



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU
 Regional Office No. III, Turquoise Street, Zone 2, Ramar Village, San Agustín
 City of San Fernando, Pampanga
 Tel. Nos (045) 455-3316, 455-3080, 455-4340
 402-5071, 402-5973, 402-5074

ENVIRONMENTAL COMPLIANCE CERTIFICATE
 (Issued Under Presidential Decree 1586)
 R03-12272017-4316

THIS IS TO CERTIFY THAT THE BASES CONVERSION AND DEVELOPMENT AUTHORITY (BCDA) / URBAN INTEGRATED CONSULTANTS, INC. (UICI) are granted this Environmental Compliance Certificate (ECC) for the Road Network Development of the proposed Airport-New Clark City (NCC) Access Road, MacArthur – NCC Access Road, MacArthur –SCTEX Access Road and Olympic Village Access Road to be located at Bamban and Capas, Tarlac, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau, Region III.

THIS IS SUBJECT to the conditions and restrictions set-out in this ECC and in the attached document labeled as Annex A. Recommendations have been provided in Annex B as guidance to concerned government agencies and local government units for consideration in their decision making.

This ECC covers the Road Network Development Project (Group 3.4.2) with a total length of 35.552 kilometers with the following project components:

- 1) 6 Lane Airport-NCC Access Road with a total length of 19.826 kms and 48 meters primary arterial road + 20.00m future rail with the following features:
 - 1.8m wide road median
 - 3 @3.50m carriageway lanes (each direction)
 - 2.50m green area (each direction)
 - 3.60m bike lane/drainage line (each direction)
 - 1.50m green area (each direction)
 - 5.00m sidewalk/utility corridor (each direction)
 - Streetlighting
 - 20.00m ROW provision for rail
 - Roundabout interchange connection at Prince Balagtas Highway

Project Geographical Coordinates/Location:

Airport-NCC Access Road	Start	End
North Latitude -	1683738.243°	1699078.585°
East Longitude -	452087.113°	448658.474°

- 2) Lane MacArthur-New Clark City Access Road with a total length of 7.448 kms and 55.00m primary arterial road with the following features

- 1.8m wide road median
- 4 @3.5m carriageway lanes (each direction)
- 2.50m green area (each direction)
- 3.60m bike lane/drainage line (each direction)
- 1.50m green area (each direction)
- 5.00m sidewalk/utility corridor (each direction)
- Streetlighting

Project Geographical Coordinates/Location:

MacArthur-NCC Access Road	Start	End
North Latitude -	1693143.691°	1698521.207°
East Longitude -	454002.968°	448658.709°

ECC- R03-12272017-4316

Road Network Development Project

BASES CONVERSION AND DEVELOPMENT AUTHORITY (BCDA) URBANINTEGRATED CONSULTANTS INC. (UICI)

"The Earth is the Lord's and all that is in it" Psalm 24

... Let's be good stewards!

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SUB-CONTRACT OF CONSULTING SERVICES

KNOWN ALL MEN BY THESE PRESENTS

This Agreement is made and entered into this ____ day of October, 2017 in Quezon City, Philippines

- by and between -

Urban Integrated Consultants, Inc., a private engineering consultancy corporation firm with principal office at Ground Floor, UICI Corporate Bldg., No. 8 Lands Street, VASRA, Diliman, Quezon City, represented by its principal officer, **Mr. Efren L. David**, President, hereinafter referred to as the "CONSULTANT"

-and-

KRC Environmental Services, a duly registered company and existing under the Philippine laws, with principal office and place of business at 381 Sto. Rosario St., Angeles City, represented by its President, **Mr. Ricardo A. Capule**, hereinafter referred to as "SUB-CONSULTANT"

WITNESSETH THAT

WHEREAS, the "CONSULTANT" is an awardee of a contract with the Bases Conversion Development Authority (BCDA) entitled **Consulting Services for the Detailed Engineering Design for the Detailed Engineering Design of the Proposed Clark-Bamban-Capas Access Road, McArthur-CGC Access Road, McArthur-SCTEX Access Road & Olympic Village Access Road**, hereinafter called the "MAIN CONTRACT" together with all Appendices and attachments which form part of this Sub-Contract Agreement.

WHEREAS, the "CONSULTANT" is in need of a SUB-CONSULTANT to undertake the preparation of a complete "Environmental Impact Statement Report of the Four (4) Access Roads" specified in the Project in accordance with the "Terms of Reference" of the "MAIN CONTRACT".

WHEREAS, the "SUB-CONSULTANT" has presented his company as having the necessary equipment, experience and qualified personnel knowledgeable, competence and skills to undertake the service.

NOW THEREFORE, the CONSULTANT and the SUB-CONSULTANT in consideration of the mutual covenants, hereinafter set forth agree as follows:

I. SCOPE OF SERVICES (Section 4.0) Terms of Reference of the "MAIN CONTRACT"

The SUB-CONSULTANT shall be responsible for the performance of all the required activities to complement the preparation of an Environmental Impact Statement Report and shall act as the Environmental Specialist in the overall implementation. The cost to perform the whole works is for a Lump Sum Fee as

stipulated under Section III of this contract; no additional payment or variations shall be allowed.

The identified required deliverables/participation from your end shall be as per **Attachment I** of this Contract including all other necessary works required by the EMB Region III towards the issuance of an Environmental Compliance Certificate.

II. PERFORMANCE PERIOD

Assuming no delay, problem or unforeseen occurrences, during the execution of the design works, the services are expected to be completed as follows or shall be completed in accordance with the "WORK PLAN SCHEDULE" or as directed by "Bases Conversion Development Authority (BCDA) - PMO" and or "CONSULTANT" whichever is sooner.

EIS Report – Two (2) months upon completion of sampling, data gathering and receipt of various documents necessary for the EIS preparation

III. CONTRACT AMOUNT

In consideration for the performance of the Services the CONSULTANT shall pay a total Lump Sum Fee of **One Million Forty Nine Thousand Six Hundred Sixty Four Pesos & 00/100 (P1,049,664.00)** inclusive of 12% VAT. UICI shall be deducting a total of 2% as Expanded Tax.

IV. MANNER OF PAYMENT

In consideration of the consulting services required under the Main Contract, payment to the SUB-CONSULTANT shall be made in the following manner:

- A. **Ten percent (10%) of the Contract Price** upon approval of the Sub-contract Agreement.
- B. **Forty percent (40%) of the Contract Price** upon submission to and acceptance of the draft drawings, technical specifications, cost estimates, unit price analysis, tender documents, technical reports, completion of Environmental Data gathering/baseline data, manpower and equipment utilization program, construction schedule and S-Curve, and all other reports that may be required by BCDA.
- C. **Forty percent (40%) of the Contract Price** upon submission to and acceptance of the complete set of approved plans, technical specifications, cost estimates, unit price analysis, tender documents, Final EIS report and all other reports that may be required by BCDA.
- D. **The remaining ten percent (10%) of the Contract Price** shall be released under the following conditions:

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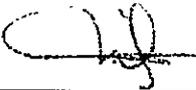
- c. You will attend meetings called UICI, the Client Agency and other related parties.
- d. You will not disclose to other parties confidential information related to the project without clearance from UICI and the Client Agency.
- e. You will maintain the confidentiality of information of the company's important data.
- f. Your field visits or a designated staff shall be arranged by UICI and provided with transportation to and from the site including a fixed per diem.
- g. You shall be responsible for payment and remittance of your (including your staff) Social Security and Phil health premiums to the Social Security System and Philippine Health Insurance Corporation, respectively.
- h. You shall be reporting to, and coordinating with, Engr. Amber R. Montemayor with regards to the project activities to be undertaken and reports to be submitted, as well as the issues that may be encountered during project implementation.
- i. Should you decide to terminate this contract, you shall serve UICI a fifteen (15) day notice prior to its effective date.

IX. EFFECTIVITY

This Agreement shall take effect upon its signing by the parties hereto.

In WITNESS WHEREOF, the parties have hereunto affixed their signatures on the date and on the place first above written.

**URBAN INTEGRATED
CONSULTANTS, INC.**



Engr. EFREN L. DAVID
President

**KRC ENVIRONMENTAL
SERVICES**



Mr. RICARDO A. CAPULE
President

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KRC ENVIRONMENTAL SERVICES

#381 St. Rosario St., Santo Rosario, Angeles City
RICARDO A. CAPIULE - Prop.
VAT Reg. TIN 910-338-865-000

No. 0054

OFFICIAL RECEIPT

Date Jan 16, 2018

RECEIVED from Ch. Ball Interstates Construction Co.

and address at 1100 Calle de la Libertad, Sta. Rosa, Angeles City, P.I.

engaged in the business style of Construction, the sum of

Five Thousand Six Hundred Twenty Eight Pesos

(P 5,628.00) partial/full payment for Services

By: [Signature]
Cashier/Authorized Representative

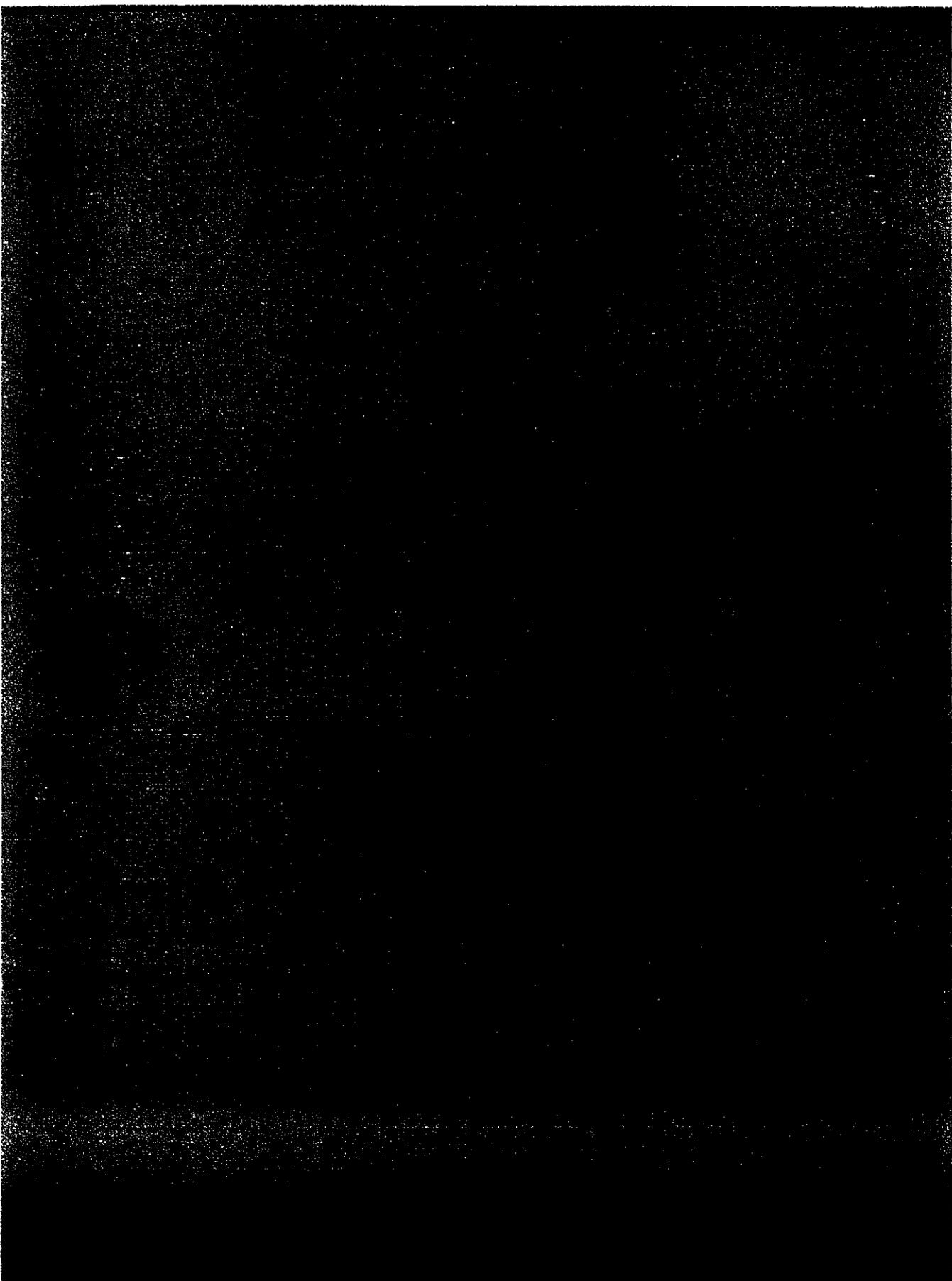
In Settlement of the following:	
Invoice No.	AMOUNT
Total Sales (VAT Inclusive)	7,000.00
Less VAT	1,372.00
Total	5,628.00
Less: SCJPWD Discount	
Total Due	5,628.00
Less: Withholding Tax	
Amount Due	
VATable Sales	
VAT Exempt Sales	
VAT Zero Rated Sale	
VAT Amount	
Total Sales	

FORM OF PAYMENT:
CASH CHECK

Printer's Accreditation No. 218MP2013000000003
Date Issued: 12/18/2013

THIS OFFICIAL RECEIPT SHALL BE VALID FOR FIVE (5) YEARS FROM THE DATE OF ATE

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Republic of the Philippines
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU**

Regional Office No. III, Turquoise Street, Zone 2, Ramar Village, San Agustín

City of San Fernando, Pampanga

Tel. Nos. (045) 455-3316, 455-3080, 455-4340

402-5071, 402-5073, 402-5074

MAN 08 2018

ECC Ref. Code No. R03-12272017-4315

**BASES CONVERSION AND DEVELOPMENT AUTHORITY (BCDA) and MTD
CAPITAL BHD thru ALLOYMTD PHILIPPINES HOLDING COMPANY, INC./MTD
CLARK, INC.**

907 Trade and Financial Tower
32nd Street corner 7th Avenue
Bonifacio Ground Floor, UICI Corporate Building
No. 8 Lands Street, Vasra
Dillman, Quezon City

Dear Sir/Madam,

This refers to your application for an Environmental Compliance Certificate (ECC) for the proposed **Philippine Sports City and National Government Administrative Center Project** to be located at Capas, Tarlac.

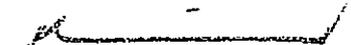
After satisfying the requirements of the said application, this Office has decided to grant an Environmental Compliance Certificate (ECC) to the above-mentioned project.

In issuing this **CERTIFICATE**, it is expected that you will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies.

With the issuance of this ECC, you are expected to implement the measures presented in the submitted Environmental Impact Statement (EIS), intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project. You may proceed with project implementation, after securing all the necessary permits from the pertinent government agencies. This Office will be monitoring the project periodically to ensure your compliance with the stipulations cited in the attached ECC.

Please be guided accordingly.

Very truly yours,


LORMELYN E. CLAUDIO, CESO IV
Regional Director

cc: LGU-Capas, Tarlac
Municipal Engineers Office
Municipal Planning and Development Office
BCDA

*original copy
received by
[Signature]*

[Signature]

[Signature]

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU
Regional Office No. III, Turquoise Street, Zone 2, Ramar Village, San Agustin
City of San Fernando, Pampanga
Tel. Nos. (045) 455-3316, 455-3080, 455-4340

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued Under Presidential Decree 1586)
R03-12272017-4315

THIS IS TO CERTIFY THAT THE BASES CONVERSION AND DEVELOPMENT AUTHORITY (BCDA) and MTD CAPITAL BHD thru ALLOYMTD PHILIPPINES HOLDING COMPANY, INC./MTD CLARK, INC. are granted this Environmental Compliance Certificate (ECC) for the proposed **Philippine Sports City and National Government Administrative Center Project** to be located at Capas, Tarlac, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau, Region III.

THIS IS SUBJECT to the conditions and restrictions set-out in this ECC and in the attached document labeled as Annex A. Recommendations have been provided in Annex B as guidance to concerned government agencies and local government units for consideration in their decision making.

This ECC covers the development of Sports Complex, Government Buildings and Housing Projects (Group 3.6.2, 3.6.8 and 4.4.2) covering a total area of 73 hectares with the following project components:

Phase 1 (43 hectares)

- Aquatic Center – 38,556 square meters (footprint: 18,200 sq.m.)
- Athletic Stadium – 102,669 square meters (footprint: 48,400 sq.m.)
- Athletes Village – 6,200 square meters (footprint: 3,332 sq.m.)
- Government Buildings – 20,000 square meters (footprint: 4,000 sq.m.)
- Government Housing – 6,200 square meters (footprint: 3,332 sq.m.)
- Service Facilities – 25,000 square meters (footprint: 20,000 sq.m.)
- Internal Road Network (footprint: 53,500 sq.m.)

Phase 2 (20 hectares)

- Government Buildings, Government Housing, Service Facilities, Internal Road Network

Project Geographical Coordinates/Location:

Lot 1-A-1		Lot 1-B	
North Latitude	- 15°20'34.81"	North Latitude	- 15°20'51.01"
East Longitude	- 120°31'54.77"	East Longitude	- 120°31'51.12"
Lot 1-A-2			
North Latitude	- 15°20'34.22"		
East Longitude	- 120°31'35.84"		

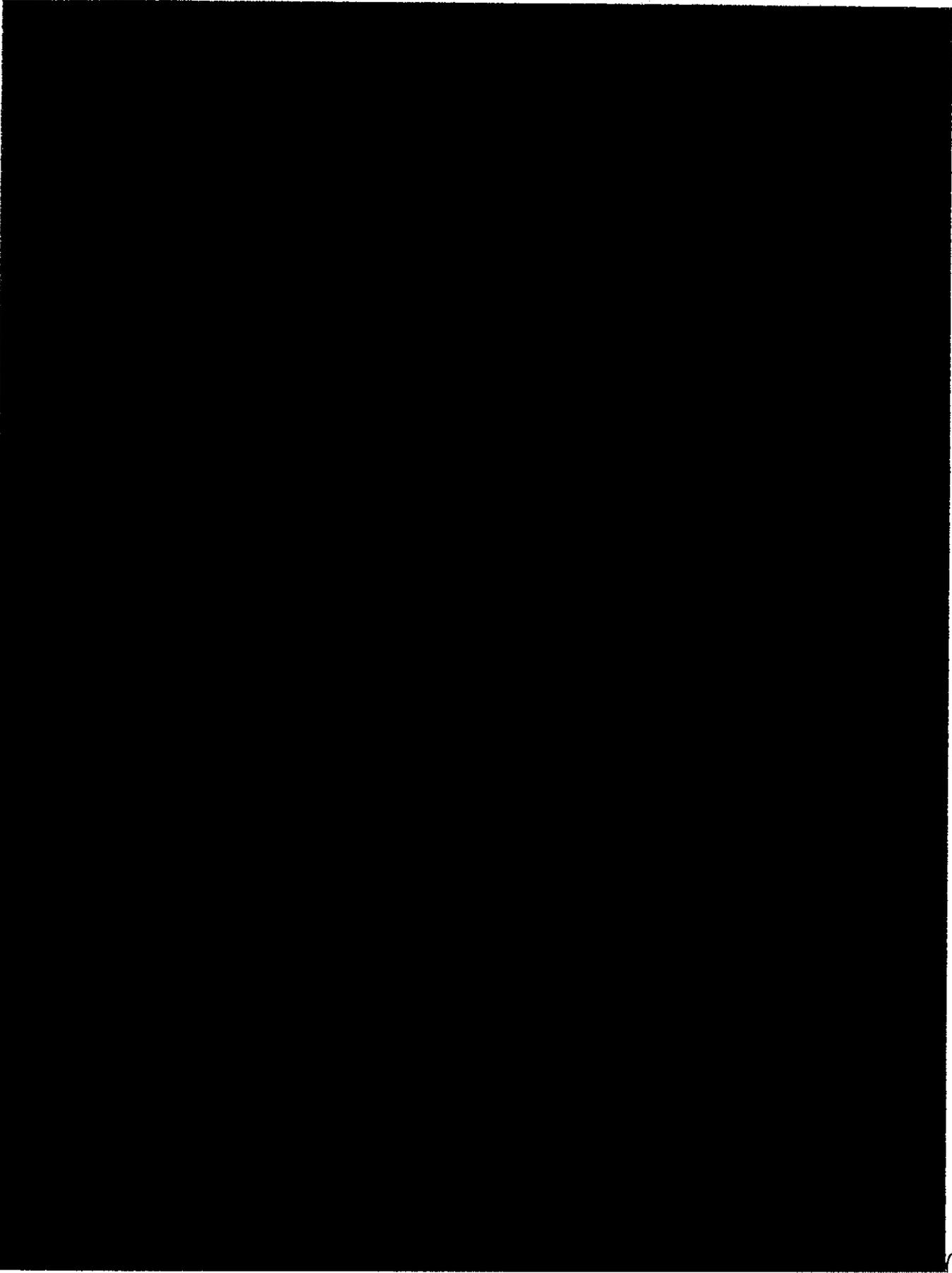
Temporary Construction Camp Site (10 hectares)

- Temporary Housing for 4,000 construction workers, Project Management Field Office, Concrete Batching Plant, Precast Plant, Materials Depot, Motor Pool, Fuel Pool

Project Geographical Coordinates/Location:

1. /

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**CONTRACT DOCUMENTS
FOR
INITIAL ENVIRONMENTAL EXAMINATION (IEE) AND
RESETTLEMENT POLICY FRAMEWORK (RFP)
BRIDGE NOS. 7-12**

UNDER

**SUPPLEMENTAL AGREEMENT NO. 4
Conduct of Feasibility Study for Proposed 12 Bridges on Pasig-Marikina River
and Mangahan Floodway**

FOR

**CONSULTING SERVICES FOR THE ASSISTANCE TO PROCUREMENT OF CIVIL WORKS
AND CONSTRUCTION SUPERVISION OF THE JICA-ASSISTED
PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT, PHASE III (PH-P252)**

JANUARY 2017

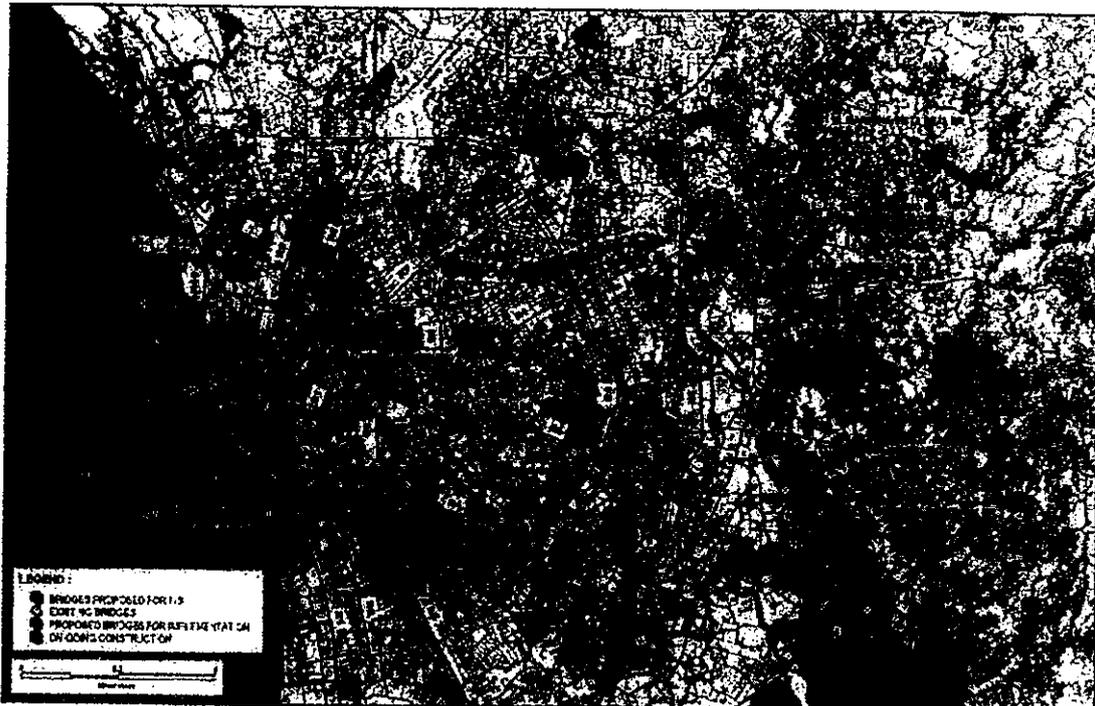


CTI Engineering International Co., Ltd.

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*Supplemental Agreement No. 4 to the Contract for
Consulting Engineering Services for Assistance to Procurement of Civil Works and Construction Supervision of
the JICA-Assisted Pasig-Marikina River Channel Improvement Project, Phase III (Loan No. PH P252)
INITIAL ENVIRONMENTAL EXAMINATION AND RESETTLEMENT POLICY FRAMEWORK*



LOCATION OF PROPOSED 12 BRIDGES

LIST OF PROPOSED 12 BRIDGES

Bridge No.	Name of Bridge	River
1	North & South Harbor Bridge	Pasig River
2	Binondo - Intramuros Bridge	Pasig River
3	2 nd Ayala Bridge (Planca - San Marcelino Bridge)	Pasig River
4	Beata - Manila Bridge	Pasig River
5	Blumentritt - Antipolo Bridge	Pasig River
6	Estrella - Pantaleon Bridge	Pasig River
7	Mercury - Evangelista Bridge	Marikina River
8	J.P. Rizal - St. Mary Bridge	Marikina River
9	Reposo - Guatemala Bridge -	Marikina River
10	Kabayani - Katipunan Bridge	Marikina River
11	Eastbank - Westbank Bridge-1	Mangahan Floodway
12	Eastbank - Westbank Bridge-2	Mangahan Floodway

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*Supplemental Agreement No. 4 to the Contract for
Consulting Engineering Services for Assistance to Procurement of Civil Works and Construction Supervision of
the JICA-Assisted Pasig-Marikina River Channel Improvement Project, Phase III (Loan No. PFI P252)*
INITIAL ENVIRONMENTAL EXAMINATION AND RESETTLEMENT POLICY FRAMEWORK

Engagement and the following appendices which are made as integral parts thereof:

APPENDIX A TERMS OF REFERENCE FOR INITIAL ENVIRONMENTAL EXAMINATION AND RESETTLEMENT POLICY FRAMEWORK;

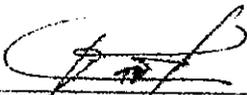
APPENDIX B BREAKDOWN OF CONTRACT AMOUNT for Bridge Nos 7-12

- (2) That both parties hereby agree that this Agreement contains the entire agreement between them and it shall not be modified, changed, altered or amended in any way except through a written amendment signed by both Parties; and
- (3) That this Agreement becomes effective upon signing by both Parties.

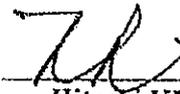
IN WITNESS WHEREOF, the Parties have hereunto caused this Agreement to be duly executed on the day, month and year first above-written.

FOR THE CONTRACTOR:

FOR THE CONSULTANT:



Ricardo A. CAPULE
President



Hitoshi KIN
Project Manager



ARTICLE 6 COST OF THE WORK

The Consultant and the Contractor agree that the Total Contract Cost of the Work is **FOUR MILLION THREE HUNDRED FIFTEEN THOUSAND PHILIPPINE PESO (PHP 4,315,000) ONLY**, which shall be adjustable based on the quantity performed on each work item defined in the Bill of Quantities in accordance with the terms and conditions specified in Article 7 hereof.

ARTICLE 7 MANNER OF PAYMENT

All payments shall be in Philippine Peso (PHP). The Consultant will pay the Contractor in the following manner:

(1) Advanced Payment

Forty percent (40%) of the Total Contract Cost shall be paid to the Contractor within fifteen (15) days after the signing of this Agreement.

(2) Final Payment

Sixty percent (60%) of the Total Contract Cost shall be paid to the Contractor within fifteen (15) days after the satisfactory completion of the Work and its acceptance by the Consultant.

ARTICLE 8 EFFECTIVE DATE OF THE AGREEMENT AND COMMENCEMENT OF THE WORK

The Contractor shall commence the Work on the date this Agreement is signed by both parties.

ARTICLE 9 CONTRACTOR'S REPRESENTATIVE AND MANNER OF EXECUTION OF THE WORK

- (1) Upon signing of this Agreement, the Contractor shall assign a representative satisfactory to the Consultant. The Contractor's Representative shall be responsible for handling all the important matters on behalf of the Contractor.
- (2) The representative and engineers of the Consultant assigned to the Work, whose name(s) shall be notified to the Contractor, will have power to control and supervise the Work.
- (3) All the Work conducted under this Agreement shall be executed in accordance with the Agreement, Scope of Work, or where not specified herein, in accordance with the instructions and orders as the Consultant's Engineer may give.
- (4) In the course of the Work, when the Consultant calls the Contractor for a meeting, his representative shall at all times and at the Contractor's own expense attend the meeting and shall report all the actual state of the Work to the Consultant.

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Republic of the Philippines
Department of Environment and Natural Resources
Environmental Management Bureau CALABARZON

6 F DENR Building, 1515 Roxas Boulevard, Ermita, Manila
Tel. No. (02) 536-9784 536-2868 Fax No. (02) 536-9784 522-8177 536- 0000
Visit us at <http://www.calabarzon.emb.gov.ph>

September 14, 2017

ECC-OL-R4A-2017-0433

MR. EMIL K. SADAIN, CESO II
Undersecretary for UPMO Operations
**DEPARTMENT OF PUBLIC WORKS
AND HIGHWAYS**
Bonifacio Drive, Port Area
Manila 1018

SUBJECT : Environmental Compliance Certificate

Dear Usec. Sadain:

This has reference to your ECC application for the **BRIDGES ON PASIG-MARIKINA RIVER AND MANGGAHAN FLOODWAY (EASTBANK-WESTBANK BRIDGES 2) PROJECT** located at **Barangay San Andres, Cainta, Rizal**. After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project.

With the issuance of this ECC, you are expected to implement the measures presented in the Initial Environmental Examination (IEE) Checklist Report, intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project. You may proceed with the project implementation after securing all the necessary permits from other pertinent Government agencies. This Office will be monitoring the project periodically to ensure your compliance with stipulations cited in the attached ECC.

For your information and guidance.

Very truly yours,


DIR. NOEMI A. FARANADA
OIC-Regional Director

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Republic of the Philippines
 Department of Environment and Natural Resource
Environmental Management Bureau CALABARZON

6/F DENR Building, 1515 Roxas Boulevard, Ermita, Manila
 Tel. No. (02) 836-9784-836-2808 Fax No. (02) 836-9784-522-8177 536-XXXX
 Visit us at <http://www.calabarzon.emb.gov.ph>

ENVIRONMENTAL COMPLIANCE CERTIFICATE
 (Issued under Presidential Decree 1586)
ECC-OL-R4A-2017-0433

THIS IS TO CERTIFY THAT THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS is granted Environmental Compliance Certificate (ECC) for **BRIDGES ON PASIG-MARIKINA RIVER AND MANGGAHAN FLOODWAY (EASTBANK-WESTBANK BRIDGE 2) PROJECT** located at **Barangay San Andres, Calinta, Rizal** Department of Environment and Natural Resources, Environmental Management Bureau (EMB), CALABARZON REGION.

This Certificate is issued under the following project details:

PROJECT DESCRIPTION
 The Conduct of Feasibility Study for Bridges on Pasig-Marikina River and Manggahan Floodway (Eastbank-Westbank Bridge 2) Project shall have a total length of not exceeding Nine Hundred Thirty Three (933) meters located at Barangay San Andres, Calinta, Rizal with the following geographic coordinates:

Boundary Points	Geographic Coordinates	
Westbank	121° 6'21.72"E	14°34'11.29"N
Eastbank	121° 5'55.75"E	14°34'00.88"N

The project components shall include: Four (4) vehicular lanes- 2 directions bridge connecting the east and western portion of Calinta, Rizal that traverse the Manggahan floodway, ±254.5 meters length and 21.65 meters width of Steel Lohse Arch Type Main Bridge Bridge, 3.35 meters width of each Vehicular Lane, ±516 meters of Approach Road and ±162.5 meters of Ramp to Main Bridge (Westbank to Mercedes Village only), ± 933 meters length, 0.65 meters width and ±1 meter width of Road Gutter, 3 meters width of Sidewalk (each side), 3 meters width of Driveway (each side), 3 meters width of Driveway (each side), and other related support facilities.

This Certificate is issued in compliance with the requirements of Presidential Decree 1586 and Department Administrative Order 98-30. The Bureau is not precluded from re-evaluating, adding, deleting, and correcting the project details of this Certificate.

Environmental Compliance Certificate
Bridges on Pasig-Marikina River & Manggahan Floodway
(Eastbank-Westbank Bridge 2) Project
Brgy. San Andres, Calinta, Rizal
 Department of Public Works and Highways

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Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU
National Ecology Center, East Avenue, Diliman, Quezon City
Telephone No (02) 931-1331, (02) 931-2397, (02) 931-1834 Fax No 781-0485
nrc@emb.gov.ph
Visit us at www.emb.gov.ph/portal/embnrc

January 7, 2018

ECC-OL-NCR-2018-0010

EMIL K. SADAIN, CESO II
Undersecretary for UPMO Operations
Department of Public Works and Highways
Bonifacio Drive, 1018 Manila

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear Sir;

This refers to the Environmental Compliance Certificate (ECC) application for the proposed **Conduct of Feasibility Study for Proposed 12 Bridges on Pasig-Marikina River and Manggahan Floodway (JP Rizal - Lopez Jaena Bridge)** to be located in Barangays Sto. Nino and Jesus Dela Pena, Marikina City.

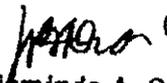
After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project.

With the issuance of this ECC, you are expected to implement the measures presented in the Environmental Impact Management Plan (EIMP) as indicated in the Initial Environmental Examination Checklist (IEEC), intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project.

This Certificate does not create any right nor be used as an authorization to implement the project. You may proceed with the implementation only after securing all the necessary and relevant permits from other pertinent Government Agencies. This Office shall be monitoring the project periodically to ensure strict compliance with the stipulations cited in the attached ECC.

Please be guided accordingly.

Very truly yours,


Vilma A. Osorio
Regional Director







Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU

National Ecology Center, East Avenue, Diliman, Quezon City
Telephone No. (02) 931-1331, (02) 931-2397, (02) 931-1834 Fax No 761-0485
nrc@emb.gov.ph
Visit us at www.emb.gov.ph/portal/embnrc

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued under Presidential Decree 1586)
ECC-OL-NCR-2018-0010

THIS IS TO CERTIFY THAT THE PROPONENT, **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**, represented by Undersecretary for UPMO Operations, Emil K. Sadain, CESO II, is granted this Environmental Compliance Certificate (ECC), for the **JP Rizal - Lopez Jaena Bridge** to be located in Barangays Sto. Nino and Jesus Dela Pena, Marikina City, Metro Manila, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labeled as Annexes A and B.

This Certificate is issued with the following details:

PROJECT DESCRIPTION

The **JP Rizal - Lopez Jaena Bridge** project is a 2-Lane Steel Nielsen Arch bridge with total length of 594 meters. The bridge which is dissected by the Marikina River will start from Lopez Jaena Street in Barangay Jesus Dela Peña and will end at JP Rizal in Barangay Sto. Niño, Marikina City.

As per Annex "A" of EMB MC 005 Series of 2014, the project falls under item 3.4.3 and considered as Category B (Non-ECP)/IEE.

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586 in accordance to DENR Administrative Order (D.A.O.) No. 2003-30 and EMB Memorandum Circular 2014-005. Non-compliance with any of the provisions of this Certificate shall be a sufficient cause for the cancellation of this Certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50,000.00) for every violation thereof without prejudice to imposition of fines and penalties under other environmental laws. The EMB-NCR, however, is not precluded from reevaluating and correcting any deficiencies or errors that may be found after issuance of this Certificate.



Environmental Compliance Certificate
CONDUCT OF FEASIBILITY STUDY FOR PROPOSED BRIDGES ON PASIG-MARIKINA
RIVER AND MANGGAHAN FLOODWAY (JP RIZAL - LOPEZ JAENA BRIDGE)
Brgy. Sto Nino, Brgy. Jesus Dela Pena Marikina, Metro Manila

[Handwritten Signature]

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Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU

National Ecology Center, East Avenue, Diliman, Quezon City
Telephone No. (02) 931-1331 (02) 931-2397 (02) 931-1834 Fax No. 781-0825
nrc@emb.gov.ph
Visit us at www.emb.gov.ph/partofnature

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued under Presidential Decree 1586)
ECC-OL-NCR-2018-0009

THIS IS TO CERTIFY THAT THE PROPONENT, **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**, represented by Undersecretary for UPMO Operations, Emil K. Sadain, CESO II, is granted this Environmental Compliance Certificate (ECC), for the **Conduct of Feasibility Study for Proposed 12 Bridges on Pasig-Marikina River and Manggahan Floodway (JP Rizal - St. Mary Bridge)** to be located in Barangays Calumpang, San Roque, Jesus Dela Peña, Marikina City, Metro Manila, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labeled as Annexes A and B.

This Certificate is issued with the following details:

PROJECT DESCRIPTION

The **JP Rizal - St. Mary Bridge** project is a 2-Lane 2-Way Bridge with total length of 1,849 meters PC Extradosed Bridge connection to be constructed across the Marikina River channel that will start at A. Bonifacio Avenue, entering the main road of St. Mary Avenue inside the Provident Village, Barangay Jesus Dela Peña and will end at JP Rizal Street, Barangays San Roque and Calumpang, Marikina City.

As per Annex "A" of EMB MC 005 Series of 2014, the project falls under item 3.4.3 and considered as Category B (Non-ECP)/IEE.

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586 in accordance to DENR Administrative Order (D.A.O.) No. 2003-30 and EMB Memorandum Circular 2014-005. Non-compliance with any of the provisions of this Certificate shall be a sufficient cause for the cancellation of this Certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50,000.00) for every violation thereof without prejudice to imposition of fines and penalties under other environmental laws. The EMB-NCR, however, is not precluded from reevaluating and correcting any deficiencies or errors that may be found after issuance of this Certificate



Environmental Compliance Certificate
CONDUCT OF FEASIBILITY STUDY FOR PROPOSED 12 BRIDGES ON PASIG-MARIKINA
RIVER AND MANGGAHAN FLOODWAY (JP RIZAL - ST. MARY BRIDGE)
Brgy. Calumpang, Brgy. San Roque, Brgy. Jesus Dela Peña, Marikina
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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Republic of the Philippines
Department of Environment and Natural Resource
ENVIRONMENTAL MANAGEMENT BUREAU
National Ecology Center, East Avenue, Diliman, Quezon City
Telephone No. (02) 931-1331 (02) 931-2397, (02) 931-1834 Fax No. 781-0495
nrc@emb.gov.ph
Visit us at www.emb.gov.ph/portal/emb/ncr

January 7, 2018

ECC-OL-NCR-2018-0009

EMIL K. SADAIN, CESO II
Undersecretary for UPMO Operations
Department of Public Works and Highways
Bonifacio Drive, 1018 Manila

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear Sir;

This refers to the Environmental Compliance Certificate (ECC) application for the proposed **Conduct of Feasibility Study for Proposed 12 Bridges on Pasig-Marikina River and Manggahan Floodway (JP Rizal - St. Mary Bridge)** to be located at Barangays Calumpang, San Roque and Jesus Dela Pena, Marikina City.

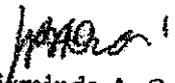
After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project

With the issuance of this ECC, you are expected to implement the measures presented in the Environmental Impact Management Plan (EIMP) as indicated in the Initial Environmental Examination Checklist (IEEC), intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project.

This Certificate does not create any right nor be used as an authorization to implement the project. You may proceed with the implementation only after securing all the necessary and relevant permits from other pertinent Government Agencies. This Office shall be monitoring the project periodically to ensure strict compliance with the stipulations cited in the attached ECC.

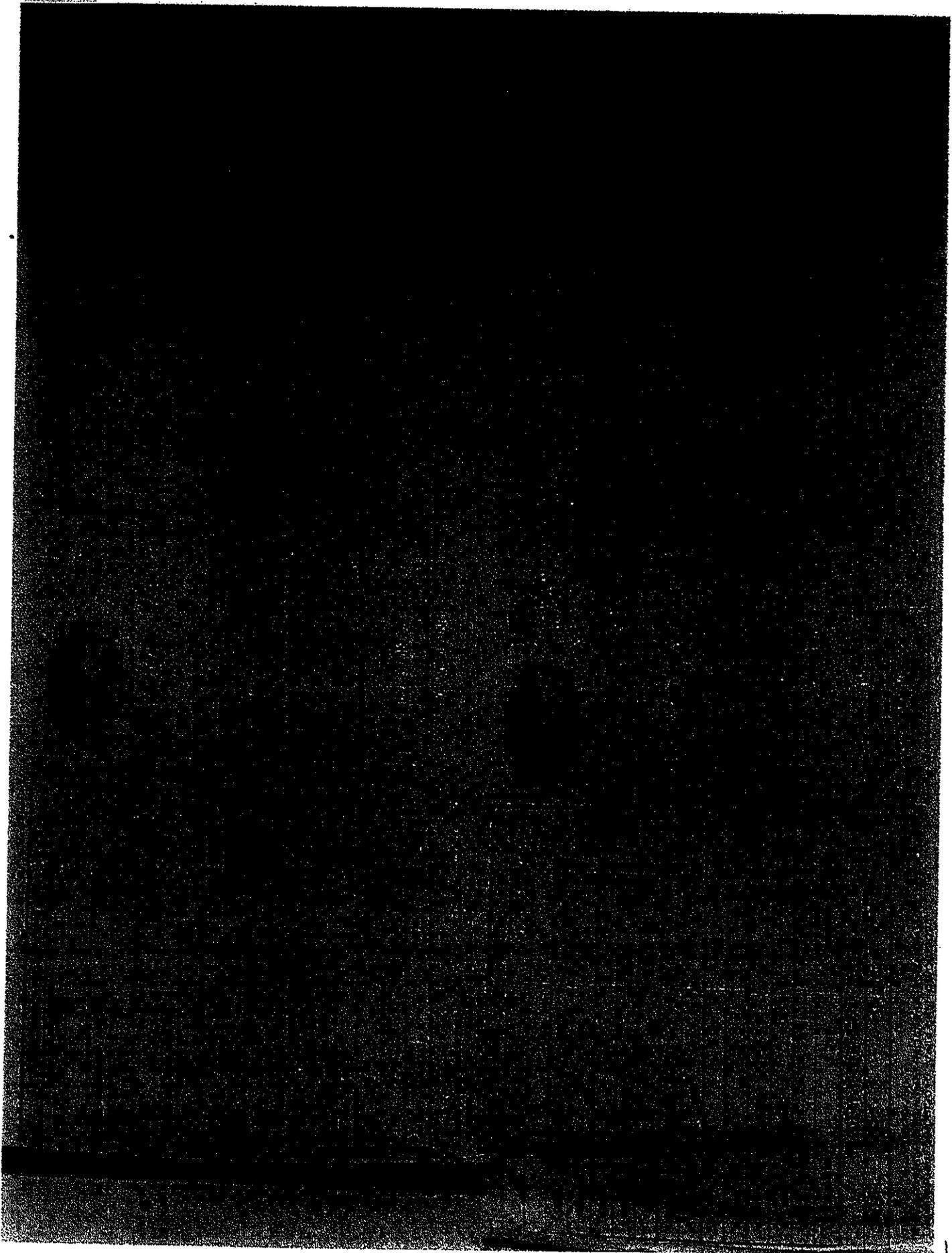
Please be guided accordingly.

Very truly yours,


Visminda A. Osorio
Regional Director







ftqd

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CONTRACT DOCUMENTS

FOR

ENVIRONMENTAL IMPACT ASSESSMENT

UNDER

**THE PREPARATORY SURVEY FOR CAVITE INDUSTRIAL AREA
FLOOD MANAGEMENT PROJECT
IN THE REPUBLIC OF THE PHILIPPINES**

DECEMBER 2015

AGREED BETWEEN

CTI ENGINEERING INTERNATIONAL CO., LTD.

AND

KRC ENVIRONMENTAL SERVICES

Yok

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R

**SECTION I
AGREEMENT**

THIS AGREEMENT together with the Conditions of Engagement and all the Appendices which form an integral part hereof (hereinafter called "the Agreement") is executed in duplicate at the JICA Study Team Office, 3rd Floor, NHCS Compound, Lopez Jaena cor, E. Santos Sts. Brgy. Sta. Rosa, Pasig City, Metro Manila on this 10 day of December 2015, by and between CTI Engineering International Co., Ltd. (hereinafter called "the Client") of the one part, and KRC ENVIRONMENTAL SERVICES (hereinafter called "the Contractor") of the other part.

The Client is desirous that the Services be provided, and the Contractor agrees to provide the Services for the Client.

It is therefore hereby agreed and declared by both parties as follows:

The Client hereby appoints the Contractor to carry out the Services and the Contractor accepts the appointment in accordance with the conditions laid down in the Conditions of Engagement in Section II and the Appendices, which are made an integral part hereof, namely:

- Appendix A: Technical Specifications
- Appendix B: Technical Proposal by the Contractor
- Appendix C: Approved Bill of Quantities

IN WITNESS WHEREOF, the parties have signed this Agreement at the place and on the date first above written.

FOR THE CLIENT:

FOR THE CONTRACTOR:

Yakshi Ohmura
for Makihiko OTOGAWA
Authorized Representative
CTI Engineering International Co., Ltd.

Marilou P. Avenido
Marilou P. AVENIDO
Authorized Representative
KRC ENVIRONMENTAL SERVICES

No.	Description	Unit	Quantity	Unit Rate (Peso)	Amount (Peso)
	Remuneration				
1.1	Professional				
	Project Manager	M/M	9	75,000.00	675,000.00
	Environmentalist	M/M	14	50,000.00	700,000.00
	Sociologist	M/M	1	50,000.00	50,000.00
	Pollution Analyst	M/M	15	25,000.00	375,000.00
1.2	Supporting Staff				
	Socio-economist	M/M	1	50,000.00	50,000.00
	CAD/GIS Operator	M/M	1	25,000.00	25,000.00
	Field Surveyor	M/M	1	25,000.00	25,000.00
	Other Costs				
2.1	Field Survey				
	Water Quality	point	10	20,000.00	200,000.00
	Air Quality	point	2	75,000.00	150,000.00
	Noise	point	3	25,000.00	75,000.00
	Landscape	point	1	250,000.00	250,000.00
	Vibration	point	3	75,000.00	225,000.00
	Fauna & Flora	unit	1	250,000.00	250,000.00
	Groundwater	unit	5	20,000.00	100,000.00
	River study	unit	1	250,000.00	250,000.00
2.2	Stakeholder meeting		3		
	Venue	venue	3	100,000.00	300,000.00
	Notification of SHM	times	3	10,000.00	30,000.00
2.3	Vehicle Transportation	set	3	50,000.00	150,000.00
2.4	OSA				-
2.5	Reporting				-
	Draft Final Report	set	2	10,000.00	20,000.00
	Final Report	set	2	10,000.00	20,000.00
	Stakeholder meeting report	set	2	10,000.00	20,000.00
2.6	Meeting				-
	Meeting with DPWH	times	5	15,000.00	75,000.00
	Meeting with LGU	times	12	15,000.00	180,000.00
	Meeting with EIA & Review Committee	times	4	20,000.00	80,000.00
2.7	Data Collection	L.S.			
	Subtotal				4,275,000.00
	Overhead, %	set	1		427,500.00
4	VAT				564,300.00
	TOTAL AMOUNT				5,266,800.00

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ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

ECC-R4A-1704-0131

THIS IS TO CERTIFY THAT THE PROPONENT, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH) is granted with this Environmental Compliance Certificate (ECC) for CAVITE INDUSTRIAL AREA FLOOD MANAGEMENT PROJECT located at San Juan River Basin and Maalimango Creek within the boundaries of the Municipalities of Imus, Kawit, Rosario, Novelista, and General Trias City, Province of Cavite by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), CALABARZON Region.

This Certificate being issued for the project with the following details:

PROJECT DESCRIPTION

The Cavite Industrial Area Flood Management Project shall cover a total area of Eighty Six and 1/10 (86.1) square meters and a length of Fourteen and 9/10 (14.9) kilometers of San Juan River Basin and Maalimango Creek located within the boundaries of the Municipalities of Imus, Kawit, Rosario, Novelista, and General Trias City, Province of Cavite.

The project activities shall include the following: River improvement in San Juan River Basin (river improvement works of San Juan River, Rio Grande River, and Ylang-Ylang River, construction of diversion channel from the confluence of Rio Grande and Ylang-Ylang rivers to Manila Bay), drainage improvement at Maalimango Creek (dredging and widening of Maalimango Creek and construction of diversion drainage) and construction and improvement of bridges.

Project Activities	Municipalities/ Barangays	Area (Hectares)	Description
River Flood Mitigation			
I. San Juan Diversion Channel	Novelista: Salcedo I Salcedo II Sta. Rosa I Sta. Rosa II San Rafael Eufacion	28.72	<ul style="list-style-type: none"> • 2.5 kilometer length (Sta. 0+000-2+457), approx. 100 meters width (89-115 m), 3 meters depth, 2 meters high revetment on each side • Excavation for diversion canal • Dike embankment • Concrete Block Slope Protection • Riprap protection • Dredging • Fixed weir

ECC-R4A-1704-0131

Cavite Industrial Area Flood Management Project
 Department of Public Works and Highways (DPWH)

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[Handwritten Initials]

Project Activities	Municipalities/ Barangays	Area (hectares)	Description
Bridges • Improvement of bridges • Construction of bridges	Road name: Mercury Road name: Gen. Antonio A. Soriano Nayasa Marcella J. Linao		• Widest width of 12 meters + 5 meters buffer • Excavation for diversion channel (concrete block slope protection) • Replacement of Two (2) existing bridges • Construction of at least five (5) additional bridges

This Certificate is issued in compliance to the requirements of Presidential Decree No. 1586, in accordance to Department Administrative Order No. 2003-30. The Bureau, however, is not precluded from reevaluating, adding, removing, and correcting any deficiencies or errors that may be found after issuance of this Certificate.

This is to certify, further, that in issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. It is expected that the proponent will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies (i.e. HLURH, NWRB, LGUs, DOT, DOH, DTI, DOLE, DPWH, DTEC, LWUA, DA, DAR, DOE, MGR, FMRR, PCA, NGA, etc.) prior to the implementation of the project to be submitted to this Office within sixty (60) working days upon receipt thereof, otherwise this Office shall be constrained to take appropriate legal action. The issuance of the ECC shall not be construed as resolving issues within the mandate of other government agencies.

Issued at EMH-CALABARZON Region this **MAY 15 2017**

Recommending Approval:

Approved by:

ROBERT ANGELO M. METIN
 OIC, Clearance and Permitting Division

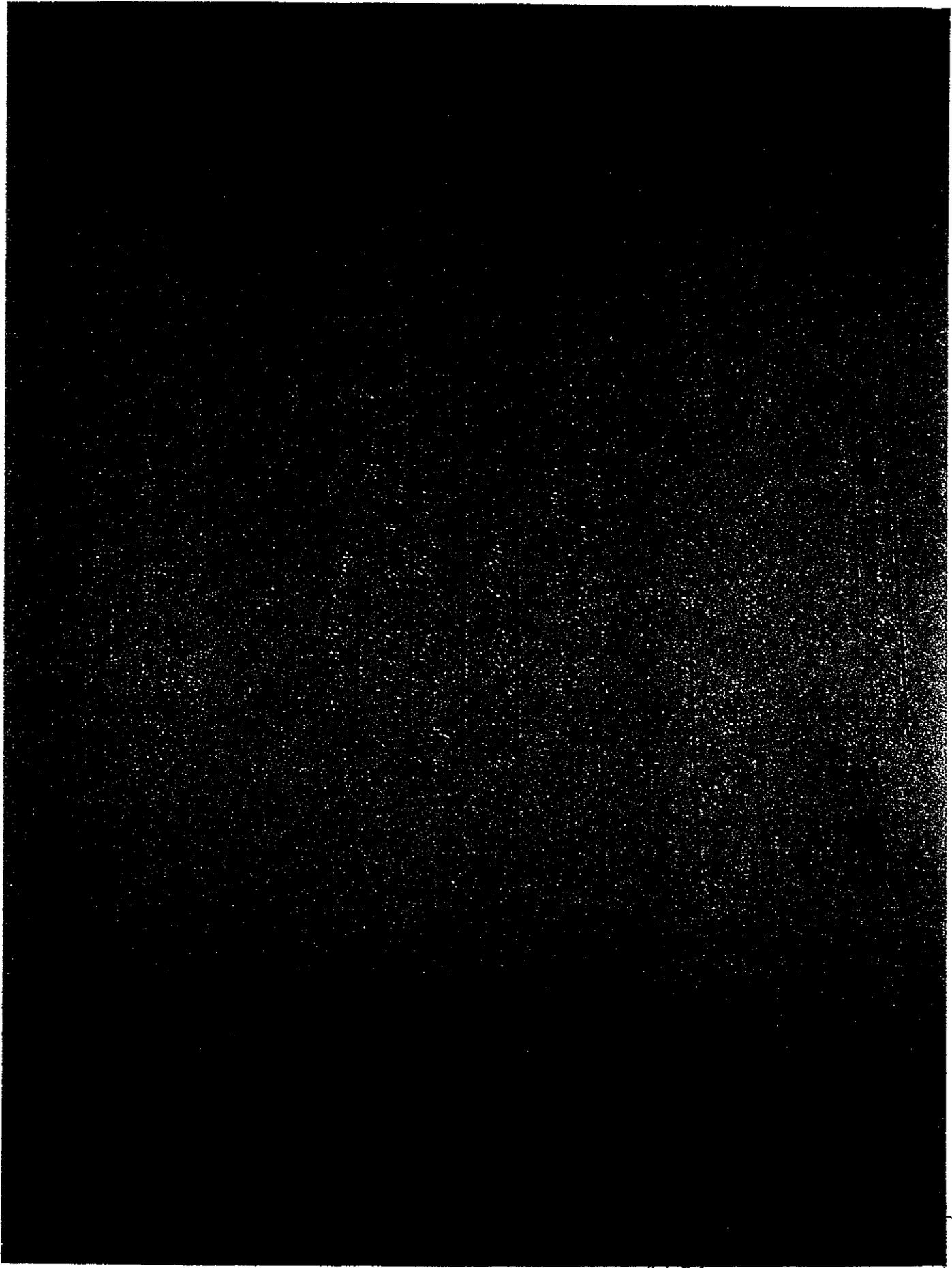
DIS. NOEMI A. PARANEDA
 OIC Regional Director

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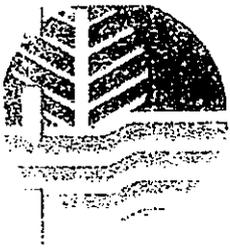
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Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU

Regional Office No. III 4/F Mel-Vi Bldg., Olangapo-Gapan Road
Dolores, City of San Fernando, Pampanga
Telefax Nos. (045) 961-5203; 961-5206; 861-2361

"APR 22 2016"

ECC Ref. Code No. R03-0912-0264
CLARK INTERNATIONAL AIRPORT CORPORATION
Civil Aviation Complex, Clark Freeport Zone
Pampanga

Dear Sir/ Madam:

This refers to your application for the amendment of the Environmental Compliance Certificate (ECC) issued to the existing Clark International Airport Civil Complex (CCAC) and its facilities with an area of 2,367 hectares and the existing Clark International Airport Passenger Terminal Building (Terminal 1) with an area of 21,037 square meters and proposed Airport Passenger Terminal Building and its facilities located at Civil Aviation Complex, Clark Freeport Zone, Pampanga.

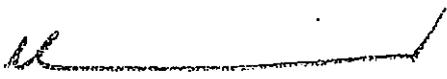
After satisfying the requirements of the said application, this Office has decided to grant an amended Environmental Compliance Certificate (ECC) to the above-mentioned project.

In issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and not a **PERMIT**. It is expected that you will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies.

With the issuance of this ECC, you are expected to implement the measures presented in the submitted Environmental Performance Report and Management Plan (ERMP) intended to protect and mitigate the project's adverse impacts on community health welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project. You may proceed with project implementation, after securing all the necessary permits from the pertinent government agencies. This Office will be monitoring the project periodically to ensure your compliance with the stipulations cited in the attached ECC.

Please be guided accordingly.

Very truly yours,


LORMELYN E. CLAUDIO, CESO IV
Regional Director







Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU

Regional Office No. III 4/F Mel-Vi Bldg., Olangapo-Gapan Road
Dolores, City of San Fernando, Pampanga
Telefax Nos. (045) 961-5203; 961-5206; 861-2361

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued Under Presidential Decree 1586)
R03-0912-0264
Amended

THIS IS TO CERTIFY THAT CLARK INTERNATIONAL AIRPORT CORPORATION is granted this Environmental Compliance Certificate (ECC) for the existing Clark International Airport Civil Aviation Complex (CCAC) and its facilities with an area of 2,367 hectares and the existing Clark International Airport Passenger Terminal Building (Terminal 1) with an area of 21,037 square meters and proposed Airport Passenger Terminal Building and its facilities located at Civil Aviation Complex, Clark Freeport Zone, Pampanga, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau, Region III.

SUBJECT ONLY to the conditions and restrictions set-out in this ECC and in the attached document labeled as Annex A. Recommendations have been provided in Annex B as guidance to concerned government agencies and local government units for consideration in their decision making.

It shall cover the development and operation of the following project components (Group 3.5.1)

Existing Components

- Clark International Airport Civil Aviation Complex (CCAC) and its facilities with an area of 2,367 hectares
- Clark International Airport Passenger Terminal Building (Terminal 1) with an area of 21,037 square meters

Proposed Components

- Airport Passenger Terminal Building with an approximate area of 82,600 square meters
- Apron/ Ramp with an approximate area of 180,000 square meters
- Car and Bus Parking Area with an approximate area of 70,000 square meters
- Four lane road network with a length of 4 km
- All necessary equipment and facilities for airport operations such as check-in counters, baggage handling and delivery carousels, x-ray units, power substations, Diesel Power Generators, Solar Panel, Rainwater Collecting Network, Air Conditioning Systems, Lighting System, Chillers, Air Handling Units, Cooling Tower, Fire Protection with Sprinkler System, Lifts, Travelators, Closed Circuit Television (CCTV), Background Music and Paging System (BGM/PA)
- All necessary support services and facilities for airport passenger terminal operations such as but not limited to concessionaires, lounges, offices, warehouse, Immigration, Quarantine, Customs, Security, ground support, in flight catering, etc.

Project Geographical Coordinates/Location:

North Latitude - 15°11'14.47"
East Longitude - 120°32'55.98"



PURCHASE ORDER
CLARK INTERNATIONAL AIRPORT CORPORATION

Corporate Office Building., Civil Aviation Complex
 Clark Freeport Zone, Pampanga, Philippines 2023



Management System
 ISO 9001:2008



www.cia.com
 ID #10608000

Supplier: KRC ENVIRONMENTAL SERVICES
 Address: Angeles City
 TIN: _____

P.O. No. 16817
 Date: 21-Dec-15
 Mode of Procurement: Small Value

Gentlemen:
 Please furnish this office the following articles subject to the terms and condition contained herein:

Place of Delivery: CLARK INTERNATIONAL AIRPORT CORP.
 Date of Delivery: ART _____ 599-2897 loc. 711
 Pls. notify _____ / thru tel. no. _____

Delivery Term: 15 Days
 Payment Term: SAF 15-09-002
 RIS No.: _____

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
1	lot	Professional and Technical services for the preparation and completion of the Environmental Impact Statement (EIS) documents for the proposed Clark International Airport New Passenger Terminal Building (CNPTB) Project and the facilitation in the acquisition of the ammendment in the Environmental Clearance Certificate (ECC) issued to Clark International Airport Corporation (CIAC) As per attached specifications and quotation submitted and approved by SEMO-Manager, terms and conditions follows. ***nothing follows***	1	298,000.00	298,000.00

(Total Amount in Words) TWO HUNDRED NINETY EIGHT THOUSAND PESOS & 00/100 298,000.00

In case of failure to make the full delivery within the time specified above, a penalty of one-tenth (1/10) of one percent for every day of delay shall be imposed.

Conforme: _____
 Signature over Printed Name of Supplier

_____ Date

CIAC-TRE
 FUNDS AVAILABLE
[Signature]

Very Truly yours,
EMIGDIO P. TANJATCO III
 President & CEO
 Authorized Official *[Signature]*

Funds Available _____

 Chief Accountant

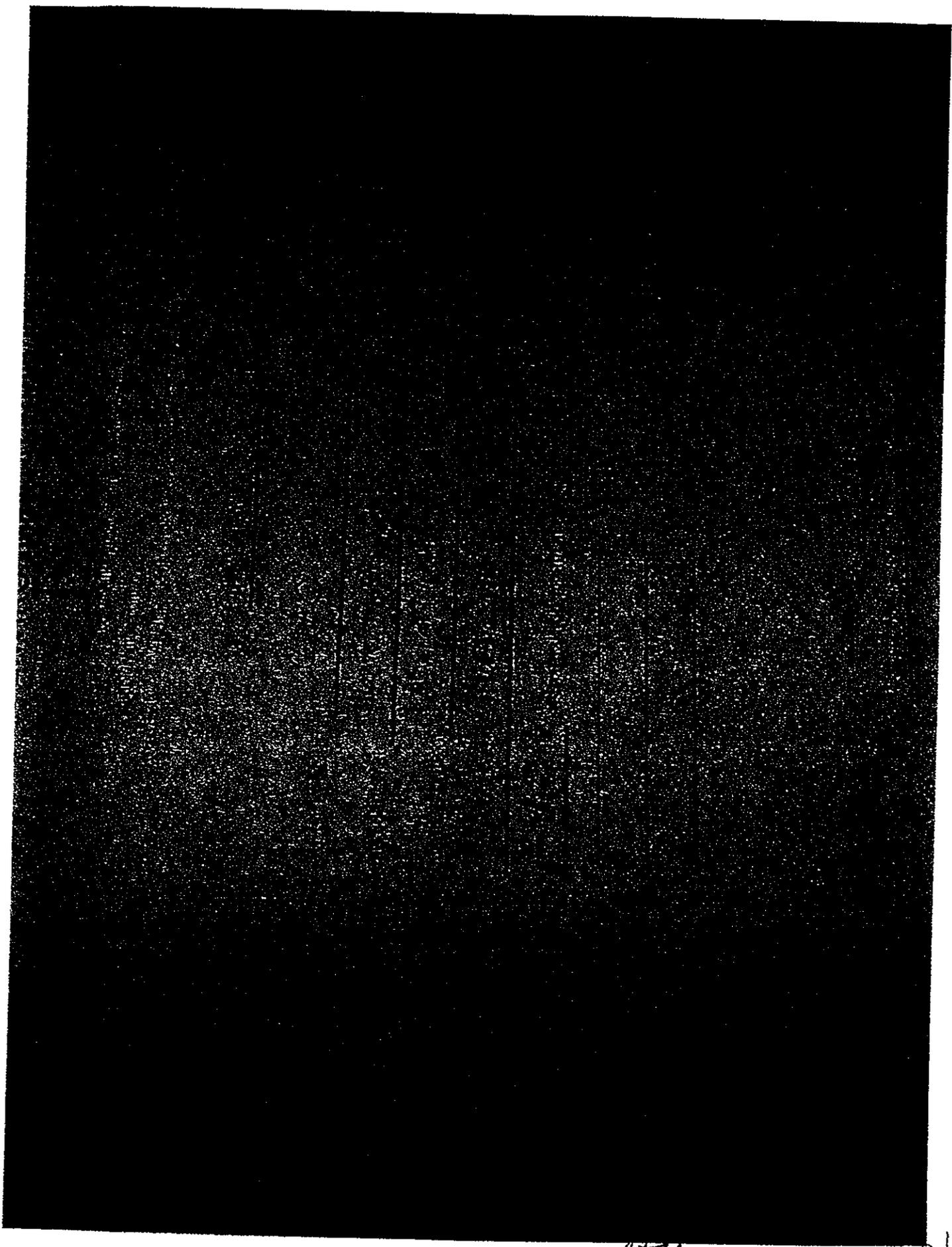
ALOBS No.: _____
 Amount: _____

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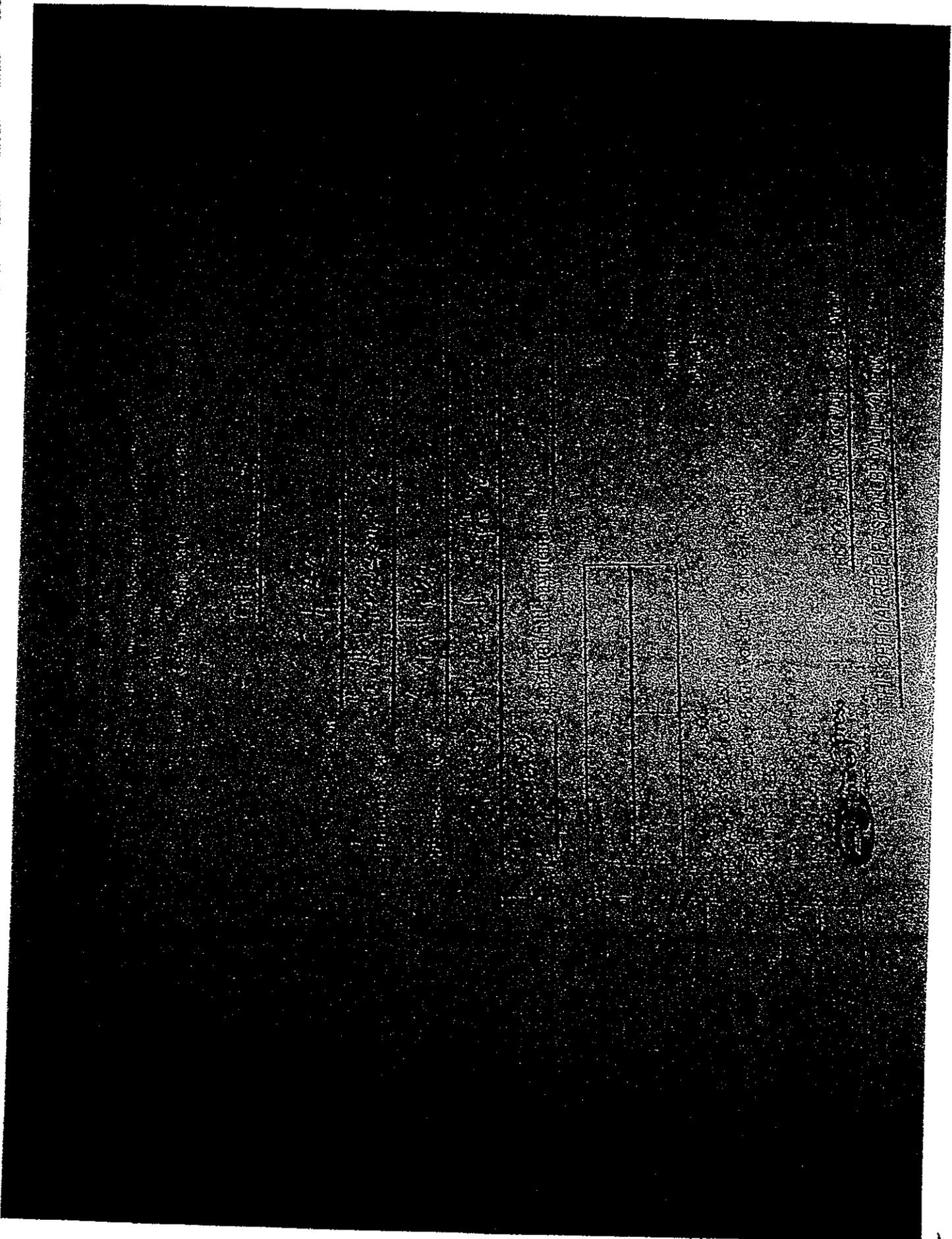
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ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

ECC-R4A-1409-0561

THIS IS TO CERTIFY THAT THE PROPONENT, **PILIPINAS ENERCAP PLANT, INC. (PEPI)** is granted this Environmental Compliance Certificate (ECC) for their **BIOETHANOL PLANT IN CO-GENERATION WITH A WASTE-TO-ENERGY POWER PLANT FOR REFUSE DERIVED FUELS (RDF) AND ITS OWN PORT PROJECT** located in **Barangay Mayao, Castillo, Lucena City, Quezon Province** by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), CALABARZON Region.

This Certification is being issued for the Project with the following details:

PROJECT DESCRIPTION

The Bioethanol Plant in Co-Generation with a Waste-to-Energy Power Plant for Refuse Derived Fuels (RDF) and its Own Port Project shall have a maximum annual capacity not to exceed Three Hundred Thousand (300,000) metric tons of bioethanol, Two Hundred Forty Thousand (240,000) metric tons of Dried Distiller's Cassava with Solubles (DDCS), and Two Hundred Eighty Seven Thousand (287,000) megawatts electricity. It shall have the following project components/facilities:

Bioethanol Plant	Three (3) Lines RDF Power Plant	Support Facilities and Auxiliary Equipment
1. Feedstock Process <ul style="list-style-type: none"> • Unloading/Loading Units (train, truck and ship) • Conveyor system • Silos and/or bunkers • Pre-wash unit for cassava tubers • Mill • Conditioning unit 2. Fermentation Process <ul style="list-style-type: none"> • Mixer • Storage and dosing equipment • 30 Fermenter • Tank cleaning system (CIP cleaning in process) • Heat exchanger • CO₂ scrubber (Quench) 	1. RDF Supply & Storage <ul style="list-style-type: none"> • Unloading unit for trucks • Bunker • Crane 2. Three (3) units Boiler <ul style="list-style-type: none"> • Grate firing system • Four (4) standing kettles with steam drums • Slag discharging system with slag container 3. Three (3) units Turbine <ul style="list-style-type: none"> • Steam turbines (condensation/extraction) • PHW generation and process • Electric power generators 	1. Administration buildings 2. Auxiliary equipment for bioethanol production <ul style="list-style-type: none"> • Automated measuring and monitoring system • Pumps • Nitrogen vessels • Compress air generator • Fire extinguishing system • Laboratory equipment • Ventilation and air equipment • Wheel loader 3. Auxiliary equipment for power generation <ul style="list-style-type: none"> • High-/medium-/low

ECC-R4A-1409-0561

Bioethanol Plant in Co-Generation with Waste-To-Energy Power Plant for Refuse Derived Fuels (RDF) and its Own Port Project
 Pilipinas Enercap Plant, Inc. (PEPI)

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PROJECT ASSESSMENT PLANNING TOOL

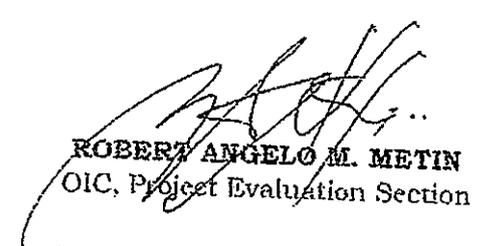
For the assistance of the Proponent, LGUs and other concerned government agencies (GAs) in the management of the project and for better coordination in mitigation on the impacts of the project on its surrounding areas and to the environment.

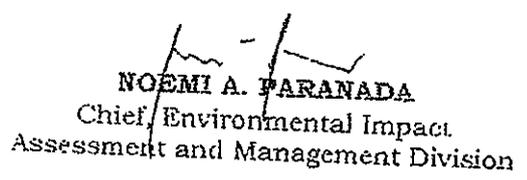
By way of recommendation, the following have been taken notice of by this Office and are providing these recommendations to the parties and authorities concerned for proper action and integration into their decision making-process.

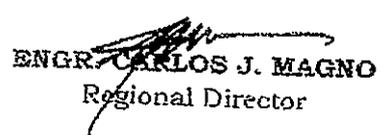
Regulatory Conditions	
1. The proponent shall comply with, but not limited to the following: 1.1 PD 856 or the Sanitation Code of the Philippines; 1.2 PD 442 or the Labor Code of the Philippines including occupational health and safety; 1.3 R.A. 6541 or the National Building Code of the Philippines including adequate storm drainage system and other flood control measures and compliance to the Fire Safety and Emergency Preparedness; 1.4 R.A. 9367 or the Bio-Fuels Act of 2006; 1.5 R.A. 7916 and R.A. 8748 1.6 P.D. 1067 or the Water Code of the Philippines.	DOH DOLE-Bureau of Working Condition City Planning & Dev't. Office/Building Official/BFP/ LGU Concerned/PEZA DOE PEZA DFWH/NWRB
Environmental Planning Recommendations for the Proponent	
Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all stages of the project, and to immediately address any environmental hazard/change that may take place.	Proponent

For dissemination and proper action of the parties concerned.


CHERYL M. DUYA
 Case Handler


ROBERT ANGELO M. METIN
 OIC, Project Evaluation Section


NOEMI A. PARANADA
 Chief, Environmental Impact Assessment and Management Division


ENGR. CARLOS J. MAGNO
 Regional Director

Processing Fee : PhP5,000.00
 O.R. No : 5214006 Date : 08/07/2014
 Legal Fee : Php60.00
 O.R. No. : 5214629 Date : 08/07/2014

ECC-R4A-1409-0561
 Bioethanol Plant in Co-Generation with Waste-To-Energy Power Plant for ~~Plant~~ Derived Fuels (RDF) and its Own Port Project
 Philippines Enercap Plant, Inc. (PEPI)







KRC ENVIRONMENTAL SERVICES

381 Sto. Rosario St., Angeles City

Tel. No. 0917-5262698; 0915-2312250

Email: krcehs_services@yahoo.com; cqcapule@yahoo.com; alot_avenido@yahoo.com

13 November 2013

PILIPINAS ENERGY INVEST, INC.
Attention : MR. GIANCARLO D'ELIA
DR. MICHAEL KUHN

Unit 302, Prince David Condominium
305 Katipunan Avenue, Loyola Heights
Quezon City, Metro Manila

Dear SIRS :

We are pleased to submit this final project proposal for the preparation of an **Environmental Impact Statement (EIS) Report** for your **Proposed Co-Generation Project** to be located in Lucena City, Province of Quezon for submission to the Philippine Environmental Management Bureau (EMB) and the Mines & Geosciences Bureau (MGB) of the Department of Environment & Natural Resources (DENR) for the issuance of an **Environmental Compliance Certificate (ECC)**.

A. SCOPE OF WORK

1. Coordination meeting

The Consultant will coordinate with the EMB Central Office (EMB-CO) to determine the requirements to be submitted for the ECC application. This shall include coordination with EMB-Region 4 and the Mines & Geosciences Bureau (MGB) as needed.

2. Information gathering

The Consultant will gather data and information for baseline measurements with regards to the proposed project as follows :

- a) Air and Noise Quality Measurement - Sampling and analysis of ambient air for Total Suspended Particulates, Nitrogen Dioxide, Sulfur Dioxide and VOCs dioxins and furans; and ambient noise level
- b) Land Survey and data gathering on terrestrial biology for flora and fauna; geomorphology and pedology
- c) Freshwater/Marine Water Quality Measurements of dissolved oxygen, biological oxygen demand, pH, temperature, total suspended solids, total dissolved solids, total coliform, fecal coliform, oil and grease, and nitrates
- d) Marine Water Ecology Assessment on fauna and biota - Collection of water and bottom sediments for plankton, macro-invertebrates and fish fauna



KRC ENVIRONMENTAL SERVICES

381 Sto. Rosario St., Angeles City

Tel. No. 0917-5262698; 0915-2312250

Email: krcchs_services@yahoo.com; cqcacule@yahoo.com; alot_avenido@yahoo.com

- e) Groundwater Quality Measurements of total dissolved solids, pH, nitrate, arsenic, cadmium, lead, nickel, chromium, total coliform, and fecal coliform
- f) Socio-Economic and Public Health Assessment - Including public scoping/consultation meetings; identification and assessment of health hazards and human health risks to the municipality, particularly the host community and other barangays
- g) Engineering, Geological and Geohazard Assessment Report (EGGAR) - Will study the possible geological hazards that may occur in the area and collect soil samples from drill cores or conduct of test pits for foundation studies

ANNEX I provides the details of the scope of work of the Environmental Impact Assessment study. ANNEXES II-IV further details the work to be undertaken in Items b), c), and g).

3. Consolidation and preparation of the EIS Report

Upon completion of data gathering, the EIS Report will be submitted to EMB-CO.

4. Other Services

The Consultant will liaise with the EMB and the MGB and will provide technical assistance until the approval of the ECC.

B. DURATION OF WORK

The EIS report shall be completed within 6-8 weeks, after one (1) month of sampling and analysis and from receipt of various documents listed in Section D-2 and D-3 on page 3 of this proposal.

C. PROFESSIONAL FEES & PAYMENT SCHEDULE

The total consultancy fee for the abovementioned services shall be as itemized in Table I based on Scope of Work and shall be payable according to the Schedule on Table II :

Table I - EIS PROFESSIONAL FEES (PhP)	
Ambient Air and Noise Quality	850,000.00
Air Quality Modelling	800,000.00
Marine Water and Groundwater Quality	500,000.00
Hydrology and Ground Flow Movement	400,000.00
Sediments, Biota and Marine Water Ecology	700,000.00
Terrestrial Ecology	400,000.00
Socio-Economic and Health Assessment	300,000.00



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Engineering, Geological and Geohazard Assessment Report (EGGAR)	300,000.00
Public Consultation and Permitting	850,000.00
Sub-total	5,100,000.00
VAT and other Taxes, 15%	765,000.00
Total Project Fees	5,865,000.00
Deduct : VAT and Other Taxes*	(765,000.00)
Logistics, Miscellaneous & Contingency	1,000,000.00
TOTAL PROJECT FEE (Inclusive of VAT and other taxes)	6,100,000.00

The abovementioned fees are inclusive of logistics and materials; specialist and staff supports; transportation, food and accommodations; filing and review fees within the EMB. It is understood that Client agrees that payments shall be effected through Statement of Account/Invoice only*. However, all fees necessary until the approval of the ECC – in particular, for scope of work beyond the proposal – are excluded in the total cost stated above. These shall be submitted with proper documentation for payment purposes.

Upon Approval of the Proposal/Contract	40%
Submission of the EIS Report	30%
Issuance of ECC	30%
Total	100%

D. TERMS AND CONDITIONS

1. PILIPINAS ENERGY INVEST, INC. (PEII) shall conform to the proposal prior to execution of the study. The terms of the engagement shall commence from EPI's conformity to this proposal until the satisfactory completion of the services, unless earlier terminated pursuant to Paragraph 5 hereof.
2. PEII shall make available all pertinent documents needed for the preparation of the EIS documentation. These will not be limited to legal documents such as Securities & Exchange Commission (SEC) registration certificate, Transfer Certificate of Title/s (TCTs) or Lease agreement/s, basic project description such as PEII's corporate profile, nature of project, maps, production capacity, manpower requirements, engineering drawings, utility plans such as water and sewer layout, and power layout, number of personnel, hours of operation and project cost, among others.
3. For the purposes of this proposal, Confidential Information shall mean and collectively include: all information relating to the business, plans and/or technology of PEII including, but not limited to technical information including but not limited to methods, plans, processes, specifications, experience, and trade secrets; developmental, marketing, sales, customer, supplier, consulting relationship information, operating, performance, and cost information; computer programming techniques whether in tangible or intangible form, and all record-bearing media containing or disclosing the foregoing information and techniques including but not limited to, written business



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plans, patents and patent applications, grant applications, notes, and memoranda, whether in writing or presented, stored or maintained in or by electronic, magnetic, or other means.

Except as required by the Consultant's duties, Consultant shall not, at any time now or in the future, directly or indirectly, use, publish, disseminate or otherwise disclose any Confidential Information to any third party without the prior written consent of PEII which consent may be denied in each instance and all of the same, together with publication rights, shall belong exclusively to PEII.

4. Consultant agrees that all the services will be rendered by them as an independent contractor and that this proposal does not create an employer-employee or agency relationship between the Consultant and PEII. Consultant shall have no right to receive any employee benefits including, but not limited to, health and accident insurance, life insurance, sick leave and/or vacation. Consultant agrees to pay all taxes including, corporate or self-employment taxes due in respect of the total project cost and to indemnify PEII in the event PEII is required to pay any such taxes on behalf of the Consultant.
5. Consultant's engagement shall be terminated only upon satisfactory performance of the services stated under Table I or in any of the instances stated below :
 - a) If the Consultant voluntarily ceases performing the services, becomes physically or mentally unable to perform their duties, or is terminated for cause, then, in each instance, this engagement shall cease and terminate as of such date. Any termination "For Cause" shall be made in good faith by PEII through a valid board resolution.
 - b) The Consultant's engagement may be terminated without cause by either party upon not less than thirty (30) days of prior written notice by either party to the other.
 - c) Upon termination under Paragraphs 5 (a) or 5 (b), neither party shall have any further obligations under this proposal. Upon termination and, in any case, upon PEII's request, the Consultant shall return immediately to PEII all Confidential Information, as hereinafter defined, and copies thereof.
6. PEII shall have the right to assign its rights and obligations under this proposal to its affiliates or any party which assumes PEII's obligations hereunder.
7. Further additional studies and other activities required by EMB-CO and Region 4, and the MGB and other government agencies beyond the scope of work are subject to separate costs.

Should you find the above terms and conditions acceptable, please affix your signature in the space provided below and this shall serve as our Contract of Agreement.

The validity of this proposal is thirty (30) days from the date of submission.

Thank you and we hope our proposal merits your approval.

Sincerely yours,

MARILOU P. AVENIDO
Consultant and Project Team Leader

CONFORME

Signature
Printed Name & Position :
GIANCARLO D'ELIA / BOARD MEMBER
Date : November 13, 2013

ANNEX F

CURRICULUM VITAE OF THE ASSIGNED TEAM LEADER

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**TPF 6. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED
PROFESSIONAL STAFF**

Proposed Position: Overall Team Leader

Name of Firm: KRC ENVIRONMENTAL SERVICES

Name of Staff: Maria Carmela O. Capule

Profession: B.S. Chemistry/MPS Science Education/MS Environmental Science/PhD
Environmental Science (PhD Candidate)

Date of Birth: _____

Years with Firm/Entity: 2004 to Present Nationality: Filipino

Membership in Professional Societies: Environmental Practitioners' Association Inc. (EPA), Industrial Hygienists Association of the Philippines (IHAP), Integrated Chemists of the Philippines (ICP), Kapisanang Kimika ng Pilipinas (KKP), American Waterworks Association (AWWA), Air and Waste Management Association (AWMA), Philippine Accreditation Bureau – DTI.

Detailed Tasks Assigned: Lead and oversee the effective implementation of the environmental impact assessment study, baseline environmental survey, public scoping, public hearing and other fieldworks.

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Post Graduate Degree : University of the Philippines – Diliman, Quezon City, Philippines
Doctor of Philosophy Major in Environmental Science
PhD Candidate, finished academic subjects, on-going dissertation research

Post Graduate Degree : University of the Philippines – Diliman, Quezon City, Philippines
Master of Science Major in Environmental Science

Post Graduate Degree Earned : Pampanga Agricultural College
Master of Professional Studies major in Science Education

College: Polytechnic University of the Philippines – Manila, Philippines
Degree Earned Bachelor of Science major in Chemistry
Cum Laude

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Company Name: KRC Environmental Services
Company Address : 381 Sto. Rosario St., Angeles City
Position : Environmental Scientist / Business Development Director
Period of Employment: 2004 to present

Environmental Consultant/ Environmental Scientist

- Provides consultancy services for EIA.
- Prepares Environmental Impact Assessment studies/IEE/EPRMP to clients for DENR ECC requirements
- Prepares and leads the environmental impact assessment studies which include environmental site assessment studies, environmental risk assessment and risk management, ecological studies, site inspection and investigation and provides recommendations and possible solutions to environmental problems.
- Leads and supervises environmental sampling in air, noise, water, wastewater, soil, sediments, hazardous wastes and biological matrices.
- Conducts public scoping, public hearing and consultation to stakeholders

Company Name: CRL ENVIRONMENTAL CORPORATION
Company Address : Bldg. 2, Berthaphil Compound I, Berthaphil Inc. Industrial Park,
Jose Abad Santos Ave., Clark Freeport Zone, Pampanga, Philippines
Position : Chief Operating Officer (June 2005 to present)
Quality Management Representative (January 2004 to present)
Laboratory Director (July 2001 to June 2012)
Environmental Consultant (June 2003 to present)
Pollution Control Officer (April 1, 2001 to present)
Operations Manager (July 2001 to May 2005)
Quality Assurance Officer (February 2001 to August 2002)
Laboratory Head (February 2001 to June 2001)
Period of Employment: February 2001 to present

Company Name : ENVIRONMENTAL MANAGEMENT BUREAU (EMB),
DEPARTMENT OF ENVIRONMENT AND NATURAL
RESOURCES, REGION III
Company Address : Amalgamated Bldg., MacArthur Highway, San Fernando,
Pampanga, Philippines
Position : Laboratory Head/ Chemist
Period of Employment: October 1997 to February 2001

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

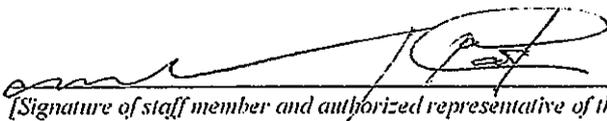
English (Excellent), Tagalog (Excellent), Pampango (Excellent)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Commitment:

I also commit to work for the Preparation of Environmental Impact Statement and Facilitation of ECC application for the New Clark City (NCC) in accordance with the time schedule as indicated in the contract once the firm is awarded the Project.


Date: 12/17/18
[Signature of staff member and authorized representative of the firm] Day:Month:Year

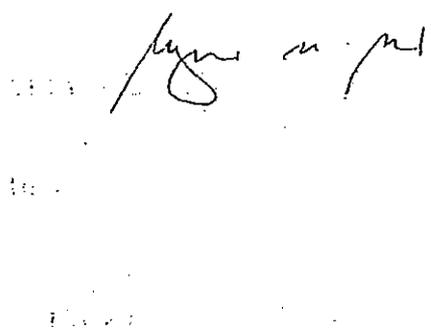
Full name of staff member: Maria Carmela Q. Capule
Full name of authorized representative: Ricardo A. Capule

SUBSCRIBED AND SWORN to before me this ^{DEC 17 2018} 17 day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. _____.

Witness my hand and seal this ^{DEC 17 2018} 17 day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ until _____
Roll of Attorneys No. _____
PTR No. ____, *[date issued]*, *[place issued]*
IBP No. ____, *[date issued]*, *[place issued]*
Doc. No. 434
Page No. 16
Book No. 124
Series of 76.8



Important Note: Provide applicable documents to substantiate professional registration, educational attainment and trainings undertaken. Only those attainments and undertakings with supporting documents will be considered for evaluation.







DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Environmental Management Bureau

Environmental Impact Assessment and Management Division

Certificate of Registration

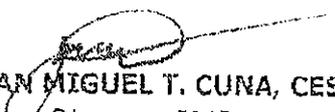
This is to certify that:

MARIA CARMELA Q. CAPULE

is a Registered Preparer of
Environmental Impact Assessment Reports
under the Philippine Environmental Impact Statement (EIS) System
as per EMB MC 2013-003
(Registration No. IPCO-045)

Given this 11th Day of July 2014 at Sulo Riviera Hotel Quezon City


ATTY. MICHAEL DRAKE P. MATIAS
Chief, EIAMD


ATTY. JUAN MIGUEL T. CUNA, CESO IV
Director, EMB





List of EIA Projects Handled and Managed

1	ENVIRONMENTAL IMPACT ASSESSMENT AND PREPARATION OF ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE ROAD WIDENING FROM 2-LANES TO 6 LANES, PUERTO PRINCESA NORTH ROAD AND PUERTO PRINCESA SOUTH ROAD, PALAWAN (513.017 KM)	EIA	Palawan	DPWH-Region IVB	July 2018 On-going
2	ROAD NETWORK DEVELOPMENT PROJECT IN CONFLICT-AFFECTED AREAS IN MINDANAO SUB-PROJECT 1: MATANOG-BARIRA-ALAMADA-LIBUANGAN ROAD SUB-PROJECT 2: PARANG-BALABAGAN ROAD SUB-PROJECT 5: MAGANOY-LEBAK ROAD SUB-PROJECT 6: TAPIAN-LEBAK ROAD SUB-PROJECT 7: MARAWI RING ROAD PROJECT SUB-PROJECT 8: PARANG-EAST DIVERSION ROAD SUB-PROJECT 9: MANUANGAN-PARANG ROAD	EIA/RAP	Autonomous Region in Muslim Mindanao (ARMM)	JICA/CTI/DPWH	2018
3	TAAL LAKE CIRCUMFERENTIAL ROAD PROJECT	EIA	Batangas	DPWH R IV A	2018 report completed ECC-on going
4	PROPOSED PHILIPPINE SPORTS CITY AND NATIONAL GOVERNMENT ADMINISTRATIVE CENTER	EIA	Tarlac	BCDA/ ALLOYMTD PHILIPPINES	2018
5	ROAD NETWORK DEVELOPMENT OF THE PROPOSED AIRPORT TO NEW CLARK CITY ACCESS ROAD, MAC ARTHUR-NEW CLARK CITY ACCESS ROAD, MAC ARTHUR-SCTEX ACCESS ROAD AND OLYMPIC VILLAGE ACCESS ROAD	EIA	Pampanga and Tarlac	BCDA/UICI	2018
6	FEASIBILITY STUDY OF THE PROPOSED CONSTRUCTION OF BRIDGES THAT WILL CROSS THE PASIG-MARIKINA RIVER AND MANGGAHAN FLOODWAY (6 -	IEE	Quezon City, Marikina, Pasig City, Cainta Rizal	DPWH thru CTI	2017

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	BRIDGES)				
7	THE PREPARATORY SURVEY FOR CAVITE INDUSTRIAL AREA FLOOD MANAGEMENT PROJECT (INCLUDES CONSTRUCTION OF 5 BRIDGES AND IMPROVEMENT OF 2 BRIDGES AS COMPONENTS)	EIA	Cavite	DPWH thru CTI-JICA	2017
8	EXPANSION OF CLARK INTERNATIONAL AIRPORT PASSENGER TERMINAL WITH FOUR LANE ROAD NETWORK WITH LENGTH OF 4 KM AS COMPONENT	EIA	Clark Freeport Zone	Clark International Airport Corp. (CIAC)	2016
9	WESTCHINAMIN GUINABON NICKEL MINING PROJECT (MPSA NO. 316-2010-III) WITH ACCESS MINING ROAD AS COMPONENT	EIA	Zambales	Westchinamin Corp.	2016
10	REMEDICATION AND CLEAN-UP OF DECOMMISSIONED BATAAN THERMAL POWER PLANT	EIA	Bataan	Peachclark/USTC	2015
11	BIOETHANOL PLANT IN CO-GENERATION WITH WASTE TO ENERGY POWER PLANT FOR REFUSE DERIVED FUELS WITH FARM TO MARKET ACCESS ROAD AS COMPONENT	EIA	Quezon	Pilipinas Enercap Plant Inc.	2014
12	10~50 MWP PAMPANGA SOLAR POWER AND BUILDING CONSTRUCTION PROJECT	IEE	Clark Freeport Zone	Enfinity Philippines Renewable Resources	2013
13	VEHICLE ASSEMBLY PLANT PROJECT	IEE	Clark Freeport Zone	Foton Motor Phils. Inc.	2013
14	ASSEMBLY, COMMISSIONING & TESTING EQUIPMENT AND BIODIESEL PRODUCTION PROJECT	IEE	Clark Freeport Zone	Enerdice Biofuels Corporation	2013
15	PHILIPPINE SCIENCE HIGH SCHOOL – CENTRAL LUZON CAMPUS	IEE	Clark Freeport Zone	DOST	2013
16	SEMICONDUCTOR MANUFACTURING PROJECT	IEE	Clark Freeport Zone	Phoenix Semiconductor Philippines Corp.	2010
17	OIOSDADO MACAPAGAL INTERNATIONAL AIRPORT (DMIA) AND TERMINAL EXPANSION PHASE I PROJECT	IEE	Clark Freeport Zone	Clark International Airport Corp. (CIAC)	2010
18	WATER SUPPLY SYSTEM – SAN LUIS WATERWORKS	IEE	San Luis, Pampanga	BWSI-CLPI BRANCHES INC. (BCBI)	2009
19	WATER SUPPLY SYSTEM – STA. RITA WATERWORKS	IEE	Sta. Rita, Pampanga	Crystal Liquid Phils. Inc. (CLPI)	2009

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20	WATER SUPPLY SYSTEM – STA. ANA WATERWORKS	IEE	Sta. Ana, Pampanga	BWSI-CLPI BRANCHES INC. (BCBI)	2009
21	Health Centrum Tertiary Hospital	IEE	Roxas City, Capiz	The Health Centrum Inc.	2009
22	PALIO ISLAND BEACH RESORT	IEE	El Nido, Palawan	Gorong Bay Resort Corporation	2007

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María Carmela Q. Capule

Resource Speaker/Lecturer/Presenter

- August 7-8, 2018** *Workshop on Laboratory Quality Management and QMS Documentation (DFWH)*
La Breza Hotel, Mcter Ignacia Ave., Quezon City
- June 21, 2018** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Quest Hotel Convention Hall, Clark Freeport Zone, Pampanga
- April 5, 2018** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- March 21, 2018** *Philippine Clean Water Act*
PCAPI CAR: Water Sampling, Soil Sampling, Sample Handling and Safety
Regency Hotel, Baguio City
- February 22, 2018** *Training on Environmental Sample Handling, Sample Collection, Field Safety*
Galoc Office, Makati City
- February 8, 2018** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- January 29, 2018** *Water Sample Collection Training and Accreditation*
Logistics conference room, Arroceros Compound, Manila
- January 24, 2018** *PCAPI CAR: Water Sampling, Soil Sampling, Sample Handling and Safety*
Regency Hotel, Baguio City
- November 23, 2017** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- October 12, 2017** *PCAPI CAR: Water Sampling, Soil Sampling, Sample Handling and Safety*
Regency Hotel, Baguio City
- 9/28-29/2017** *Training/Workshop on PCB Sampling, Sample Handling and Field Safety*
Hedcor, Inc., #214 Ambuklao Road, Obulan, Beckel, La Trinidad, Banguet
- September 26, 2017** *Water Sample Collection Training and Accreditation*
Conference Room, Maynilad La Mesa Dam, Hovaliches, Quezon City
- September 6, 2017** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- August 29, 2017** *Overview on Sample Collection, Methodologies in Water and Wastewater, Sludge & Air*
Conference Room, Amherst Laboratories Inc., Binan, Laguna
- August 25, 2017** *Training on Environmental Sample Handling, Sample Collection, Field Safety (MWSS participants)*
Conference Room, CRL Environmental Corp., Clark Freeport Zone, Pampanga
- June 29, 2017** *Training on Environmental Sample Handling, Sample Collection, Field Safety (DOST participants)*
Training Room, DOST Compd., Taguig City
- May 9, 2017** *Training/Workshop on PCB Sampling, Sample Handling and Field Safety*
DOLE Phils. Inc., Polomolok, South Cotabato
- May 25, 2017** *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Splash Island, Los Baños, Laguna
- May 18, 2017** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- March 17, 2017** *Scientific Training on Silica Dust*
C&HC, Diliman, Quezon City
- February 26, 2017** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- November 9, 2016** *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga
- August 17, 2016** *PCAPI CAR: Water Sampling, Soil Sampling, Sample Handling and Safety*
Regency Hotel, Baguio City

August 10, 2016 *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga

April 27, 2016 *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Widus Hotel Convention Hall, Clark Freeport Zone, Pampanga

April 8, 2016 *PCAPI CAR: Water Sampling, Soil Sampling, Sample Handling and Safety*
Regency Hotel, Baguio City

August 27, 2015 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
DAP, Tagaytay City

July 23, 2015 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Splash Island, Los Banos, Laguna

June 30, 2015 *EPA Region III: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Mimosa Convention Hall, Clark Freeport Zone, Pampanga

June 25, 2015 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Splash Island, Los Banos, Laguna

June 19, 2015 *PCAPI CAR: Soil Sampling, Sample Handling and Safety*
Regency Hotel, Baguio City

March 13, 2015 *ECL: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Ortigas Ave., Pasig City

January 22, 2015 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
Splash Island, Los Banos, Laguna

November 6, 2014 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
DAP, Tagaytay City

October 14, 2014 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
PEZA, Rosario, Cavite

August 28, 2014 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
DAP, Tagaytay City

August 18, 2014 *PCAPI Region 12: Overview of Wastewater Treatment, Flow Measurements, Collection & Disposal Systems*
Family Country Hotel, General Santos City

July 31, 2014 *PCAPI Region 4: Training on Environmental Sample Handling, Sample Collection, Field Safety*
DAP, Tagaytay City

February 13, 2014 *QA/QC in the Analytical Laboratory and Understanding QA/QC Requirements based on ISO 17025:2005*
UP NIGS, Diliman, Quezon City

March 20, 2013 *Environmental Sampling and Sample Handling Procedure*
Yana Chemodities Inc., Quezon City

February 26, 2013 *Analytical Methodologies and Laboratory QA/QC*
Hotel Stotsenberg, Clark Freeport Zone, Pampanga

October - November 2012 *Nationwide Seminar-Workshop on PCB Sampling and Sample Handling Procedures*
Participants: National Grid Corporation of the Philippines
Locations: La Union, Isabela, Pampanga, Quezon, Cebu, Bacolod, Leyte, Zamboanga, Davao, Cagan de Oro

March 14-16, 2012 *Advanced PCO Training*
Participants: Pollution Control Officers from different industries in Region 3
La Carmela De Boracay, Boracay

August 4, 2011 *Wastewater Treatment Technologies*
Participants: Pollution Control Officers from different industries in Region 3
Subic International Hotel, Subic Freeport Zone, Zambales

June 30, 2011 *Indoor Air Pollution: Occurrence, Measurement and Evaluation*
Participants: EPA members composed of different industries in Region 3
CDC Board Room, Clark Freeport Zone, Pampanga

April 28, 2011 *Hazards in Construction Sector: Site Assessment and Remediation*
Participants: Mapua Institute of Technology, School of Engineering

Manila

- November 11, 2010 *Air Pollution Control*
Participants: Pollution Control Officers from different Industries in Region 3
Subic International Hotel, Subic Freeport Zone, Zambales
- June 24, 2010 *Air Pollution Control*
Participants: Pollution Control Officers from different industries in Region 3
Subic International Hotel, Subic Freeport Zone, Zambales
- May 26, 2010 *Principles of Environmental Sampling and Sample Handling Procedures*
Participants: DOST and University Consortium
Centro Escolar University, Manila
- March 18, 2010 *Principles and Procedures of Sample Management as per ISO 17025:2005 Requirements*
Participants: Laboratory analysts/Laboratory Managers (participants from all Coca Cola plants in the Philippines)
Coca Cola Bottlers Philippines Inc., Sta. Rosa, Laguna
- January 27, 2010 *Seminar-Workshop on Deepwell Operations and Water Sampling Techniques*
Participants: Quezon Association of Water Districts
QMWD Compound, Brgy. Ibabang Dupay, Lucena City, Quezon Province
- October 9, 2009 *Greening The Business*
CAGAYAN DE ORO BUSINESS ENTERPRISES, SERVICES AND TRADE EXPOSITION 2009
The Atrium, Limketkai Mall, Cagayan de Oro City
- September 12, 2009 *Seminar-Workshop on Environmental Monitoring & Regulations*
Participants: Petron Group of Companies; Jollibee; Chowking; Goldilocks
CRL Training Room, Clarkfield, Pampanga
- June 30, 2009 *Organic Testing of Air Pollutants*
AWMA Technical Forum, Sulo Hotel, Quezon City
- June 17 & 18, 2009 *Risk Management of AH1N1 & Wastewater Management on Particular Parameters*
Participants: Localors of Carmelray Park I and Park II, Laguna
- June 3, 2009 *Site Assessment and Investigation on Water and Soil Contamination*
Annual Networking Committee Convention of the Association of Electronics & Semiconductor for Safety & Environmental Protection, SMX Convention Center, Mall of Asia Complex, Pasay City
- October 9, 2008 *QA/QC Protocols on Environmental Monitoring*
SMX Convention Center, Mall of Asia Complex, Pasay City
- May 16, 2008 *Basic Certification Course on Water Refilling Stations*
La Maja Rica Hotel, Mc Arthur Highway cor. Ligtasan, Tarlac City
- August 25, 2007 *Seminar/Hands-on Training on Hazardous Waste Sampling, Handling, and Characterization*
STRC 412, De La Salle University, Taft, Manila
Sponsored by: Asian Regional Research Programme on Environmental Technology
- January 24, 2007 *ARRPET II-DLSU 3rd National Workshop on Transcending Research and Forging Partnerships for Persistent Organic Pollutants Management and Technology Development*
Angelo King International Center, DLSU-CSB, Manila
- November 10, 2006 *Basic Certification Course on Water Refilling Stations*
La Maja Rica Hotel, Mc Arthur Highway cor. Ligtasan, Tarlac City
- October 12, 2006 *Technical Forum on Volatile Organic Compounds - Management & Control*
Orchid Garden Suites, Malate, Manila, Sponsored by: AWMA-PS
- August 10, 2006 *Environmental Sampling Procedures and Laboratory Techniques*
Intel Phils., Cavite
- May 12, 2006 *Basic Certification Course on Water Refilling Stations*
La Maja Rica Hotel, Mc Arthur Highway cor. Ligtasan, Tarlac City
- February 28, 2006 *Seminar on Material Safety Data Sheet*
CRL Conference Room, Clarkfield, Pampanga
- March 16, 2005 *PCB Sampling, Safety, Sample Handling, and Sample Collection*
GST Philippines Inc., Taguig, Metro Manila
- March 5, 2005 *Research Presentor: PAGE III Annual Regional Congress of Graduate Students, Faculty*

and Administrators on the Theme: Issues and Concerns in Thesis/Dissertation Writing/Advising
Philippine Association for Graduate Education (PAGE) Region III, Cabanatuan City

- September 28, 2004 *Seminar on Noise Monitoring*
Philippine Long Distance Telephone (PLDT) Company, Makati City
- September 17, 2004 *Technical Seminar on Persistent Organic Pollutants (POPs) and the Chemical Control Order (CCO) on Polychlorinated Biphenyls (PCBs)*
Holiday Inn Galleria Manila, ADB Ave., Ortigas Center, Pasig City (AWMA)
- May 13, 2004 *Training on Pesticide Sampling, Safety, Sample Handling, Sample Collection and Analysis*
CRL Conference Room, Clarkfield, Pampanga
- April 20, 2004 *Seminar-Workshop on PCB Regulation, PCB Sampling, Sample Handling & Sample Collection*
CRL Conference Room, Clarkfield, Pampanga
- April 5, 2004 *Internal Laboratory Quality Audit*
CRL Conference Room, Clarkfield, Pampanga
- February 13, 2004 *Training on ISO/IEC 17025:1999 Part 1*
CRL Conference Room, Clarkfield, Pampanga
- February 5, 2004 *Environmental Sampling Procedures, Safety, Sample Handling and Sample Collection*
Trainees: Optimal Laboratories, Batangas City
- January 30, 2004 *Echo Seminar on Work Environment Measurement*
LHIP, Mamplasan, Binan, Laguna
- April 29, 2003 *Training on PCB Sampling, Safety, Sample Handling and Sample Collection*
NPC-TRANSCO, Banilat Power Transmission Complex, Cebu City
- December 17, 2002 *Environmental Sampling Procedures*
KEPCO IliJan Corp. Multi-partite Monitoring Team, Picnic Grove, Tagaytay City
- November 15, 2002 *Training on Quality Control and Quality Assurance*
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga
- October 18, 2002 *Seminar on PCB Sampling, Safety & Sample Handling with Hands-on Application*
Conference Room, NPC Mexico Substation, Mexico, Pampanga
- October 5, 2002 *Sampling and Analysis Techniques of PCBs in Water Using Gas Chromatography*
STRC 214 & 215, De La Salle University, Taft, Manila
Sponsored by: Asian Regional Research Programme on Environmental Technology
- May 24, 2002 *Hands-on Demonstration Using Atomic Absorption Spectrophotometer*
CRL Environmental Corporation & Asian Regional Research Programme on Environmental Technology, De La Salle University, Taft, Manila (conducted at CRL Laboratory)
- May 04, 2002 *Seminar on Air Quality Monitoring: Ambient Air and Stationary Sources*
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga
Attendees: Mirant Pagbilao environmental staff
- April 20, 2002 *Training on Sampling and Analysis Techniques Using Gas Chromatography*
STRC 218, De La Salle University, Taft, Manila
Sponsored by: Asian Regional Research Programme on Environmental Technology
- April 16, 2002 *Seminar on RA 9003: Ecological Solid Waste Management Act*
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga
- November 9-10, 2001 *Seminar on Sampling & Analysis of PCBs*
CRL Environmental Corporation, Clarkfield, Pampanga



Maria Carmela Q. Capule

TRAININGS/SEMINARS ATTENDED

July 26-27, 2018 APFAN PT1 Workshop "Trends in Quality Management - Improving Your Laboratory's Proficiency
Holiday Inn, Kemayoran, Jakarta, Indonesia

June 15, 2018 Seminar 1 of 3: Introduction to Enterprise Risk Management
Club Lounge, Quest Hotel, Clark Freeport Zone, Pampanga

May 30-June 1, 2018 33rd Chemistry Congress
Phil. International Convention Center (PICC), CCP Complex, Manila

May 24-25, 2018 ISO/IEC 17025:2017 ASSESSORS' FORUM
Jade Hotel, Makati City

May 9, 2018 Safety Management
Omni Aviation, Clark Freeport Zone, Pampanga

March 22-23, 2018 PNS ISO/IEC 17025:2017 Awareness Training
Crown Plaza Manila Galleria, Ortigas Ave. Quezon City

November 28-29, 2017 1st National Conference on Chemical Laboratories
Century Park Hotel Manila

September 5-7, 2017 Training on Water Safety Plan (WSP) and Drinking Water Quality Assessment
CDC Health and Sanitation Division, Clark Freeport Zone, Philippines

May 31-June 2, 2017 32nd Philippine Chemistry Congress
Citystate Asturias Hotel, Puerto Princesa, Palawan

March 17, 2017 Scientific Training on Silica Dust
OSHC, Diliman, Quezon City

January 27, 2017 Orientation for Team Leaders
PAB-DTI, 3rd Floor, Trade and Industry Building, 361 Sen Gil Puyat Ave., Makati City

July 28-29, 2016 PAB Assessors' and Expert's Forum 2016
Eso-Boso Highlands Resort and Convention Center, Sitio Cabading, Brgy. San Jose, Antipolo City, Rizal

June 27-28, 2016 Asian Network of Occupational Hygiene (ANOH) Conference 2016
Hotel Sofitel, Hanoi, Vietnam

June 24-26, 2016 Comprehensive Industrial Hygiene Core Course
Hotel Sofitel, Hanoi, Vietnam

May 25-28, 2016 International Joint Forum on Recycling Policy and Technology of E-Waste
PGN Center for Professional Development, Holy Angel University, Angeles City

April 22, 2016 Theory and Applications, Method Development and Maintenance for Inductively Coupled
Plasma Optical Emission Spectrometer (ICP-OES)
NASAT Labs, Muntinlupa

April 19, 2016 Industrial Hygiene Scientific Training
Occupational Safety and Health Center, Diliman, Quezon City

March 6, 2015 Philippine-Japan Technical Cooperation Workshop for Effective Management
of Mercury in relation to the Minamata Convention
Hotel Intercontinental, Makati City

February 6, 2015 Assessors' Forum 2015
PAB-DTI, 5th Floor, DTI International Trade Building, Gil Puyat Ave., Makati City

July 11, 2014 Registration on Environmental Impact Assessment as per EMB MC 2013-003
Sula Riviera Hotel, Quezon City

October 7-9, 2013 Water Environment Federation's Annual Technical Conference & Exhibition (WEFTEC)
McCormick Place South, Chicago, Illinois, USA

April 19, 2013 IHAP Updates and Approaches
Occupational Safety and Health Center, Diliman, Quezon City

February 28, 2013 Building a Nation Through Environmental Stewardship



Century Resort Hotel, Balibago, Angeles City

February 25-27, 2013 *Training Course on Site Characterization of POPs Contaminated Sites*
Hotel Stotsenberg, Clark Freeport Zone, Pampanga

February 8, 2013 *Inventory Workshop for Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on POPs Project*
Hotel Stotsenberg, Clark Freeport Zone, Pampanga

February 23, 2012 *Seminar on Industrial Hygiene Assessment*
Occupational Safety and Health Center, Diliman, Quezon City

February 3, 2012 *Regional Capacity Building on Disaster Risk Reduction and Climate Change Adaptation (CCA) in the Philippine Environmental Impact Statement (EIS) System*
Holiday Inn, Clark Freeport Zone, Pampanga

October 20-21, 2011 *Radiation Safety Course*
PNRI, Quezon City

July 23, 2010 *Scientific Training on Gas Detection and Control*
Occupational Safety and Health Center, Diliman, Quezon City

July 22, 2010 *Environmental Technology Verification (ETV) Stakeholders' Workshop*
Lourdes Suites, Kalayaan Ave cor. Makati Ave., Makati City.

June 22, 2010 *DOH AO 2008-0021 Gradual Phase Out of Mercury in all Philippine Health Facilities & Institutions*
Mimosa Convention Hall, Mimosa Leisure Estate, Clark Freeport Zone, Pampanga

July 17, 2009 *Merck Safety Summit*
Diamond Hotel, Roxas Boulevard, Manila

November 14, 2008 *Training on Asbestos Sampling and Analysis*
CRL Training Room, CRL Environmental Corp, CFZ, Pampanga

October 1-2, 2008 *PAO Assessors' Training on ISO/IEC 17026 with Overview on ISO/IEC 17011, ISO/IEC 17025 & ISO 19011; Qualification of Assessors' Assessment Techniques; Evaluation of Corrective Actions & 20 Milestones for accreditation of laboratories*
PAO Conference Room, Department of Trade and Industry, Makati City

Commercialization for Hazardous Wastes Management
Orchid Garden Suites, Malate, Manila

September 28, 2007 *Basic Occupational Safety and Health Training Course for Supervisors - Distance Mode (40 hours)*
(May - September 2007) Occupational Safety and Health Center, Diliman, Quezon City

March 21, 2007 *Fire Prevention Awareness, Fire and Evacuation Drill and Use of Fire Extinguishers*
Public Safety Department, Clark Development Corporation, Clarkfield, Pampanga

February 15, 2007 *Learning Session on Confined Space Safety*
OSHC Complex, North Avenue cor. Agham Road, Diliman, Quezon City

November 14-17, 2006 *Forum on DENR Analytical Methods for Water and Wastewater*
Imperial Palace Suites, Timog Avenue cor. Tomas Morato Ave. Quezon City

March 14, 2006 *Productivity Improvement Seminar*
Conference Room, CRL Environmental Corporation, Clarkfield Pampanga
Lecturer: Ms. Anna Uza Cunanan, DTI-Region III

January 27-28, 2006 *Training - Workshop on the Introduction to Estimating Measurement Uncertainty*
Conference Room, CRL Environmental Corporation, Clarkfield Pampanga
Lecturer: Ms. Wilhelmina Erna - PICTS, Inc.

November 3, 2005 *Seminar on Special Aspects of ISO/IEC 17025*
Multipurpose Hall, 6/F, IPO Bldg., Makati City Sponsored by: BPS-DTI

October 28, 2005 *ARRPET II-DLSU 2nd National Workshop on Management of Persistent Organic Pollutants (POPs) and Paper Mill Sludge: In Partnership with the Government and Industries*
Don Enrique Yuchengco Hall, De La Salle University, Manila

August 17, 2005 *Training on Air Quality Monitoring: Stack Testing Methods*
Marlin Mansion Hotel, Balibago, Angeles City

March 30-31, 2005 *Orientation Seminar on Environmental Laws and Management for Pollution Control Officers*
Holiday Inn Resort, Clarkfield, Pampanga
Sponsored by: EMB-DENR & Environmental Practitioners' Association Inc.

November 17-18, 2004 **Orientation Seminar on Environmental Laws and Management for Pollution Control Officers**
Holiday Inn Resort, Clarkfield, Pampanga
Sponsored by: EMB-DENR & Environmental Practitioners' Association

June 2, 2004 **Metro Manila Air Quality Technical Forum 2004**
CSB International Conference Center, Estrada St., cor. Arellano Aya., Malate, Metro Manila

March 10, 2004 **Fire Prevention & Proper Usage of Portable Fire Extinguishers**
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga

January 27-29, 2004 **Workshop on Environmental Friendly Production Improvement in Asian Countries**
Organized by ICETT/NEDO/EMB with support from the Government of Japan
Holiday Inn Clarkfield, Pampanga

October 15-17, 2003 **Work Environment Measurement Training Workshop**
Occupational Safety and Health Center(OSHC-DOLE), Diliman Quezon City

August 22, 2003 **Training on Calibration of Volumetric Wares**
Speaker: DOST expert, Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga

June 29-August 10, 2003 **Observation/Training on Laboratory Operations at Advanced Technology Laboratories**
3283 Walnut Street, Signal Hill, California, USA

June 22-27, 2003 **95th Air and Waste Management Annual Exhibition and Conference**
San Diego Convention Center, San Diego, California, USA

March 18, 2003 **Basic Fire Brigade Training**
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga

February 18, 2003 **Symposium on "Ensuring Competitiveness Through Laboratory Quality Systems"**
Metrology Conference Room, Industrial Technology Development Institute
Department of Science and Technology, Bicutan, Taguig, Metro Manila

September 13, 2002 **Land Remediation and Waste Management**
Hyatt Regency Hotel, Roxas Boulevard, Manila, sponsored by AWMA-PS

September 7-8, 2002 **Hands-on Training on Mass and Temperature Calibration**
CRL Training Room, CRL Environmental Corporation, CSEZ, Pampanga
Sponsored by Lab Industries and trainer from ITDI-DOST

August 21-28, 2002 **Seminar-Workshop on Environmental Laws and Pollution Control Officers (PCOs)**
Holiday Inn Resort, Clarkfield, Pampanga
Sponsored by: EMB-DENR & Environmental Practitioners' Association

April 25-26, 2002 **Technical Seminar on RA 6969 and RA 8749**
Days Hotel, Mactan, Cebu City
Sponsored by: Air and Waste Management Association - Philippine Section

April 06, 2002 **Training on Basic Life Support**
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga

February 28, 2002 **Solid Waste Management Forum**
OTS Conference Room, Clark Development Corporation, Clarkfield, Pampanga

January 25, 2002 **Industrial and Hazardous Wastes Management in the Philippines: A Focus on PCBs**
Angelo King International Center, De La Salle University, Taft, Manila

December 5, 2001 **POPs Conference-Workshop**
Holiday Inn Resorts, Clarkfield, Pampanga

October 16, 2001 **Basic Fire Brigade Training**
Conference Room, CRL Environmental Corporation, Clarkfield, Pampanga

September 28, 2001 **The Penal Provisions of R.A. 6969 and The Latest Updates in Clark**
Oasis Hotel, Clarkfield, Pampanga

August 18, 2001 **Your MMDA Chair and RA 9003**
De La Salle University, Taft Ave., Manila

July 3, 2001 **Environmental Management System Seminar based on ISO 14001**
TESDA Region III Office, San Fernando, Pampanga

June 20, 2001 **All-Hazards Emergency Management Approach**
CDC-OTS, Bldg. 2125, CSEZ, Clarkfield, Pampanga

December 5-14, 2000 **2000 Training-Workshop for DENR Environmental Laboratory Analysts**
Gabriel Resort, Pangil, Laguna & EMB Laboratory, Visayas Ave., Diliman, Q.C.

August 23, 2000 **Seminar-Workshop on GLP and ISO Standards for ISO DIS 8655 for Laboratory Glassware, Validation and Certification of Laminar Hoods & Biosafety Cabinets**
Quezon City Sports Complex, Quezon City

April 10-28, 2000 **On The Job Training Seminar on Environmental Monitoring**
EMB-RDD, Laboratory, DENR Compound, Diliman, Quezon City

March 26-30, 2000 **Seminar-Workshop in Environmental Laboratory Quality System Documentation in collaboration with the IISENRMP Project**
Mercury Grand Hotel, Davao City

December 12-14, 1999 **Seminar-Workshop on Rapid Method of Water Analysis**
Vacation Hotel, Baguio City

Nov.22 to Dec.1, 1999 *Training/Workshop for DENR-EMPAS Laboratory Staff*
EMB Laboratory, DENR Compound, Diliman, Quezon City

June 28-29, 1999 *Novillo-Clarke Training Course on Laboratory Internal Audit*
Sulo Hotel, Quezon City

November 17-26, 1998 *DENR-EMPAS Seminar/Workshop: Intercomparison Exercise 1998*
EMB Laboratory, DENR Compound, Diliman, Quezon City

September 3-4, 1998 *AAS Training Course*
Shimadzu (Asia Pacific) PTE LTD, Singapore

October 8-9, 1998 *Seminar/Workshop for DENR Laboratory Assessors in collaboration with*
the UNDP-PRIME Project
Oasis Hotel, Clarkfield, Pampanga

Nov. 25-Dec.4, 1997 *DENR-EMPAS Workshop: Intercomparison Exercises 1997*
EMB Laboratory, DENR Compound, Diliman, Quezon City

May 26-31, 1997 *13th Philippine Chemistry Congress*
Aslaworld Resort Hotel, Puerto Princesa, Palawan

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**TPF 6. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED
PROFESSIONAL STAFF**

Proposed Position: Air and Noise Quality Specialist

Name of Firm: KRC ENVIRONMENTAL SERVICES

Name of Staff: RICARDO A. CAPULE

Profession: B.S. CHEMISTRY

Date of Birth: ____

Years with Firm/Entity: 2004 to Present Nationality: Filipino

Membership in Professional Societies: Environmental Practitioners' Association

Detailed Tasks Assigned: Gather all data (primary and secondary) to determine the impact of the proposed project to the area. Conduct Air and noise sampling survey based on DENR requirements and methodologies.

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Bachelor of Science Major in Chemistry, 1996

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Employer: KRC Environmental Services

Position: President

Period: October 2016 – present

- Responsible for over-all management and planning of the technical and financial operations.
- Handles strategic planning, directing the long-term operations of the company.
- Prepares annual and long-term business plan of the company which includes financial projections, market-share targets and planning growth.
- Responsible for implementation of the company's policies and procedures
- Identifies business opportunities that are relevant to the business at hand
- Responsible for communicating to the Board of Directors the financial status of the company and its significant activities.

Employer: Hyundai Engineering Company Ltd., Hyundai 41 Tower 917-9, Mok-dong, Yangcheon-gu, Seoul 158-723, Korea.

Position: Senior Environmental Engineer/ Team Leader

Period: September 2007 – September 2016

- Responsible for the basic and detail design of desalination using RO system, MED-TVC, water demineralization system by Ion exchanger, condensate polishing system, potable water remineralization, seawater electro chlorination system, boiler chemical dosing for power plant operation.
- Responsible for the basic and detail design of wastewater treatment including sludge processing system in power plant operation such as API Oil/Water separator, CPI, DAF, Chemical Treatment System and Sewage Treatment system.
- Responsible for design of Laboratory chemical facility to be used in power plant and desalination plant for monitoring of demi water, wastewater, steam water, fuel gas & oil, lubricating oil & others.
- Responsible for the preparation of technical specification (RFQ) request for quotation and conduct technical bid evaluation for the procurement of all equipments needed in the supply and installation of the all types of water treatment facility for power plant operation
- Prepare clarification and deviation for Owner's minimum technical requirements.
- Prepare P&ID, Water mass balance diagram, Calculation, Operation and Maintenance Manual, System Description & other documents for all water treatment system packages
- Handle Projects (Ras Laffan C IWPP Project (Qatar); Alkhalij 4 x 350 MW Power Plant Project (Libya); Tripoli West 4 x 350 MW Power Plant Project (Libya); Mong Duong 1 Thermal Power Plant Project (Vietnam))

Employer: CRL Environmental Corporation (Phils.)

Position: Manager – Environmental Air Monitoring Department

Period: June 2003 – August 2007

- Air pollution and noise pollution control development and assessment of efficiencies
- Responsible for the overall environmental monitoring specifically in air and noise quality assessment from all type of industries such as oil and gas, power plant, chemical plant, cement plant, mining and others.
- Prepare proposal for the client requirements in terms of environmental and safety procedure and implementation in accordance with USEPA and OSHA specification.
- Prepare Environmental Impact Statement (EIS) study for different type of industry in requirements to secure an Environmental Compliance Certificate.
- Responsible for technical operation in terms of air pollution control device efficiency assessment such as wet scrubber system, deNOx, and dust collector system from different types of industrial firm.



- Oversee effective implementation of safety during fieldwork.
- Conduct work risk assessment such as identifying the job hazard, assess the risk and apply the control measures when conducting field work in different type of industries specifically when working at heights, working at hot area, working at hazardous area, working in confined space and others.
- Design effective ventilation for work place area contaminated with solvent, acid mists, fumes and others.
- Formulate environmental management program for different types of industries like oil gas, electronics, mining and others. This includes proper handling of chemicals, emergency preparedness during accidental release and mitigating measures, proper treatment and disposal to avoid environmental hazard and preparation of health and safety aspect of the worker.

Employer: Environmental Management Bureau- Department of Environment and Natural Resources Region III
 Position: Environmental Management Specialist
 Period: May 2000 – June 2003

- Conduct regular inspection and audit regarding implementation of environmental program like chemical management, solid and hazardous waste management which included health and safety program in compliance with Philippine and USEPA regulation from different type of industry such as petrochemical plants (Petron Bataan Refinery Corporation, Bataan Polyethylene Corporation, Philippine Resin, Petrocorp and Gulf Oil); cement plants (Holcim Philippines and Lafarge); high hazard chemical manufacturers (International Chemicals, Umicore etc); power plants (Calibu Power using diesel engine and Masinloc Coal Fired Power Plant), and hazardous waste generator companies.
- Conduct inspection regarding permit to operate application of air pollution control device and wastewater treatment facility by assessing its efficacy to assure that the plant operation has no significant impact in the nearby environs.
- Conduct environmental impact assessment of new and existing company that are engaged in recycling, treatment and disposal of hazardous waste such as waste oil, waste solvent and others.
- Supervised clean-up for oil and chemical spillage from illegal dumping and accidental release in the environment.
- Provide assistance and training to the company who are engaged in hazardous waste treatment, storage and disposal specifically waste oil treatment, solvent treatment and chemical treatment using bioremediation, distillation and encapsulation.
- Conduct seminar and training regarding information dissemination for environmental management.
- Conduct water and wastewater sampling, soil and sludge sampling and other environmental matrices
- Perform physical, chemical, metal and bacteriological analysis of industrial effluents, river samples, marine, creeks and other types of water and waste water matrices.

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

English, Tagalog

Certification:




I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Commitment:

I also commit to work for the **Preparation of Environmental Impact Statement and Facilitation of ECC application for the New Clark City (NCC)** in accordance with the time schedule as indicated in the contract once the firm is awarded the Project.



[Signature of staff member and authorized representative of the firm] Date: 17/12/2018
Day/Month/Year

Full name of staff member: Ricardo A. Capule
Full name of authorized representative: Ricardo A. Capule

SUBSCRIBED AND SWORN to before me this ^{DEC 17 2018} ____ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____.

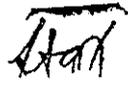
Witness my hand and seal this ^{DEC 17 2018} ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ until _____
Roll of Attorneys No. _____
PTR No. ____, [date issued], [place issued]
IBP No. ____, [date issued], [place issued]
Doc. No. 1260
Page No. 61
Book No. 118
Series of 2018


ATTY. CRISANTO A. COCAL, CPA
NOTARY PUBLIC - ANGELES CITY
UNTIL DECEMBER 31, 2019
PTR # R. # P.A. # 763100 JAN 2018
ROLL # 49761 P.O. # 1063172
C-7 NEP # 1260
NEPO COMMERCIAL CODE # ANGELES CITY,
COMMISSION NO. 2017-883
MGLC COMPLIANCE NO. VI-00009995

Important Note: Provide applicable documents to substantiate professional registration, educational attainment and trainings undertaken. Only those attainments and undertakings with supporting documents will be considered for evaluation.





**TPF 6. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED
PROFESSIONAL STAFF**

Proposed Position: Terrestrial Team Leader

Name of Firm: KRC ENVIRONMENTAL SERVICES

Name of Staff: CAROLYN P. BARRIAS

Profession: B.S. FORESTRY

Date of Birth: _____

Years with Firm/Entity: 2013 to Present Nationality: Filipino

Membership in Professional Societies: UP Alumni Association

- UP Diliman Alumni Association
- UP Los Banos Alumni Association
- Society of Filipino Forester
- Philippine Association of Research Manager
- UP Mussaenda Honor Sorority

Detailed Tasks Assigned: Gather all data (primary and secondary) to determine the impact of the proposed project to the area. Conduct terrestrial flora and fauna study in the proposed area. Prepare Environmental Management Plan. Prepare Environmental Impact Assessment.

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

- Doctor of Philosophy in Environmental Science, University of the Philippine Diliman, SY 2010 – present
- Master of Science in Environmental Science, University of the Philippine Diliman. 2010
- Bachelor of Science in Forestry, University of the Philippines Los Banos. 1996





Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

FRO 2013 **TO:**
M: Present
EMPLOYER: KRC Environmental Services
POSITION HELD: Environmental Specialist / Watershed Management/Terrestrial Specialist (Project Based)

FRO November **TO:**
M: 1996 **Decem**
ber
2017
EMPLOYER: National Power Corporation
POSITION HELD: Sr. Watershed Management Specialist

DETAILED
TASKS
ASSIGNED

12. WORK UNDERTAKEN THAT BEST ILLUSTRATES CAPABILITY TO HANDLE THE TASKS ASSIGNED

01. NAME OF ASSIGNMENT OR PROJECT: Head Office Based -Senior Watershed Maangement Specialist/Watershed Management Analyst under Protection and Rehabilitation and Resource Development Divisions

YEAR: September 2003- present
LOCATION: NAPOCOR Head Office, Diliman, Quezon City
CLIENT: 11 Watershed Area Teams (Upper Agno Watershed, Lower A, DENR, Host LGU's, Academe, Research Institutions, PO's, NGO's, other Gov't Agencies.

ACTIVITIES PERFORMED:
 Attends to various policy and watershed guidelines related needs of the various NPC managed watershed areas supporting power plants, (Ambuklao-Binga Watershed in Benguet, Lower Agno Watershed in Itogon and Pangasinan, Magat watershed in Isabela, Pantabangan-Carranglan Watershed in Nueva Ecija, Angat Watershed, Bulacan, Nueva Ecija, Quezon & Rizal, Caliraya Watershed in Laguna, Makiling Banahaw in Laguna, Quezon & Batangas, Buhi-Barit Watershed in Camarines Norte, Tiwi Watershed in Albay, Pulangi Watershed in Bukidnon and Lake Lanao Watershed in Lanao del Norte and Lanao de Sur; Conducts periodic inspection and validation of the status of ongoing and completed watershed related projects of NPC, including attention on financial and administrative matters, annual budget preparations, policy and planning directions, master planning for the 11 watershed units, permitting and issuances, linkages, collaboration with host LGU's , etc.

02. NAME OF ASSIGNMENT OR PROJECT: Consultancy Services for the Updating of the Feasibility Study of Ilocos Norte Irrigation Project
YEAR: August 2015-present
LOCATION: Ilocos Norte
CLIENT: National Irrigation Administration /Woodfields Consultancy

MAIN PROJECT FEATURES: Feasibility Study
POSITION HELD: WATERSHED SPECIALIST
ACTIVITIES PERFORMED: Prepares watershed management plan for watershed development and protection, aimed at the sustainable distribution of its resources and the process of creating and implementing plans, programs, and projects to sustain and enhance watershed functions that affect plant, animal, and human communities within the watershed boundary.

03. NAME OF ASSIGNMENT OR PROJECT: Consultancy Services for the Asian Development Bank (ADB) TA-8574 PHH: Improving National Roads for Inclusive Growth in Mindanao Project
YEAR: February 2015 – September 2015
LOCATION: Zamboanga Peninsula (Region IX), Philippines

CLIENT: ADB, DPWH – Region IX
MAIN PROJECT FEATURES: Feasibility study
POSITION HELD: ENVIRONMENTAL SPECIALIST
ACTIVITIES PERFORMED:

Gathered all data (primary and secondary) to determine the impact of the proposed road alignments to the area. Conducted feasibility study of the proposed area. Conducted site investigation and interview stakeholders. Prepared Environmental Management Plan. Prepare Environmental Impact Assessment.

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

English, Tagalog



Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Commitment:

I also commit to work for the **Preparation of Environmental Impact Statement and Facilitation of ECC application for the New Clark City (NCC)** in accordance with the time schedule as indicated in the contract once the firm is awarded the Project.

Cap Barrios / [Signature] Date: 12/12/2018
[Signature of staff member and authorized representative of the firm] Day / Month / Year

Full name of staff member: Carolyn P. Barrias
Full name of authorized representative: Maria Carmela Q. Capule

SUBSCRIBED AND SWORN to before me this DEC 17 2018 day of December [month] [year] at ANGELES CITY [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____.

Witness my hand and seal this DEC 17 2018 day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ until _____
Roll of Attorneys No. _____
PTR No. __, [date issued], [place issued]
IBP No. __, [date issued], [place issued]
Doc. No. 121
Page No. 08
Book No. 2667
Series of 7113

[Signature]
Notary Public

Important Note: Provide applicable documents to substantiate professional registration, educational attainment and trainings undertaken. Only those attainments and undertakings with supporting documents will be considered for evaluation.

[Signature]

[Signature]

**TPF 6. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED
PROFESSIONAL STAFF**

Proposed Position: Sociologist

Name of Firm: KRC ENVIRONMENTAL SERVICES

Name of Staff: MILAGROSA PASION-ASUNCION

Profession: B.S. FORESTRY/ M.S. COMMUNITY DEVELOPMENT

Date of Birth: _____

Years with Firm/Entity: 2013 to Present Nationality: Filipino

Membership in Professional Societies: Society of Filipino Foresters Inc.

Detailed Tasks Assigned: Gather all data (primary and secondary) to determine the impact of the proposed project to the area. Conduct social survey based on DENR requirements and methodologies.

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Master in Community Development (specialized in community organizing and planning)
University of the Philippines Diliman (UPD), College, Laguna. 2013-2018

Bachelor of Science in Forestry (major in Social Forestry), UPLB, College, Laguna, 2011

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

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Employer: KRC Environmental Services
 Position: Sociologist (Project based)
 Period: October 2013 – present

From : November 2017 To : April 2018 Duration: 5 months	Employer: KRC Environmental Services JICA-DPWH through CTI Engineering	Position: Social Specialist
Project Title: EIA & RAP of Road Network Development in Conflict-Affected Areas in Mindanao Project		
Location: Lanao del Sur, Maguindanao, Sultan Kudarat, Cotabato		
Description of the Project: The study aims to evaluate/assess the environmental impact assessment (land, air, water, people) of the proposed project.		
Duties and Responsibilities: As Social Specialist, the following roles and responsibilities are performed: Conduct socio-economic survey on the primary and secondary impact area of the EIA of proposed Project; Coordinate with LGUs, private sectors, national government agencies and other stakeholders of the project; Conduct survey, KIIs and Public Scoping as part of EIA process; Identify potential impacts on social environment and mitigating measures for the impacts identified; and Formulate Social Development Program and Information, Education and Communication Program. Prepare Resettlement Action Plan (RAP) reports.		

From : August 2017 To : October 2017 Duration: 3	Employer: DOT-DPWH Convergence Project	Position: Social Specialist
Project Title: Environmental Impact Assessment of the Taal Lake Circumferential Road Project		
Location: Batangas		
Description of the Project: The study aims to evaluate/assess the environmental impact assessment (land, air, water, people) of the proposed Taal Lake Circumferential Road		
Duties and Responsibilities: As Social Specialist, the following roles and responsibilities are performed: Conduct socio-economic survey on the primary and secondary impact area of the EIA of proposed Project; Coordinate with LGUs, private sectors, national government agencies and other stakeholders of the project; Conduct survey, KIIs and Public Scoping as part of EIA process; Identify potential impacts on social environment and mitigating measures for the impacts identified; and Formulate Social Development Program and Information, Education and Communication Program.		

From : February 2016 To : April 2016 Duration: 3	Employer: DPWH/JICA Funded	Position: Community Development Specialist
Project Title: Environmental Impact Assessment of the Cavite Flood Management Project		
Location: Cavite		
Description of the Project: The study aims to evaluate/assess the environmental impact assessment (land, air, water, people) of the proposed project		
Duties and Responsibilities: As Environmental and Social Specialist, the following roles and responsibilities are performed: Conduct socio-economic survey on the primary and secondary impact area of the EIA of proposed Project; Coordinate with LGUs, private sectors, national government agencies and other stakeholders of the project; Conduct survey, KIIs and Public Scoping as part of EIA process; Identify potential impacts on social environment and mitigating measures for the impacts identified; and Formulate Social Development Program and Information, Education and Communication Program.		

From : February 2013 To : May 2013 Duration: 4	Employer: NATIONAL IRRIGATION ADMINISTRATION-CO	Position: Environmental and Social Specialist
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Project Title: Feasibility Study of Bulo Small Reservoir Irrigation Project
Location: San Miguel, Bulacan
Description of the Project: The study aims to evaluate/asses the feasibility of the proposed irrigation project considering the technical, economics, environmental and social aspects.
Duties and Responsibilities: As Environmental and Social Specialist, ensure that social safeguards are considered in all the phases of irrigation development. Identify baseline condition of the people within the project area as well as potential impacts of the development in their livelihood and properties. Also, formulate mitigating measures to the identified impacts to minimize the negative effects of the project to the people/community.

From : May 2013	Employer:	Position:
To : August 2013	NATIONAL IRRIGATION	Environmental and Social Specialist
Duration: 4	ADMINISTRATION-CO	

Project Title: Feasibility Study of Ibingan Small Reservoir Irrigation Project
Location: Prieto Diaz, Bicol
Description of the Project: The study aims to evaluate/asses the feasibility of the proposed irrigation project considering the technical, economics, environmental and social aspects.
Duties and Responsibilities: As Social Specialist, ensure that social safeguards are considered in all the phases of irrigation development. Identify baseline condition of the people within the project area as well as potential impacts of the development in their livelihood and properties. Also, formulate mitigating measures to the identified impacts to minimize the negative effects of the project to the people/community.

From : April 2014	Employer:	Position:
To : June 2014	Performance Solution Foundation, Inc and	Community Development Specialist
Duration: 3	KRC Environmental Services	

Project Title: Environmental Impact Assessment of the Bioethanol Plant Project
Location: Lucena City
Description of the Project: The study aims to evaluate/assess the environmental impact assessment (land, air, water, people) of the proposed Bioethanol Plant Project
Duties and Responsibilities: As Social Specialist, the following roles and responsibilities are performed: Conduct socio-economic survey on the primary and secondary impact area of the proposed Bioethanol Plant Project. Coordinate with LGUs, private sectors, national government agencies and other stakeholders of the project: Conduct Focused Group Discussion, and Public Scoping as part of EIA process: Identify potential impacts on social environment and mitigating measures for the impacts identified; and Formulate Social Development Program and Information, Education and Communication Program.

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

English, Tagalog

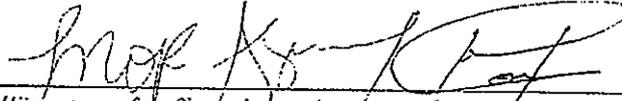
Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.




Commitment:

I also commit to work for the **Preparation of Environmental Impact Statement and Facilitation of ECC application for the New Clark City (NCC)** in accordance with the time schedule as indicated in the contract once the firm is awarded the Project.


[Signature of staff member and authorized representative of the firm]

Date: 17/12/2018
Day/Month/Year

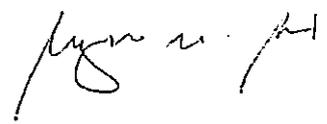
Full name of staff member: Milagrosa Pasion-Asuncion
Full name of authorized representative: Ricardo A. Capule

SUBSCRIBED AND SWORN to before me this ^{DEC 17 2018} 17 day of 12 month / 2018 year at NEW CLARK CITY [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____.

Witness my hand and seal this ^{DEC 17 2018} 17 day of 12 month / 2018 year.

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ until _____
Roll of Attorneys No. _____
PTR No. __, [date issued], [place issued]
IBP No. __, [date issued], [place issued]
Doc. No. 1123
Page No. 6
Book No. XVVI
Series of 716



Important Note: Provide applicable documents to substantiate professional registration, educational attainment and trainings undertaken. Only those attainments and undertakings with supporting documents will be considered for evaluation.





ANNEX G

DESCRIPTION OF THE METHODOLOGY AND WORK PLAN

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DESCRIPTION OF THE METHODOLOGY AND WORK PLAN FOR PERFORMING THE PROJECT

TERRESTRIAL (FLORA AND FAUNA) BIODIVERSITY ASSESSMENT/SURVEY

I. FLORA BIODIVERSITY ASSESSMENT/SURVEY METHODOLOGY

A. Field measurements and detailed procedures

Terrestrial assessment will be conducted starting from the orientation in the sampling stations. coordination with the authorities, preparation of instruments, and the field work proper.

Site reconnaissance will be conducted within the sampling stations identified by the proponent. (*Baseline Maps must be provided by the proponent*). This pre-ocular survey will be done to plan the fieldwork and to be able to choose the best sampling site or representation.

Transects will be established and surveyed for each of the sampling stations. Line plot method using 10m x 10m quadrats will be established. Inside the 10m x 10m square plots, a nested 5m x 5m and 1m x 1m subplots will also be established (Figure 1). The distance between the sampling plots will be 500 meters or will be determined depending on the actual rugged terrain and condition of the area. The position (coordinates) of plots will be determined using Global Positioning System (GPS).

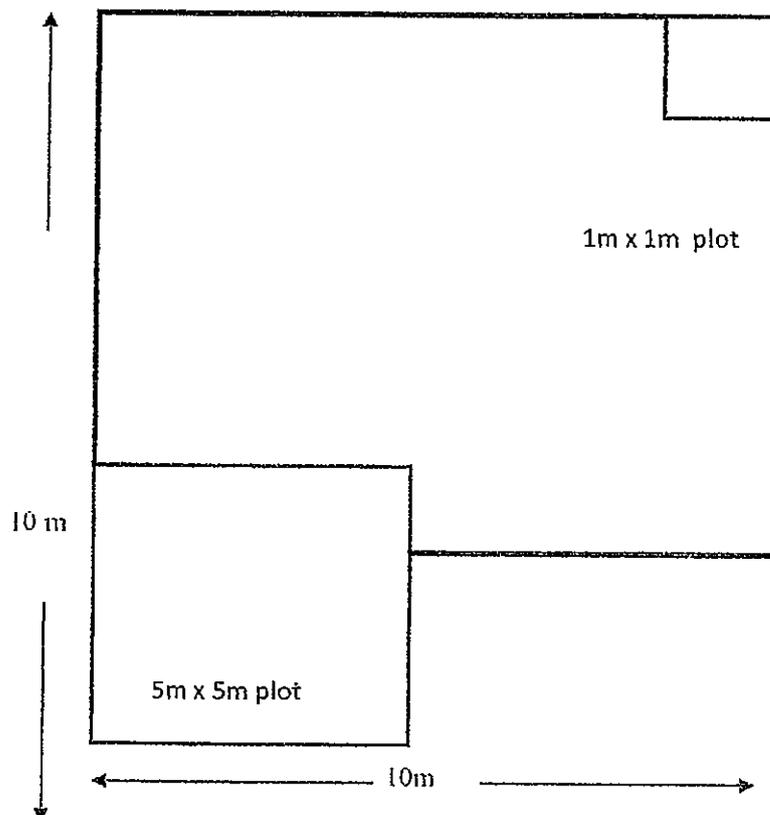


Figure 1. Lay out of the different plots that will be employed for terrestrial assessment

In the 10m x 10m plots, all trees with diameter at breast height (1.3m from the ground) greater than (>) 10 cm will be enumerated and identified. The dbh, merchantable height and total height of each tree will be measured also for use in the preparation of stand and stock table. Rattans, boles climbers, bamboos, palms, orchids, lianas including lichens will also be tallied and recorded.

The 5m x 5m subplots will be established after determining the center point of the 10m x 10m plots. The center point will serve as one of the corners of the 5m x 5m subplot. A plastic twine will be used to enclose the subplot. All poles with dbh ranging from 5cm to 9.5 cm will be recorded, measured (dbh and total height only) and tallied. Agricultural crops, herbs, grasses, rattans, palms, zingibers and ferns will be collected and later identified, recorded and tallied. Unknown species will be collected and properly tagged for both the poles and non-woody plant specimen.

The 1m x 1m subplots will be established opposite the 5m x 5m subplots. Tree saplings and seedlings with height greater than or equal to 1.5 m and with dbh less than 4.5 cm will be identified, tallied and recorded. Unknown species will be collected and will be tagged properly for identification. Other life forms such as fern and fern allies, palms, vines, grasses and sedges, and begonias will be identified and recorded.

Other species of plants bearing fruits and flowers including agricultural crops that will be encountered outside the sampling plots will be photo documented. Unknown/unidentified specimens for all plant life form will be collected and individually tagged. A picture of each specimen will also be taken for proper documentation. All unknown/unidentified plant specimens will be brought to University of the Philippines, College of Forest and Natural Resources (UPLB-CFNR) for further verification of the species identity and using digital images of Philippine plants.

The collected data will be assembled to form a species checklist indicating common name, scientific name and family name of the plants recorded.

B. Parameters

The degree of importance of each species in a plant community can be measured through Quantitative Structure Analysis where the Importance Value of each species is calculated. Importance Value is the combined sum of Relative Density, Relative Frequency and Relative Cover. Importance Value will be computed to determine the dominant species in the plant community.

Based on frequency or abundance of each species encountered in the sampling plots, Species Richness Index (Margalef's or Menhinick's index) and Heterogeneity Indices (Shannon Diversity Index, Simpson's Dominance Index and Evenness Index) will be computed.



Tree volumes will be also computed using the volume equations derived by the Bureau of Forestry et. al. (1963).

C. Impact Assessment

D. Expected Output/Deliverables for Flora Biodiversity Assessment/Survey

The Terrestrial Specialist will prepare and submit soft (electronic) copy of Terrestrial (Flora and Fauna Biodiversity) Assessment Report with the following output:

- List of Species Identified (Family Name, Vernacular/Common Name and Scientific Name);
- Complete listing of all species identified in 10m x 10m plot for all plots established including position of plots (coordinates) using GPS;
- Complete listing of all species of pole size woody plants identified in 5m x 5m plot for all plots established including position of plots (coordinates) usingGPS;
- Complete listing of identified non-woody plant species in 5m x 5m plot for all plots established including position of plots with the aid of GPS;
- Complete listing of all seedling species identified in 1m x 1m plot for all plots established including position of plots with the aid of GPS;
- Complete listing of all non woody plants found and identified in 1m x 1m plot for all plots established including position of plots with the aid of GPS;
- Distribution of woody species in 10m x 10m and the number of plots where the individual species were found;
- Conservation status of species identified
- Distribution of woody species in 5m x 5m and the number of plots where the individual species were found;
- Importance value for all species in 10m x 10m plots (Relative Dominance, Relative Density, Relative Frequency and Importance Value);
- Importance value for all species ≤ 9.5 in all plots established (Relative Dominance, Relative Density, Relative Frequency and Importance Value);
- Computed Biodiversity Indices: Species Richness Index (Margalef's or Menhinick's Index) and Heterogeneity Indices (Shannon Diversity Index, Simpson's Dominance Index and Evenness Index);

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- Economic Importance(Flora and Fauna identified)
- Threats of the identified Flora and Fauna
- Impacts and Management Plan; and
- Pictorial Report

II. FAUNA (WILDLIFE & ARTHOPODS BIODIVERSITY ASSESSMENT/ SURVEY METHODOLOGY

A. Field measurements and detailed procedures

The faunal composition and diversity of the area will be assessed on the identified sampling stations. The transect line will be laid to cover representative of wildlife and arthropods within the study area as far as possible or along an environmental gradient.

All transects established for wildlife assessment will be recorded in the GPS and Geo-tag to map out the location of each faunal species identified.

In each survey sites, transect samplings will be established and different methods will be done for each parameters. A binocular will be used to observe the species at a distance and diagnostic features will be recorded. In addition, presence of species as indicated by their call, tracks and dropping will also be noted. Frequency or abundance of each species sighted/encountered will also be recorded for computing biodiversity parameters. This will be done particularly for avian fauna since birds are mostly active especially at daytime. Whenever possible, wildlife that will be encountered will be photo documented.

Soil Litter Arthropods and Insects

Pitfall traps are useful for catching ground vertebrates including arthropods that run along the soil surface. It is a container placed below the ground with the opening flush or just below the ground surface. Pail traps will be installed in each site to collect ground arthropods and insects. Plastic pails will be sunk into the ground, and the open top of the pail will be positioned level with the soil surface so that ground arthropods and insects running along the soil surface will fall into the traps. Drift fences will be placed that will guide the animals to fall into the traps for better results. Pitfall traps should will be de-activated or removed after the completion of the survey. The traps will be checked regularly while staying in the survey site. The trapped specimens will be recorded, identified and photo-documented, while unknown specimens will be preserved for further identification.



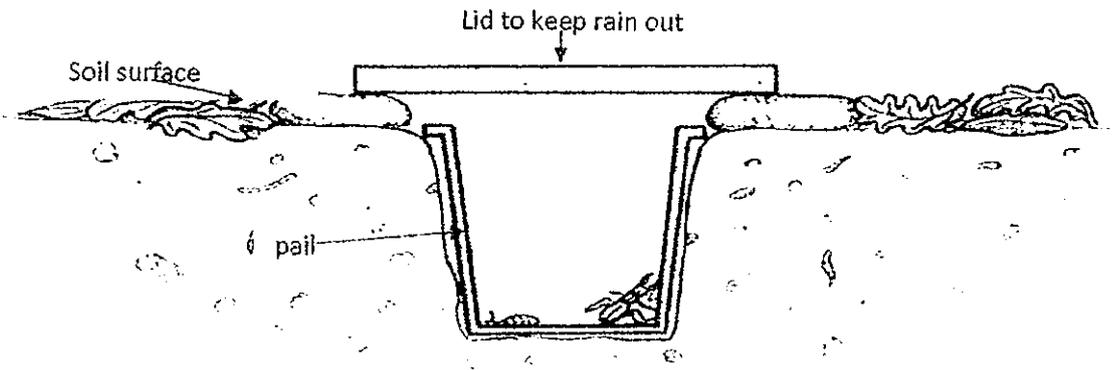


Figure 2. Illustration of Pit fall trap to be installed in the area for Soil Litter Arthropods and Insects assessment

Surveys for Bats and Birds

For nocturnal and volant vertebrates like birds and bats, mist nets will be installed along strategic positions within the survey sites. Mist nets will be established before night to capture the flying bats and birds. The nets will be monitored regularly until early morning and trapped bats and birds will be identified, physical dimensions will be measured, weighed and ringed. The team will mark the specimens before releasing to avoid repetition of count when the birds/bats will be trapped again. Also, notable behaviours of the bird such as feeding, nesting, or breeding and the associated habitats where it exhibits such behaviour will be recorded.

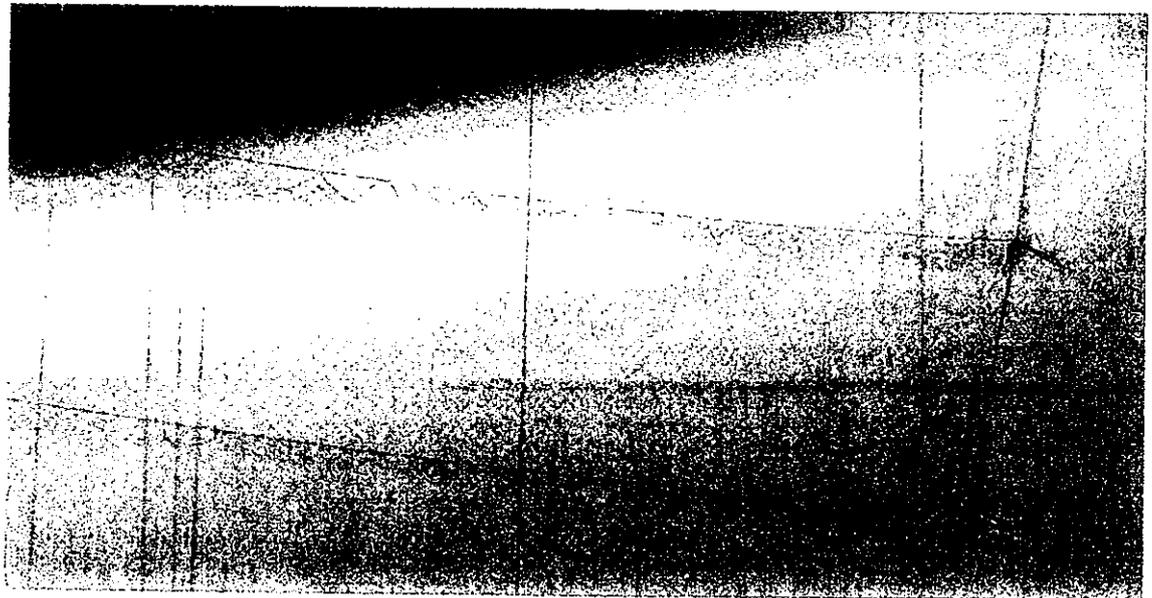


Figure 3. Mist Nets to be installed in the area for bats and birds survey

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Herpetofauna (Amphibians & Reptiles) Survey

Many reptiles such as snakes and lizards are timid, secretive, fast-moving and cryptically colored which render survey on reptiles difficult. Amphibians are usually most active just after dusk during their breeding seasons while many diurnal reptiles such as lizards are active in mid-morning. Many reptiles such as certain snakes, geckos and most turtles would only be active at night time. Active searching which is an effective way to survey amphibians and reptiles, particularly during the daytime will be done. Study area which will be actively searched for potential breeding areas of amphibians (e.g. marsh, small water pools, water channels) and suitable microhabitats for both amphibians and reptiles (e.g. stones, pond bunds, crevices, leaf litter/debris, rotten log) within the transect line. Species that will be surveyed will be identified, measure and weighed.

Butterflies and Dragonflies Survey

Survey will be conducted during daytime and under fine weather when most butterflies and dragonflies are active. Using a transect count, a transect route with an imaginary belt of approximately 5 m wide will be established. All butterflies or dragonflies observed within the belt are identified and counted. Route selected encompasses different habitats within the study area. A pair of binoculars with short focal length will be used to assist in the identification. Netting will also be used for collecting specimens to confirm the identification of adult butterflies and dragonflies observed along transects or during area-based surveys. Sweep netting is a simple technique with dramatic results in terms of flying insects' collection. The tool required is an insect net, most sweep nets are made of a sturdy material, such as canvas. From there the technique is to sweep the net back and forth across the ground, through grass, forbs, and even shrubs. The opening of the net is turned quickly from side to side as the net sweeps, essentially following a shallow figure eight pattern.

Figure 4. Tool that will be used for conducting winged (flying) insects' survey

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B. Biological Parameters

Based on frequency or abundance of each species sighted/encountered along the sampling transects, biodiversity parameters such as Species Richness Index (Margalef's or Menhinick's Index) and Heterogeneity Indices (Shannon Diversity Index, Simpson's Dominance Index and Evenness Index) will be computed.

C. Impact Assessment

D. Expected Output/Deliverables for Fauna (Wildlife And Arthropods) Biodiversity Assessment/Survey

- Geo-tagged maps of transect locations;
- List of Wildlife and arthropods observed in the area (Family Name, Vernacular/Common Name and Scientific Name) with notes on their ecological status and general habitat;
- Number of wildlife species and families and endemism of wildlife observed;
- List of threatened wildlife species with global conservation status based on Collar et al. (1999) and Wildlife Conservation Society of the Philippines (1997), if any;
- List of vulnerable bird species occurring in the area (Birdlife IBA Factsheet), if encountered during the survey;
- Computed Biodiversity Parameters: Species Richness Index (Margalef's or Menhinick's Index) and Heterogeneity Indices (Shannon Diversity Index, Simpson's Dominance Index and Evenness Index);
- Threats of the identified Flora and Fauna
- Impacts and Management Plan; and
- Pictorial Report of Wildlife and Arthropods encountered



METHODOLOGY IN AIR, NOISE AND WATER

The following scope of work for air, noise and water quality describes the modules needed for Environmental Impact Statement (EIS) preparation.

1. Scope of Work

1.1 Noise Quality at two (2) stations

Measurement of noise during the following period. Noise measurement shall be done every 30 minutes during each time period.

1.1.1 Morning (5 am to 9 am)

1.1.2 Daytime (9 am to 6 pm)

1.1.3 Evening (6pm to 10 pm)

1.1.4 Night time (10 pm to 5 am)

1.2 Ambient Air

Twenty four (24) hours sampling for Total Suspended Particulates, PM₁₀, Nitrogen Dioxide, Sulfur Dioxide at two (2) stations; determination of meteorological condition during the conduct of sampling.

Analytical methodologies are based on Philippine Clean Air Act.

1.3 Surface Water Quality

- Grab Collection of surface water samples at two (2) stations using stainless pale and rope, for surface, bottle submersion method will be applied. Parameters to be measured are dissolved oxygen, biological oxygen demand, pH, temperature, total suspended solids, oil and grease, ammonia, phosphate, nitrates, surfactants, total and fecal coliform, color, chloride, arsenic, lead':

Analytical methodologies are based on DENR Administrative Order No. 34 DENR AO No. 2016-08 and DENR MC 2016-012.

1.4 Groundwater Quality

Grab water collection to measure Total & Fecal Coliform, Conductivity, TDS, temperature and pH, turbidity, color, total hardness, arsenic, lead, cadmium, nitrates. Analytical methodologies are based on Philippine National Standards for Drinking Water, Administrative Order No. 10, Series of 2017.





KRC ENVIRONMENTAL SERVICES

381 Sto. Rosario St., Angeles City
Tel. No.02-5061409; 0917-7132629; 0917-5276352
Email: krc.enviservices@gmail.com; racapule@yahoo.com

FINANCIAL PROPOSAL SUBMISSION FORM

December 17, 2018

The Bids and Awards Committee for Consulting Services
Bases Conversion and Development Authority
2/F Bonifacio Technology Center
31st Street, corner 2nd Avenue, Bonifacio Global City

Ladies/Gentlemen:

We, the undersigned, offer to provide the Preparation of Environmental Impact Statement and Facilitation of ECC application for the New Clark City (NCC) in accordance with your Bidding Documents dated 12/11/18 and our Bid (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of *Nine Hundred Thirty Seven Thousand & 00/100 (PhP 937,000.00)*. This amount is exclusive of the local taxes, which we have estimated at *One Hundred Twelve Thousand Four Hundred Forty (PhP 112,440.00)*.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the bid validity period, *i.e., 60 days*.

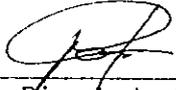
In accordance with GCC Clause 51, we acknowledge and accept the Procuring Entity's right to inspect and audit all records relating to our Bid irrespective of whether we enter into a contract with the Procuring Entity as a result of this Bid.

We confirm that we have read, understood and accept the contents of the Instructions to Bidders (ITB), the Bid Data Sheet (BDS), General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Terms of Reference (TOR), the provisions relating to the eligibility of Consultant and the applicable guidelines for the procurement rules of the Funding Source, any and all Bid bulletins issued and other attachments and inclusions included in the Bidding Documents sent to us.

We understand you are not bound to accept any Bid you receive.

We remain,

Yours sincerely,

Authorized Signature: 
Name and Title of Signatory: Ricardo A. Capule, President
Name of Firm: KRC Environmental Services
Address: 381 Sto. Rosario St. Angeles City



BASES CONVERSION and DEVELOPMENT AUTHORITY
 2nd Floor Bonifacio Technology Center, Fort Bonifacio Taguig City
 BCDA-SCTEP, Bldg. 7458 J. Topacio St. CM Recto Hi-way
 Clark Special Economic Zone, Clark, Pampanga
 Tel. Nos. (045) 599-7215

REQUEST FOR QUOTATION

17-Dec-18
DATE

KRC ENVIRONMENTAL SERVICES
381 Sto. Rosario St., Angeles City

Please quote your lowest price(s) using this form, or your letterhead. Also, take note of the following details:

- 1) Quotation/s shall address to the Head of Procurement. Please indicate Solicitation or Reference No.
- 2) Fax/Send to this office not later than _____, 5:00 pm to 599-6053.
- 3) Quotation/s submitted later than above date shall not be accepted/considered.
- 4) The quotation/proposal shall not be considered unless it is properly signed by the authorized representative and/or immediate supervisor.

BCDA reserves the right to accept or reject any or all of the quotations or waive formally therein, or to accept quotation/s as may be considered most advantageous to the govt or to pursue appropriate legal action should the winning bidder refuse to accept the award without justifiable reason/s.

Jerico G. Bondoc
Canvasser

Peter Lester O. Carreon
Member, Inspection Committee

Brando C. Aquilera
Head of Inspection Committee

TO: BCDA HEAD OF PROCUREMENT

Per request, below is/are the price(s) of the article(s)/service(s) as indicated under Unit Price:

QTY	UNIT	Code	PR#	DESCRIPTION/SPECIFICATIONS	BRAND	UNIT COST	TOTAL
				Environmental Testing (Field data Gathering and Analysis)			
1	l.s.			Air Quality Test	N/A	100,000.00	100,000.00
1	l.s.			Water Quality Test	N/A	50,000.00	50,000.00
1	l.s.			Noise Level	N/A	35,000.00	35,000.00
				Personnel			
2	man-mo.			Team Leader	N/A	50,000.00	100,000.00
2	man-mo.			Air and Noise Specialist	N/A	40,000.00	80,000.00
2	man-mo.			Water Quality Specialist	N/A	40,000.00	80,000.00
2	man-mo.			Sociologist	N/A	30,000.00	60,000.00
2	man-mo.			Terrestrial Specialist	N/A	25,000.00	50,000.00
2	man-mo.			Field Personnel	N/A	15,000.00	30,000.00
2	man-mo.			Administrative Officer	N/A	15,000.00	30,000.00
2	man-mo.			Secretary	N/A	15,000.00	30,000.00
2	man-mo.			Encoder	N/A	15,000.00	30,000.00
1	man-mo.			Driver	N/A	12,000.00	12,000.00
				Review Funds and Application Fee			
1	l.s.			EIS Review Fund	N/A	180,000.00	180,000.00
1	l.s.			Application Fee	N/A	10,000.00	10,000.00
				Miscellaneous			
1	mo.			Vehicle Rental	N/A	40,000.00	40,000.00
2	l.s.			Office Supply	N/A	10,000.00	20,000.00
							937,000.00

Terms and conditions:

- Price: *inclusive of all applicable taxes*
 Payment: *50% upon award and another 50% upon completion of the contract*
 Delivery: *to be completed sixty (60) days upon award of the contract*
 Validity of price: *one month*

We hereby certify, that we have prepared, checked and reviewed this quotation.

This quotation is valid unless revoked in writing which should be prior to our receipt of your Purchase Order or Job Order.

RICARDO A. CAPULE / 2018.12.17
Printed Name/Signature/DATE

Immediate Supervisor

0917-7132629
Telephone / Fax Number

[Handwritten Signature]

**NOTICE OF AWARD OF CONTRACT AND THE
BIDDER'S CONFORME**

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NOTICE OF AWARD

27 December 2018

RICARDO A. CAPULE
President
KRC Environmental Services
381 Sto Rosario St., Angeles City

Dear Mr. Capule:

We are pleased to notify you that the Contract for the Consultancy Services for the Preparation of Environmental Impact Statement and Facilitation of Environmental Compliance Certificate for the New Clark City Project is hereby awarded to you as the Consultant with the Highest Rated Responsive Proposal at a Contract Price of Nine Hundred Thirty Seven Thousand and 00/100 Pesos (Php937,000.00) inclusive of all applicable taxes and fees.

You are hereby required, within ten (10) calendar days from receipt of this Notice of Award, to:

1. Formally enter into contract with BCDA provided that documentary requirements are complied with.

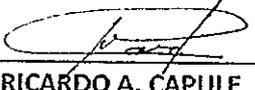
Failure to enter into the said contract shall constitute sufficient ground for cancellation of this award.

Please indicate your concurrence by signing on the space below "Conforme" and return the duly signed Notice of Award to BCDA.

Very truly yours,


AILEEN ANUNCIACION R. ZOSA
Executive Vice President

Conforme:


RICARDO A. CAPULE
President
Date: Dec. 28, 2018

