monitoring of projects by comparing the practice and experiences of Orient Foods Industries Corporation (OFIC), Dumaguete Business Park Incorporated (DBPI), and the Environmental Management Bureau (EMB) Provincial Environmental Management Unit, and explaining what these cases reveal about the effectiveness of the environmental compliance monitoring in Metro Dumaguete.

Monitoring as the “Real Test” of the PEIS System

The results of the study provide evidence to support the idea that the effectiveness and success of the PEIS System is ultimately seen in the actual, faithful implementation of environmental compliance monitoring as prescribed in the ECC conditions and the EMB regulatory requirements. In many instances, the literature shows that EIA is treated mainly as a procedural requirement to secure an ECC, and once obtained, the EMP and the EMoP are not followed or, worse, not even fully implemented. Bravante and Holden (2009) and Wood (2003) argue that project proponents or even the regulatory agency focus more on securing the approval and subsequent operation of projects through the ECC issuance, rather than the long-term commitment for environmental protection.

This pattern is reflected in the contrasting experiences of OFIC and DBPI as shown in their compliance monitoring practices. OFIC, though not even formally covered by the PEIS documentary requirements due to its pre-1982 status and having a small production volume, designated an accredited PCO that coordinates closely

with the EMB and regularly conducts monitoring and tests of discharged wastewater and air emissions that are reported to the EMB by submitting SMRs. DBPI, on the other hand, has been issued an ECC because of its large land development project, but has not fully followed the ECC conditions because it was not immediately turned over to the new management, thus having a limited awareness of its conditions that led to the non-creation of a MMT, as well as having no PCO or designated personnel responsible for environmental concerns.

These findings confirm that granting an ECC does not guarantee effective environmental management and implementation of conditions. What will determine the true intentions of the PEIS System that will translate into actual compliance on the ground is a combination of the organization's commitment to protect the environment through a responsible monitoring system and follow-through of regulatory requirements.

Proponent Behavior and Internal Capacity of OFIC and DBPI

The two (2) project cases, specifically OFIC and DBPI, highlight how different organizational attitudes and capacities would shape the compliance monitoring outcomes under the same regulatory framework.

OFIC shows that a proactive behavior to meet environmental requirements can occur even without being strictly covered by the PEIS System through the preparation of the EIS or securing an ECC. The company, having a designated PCO, conducts regular water quality tests of discharges from their wastewater treatment facility as well as air emission tests, thereby being granted permits to operate. The laboratory results for their key wastewater parameters (pH, BOD, TSS) are reported to be well

below the DENR effluent standards, suggesting good monitoring practices thus maintaining a good environmental performance. From the perspective of the findings by Bataineh (2007), OFIC seems to resemble the kind of practice where the understanding of environmental impacts and maintaining an active involvement with the regulating agency contribute to a more responsible project monitoring implementation.

In contrast, DBPI reflects the many concerns raised by Bravante and Holden (2009), Wood (2003), and Rao et al. (2006) about the EIA and ECC as being treated like stepping stones or permits to commence project implementation rather than a procedural guide for a long-term commitment to comply with environmental protection requirements. The project is classified as a Group IV co-located project that was required to prepare a Programmatic EIS and was granted an ECC in 2006. But after a change in management, the ECC-related documents were not properly turned over to the current administrator, thus having no knowledge about the details of the ECC conditions that must be complied with throughout the life of the project that resulted in being unaware of the associated EMP, EMoP; non-establishment of the MMT that is part of the required ECC conditions; non-designation of an accredited PCO who could coordinate all environmental concerns with the EMB PEMU.

The work of Rao et al. (2006) about the attitude of companies toward environmental protection suggests that environmental measures are adopted in response to policy pressures or market expectations, rather than showing genuine concern. This view fits the case of DBPI that followed basic environmental measures during the start of construction of the initial infrastructure requirements of the project, but monitoring activities to comply with ECC conditions were not institutionalized, thus

indicating that environmental obligations were not fully integrated into the company's supposed long-term management systems. This reinforces the view that internal capacity and commitment, designation of an accredited PCO, and clear internal procedures for environmental compliance are critical for effective monitoring, including proper endorsement and communication during changes in management.

Regulatory Capacity and the Role of the EMB

The EMB PEMU in Dumaguete City is given the mandate to oversee the proper implementation of the PEIS System at the local level, that includes compliance monitoring and the validation of projects. However, the results show that this unit is only composed of two (2) personnel, including its officer, who are responsible for all the environmental regulatory activities of all the projects located in Negros Oriental and Siquijor that will require inspection, review of submitted reports, and proper coordination with the project proponents. The EMB officer acknowledges the fact that the local unit is under-manned, and there exists limited time for them to do regular, in-depth monitoring visits and systematic follow-up of compliance with the ECC conditions as workload keeps piling up.

This situation is very consistent with the broader studies that give emphasis on how the limited capacity of the regulatory agency can weaken the implementation of supposed environmental policies, even when the legal frameworks are already well established. As noted by Woods (2003), the environmental requirements in developing countries may not be observed or monitored consistently, especially when projects change substantially after having been granted an ECC. Tolentino and Tolentino (2011) stress that for an environmental control to be effective, the institutional capacity

should be able to detect non-compliance and enforce strict penalties and consequences.

In the context of Metro Dumaguete, the EMB personnel do conduct occasional project site visits, they review SMRs, and maintain communication and coordination with project proponents such as with OFIC. But the fact remains that the very limited staff restricts the frequency and coverage of their regulatory tasks. This and the lack of substantial regulatory pressure explain why projects like DBPI can operate for years even without fully implementing the ECC conditions, especially that which is related to monitoring activities. The EMB case demonstrates that the strengthening of the PEIS System requires not only better compliance practices by project proponents but also increased and improved staffing, resources, and that monitoring schedules are frequently done by the regulatory agency.

Information Transfer, Consultants, and Institutional Memory

Another important issue that emerges from the results of the study is the role of information transfer and institutional memory in sustaining environmental compliance and monitoring over time. In some cases, according to the EMB officer, the ECC applications and EIS documents are prepared by external consultants or “preparers,” who are more technically equipped to accomplish the task. While this can improve the quality of the documentary submissions, it can also create a gap when the engagement of the consultant ends and the knowledge about the ECC conditions, EMP, and EMoP are not handed over effectively to the company management. This problem is clearly demonstrated in the DBPI case. The lack of proper turnover of ECC-related documents and responsibilities that go with it during a change in management contributed to the limited awareness of specific environmental obligations, including

the creation of the MMT and the proper conduct of regular monitoring by the current administrator. As a result, the commitments made during the EIA process were not institutionalized within the organization, thus compliance monitoring activities were not pursued.

The study made by Nakayama and Fujikura (2001) points out that the environmental compliance monitoring can uncover erroneous conduct done during the EIA process due to some factors including wrong assumptions made about development projects as they are evaluated. There should be a clear understanding about the project and the impacts it can create, and project information should be complete and validated by baseline research in the conduct of the EIA process leading to the issuance of an ECC. The results then suggest that both the EMB and the project proponents will need clearer procedures to ensure that ECC-related responsibilities are fully communicated and coordinated, especially when consultants are used during the EIA phase or when there is a turnover of key officials in an organization.

Monitoring, Enforcement, and the Problem of Weak Sanctions

The literature indicates that monitoring must have its corresponding appropriate corrective actions or penalties when noncompliance is detected. Tolentino and Tolentino (2011), among others, argue that a mix of administrative, civil, and punitive sanctions that have real consequences for violations committed are necessary because some project proponents will not take environmental laws seriously. In practice, however, they also note that erring organizations would most likely receive only minor penalties or no sanctions at all, which undermines the deterrent effect of the law.

In Metro Dumaguete, the patterns observed about the monitoring practices of DBPI suggest that a prolonged non-implementation of monitoring obligations can persist without strong corrective measures from the regulatory agency. What contributed to this situation is the limited manpower of EMB and the absence of clear, routine mechanisms to remind project proponents of their obligations to fulfill environmental conditions and to follow up on the lapses. Meanwhile, the relatively strong monitoring practices of OFIC show that not all compliance is driven by the awareness of sanctions but by internal motivation and concern for the neighboring communities that may be affected by inappropriate discharges and emissions and, most importantly, the environment.

These findings point to the need for information and education strategies that will encourage project proponents to view the ECC and its conditions as serious commitments to continuous environmental management and protection rather than as a one-time requirement or permit to commence the project, combined with improved enforcement mechanisms, strengthened designation requirements with proper guidance for PCOs, and promoting proper turnover of ECC responsibilities within companies when management transitions would take place.

Contribution of the Study and Significance of the Results

The study contributes to the understanding of the PEIS System by providing a detailed, baseline picture of how environmental compliance monitoring is actually carried out or not by selected project cases in Metro Dumaguete. While many previous works focus on the design of the EIA process, the quality of EIS documents, or national-level policy issues, this research highlights the environment-related

monitoring phase in a localized setting and the interplay between the project proponents and a resource-constrained regulatory office.

By comparing OFIC and DBPI, the study shows that compliance behavior is not solely determined by whether a project is formally covered by the PEIS System or has an ECC, but rather, it also depends on internal organizational commitment to environmental protection, availability and designation of an accredited technical staff like a PCO, and the presence of clear internal systems for monitoring and reporting. Meanwhile, the EMB case demonstrates how being under-manned and having heavy workloads at the same time limit the ability of the regulatory agency to carry out the monitoring and guidance functions of projects as envisioned in the Revised Procedural Manual. These insights and realizations will all together help to refine the understanding of why gaps in environmental compliance monitoring persist and what types of interventions may be needed and implemented to improve the system such as additional personnel (EMB staff or PCO for projects), structured orientation sessions and education about the PEIS System and all its required obligations, and reminder mechanisms (externally from EMB to project proponents or internal obligations of EMB and project proponents).

The results are particularly relevant and useful for policymakers, the regulatory agency, and project proponents in Metro Dumaguete and similar localities, as well as for researchers and educators who wish to examine the implementation of environmental policies and the relevant dynamics that go with it. The findings demonstrate how local case studies can uncover specific issues about the PEIS System that are not present in national-level analyses but are crucial to understand actual environmental outcomes.

Strengths and Limitations of the Study

The strength of the study is its consideration and focus on the specific concrete cases that reveal the different facets of compliance monitoring that are under the same regulatory framework, which is the PEIS System. The OFIC and DBPI cases provide contrasting examples on how organizations respond to regulatory environmental obligations, while the EMB PEMU case shows the institutional realities faced by the constraints of having a relatively small field office that is responsible for a wide area. The use of multiple sources such as documents, key informant interviews, and site observations allow for triangulation that will help validate the findings across different types of evidence.

However, the study has limitations that should be considered in interpreting the results. First, the findings cannot be generalized to all projects in Metro Dumaguete or the Philippines because the selection of only OFIC and DBPI is small considering the number of cases, and was influenced by the existing association of the researcher to these organizations. Second, the access to documents and the key informant interviews depended largely on the willingness of the organizations and personnel to participate and provide relevant and pertinent information, which can limit the completeness of the data collected and the subsequent findings. Third, the study relied in part on self-reported information from the respondents, which can be influenced by their memory, perception, and the sensitivity of information by disclosing and discussing non-compliance or internal weaknesses.

Despite these limitations, the study offers useful insights to better understand the dynamics of environmental compliance monitoring at the local level and helps determine specific areas where improvements can be made. The study supports the

view that careful attention must be given to the entire process from the pre-approval assessments to the post-ECC monitoring phase, as well as the capacities of regulatory agencies and the internal systems of project proponents in order for the PEIS system to achieve its goals, thus become successful.

XI. RECOMMENDATION AND CONCLUSION

Recommendation

This section presents recommendations based on the findings of the study, the discussion in the previous chapter, and the existing guidelines of the Philippine Environmental Impact Statement (PEIS) System on monitoring compliance. The recommendations are directed to the Environmental Management Bureau (EMB), project proponents such as OFIC and DBPI, and other stakeholders involved in environmental compliance monitoring in Metro Dumaguete.

Recommendations for the Environmental Management Bureau (EMB)

A. Strengthen staffing and field monitoring capacity of the Provincial Environmental Management Unit

The study shows that the EMB Provincial Environmental Management Unit in Dumaguete City is manned by only two personnel who handle all environmental regulatory functions for Negros Oriental and Siquijor. This limited staffing constrains the frequency of field inspections, the thoroughness of report review, and the ability to provide continuous guidance to project proponents. It is recommended that additional personnel be assigned to the unit so that office-based tasks, such as document processing and report screening, can be separated from field-based monitoring and inspection work. This will help the EMB PEMU more effectively carry out the monitoring, validation, and evaluation functions already provided in DAO 2003-30 and its Procedural Manuals.

B. Institutionalize orientation and consultation meetings upon and after ECC issuance

The results highlight that DBPI's current management is not fully aware of the conditions in its ECC and of the required monitoring mechanisms, partly due to poor document turnover and limited direct briefing from EMB. To address this, EMB may institutionalize an orientation or consultation session with project proponents upon issuance of the ECC and, where necessary, shortly after key project milestones (e.g., before construction, before full operation). The consultative sessions will serve to explain and clarify the meaning and importance of the ECC conditions, the required Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP), the role of the Pollution Control Officer (PCO), and the possible sanctions for non-compliance, including establishment of the monitoring and reporting schedules. This recommendation makes the information and education functions that are already recognized in the PEIS System work, but places more emphasis on the monitoring phase.

C. Develop and implement a reminder mechanism and follow-up system for monitoring requirements

The DBPI case shows that monitoring the requirements outlined in the ECC conditions can be overlooked for years when there are no regular reminders or follow-up mechanisms established by the EMB. A simple but regular and systematic reminder system such as periodic letters, emails, or notices indicating due dates for self-monitoring reports, performance of required laboratory tests, and ECC condition compliance checks, can help proponents remember their obligations. This can be complemented by a basic tracking system by the EMB PEMU to record which

proponents have already submitted the required documents and which need follow-up visits or notices. Such a system would support the self-monitoring and validation procedures described in the PEIS System and improve the consistent practice of conducting monitoring activities.

D. Clarify and reinforce guidance on the formation and functioning of the Multi-partite Monitoring Team (MMT)

The ECC of DBPI requires the formation of an MMT, but this was not implemented, partly due to the lack of awareness about it by the current management. EMB PEMU, being the regulatory agency, should provide clearer guidance, templates, and step-by-step instructions for project proponents to follow on how to organize an MMT, including the definition of roles of its membership (composed of representatives from local government, the community, and NGOs), and the preparation and submission of the monitoring reports. Orientation for both the project proponents and the potential MMT members shall emphasize the roles and responsibilities of the MMT in strengthening compliance with ECC conditions and EMP commitments. Clearer guidance from the EMB PEMU can make the MMT function as an effective monitoring body on the ground.

E. Promote and enforce the requirement and role of Pollution Control Officer (PCO)

The study shows a clear difference in the monitoring practices between OFIC, which has a designated and accredited in-house PCO actively coordinating with the EMB, and DBPI, which has no designated PCO or similar technical person to handle environmental concerns. EMB should intensify its information dissemination about the

importance of requiring a designated and accredited PCO, most especially in establishments with significant environmental impacts. This shall include requiring project proponents to submit the name and accreditation details of their PCO as a condition for an ECC issuance and renewal of related permits, and integrating PCOs directly into the monitoring and reporting processes. Institutionalizing the demand for a PCO as a requirement helps ensure that technical expertise is always available within the companies to interpret the ECC conditions and manage environmental compliance monitoring.

F. Encourage proper turnover procedures for ECC-related documents during changes in management

The DBPI experience shows that the absence of proper turnover of ECC documents during a change in management led to the eventual noncompliance of ECC conditions. The EMB can address this by requiring the project proponents to submit a notice or certification that there is a change in ownership or key management and that the ECC conditions, EMP, and EMoP have been formally turned over to the new management. The EMB shall also provide a brief checklist of documents and responsibilities that must be transferred, which shall be used as a guide by both the outgoing and incoming administrators.

Recommendations for Project Proponents - OFIC, DBPI, and Similar Establishments

A. Institutionalize internal compliance monitoring systems beyond the minimum legal requirements.

The case of OFIC shows that a company can maintain regular monitoring and coordination with the EMB despite not being formally covered by the EIS/ECC documentation requirements. It is recommended that both the covered and non-covered establishments shall view compliance monitoring as an integral part of their operations rather than just a mere regulatory transaction. This includes the setting up of internal procedures for regular wastewater and air quality testing, record-keeping, periodic internal audits, and prompt response to any issues identified during the monitoring activities. Project proponents shall structure their EMoP templates to be effective with the guidance of the EMB.

B. Ensure continuous awareness of ECC conditions and EMP commitments within the organization.

For ECC-bearing projects such as DBPI, the management shall maintain complete and accessible copies of their ECC, EMP, EMoP, as well as related communications and coordination with the EMB and the testing laboratories. These documents shall be made available to the PCO, and discussed in management meetings where environmental performance is being reviewed. In cases of management turnover, outgoing and incoming managers should conduct a formal handover conference that includes discussions about ECC-related responsibilities, ongoing monitoring activities and schedules, and any pending requirements. This will help prevent the lapse that occurred in DBPI.

C. Designate and capacitate Pollution Control Officer or equivalent technical staff.

Project proponents with significant environmental impacts shall appoint a qualified and accredited PCO or environmental officer who is responsible for overseeing the compliance of ECC conditions and other regulatory requirements. This personnel shall be given appropriate authority and resources to coordinate monitoring activities, liaise with the EMB, maintain records, and propose improvements to environmental management practices. Where internal expertise on preparing for ECC application is limited, project proponents may invest in having potential staff trained or, if the only option is to seek external technical support, the knowledge about everything prepared by the consultant is kept and retained within the organization.

D. Engage proactively with EMB and participate in orientation and consultation activities.

Project proponents such as OFIC and DBPI can benefit from regular communication and coordination with the EMB, not only by submitting reports but also by seeking clarification on ECC conditions, monitoring frequencies, or even technical standards. Taking advantage of any orientation sessions, consultations, or trainings offered by the EMB or other bodies on the PEIS System, as well as clarifying PCO roles and monitoring practices, are helpful. Proactive engagement with the EMB can help avoid misunderstandings about obligations and can support more cooperative relationships between regulators and project proponents.

E. Participate actively in the formation and operation of Multi-partite Monitoring Teams.

For projects that are required to have a MMT, such as large or environmentally critical developments, project proponents shall take the lead in initiating the formation of this team and in consultation with the EMB and relevant stakeholders. Once organized, project proponents shall support the work of the MMT by providing access to the project site, relevant data, and logistical support for the monitoring activities. Active and transparent participation in the MMT formation process helps build trust with the local communities and other actors involved, and enhances the credibility of the monitoring results.

Recommendations for Policy and Further Research

A. Translate PEIS monitoring provisions into a more detailed local implementation guideline.

The existing PEIS System already has provisions in place to guide monitoring activities and its validation, but it is expressed broadly at a national procedural level. Based on this study, there is a need for a more detailed local implementation guideline at the regional or provincial EMB level that specifies, for example, minimum inspection frequencies for different project types, standard content or agenda for orientation meetings, and simple tracking tools to monitor required submissions. Such a guideline helps bridge the gap between the monitoring procedures done at the national level and local-level realities.

B. Explore mechanisms to strengthen enforcement while supporting voluntary compliance.

The literature emphasizes that sanctions are necessary because many project proponents will not comply if there are no meaningful consequences, but yet sanctions are often weak in actual practice. Future policy directions can consider adjustments to strengthen the enforcement mechanism, such as clearer escalating penalties for repeated violations on non-submission of monitoring reports, stronger link between the compliance of ECC conditions and granting of subsequent permits, and public disclosure of serious non-compliance cases, while at the same time encouraging voluntary improvements and recognition of good performers like OFIC.

C. Conduct further case studies in other sectors and localities.

This study is limited to only two (2) project proponents and the EMB PEMU in Metro Dumaguete, of which these cases were chosen on the basis of existing associations for easy access. Further research covering other sectors such as mining, tourism, heavy industry, and other localities, provinces, or regions helps determine whether the patterns observed in the study are common across the country or specific only to this locality. Comparative case studies can deepen the understanding of how different types of projects and regulatory contexts influence compliance monitoring that can refine recommendations for improvement.

D. Examine the role of external consultants and develop guidance on knowledge transfer.

Since many EIS and ECC applications are prepared by external consultants, future research can look more closely at how this practice affects long-term

compliance and monitoring, and how the knowledge acquired in the process of preparation can be effectively transferred from the consultants to the company management once the ECC is issued. Policy or administrative guidance can be developed to ensure that during changes in management, the consultants have explicit obligations to orient the client management on the ECC conditions and have the mechanism to properly hand over the complete document package to quickly see what must be done to be compliant.

Overall, the recommendations emphasize that in order to improve compliance monitoring under the PEIS System in Metro Dumaguete, two courses of action are required: (1) strengthening the capacity and procedures of the local EMB PEMU, and (2) improving the internal systems, awareness, and commitment of project proponents. By pursuing both courses of action, the PEIS system can move closer to its intended purpose of not only assessing environmental impacts in order to achieve project approval but also ensuring that mitigation and monitoring measures are actually carried out throughout the life cycle of the project.

Conclusion

This research looked into the environmental compliance monitoring dynamics under the PEIS System in Metro Dumaguete of the three (3) cases, namely Orient Foods Industries Corporation (OFIC), Dumaguete Business Park Incorporated (DBPI), and the Environmental Management Bureau (EMB) Provincial Environmental Management Unit (PEMU). The area of focus was specifically on what actually happens on a project after the issuance of an Environmental Compliance Certificate (ECC) or, in the case of non-covered projects, after the project operation has begun

and fulfillment of regulatory requirements on wastewater discharge, air emission, and solid waste management apply.

The findings show that the real test showing the success or effectiveness of the PEIS system lies in the monitoring phase, where the behavior of project proponents and the capacity of regulators are exposed and the actual practice will determine whether the EMPs, EMoPs, and ECC conditions are fully implemented or not. In the case of OFIC, the study found relatively strong environmental protection compliance despite it being a company that is not formally covered by the PEIS documentary requirements because it operated before 1982 and production volume is low. Simultaneously, OFIC has designated an EMB accredited in-house Pollution Control Officer (PCO) that carries out regular water and air quality tests, operates and maintains their wastewater treatment facility, secures permits for discharges and air emissions, and submits self-monitoring reports to the EMB. This indicates that proper monitoring and compliance can be institutionalized even beyond the minimum regulatory requirements when there is management commitment to fulfill environmental protection responsibilities and regular coordination and communication with the EMB.

In contrast, DBPI is an example of projects showing weak implementation of environmental monitoring commitments despite it being fully covered by the PEIS System and has been granted an ECC. Although DBPI was classified as a Group IV co-located project that is required to prepare a Programmatic EIS, the current management is not fully aware of the responsibilities to fulfill the EMP, EMoP, or the specific ECC conditions, because there was no proper turnover of ECC-related documents when management changed. The project proponent also has not formed

a Multi-partite Monitoring Team (MMT), has not designated a PCO, and has undertaken only limited actions to comply to some measures required during the construction of a few initial buildings. These actual practices confirmed the observations of some literatures noting that the EIA and ECCs are often treated as procedural requirement in order to obtain project approval, while environmental protection commitments lose its grip once the project begins.

In the case of the EMB PEMU, the study provides a broader institutional context of constraints faced by regulatory agencies. The unit is manned by only two (2) personnel who are responsible for all the environmental regulatory tasks covering the province of Negros Oriental and the island of Siquijor that include the review of reports, field inspections, and coordination with project proponents. The EMB PEMU officer acknowledged that their current staffing is inadequate for the volume of work that they handle resulting to monitoring visits that cannot always be conducted regularly, only a few self-monitoring reports that they can thoroughly examine, and follow-up actions on ECC conditions that are delayed or limited. These observations support the view of the study's literature that resource capacity of the regulatory agency is a critical factor to effectively implement environmental policies, even as formal procedures and guidelines are in place.

Considering now the three (3) cases altogether, the effectiveness of compliance monitoring under the PEIS System in Metro Dumaguete is shaped by the internal arrangements within the system of each of the project proponents and the external support and oversight provided by EMB to the projects. The relatively strong environmental compliance of OFIC suggests that internal commitment, existence of a technical staff such as PCO, and regular coordination and communication with the

EMB can lead to good monitoring performance even without an ECC. The weak implementation of ECC conditions by DBPI shows that commitments made during the EIA phase may not be sustained over time, with the absence of proper internal systems and effective information transfer during management transition. The limited staffing and resources of the EMB PEMU, in turn, constrain its ability to detect gaps or lapses in the monitoring of environmental compliance as early as required and to provide continuous guidance, reminding, and enforcement.

The conclusions of this study therefore support several key points as follows:

First, the mere existence of an ECC and the formal EMP or EMoP do not guarantee effective environmental management and compliance. What matters is whether these documents are understood by the management, integrated into the organizational procedures, and supported by adequate technical and human resources on both the sides of the project proponent and the regulatory agency.

Second, monitoring is not only a reporting requirement, but a phase in the PEIS System process where earlier assumptions in the EIS are tested against actual project performance, and where deficiencies in the assessment procedure or implementation of regulatory requirements can be identified and corrected. When monitoring is weak, insufficient, or irregular, there will be a loss of opportunities to prevent or mitigate adverse environmental impacts.

Third, the study highlights that the compliance monitoring under the PEIS System is a legal or a technical requirement as well as an institutional and organizational issue. Problems such as poor turnover of ECC documents during management transitions, dependence on external consultants to handle and produce

the documentary requirements without effective knowledge transfer to the project proponents, the lack of an accredited PCO, and under-manned regulatory offices contribute to the gaps observed in the cases and in the broader system. Addressing these problems will require reminding project proponents of their obligations, strengthening or reinforcing the field capacity of the EMB, institutionalizing orientation and reminder mechanisms, and promoting better internal systems within the organizations.

Finally, even while there is a limitation in the study done by the researcher that includes the consideration of only two (2) establishments and the EMB PEMU in Metro Dumaguete, and the access of relevant and pertinent information that depends on the willingness of organizations and respondents to participate, the cases offer useful insights to better understand how the PEIS operates in actual practice at the local level. They show that the goals of the EIS system, which are to balance development and environmental protection and to ensure that projects operate within acceptable environmental limits, will only be realized if greater attention is given to the post-ECC monitoring stage, supported by stronger institutional capacity and internal commitment among project proponents. In this sense, the findings and recommendations of the study can serve as a starting point for further improvements in environmental compliance monitoring in Metro Dumaguete and for comparative work in other areas under the Philippine EIS System.

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APPENDICES

Appendix A

Interview Guide for Project Proponents (OFIC and DBPI)

A. Introductory information

1. Can you briefly describe your role in the company and how long you have been in this position?
2. Can you describe the main activities of your company project here in Metro Dumaguete?

B. Awareness and understanding of environmental regulatory requirements

1. What environmental permits or documents does your company currently have (e.g., ECC, Discharge Permit, Permit to Operate for air emissions, others)?
2. For DBPI:
 - a. Are you familiar with the Environmental Compliance Certificate (ECC) issued for this project?
 - b. How did you first learn about the ECC and its conditions?
3. For OFIC:
 - a. Are you aware of any requirements under the Philippine EIS System that may or may not apply to your company?
 - b. How did you come to know what environmental requirements you need to comply with?

4. There are specific environmental issues that apply to your project for example, wastewater discharge and air emission, and solid waste disposal that will require testing, reporting, and monitoring. What is your understanding about these issues and the obligations to meet the conditions?

C. Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP)

1. Does your company have any written Environmental Management Plan (EMP) or similar document that guides how you manage environmental impacts?
 - a. If yes: Who prepared it and how is it used in your operations?
2. Are you aware of any Environmental Monitoring Plan (EMoP) or monitoring schedule related to your project?
 - a. If yes: What are the main parameters or activities included?

D. Actual monitoring practices

1. What kinds of environmental monitoring activities does your company currently conduct (for example, wastewater quality, air emissions, solid waste, noise, others)?
2. How often do you conduct these monitoring activities (e.g., daily, monthly, quarterly, annually)?
3. Who is responsible for carrying out or supervising these monitoring activities?

- a. Do you have a Pollution Control Officer (PCO) or an equivalent staff in charge?
4. What external laboratories or service providers, if any, do you use for sampling and analysis?
5. How do you document and store the results of your monitoring (e.g., logbooks, electronic files, reports)?

E. Reporting to EMB and interaction with regulators

1. What reports or documents do you regularly submit to the Environmental Management Bureau (EMB) (e.g., self-monitoring reports, laboratory reports, permit renewals)?
2. How often do you submit these reports? Are there any challenges in meeting the deadlines or requirements?
3. How would you describe your interaction with EMB personnel (e.g., frequency of visits, phone calls, emails, guidance received)?
4. Has any EMB staff conducted site inspections or ocular visits to your facility or project site?
 - a. If yes: How often do they visit the project site and what do they usually inspect?
5. Have you ever received any notice, warning, or feedback from the EMB concerning your monitoring practices and performance?
 - a. If yes: How did you respond?

F. Multi-partite Monitoring Team (MMT) and stakeholder involvement

Note: This is more applicable to DBPI or similar ECC-bearing projects)

1. Are you aware of any requirement to form a Multi-partite Monitoring Team (MMT) for your project?
2. Has an MMT been formed?
 - a. If yes: Who are its members and what activities has it carried out?
 - b. If no: What do you think are the reasons why it has not been formed?
3. Are there any other stakeholders (e.g., local communities, LGUs, NGOs) who participate or are consulted in relation to your environmental monitoring?

G. Constraints, challenges, and internal factors

1. What challenges or difficulties does your company encounter in implementing environmental monitoring (e.g., budget, staff, technical skills, equipment, time)?
2. Have there been any changes in ownership or management that affected how environmental documents and responsibilities (such as ECC conditions) were turned over?
3. How would you describe the attitude of company management and staff toward environmental compliance and monitoring?

H. Perceptions and suggestions

1. In your view, how effective are your current monitoring activities in protecting the environment and complying with regulations?
2. What kind of support or guidance from EMB would help you improve your environmental compliance and monitoring?

3. What measures do you think could be taken by your company to strengthen environmental management and monitoring in the future?
4. Is there anything else you would like to add regarding your experience with environmental monitoring and compliance?

Appendix B:

Interview Guide for EMB Provincial Environmental Management Unit

A. Introductory information

1. Can you describe your position in the EMB Provincial Environmental Management Unit and your main responsibilities?
2. How long have you been involved in implementing the Philippine EIS System and environmental regulations in Negros Oriental and nearby areas?

B. Mandate and coverage of the unit

1. What are the main functions of your unit with respect to the PEIS System (e.g., ECC processing, monitoring, enforcement)?
2. Approximately how many projects or establishments are you currently monitoring or handling in Negros Oriental and Siquijor?
3. How many personnel are assigned to your unit, and how are tasks typically divided among you?

C. Monitoring procedures and tools

1. How do you usually monitor compliance with ECC conditions and other environmental requirements (e.g., site inspections, report review, laboratory results)?
2. What standard monitoring tools or instruments do you use (e.g., checklists, forms, ECC monitoring templates, databases)?

3. How do you handle self-monitoring reports (SMRs) submitted by proponents?
 - a. Are all SMRs reviewed in detail?
 - b. What happens when there is missing or questionable information?

D. Interaction with project proponents (including OFIC and DBPI)

1. How would you describe your interaction with project proponents in Metro Dumaguete, such as OFIC and DBPI?
2. For OFIC:
 - a. How does EMB view the monitoring and reporting practices of this company, considering it is not covered by the EIS documentation requirements?
3. For DBPI:
 - a. How has EMB monitored DBPI's compliance with its ECC, particularly with respect to monitoring conditions and formation of an MMT?
4. How often do you conduct field visits or inspections to these and other projects?
 - a. What criteria or triggers do you use to decide which projects to visit?

E. Challenges and capacity constraints

1. What are the main challenges your unit faces in implementing compliance monitoring?
2. How does the number of personnel affect your ability to conduct regular monitoring and follow-up on ECC conditions?

3. Are there any difficulties in coordinating with other offices (e.g., regional office in Cebu, central office, local governments) that affect monitoring?

F. ECC issuance, consultants, and information transfer

1. In your experience, how often are ECC applications and EIS documents prepared by external consultants rather than by the proponents themselves?
2. Do you see any issues arising from this practice, particularly in terms of proponents' understanding of their ECC conditions and EMP/EMoP?
3. After an ECC is issued, what steps (if any) does EMB take to brief proponents on their obligations, especially on monitoring?
4. Are you informed when there is a change in management or ownership of a project with an ECC?
 - a. If yes: How do you ensure that ECC responsibilities are properly turned over to the new management?
 - b. If no: What problems have you observed when such changes occur?

G. Enforcement, sanctions, and follow-up

1. When you detect non-compliance with ECC conditions or other environmental requirements, what actions does EMB usually take (e.g., notices, warnings, conferences, sanctions)?
2. In practice, how often do serious sanctions (such as fines or suspension of ECC) occur, compared to informal reminders or warnings?
3. What difficulties, if any, do you face in enforcing penalties or corrective actions?

H. Assessment of current monitoring system and suggestions

1. In your own assessment, is the current monitoring practices of projects under the PEIS System effective in ensuring compliance with their ECC conditions, thus protect the environment?
2. What do you see as the most critical gap/s in the present monitoring system at the metropolitan or provincial level?
3. What measures or reforms would you recommend to improve compliance monitoring from how actual practice is performed?
4. Are there good monitoring practices or positive examples from other projects that you are aware of, which can be shared to others or replicated?
5. Is there anything else you would like to add about your personal experience in implementing the PEIS system and compliance monitoring?

Appendix C

Conditions from the ECC of DBPI



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ENVIRONMENTAL COMPLIANCE CERTIFICATE

(07 06 11 - 02 244 212)

The **ENVIRONMENTAL MANAGEMENT BUREAU (EMB)** of the **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR)**, **REGION VII** hereby grants this **ENVIRONMENTAL COMPLIANCE CERTIFICATE (ECC)** to **DUMAGUETE BUSINESS PARK, INC. (DBPI)** for its proposed **DUMAGUETE BUSINESS PARK LAND DEVELOPMENT PROJECT** located at **BARANGAY CALINDAGAN, DUMAGUETE CITY, NEGROS ORIENTAL** after complying with the **ENVIRONMENTAL IMPACT ASSESSMENT (EIA)** requirements pursuant to P.D. 1586.

I. SCOPE AND COVERAGE

This Certificate shall cover the proposed Dumaguete Business Park (DBP) Project occupying about a total land area of Twenty-Four (24) Hectares located in Barangay Calindagan, Dumaguete City under Lot Nos. 790, 789-B, 6375, 753, 1363 and 788 of Transfer Certificate Title (TCT) Nos. 1466, 34511, 34512, 34509, 13197 and 34510;

The complex will have residential, commercial, business and recreational facilities. These include a mall, call centers, office buildings, convention center, high-end residential condominium, hotels and restaurants. Amenities would include greeneries and open spaces, lagoon, bay walk and a promenade to complement Dumaguete City's coastline development plan.

Land Use Classification	Area (sqm)	Percent (%)
Total Gross Area	240,048	100.00%
Saleable Area	155,879	64.94%
Non-saleable	84,169	35.06%
1. Commercial	103,379	43.06
Mall	60,265	
Call Center	6,208	
Call Center (exp)	5,647	
Corporate Center	19,249	
Convention center	2,828	
Hotel	1,288	
Hotel (expansion)	1,778	
Fishing Village	1,825	
Recreational facilities	4,291	
2. Mixed Use Commercial	30,829	12.84%
3. Mixed Use residential	8,181	3.41%
4. Institutional /Support Center	4,076	1.69%

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Figure C.1. DBPI ECC

Land Use Classification	Area (sqm)	Percent (%)
5. Transit Terminal	9,414	3.92%
Subtotal (Saleable)	155,879	64.94%
Non-Saleable Area		
a. Baywalk	3,771	1.57%
b. Promenade	9,050	3.77%
c. Parking Plaza	22,170	9.23%
d. Easements/ setbacks	4,386	1.83%
e. Road lots	31,992	13.33%
f. Lagoon	2,360	0.98%
g. STPs and other utilities	7,280	3.03%
h. Other open spaces	3,160	1.32%
Subtotal (Non-saleable)	84,169	

II. CONDITIONS

A. Proponent's Environmental Compliance

Proponents compliance with environmental laws specially on the Philippine EIS System and consisting of two sub sections: the general conditions requiring the proponent to comply with EIA rules and regulations and other and other environmental laws while the other sub-section is the special conditions which pertains to compliance with mitigating measures to address impacts directly under the control of the project proponents and as a result of findings during the EIA review and evaluation.

A.1 General Conditions

1. That the proponent shall comply with the following:

✓ PD 1586 (Philippine Environmental Impact Statement System)

- That all other mitigating/enhancement and rehabilitating measures enumerated in the submitted Environmental Management Plan (EMP) and specified in this Certificate for the construction and operational phase shall be strictly implemented, such as:
 - Construct a silt basin to catch and collect silts prior to reaching the sea
 - Schedule work should be done with the time that will not disturb the school and neighbors;
 - Board up to diffuse and deflect noise or construct sound barrier (e.g. fencing);
 - Install air condition units of which the exhaust fans are deflected away from the nearby surrounding communities;
 - Establish heat absorbing barriers- e.g. planting of trees of the area's perimeter with an easement of two (2) meters from the boundary of the lot;
 - Clean truck tires before leaving the site
 - Cover the trucks that are carrying soil and / or aggregate materials;
 - Water spraying of affected areas during earth moving activities;
 - Provide necessary warning signage;
 - Construct lagoon and centralized sewage treatment facility (STP) to serve all locator's wastewater;

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Figure C.2. DBPI ECC

- Replant some economically important plant species;
- Replant *Nypa* and *Rhizophora* and replant vegetation in coordination with CENRO;
- Reforestation of the mangrove swamp;
- Create a Nature Park with a lagoon where existing plants like sedges and others can be preserved and planted. Creation of a Nature Park with a lagoon; and
- Initiate coordination with other business establishment for service complementation;

- That the proponent should make available a budget of **Sixteen Million Six Hundred Eighty-Five Thousand Pesos (P16,685,000.00)**, based on the project schedule as indicated in the submitted Environmental Management Plan (EMP) Summary for the implementation of the project and proposed mitigating measures in the construction and operational phase. An accomplishment report on the implemented mitigating measures and corresponding cost of the EMP activities shall be submitted to this Office on a quarterly basis for monitoring purposes;]

- That the proponent should inform each possible locators to secure a separate ECC from this Office for their project prior to its implementation in as much as operating without ECC carries with it a corresponding penalty;

- That no other activities should be undertaken other than what were stipulated in the submitted in the EIS document. Should there be any expansion shall be subject to another EIA requirements;

- That project proponent should be held accountable for whatever damages to life, property, and environment caused by the project all throughout its lifespan;

- That proponent should allow entry of EMB-7 field personnel into the project site at all times to conduct tangible monitoring and to validate project's compliance to the ECC conditions stipulated therein;

- That in case of abandonment, the proponent shall notify this Office three (3) months prior to the abandonment and submit therewith their abandonment mitigation plan;

- Transfer of ownership of his project carries the same conditions in this certificate for which written notification should be made by herein grantee to this Office within fifteen (15) days from such transfer;

✓ **RA 6969 Toxic and Hazardous Waste Act of 1990**

- Observe proper storage and disposal of empty containers of paints, thinners, varnish, and other hazardous waste;

✓ **RA 8749 Clean Air Act of 1999**

- Permit to Operate (P/O) for air pollution source equipment and its corresponding pollution control device should be secured from this Office prior to installation and operation;

✓ **RA 9003 Ecological and Solid Waste Management Act of 2000**

- That effective solid waste management should be provided in case the government cannot accommodate the generated waste. Management Plan of same should be submitted to this Office prior to implementation.



Figure C.3. DBPI ECC

Solid waste management scheme such as segregation and recycling the biodegradable and non- biodegradable as indicated in the submitted Environmental Management Plan shall be implemented;

- That garbage receptacles should be provided as temporary disposal before collection of waste to the contractor's yard;
- Observe proper solid waste management (implement waste reduction, segregation / recycling at source);
- Support community ventures on waste recycling (of the resort's recyclable or reusable items) and display the finish product in the hotel vicinity to support employment;
- Develop a pool of skilled and unskilled labor force, support local livelihood and environmental initiatives on solid waste management, i.e., recycling, composting;

✓ **RA 9275 Clean Water Act of 2004**

- That effluent from the centralized Wastewater Treatment Facilities (WTF) and lagoon should conform to the standards set forth by Clean Water Act. Should monitoring indicate exceedance of the environmental quality standards, the proponent should be liable to provide effective remedial measures immediately;
- Discharge Permit (D.P.) for the centralized wastewater treatment facility should be secured from this Office prior to installation and operation;

2. The proponent shall set up the following:

2.1 A readily available and replenishable Environmental Guarantee Fund (EGF) in the amount of **Nine Hundred Fifty Thousand Pesos (P950,000.00)** to cover the following: expenses for further environmental assessments, compensation/indemnification for whatever damages to life and property that may be caused by the project; rehabilitation and/or restoration of areas affected by the project's implementation; and abandonment/decommissioning of the project facilities related to the prevention of possible negative impacts;

2.2 A Muti-partite Monitoring (MMT) composed of representative(s) from the proponent /estate, EMB Region 7, a local environmental Non-Government Organization (NGO), and the LGUs shall be organized. The MMT should primarily oversee the compliance of the proponent with the Environmental Management and Monitoring Plan (EMMP) and the ECC conditions; MMT shall likewise incorporate the following recommendations of the EIARC, to wit:

- MMT must include results of material quality tests, aggregate quality and concrete slump tests/compressive testing, steel testing, pipes whether galvanized iron and/or polyvinyl pipe test, electrical wiring test for the street lighting and other fixtures, vegetation/landscaping, construction management plan and design/safety requirements;
- Environmental Water Quality Monitoring of the MMT should include parameters such as BOD/COD, pH, TSS, fecal coliform, etc;

2.3 A replenishable Environmental Monitoring Fund (EMF) to cover all costs attendant to the operation of the MMT such as conduct meetings, training, sampling and analysis, hiring of technical experts, mails, accommodation, supplies and materials, communication, and transportation.

The amount and mechanics of the EGF, EMF and the establishment of the MMT shall be determined by the EMB and the proponent in consultation with DENR-EMB Region 7, stakeholder-communities and other concerned agencies. This MOA shall be submitted to EMB within Sixty (60) days upon receipt of this Certificate;



Figure C.4. DBPI ECC

3. That the proponent shall set-up an Environmental Unit who shall continue to competently handle the environmental-related aspects of the project. In addition to the monitoring requirements as specified in the Environmental Monitoring Plan, the EU shall also:
 - 3.1 Monitor actual project impact vis-à-vis the predicted impacts and management measures in the EIS;
 - 3.2 Accordingly recommend revisions to the Environmental Management plan (EMP) as necessary;
 - 3.3 Ensure that the appropriate post-assessment permits are in place;
 - 3.4 Ensure that monitoring and reporting are carried out as required; and
 - 3.5 Assure compliance with the conditions of the approved ECC.

A.2 Special Conditions:

4. That planting of appropriate tree species shall immediately be affected within the project area as planned to serve as buffer and to compensate the damaged vegetation caused by the project implementation. It shall be maintained throughout the lifespan of the project;
5. That rip rapping or re-vegetation on erosion prone areas or weak slopes shall be effected as appropriate erosion protection structures;
6. That effective Information Education and Communication (IEC) program shall be implemented including communication of environmental risks of proposed project operations and occupational safety and health of each workers;
7. That a water and energy conservation program shall be implemented by installing a rainwater/cistern tank and other appropriate technologies and practices and proper use of cooling and heating systems, respectively. Rainwater collected may be utilized in flushing restrooms, plant watering and any similar usages;
8. That a 2' x 4' billboard containing this **message "Notice to the Public, This project (title of the project) of (name of proponent) has been issued an Environmental Compliance Certificate (ECC Number) by the Environmental Management Bureau of DENR Region VII on (date of issue)"** must be installed at all entry/exit points and at all perimeters of the project site facing the road to inform the general public of the ECC issuance within thirty (30) days upon receipt thereof. The proponent shall post a copy of this approved ECC in a barangay bulletin board once within thirty (30) days from receipt thereof. An accomplishment report such as pictures of the posted ECC and installed billboards must be submitted to this Office as proof of compliance of the required publication within ninety (90) days from receipt of ECC. Proponent shall provide copy of this Certificate to DOH, DOLE and the City Government of Dumaguete, within thirty (30) days from release of this Certificate;

Non-compliance with the above conditions shall be sufficient cause for the suspension or cancellation of this Certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (PHP 50, 000.00) for every violation thereof, at the discretion of the EMD in accordance with Section 9 of P.D. 1586.

B. Suggestion to the Project Design, Contractor and Constructions

Refers to the recommendation(s) and suggestion(s) as a result of the review and evaluation. Any effects or impacts or damage to the environment, as a result to non implementation of the recommended measures, is the sole liability and responsibility



Figure C.5. DBPI ECC

of the proponent, thus DENR does not have any liabilities for the actions of the proponent. Non-compliance of these conditions does not result in any issuance of Notice of Violation.

Consists of two sections: 1.) conditions reminding the proponent of compliance with other regulations which are the mandate of other government agency; 2.) refers to the design and structures based on the submitted documents, and conditions of this ECC should not specify any specific design and parameters.

B.1 General Conditions:

9. R.A. 7160 or "Local Government Code of Philippines"
 - That the proponent should submit to this Office prior to any activity **all permits** issued by the Local Government Unit (LGU) which is mandated to implement/monitor provisions of R.A. 7160 and its Implementing Rules and Regulations which include but not limited to the following, to wit: Issuance of Structural, Building, Sanitary, Business, Development and Fire Safety Permits, Drainage and Locational Clearances, and Implementation of Proper Solid Waste Management.
 - a) That the proponent should submit to this Office an accomplishment report on the periodic monitoring of work progress, quality of materials, quality control and the strict application of standard technical/design specifications on the project based on the implementing rules and laws of the National Structural and National Building Codes;
 - b) That ground preparation and excavation must be approved by the soils engineer; Permits from the Building Official must be obtained prior to the commencement of the ground preparation and excavation and furnish copy to this Office;
 - c) That an adequate drainage and sewerage system shall be established separately and distinct from each other. Location, elevation and design of the drainage system and its facilities must be approved by the Building Official;
 - d) That proper storm drainage canal, concrete culverts, ditches and other flood control measures shall be adequately provided to channel run-off and silt-laden rainwater to the nearby receiving body of water. The same shall be maintained throughout the duration of the project cycle;
 - e) That Proper Collection, Segregation, Recycling and Disposal of Solid Wastes in accordance to R.A. 9003 shall be effected;
 - f) Collect solid waste through the City Government;
 - g) That all forms of nuisance like odor, noise during operation shall be properly mitigated.
 - h) That the project proponent should coordinate with the traffic enforcers proper traffic mangement;
10. P.D. 856 or the "Sanitation Code of the Philippines"
 - That the proponent should submit to this Office prior to any activity a copy of the **necessary permits/s** issued by the Department of Health (DOH);
 - That an Adequate Common Wastewater Treatment System shall be constructed to serve all domestic/commercial wastes generated per every if DENR standard is exceeded during monitoring;
 - That Provision of adequate toilet facilities provided with 3-chambered septic tank equipped with charcoal filter per digester outlet and monitoring of sewage collection and disposal as well as provision and proper maintenance of septic tanks;

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Figure C.6. DBPI ECC

- That temporary sanitary facilities should be provided for construction workers and any nuisance of waste generated should be disposed properly so as not to cause nuisance to the immediate environment;
11. P.D. 442 "Labor Code of the Philippines"
 - That the proponent should submit to this Office prior to any activity a copy of the **necessary permits/s** issued by the Department of Labor and Employment (DOLE)
 - That the regulation/creation of Occupational Health and Safety Standards for all industrial activities through issuance of Permit to Operate;
 - Provide sanitation facility, adequate bunk houses and temporary toilet facilities;
 - Provide personnel with protective devices such as masks and protective eye wears;
 - Implement occupational safety hazards (provide signage, first aid kit) and hire safety engineers, nurses or safety inspectors;
 12. RA 7942 "Mining Act"
 - That an accomplishment report on the recommendations enumerated in the (EGGAR) and the soil engineering report which should be strictly considered during project development should be submitted to this Office within the construction phase;

B.2 Special Conditions

13. That close monitoring should be undertaken by the project proponent to maintain a high level of safety and efficiency at all stages of the project implementation and to immediately address any environmental address environmental hazard/change at any such stage;
14. That the project proponent should provide an off-site nursery, support management of similar habitats in other areas;
15. Involve the community and provide security particularly the barangay officials and tanods to impose security measures and prohibition of unwholesome activities within the property;

C. Recommendation to Address Cumulative Impacts

16. That proponent should support skills enhancement training workshops by the Barangay and curriculum development for skills training via schools;
17. That proponent should organize environmental awareness activities such as "coastal clean up", etc.
18. That effective traffic management must be implemented by the project proponent to avoid traffic jams and accidents during the construction and operation of the project. Likewise, an accomplishment report on the traffic management plan must be submitted to this Office in quarterly basis;
19. That any loose earth materials resulting from site development activities such as construction of buildings, road network, drainage systems, etc should be properly managed to avoid soil erosion, mud-sludge flooding in the surrounding adjoining lands;
20. That the project proponent should comply the recommendation of the EIA Review Committee, to wit:



Figure C.7. DBPI ECC

- Compaction on road sub-base and base shall be to a minimum of 90% (density test) or as specified in the Philippine Highway Design standards adopted by DPWH;
- Design standards must be in accordance with the appropriate criteria used by DPWH and accepted detailed engineering practices that should take account the seismicity of the area to determine the maximum safety of structures and to minimize earthquake damage.
- Proponent should conduct a detailed soil investigation/soil boring test to assure the suitability of the backfill materials for ground preparation and the stability of the foundation for roads, wastewater treatment plant and drainage system facilities. The soil boring test results should be submitted to this Office;
- Proponent should require the individual locators to conduct soil boring test on their respective areas prior to building construction; and
- Differential Settling Hazard Map should likewise be submitted to this Office within six (6) months upon receipt of this certificate;

THAT THIS ECC SHOULD NOT BE MISCONSTRUED AS A PERMIT; RATHER A SET OF CONDITIONALITIES WHICH SHOULD BE FOLLOWED BY THE PROJECT PROPONENT IN ALL STAGES OF THE PROJECT IMPLEMENTATION IN ORDER TO MITIGATE POTENTIAL ADVERSE IMPACTS ON THE ENVIRONMENT.

Given this 2nd day of November, 2006.

Approved by:

ALAN C. ARRANGUEZ
Regional Director

Recommending Approval:

WILLIAM P. CUNADO
Chief, EIA Division

Conformer:

JULIO N. BY JR.
President

That this Certificate should be posted in a conspicuous location clearly visible to the public and shall be adequately framed or otherwise protected against damage.

PROCEDURAL SCREENING FEE:	Php	300.00	O.R.#:	6993738	DATE:	08-10-06
DATABASE MANAGEMENT FEE:		1,000.00	O.R.#:	-do-	DATE:	-do-
PROCESSING FEE:		2,700.00	O.R.#:	-do-	DATE:	-do-



Figure C.8. DBPI ECC

Appendix D

OFIC Self-Monitoring Report, 3rd Quarter 2015



October 8, 2015

THE REGIONAL DIRECTOR
Environmental Management Bureau
Department of Environment and Natural Resources
Regional Office 7
Greenplains Subdivision
Banilad, Mandaue City

Sir:

In Compliance with DENR Administrative Order 27 series of 2003, we are submitting herewith our updates and Self Monitoring Report (SMR) for the 3rd quarter of 2015.

Thank you and God Bless.

Very truly yours,

Orient Foods Industries Corp.
Boloc-Boloc, Sibulan, Oriental Negros

Katherine Gay A. Vinarao
Manager

Figure D.1. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

GENERAL INFORMATION SHEET

Name of the Establishment/Facility	ORIENT FOODS INDUSTRIES CORPORATION		
Establishment/Facility Address (NOT the company of head office)	Street # & Street Name: <u>DIONESIO CALIBAT ROAD</u>		
	Barangay: <u>BOLOC-BOLOC</u> City/Municipality: <u>SIBULAN</u>		
	Province: <u>ORIENTAL NEGROS</u>		
Name of Owner/Company	JULIO D. SY JR		
Address (If address is not the same as previous address)	Street # & Street Name: _____		
	Barangay: _____ City/Municipality: _____		
	Province: _____		
Phone Number	(035) 419 8609	Fax Number	(035) 4198609
e-mail address	orientfoods@taocorp.com.ph		
Type of Business/ Industry Classification	Philippine Standard Industry Classification Code No. <u>Not available</u>		
	Philippine Standard Industry Descriptor: <u>FOOD PROCESSING</u>		
Responsible Officer/s:	CEO/President. <u>JULIO D. SY JR.</u>		
	Tel #: <u>(02) 848-1021</u> Fax #: <u>(02) 848-1006</u>		
	e-mail address: <u>idsy@taocorp.com.ph</u>		
	Plant Manager: <u>KATHERINE GAY A. VINARAO</u>		
	Tel #: <u>(035) 4198609</u> Fax #: <u>(035) 419-8609</u>		
Pollution Control Officer	e-mail address: <u>kitchay_vinarao@yahoo.com</u>		
	Name. <u>ENG'R. PATROCENIO A. SEQUIJOR JR.</u>		
	Tel #: <u>4198609</u> Fax #: <u>4198609</u>		
Legal Classification	e-mail address: <u>sequijor@yahoo.com</u>		
	☐ single proprietorship ☐ partnership		
	☐ private domestic corporation ☐ government corporation		
	☐ Multi-national ☐ _____		

We hereby certify that the above information are true and correct.

KATHERINE GAY A. VINARAO
Name/Signature of Plant Manager

PATROCENIO A. SEQUIJOR JR
Name/Signature of PCO

Figure D.2. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

QUARTERLY SELF-MONITORING REPORT

MODULE 1: GENERAL INFORMATION

Name of the Plant	ORIENTFOODS INDUSTRIES CORPORATION
Please provide the necessary revised, corrected or updated information not contained in your <i>General Information Sheet</i>	
NATURE of BUSINESS : RATED CAPACITY :	BOLOC-BOLOC, SIBULAN, ORIENTAL NEGROS PHILIPPINES Phone : +63 (035) 225-1700 Fax : +63 ((035) 225-1321 FOOD PROCESSING (Fruit Dehydration Plant)
INCORPORATION DATE :	OCTOBER 7, 1981
START OF SIBULAN PLANT :	DECEMBER 1982
NUMBER OF EMPLOYEES :	60
(use additional sheet/s if necessary)	

DENR Permits/Licenses/Clearances

Environmental Laws	Permits		Date of Issue	Expiry Date
P.D. 984	A/C No. DP No	DP- 13-074617-001	Nov 15, 2013	Aug 17,2014
	PO No.		Applied for Renewal	
PD 1586	ECC 1	ECC for re- application		
	ECC 2	None		
	ECC 3	None		
RA 6969	DENR Registry ID	07-46- 0001	Aug. 28, 1995	None
	CCO Registry	None		
	Importer Clearance No	None		
	Permit to Transport	none		
RA 8749	A/C No.	None	Applied for Renewal	
	PO No.	POA-13-H-074617-003	Nov 15, 2013	Aug 17,2014

Operation

	Operating hours/day	Operating days/week	# of shift/day
Average	8	4	One shift / day
Maximum	8	6	One shift / day

Operation/Production/Capacity:

Average Daily Production Output	94 KGS Fresh	Total Output this Quarter	8,469.99 fresh
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Figure D.3. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

	72 kg Reworking of old stocks		6,680 kg reprocessing of old stock
Total Water Consumption this Quarter (cubic meters)	85 Cubic Meter.	Total Electric Consumption this Quarter (KwH)	18,750 KW

Please use additional sheet/s if necessary

MODULE 2: RA 6969

B. Hazardous Wastes Generator

HW Generation:

HW No.	HW Class	HW Nature	HW Cataloguing	Remaining HW from Previous Report		HW Generated	
				Quantity	Unit	Quantity	Unit
D407	Mercury, Mercury Compound	Solid	Toxic	168	pcs	10	Pc CFL Pc FL
I101	Used OIL	LIQUID	Flammable	0 Used to treat wood structure	Liters	0	Liters

Waste Storage, Treatment and Disposal:(Please fill-up one table per HW)

HW Details	HW No.:	I101/ D407		
	Qty of HW Treated:	NONE		Unit:
	TSD Location:	STORED ON SITE/SCRAP AREA		
Storage	Name:	ORIENTFOODS INDUSTRIES CORPORATION		
	Method:	STORED IN BARREL/Re-USED/SELL		
Transporter	ID:	NONE	Name:	NONE
	Date:	NONE		
Treater	ID:	NONE	Name:	NONE
	Method:	NONE	Date:	NONE
Disposal	ID:	NONE	Name:	NNE
	Date:	NONE	Date:	NNE
Disposal	ID:			
	Date:			

C. Hazardous Wastes Treater/Recycler

HW Stored and/or Untreated as of End of Quarter:

HW Number	Wastes Generator	Date of Transport	Transport Permit/Date	Valid until	Quantity	Type of Storage	Time Table for
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Figure D.4. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

			of Issue			Container/ # of containers	Treatment
N/A							

HW Treated and/or Recycled as of End of Quarter:

Type of Wastes	HW Number	Wastes Generator	Date of Transport	Transport Permit/Date of Issue	Quantity	Type of Treatment or Recycling Process	Type & Quantity of Recycled or Treated Product
None							

Residual Wastes Generated from the Treatment and/or Recycling Operation:

Type of Wastes	HW Number	Process by which the Wastes is Generated	Quantity	Type of Storage Container/ # of containers	Disposal Option	Time Table for Disposal
None						

MODULE 3: P.D. 984 (Water Pollution)

Water Pollution Data

Domestic wastewater (cubic meters/day)	1	Process wastewater (cubic meters/day)	3
Cooling water (cubic meters/day)	N/A	Others: _____ (cubic meters/day)	
Wash water, equipment (m ³ /day)	0.5	Wash water, floor (cubic meters/day)	1

Record of Cost of Treatment (Separate entries for separate facilities)

	July 2015	August 2015	September 2015
Person employed, (# of employees)	1	1	1
Person employed, (cost)	7,670.00	7,670.00	7,670.00
Cost of Chemicals used by WTP	Php 3,000	Php 3,000	Php 3,000.00
Utility Costs of WTP (electricity & water)	Php 3,500.00	Php 3,500.00	Php 2,500.00
Administrative and Overhead Costs	Php 2,500.00	Php 2,500.00	Php 2,500.00
Cost of operating in-house laboratory	Php 720.00	Php 720.00	Php 2'570.00
New/Additional Investments in WTP (Description)	Construction of Collecting Tank	none	none
Cost of New/Add Investments	Php30,000	none	none

WTP Discharge Location

Outlet Number	Location of the Outlet	Name of Receiving Water Body
1	Water Treatment Plant	Creek (Class SD)

Figure D.5. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

Detailed Report of Wastewater Characteristics for Conventional Pollutants

Outlet No.								
DATE	Effluent Flow Rate (m ³ /day)	BOD (mg/L)	TSS (mg/L)	Color	pH	Oil & Grease (mg/L)	Temp rise (°C)	(name) (unit)
July 14, 2014	3	5	82		6.9			
June 15, 2015	3	39	7.2		7.20	Effluent (End Pipe)		
FAST Laboratories. (The First Analytical Services and Technical Cooperative) M.C. Briones Highway, Mandaue City Cebu								

Please fill-up/accomplish separate form/s for other outlet/s.

Detailed Report of Wastewater Characteristics for Other Pollutants

Outlet No.								
DATE	Effluent Flow Rate (m ³ /day)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)
none								

Please fill-up/accomplish separate form/s for other outlet/s.

Please use additional sheet/s if necessary.

MODULE 4: R.A. 8749 (Air Pollution)

Summary of APSE/APCF

Process Equipment		Location		# of hrs of operations	
1.					
Fuel Burning Equipment	Location	Fuel Used	Quantity Consumed	# of hrs of operations	
1. 4000 kg. steam/Hr fire tube Boiler w/ oil pre-heater and smoke stack.	Boiler Area (Stand by)	BUNKER/DIESEL FUEL (Mix 70/30)	20 liters (Test Run Only)	6 hrs	
2. 600,000 Kcal/Hr. Hot water surface w/ cyclone fly ash collector	PRODUCTION	WOOD FIRED	58,900.00 kgs.	457 hrs	
Pollution Control Facility		Location		# of hrs of operations	

Figure D.6. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

Cost of Treatment

	Month 1	Month 2	Month 3
Cost of Person employed, (salary)	N/A		
Total Consumption of Water (cubic meters)	N/A		
Total Cost of chemicals used (e.g., activated carbon, KMnO ₄)	N/A		
Total Consumption of Electricity (KwH)	N/A		
Administrative and Overhead Costs	N/A		
Cost of operating in-house laboratory, if any	N/A		
Improvement or modification, if any. (Description)	N/A		
Cost of improvement of modification	N/A		

Detailed Report of Air Emission Characteristics

Description/Location of PCF								
DATE	Flow Rate (Ncm/day)	CO (mg/Ncm)	NO _x (mg/Ncm)	Particulates (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)
(Requesting to waive stack emission or this year.)								

Please use additional sheet/s if necessary.

MODULE 5: P.D. 1586

Ambient Air Quality Monitoring (if required as part of ECC conditions)

Description/Location of Monitoring Station								
DATE	Noise Level (dB)	CO (mg/Ncm)	NO _x (mg/Ncm)	Particulates (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)	(name) (mg/Ncm)

(Please accomplish one table per monitoring station.)

Ambient Water Quality Monitoring (if required as part of ECC conditions)

Description/Location of Sampling Station								
DATE	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)	(name) (unit)

(Please accomplish one table per sampling station.)

Figure D.7. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

Other ECC Conditions

ECC Condition/s	Status of Compliance		Actions Taken
	Yes	No	
1. ECC Application submitted to EMB-pending	/		Re apply for additional requirements

Please use additional sheet/s if necessary.

Environmental Management Plan/Program

Enhancement/Mitigation Measures	Status of Implementation		Actions Taken
	Yes	No	
1. Effluent discharge	/		Proper and regular maintenance of WTF
2. Fly ash emission	Fuel Eff. Feeding system		Fuel feeding system, to have complete wood fuel burning
3. Solid Waste Management	/		Waste segregation
4. Energy Conservation	/		LED Lighting
5. Water Conservation	/		Water Conservation program
6. Fuel Consumption	/		
7. Potable Water Supply	/		Montly Potability testing

Solid Waste Characterization/Information:

Average Quantity of Solid Wastes Generated per month	1,037 KGS	Total Quantity of Solid Wastes Generated this Quarter	3111 KGS
Average Quantity of Solid Wastes Collected per month	885 KGS	Total Quantity of Solid Wastes Collected this Quarter	2,655 KGS
Entity in charge of collecting solid wastes	Orient Foods Industries Corp./Municipal garbage collector		
Brief Description of Solid Waste Management Plan (e.g., waste reduction, segregation, recycling)	All our raw waste, seeds and skins were directly collected for feeding of cows. Domestic solid wastes are collected thru waste segregation process. Collection bins were being placed for segregated waste. Collected waste was put inside the bags/sack. Based on the solid waste generated data, it only averaging to 4 % is waste to be disposed. The bags are sealed tightly and are kept within the plant disposal site. The local garbage trucks collect the solid waste in the sacks weekly or upon their collection schedule. This has been a local government program enhancing better support to the manufacturing industry in the barangay level of the municipality of Sibulan. Sludge and granules were dried and collected mixed with charcoal from the SCANCON surface boiler, use as inputs for organic fertilizer.		

**MODULE 6: OTHERS
Accidents & Emergency Records**

Date	Area/Location	Findings and Observation	Actions Taken	Remarks
NONE				No accident recorded for this quarter.

Personnel/Staff Training/

Figure D.8. OFIC Self-Monitoring Report

**Department of Environment and Natural Resources
Environmental Management Bureau**

Date Conducted	Course/Training Description	# of Personnel Trained
Nov, 2014	Central Visayas Climate Change Summit	1

Events

Date Conducted	Activity	# of Personnel
March 22, 2015	Clean up Drive activity	70
Brgy.	Area	Waste Collected
Bantayan/Agan-an	Mojon Creek	6 CBM Plastics and other Non-Biodegradable waste
September 19, 2015	Clean up Drive activity	70
Brgy.	Area	Waste Collected
Bantayan/Agan-an	Mojon Creek	6 CBM Plastics and other Non-Biodegradable waste

I hereby certify that the above information is true and correct.

Done this _____, in _____.

KATHERINE GAY A. VINARAO
Name/Signature of Plant Manager

PATROCENIO A. SEQUIJOR JR
Name/Signature of PCO

SUBSCRIBED AND SWORN before me, a Notary Public, this 09 day of OCT 09 2015, affiants exhibiting to me their Community Tax Receipts:

Name	CTR No.	Issued at	Issued on
------	---------	-----------	-----------

<u>Patrocenio A. Sequijor Jr.</u>	<u>11411901</u>	<u>Valencia, Neg. Or.</u>	<u>February 03, 2015</u>
-----------------------------------	-----------------	---------------------------	--------------------------

Name	Driver Licence No.	Expiry Date
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<u>Katherine Gay A. Vinarao</u>	<u>G02-07-004877</u>	<u>April 07, 2015</u>
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ATTY. ROSEMARIE A. RUSSELL
NOTARY PUBLIC UNTIL DEC. 31, 2015
NOTARIAL SERIAL NO. 2014-026
ROLL OF ATTORNEY NO. 57706
PTR NO. 0471508, 1/6/2015, NEG. OR.
IBP NO. 09141, LIFETIME MEMBER
MCLE COMPLIANCE NO. V-0000934

Figure D.9. OFIC Self-Monitoring Report

Appendix E

Discharge Permit for OFIC

 ENVIRONMENTAL MANAGEMENT BUREAU REGION VII
Office of the Regional Director
Greenplains Subdivision, Banilad, Mandaue City
Tel. Nos. (032) 346-9426 * (032) 345-3905 * Telefax (032) 346-1647
Email: emb_regionseven@yahoo.com.ph Website: www.emb.gov.ph

DISCHARGE PERMIT

DP-13-H-074617-001
Permit No.

November 15, 2013
Date

Pursuant to Section 14, Article 2 of the Implementing Rules and Regulations of RA 9275, permit is hereby granted to:

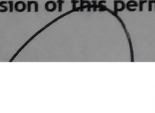
ORIENT FOODS INDUSTRIES CORP.
Name of Firm

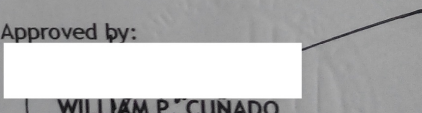
Boloc-boloc, Sibulan, Negros Oriental
Address

PERMIT CONDITIONS

- The permit holder shall discharge at **Mojon Creek (Class D)**, for the period from **August 17, 2013 to August 17, 2014**, effluent wastewater from a WTF consisting of one (1) unit equalization tank with screen; one (1) unit aeration tank; one (1) unit anaerobic tank and one (1) unit polishing pond not exceeding 1,716.00 cubic meters per year and in conformity with the DENR Administrative Order No. 35, s. 1990 (Revised Effluent Regulations of 1990).
- The permit holder shall submit self-monitoring reports on or before the following dates:
 - 1st Quarter : 4/15/2013 (month/day/year)
 - 2nd Quarter : 7/15/2013 (month/day/year)
 - 3rd Quarter : 10/15/2013 (month/day/year)
 - 4th Quarter : 1/15/2014 (month/day/year)
- The permit holder shall allow entry, inspection of subject establishment or facility and compliance monitoring by this Office.
- This Permit shall be renewed at least one month before **August 17, 2014**.
- This Permit is valid up to **August 17, 2014**, unless sooner revoked or suspended for a cause by this Office.

Refusal or failure by permit holder to comply with the permit conditions and relevant laws, rules and regulations implemented by this Office may be sufficient cause for the revocation or suspension of this permit.

Evaluated by: 
MARCELINO B. TABUCO
OIC-Chief, Pollution Control Division

Approved by: 
WILLIAM P. CUNADO
OIC-Regional Director

	O.R. No.	Amount (PhP)	Date
WD Permit Fee:			
Fixed Fee	380 2486	2,000.00	Dec. 18, 2013
Load Based Fee		100.00	
Other Fees/Penalties:			
PD 1856	380 4286	25.00	Dec. 18, 2013
Doc Stamp Tax		15.00	

This Permit should be posted in a conspicuous location near the structure and/or installation

GROW A TREE FOR LEGACY

Figure E.1. OFIC Discharge Permit

Appendix F

Permit To Operate for OFIC

 **Office of the Regional Director**
Greenplains Subdivision, Banilad, Mandaue City
Tel. Nos. (032) 346-9426 * (032) 345-3905 * Telefax (032) 346-1647
Email: emb_regionseven@yahoo.com.ph Website: www.emb.gov.ph

POA-13-H-074617-003
Permit No.
Date 15-Nov-2013

PERMIT TO OPERATE
Air Pollution Source and Control Installations

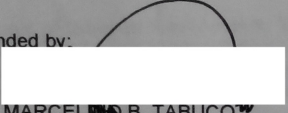
Pursuant to Section 1, Rule XIX of the Rules and Regulations of R.A. 8749, authority is hereby granted to:

ORIENT FOODS INDUSTRIES CORP. Boloc-boloc, Sibulan, Negros Oriental

(Name of Firm, Individual, Owner etc.) (Address.)

to operate the following:

One (1) unit 4,000 kgs. steam/hr. cap. "Cleaver Brooks" water tube bunker fired boiler provided with oil pre-heater and 50 ft. smoke stack; one (1) unit 600,000 kcal/hr. cap. wood fired hot water surface boiler provided with cyclone fly ash collector.

Recommended by:  Renewal: POA-12-H-074617-003

MARCELINO B. TABUCO **WILLIAM P. CUNADO**

OIC-Chief, PCD OIC, Regional Director

Permit Conditions:

1. Air Pollution Control Device (APCD) shall be properly and consistently maintained and correctly and continuously operated otherwise no Air Pollution Source Equipment (APSE)/activity shall be operated / undertaken without the APCD in good order pursuant to Sec. 13(e)(5) Rule XXV of DAO 2000-81 IRR of RA 8749. In addition the air pollution source equipment (APSE) and its corresponding air pollution control device shall be tended, operated and maintained pursuant to Section 34 of RA 8495 otherwise known as the Philippine Mechanical Engineering Act of 1998. Every mechanical work project or plant in operation shall have not less than the following complement of resident licensed professional mechanical engineer, mechanical engineer or certified plant mechanic:
 - (a) 100 kW or over but not more than 300 kW: one (1) certified plant mechanic, or more mechanical engineer or one (1) professional mechanical engineer: Provided that every mechanical work, project, or plant in this category operating in more than one shift every twenty-four (24) hours, shall have in addition to the minimum personnel herein required, one (1) certified plant mechanic, or one (1) mechanical engineer, or one (1) professional mechanical engineer in-charge of each and every additional shift.
 - (b) 300 kW or over but not more than 2000 kW: one (1) mechanical engineer or one (1) professional mechanical engineer: Provided that every mechanical work, project, or plant in this category operating in more than one shift every twenty-four hours, shall have

Unless sooner revoked,
this permit is valid up to:
17-Aug-2014

GROW A TREE FOR LEGACY

Figure F.1. OFIC Permit to Operate