

1

AGREEMENT ON THE LEASE OF INDUSTRIAL LOT

This AGREEMENT is made and entered into this 28th day of December 2000, by and between:

THE PARTIES

PHIVIDEC INDUSTRIAL AUTHORITY (PIA), a government owned corporation, created and existing by virtue of Presidential Decree No. 538 as amended, with principal office address at Sta. Cruz, Tagoloan, Misamis Oriental, represented by its Administrator **MR. GABRIEL B. EVANGELISTA**, as evidenced by its Board Resolution No. _____ dated _____, herein marked as Annex "A" and made an integral part of this Agreement, hereinafter referred to as the "**LESSOR**";

-and-

PHILIPPINE SINTER CORPORATION, a corporation duly organized under and by virtue of the laws of the Philippines, with principal business address at Nabacaan, Villanueva, Misamis Oriental represented by its President **MR. TOSHIYUKI MATSUMOTO**, as evidenced by its Board Resolution No. _____ dated _____, herein marked as Annex "B" and made an integral part of this Agreement, hereinafter referred to as "**LESSEE**";

WITNESSETH:

WHEREAS, by virtue of Presidential Decree No. 538, as amended, LESSOR develops, administers and manages the industrial estate known as the PHIVIDEC Industrial Estate – Misamis Oriental located in the Municipalities of Tagoloan and Villanueva in the Province of Misamis Oriental.

WHEREAS, the LESSOR is likewise empowered and authorized by P.D. 538, as amended, to acquire all lands within the 3,000 hectares industrial estate and to subsequently sell or lease portions thereof as deemed necessary and proper by the LESSOR'S Board of Directors as it has herein so deemed and authorized to attain its objective to promote and sustain economic social growth of the country.

WHEREAS, LESSEE is a registered manufacturing enterprise of LESSOR.

WHEREAS, LESSOR is the absolute and legal owner of certain parcels of land situated in Nabacaan, Villanueva, Misamis Oriental.

WHEREAS, LESSOR and LESSEE entered into two contracts of lease on 13 August 1974 and 01 January 1981, whereby LESSEE leased from LESSOR parcels of land with areas of One Million Three Hundred Eighty Thousand square meters (1,380,000 m²) and Eighty Four Thousand Two Hundred Fifty Six square meters (84,256 m²) respectively, located in Villanueva, Misamis Oriental.

CAS

WHEREAS, since the contracts of lease expired on 31 December 1999, LESSOR and LESSEE agreed to renew the lease over the parcels of land and for such purpose, intend to execute and enter into another lease agreement with LESSEE having the option to purchase the leased properties.

NOW THEREFORE, for and in consideration of the foregoing premises, the parties hereby agree as follows:

TERMS AND CONDITIONS

1.0 SCOPE OF AGREEMENT

1.1 This AGREEMENT governs the renewal of the expired lease contracts by and between LESSOR and LESSEE executed on 13 August 1974 and 01 January 1981, copies of which are hereto attached and made integral parts hereof as Annexes "C" and "D". The provisions of the expired lease contracts shall supplement this AGREEMENT insofar as they are not inconsistent with the terms and conditions herein.

1.2 Moreover, this AGREEMENT provides for the exercise by LESSEE of an option to purchase the PROPERTY covered by the lease.

2.0 PROPERTY

This AGREEMENT covers the parcels of land situated in Nabacaan, Villanueva, Misamis Oriental, with a total area of One Million One Hundred Eighty Five Thousand Three Hundred Seventy Five square meters (1,185,375 m²) more or less, particularly described in the Sketch Plan and Technical Description, which is attached and made an integral part hereof as Annex "E". These parcels of land are collectively referred to herein as the PROPERTY.

3.0 TERM

3.1 This AGREEMENT shall be for a fixed term of Fifty (50) years commencing on 01 January 2000 and ending on 31 December 2049 unless earlier terminated or extended as hereinafter provided.

3.2 Subject to the necessary government approvals, the AGREEMENT may be extended at the option of the LESSEE for another term of twenty five (25) years upon the same terms and conditions as contained in this AGREEMENT, provided that the LESSEE notifies the LESSOR in writing of its intention to extend this AGREEMENT at least sixty (60) days before the expiration of the original term.

4.0 RENTALS

4.1 In consideration of the lease of the PROPERTY for the entire term excluding any approved extensions thereof, LESSEE shall pay LESSOR, in advance, the total amount of Four Hundred Four Million Eight Hundred Eighty One Thousand Two Hundred Fifty Pesos (P404,881,250), according to the following schedule:

- 4.1.1 The first payment of One Hundred Fourteen Million Four Hundred Sixty Four Thousand Three Hundred Seventy Three Pesos (P114,464,373.00) shall be made upon the signing of this AGREEMENT.
- 4.1.2 The second payment of Sixty Two Million Two Hundred Thirty Two Thousand One Hundred Eighty Eight Pesos (P62,232,188.00) shall be made on 01 January 2001.
- 4.1.3 The third payment of Sixty Two Million Two Hundred Thirty Two Thousand One Hundred Eighty Eight Pesos (P62,232,188.00) shall be made on 01 January 2002.
- 4.1.4 The fourth payment of Sixty Two Million Two Hundred Thirty Two Thousand One Hundred Eighty Eight Pesos (P62,232,188.00) shall be made on 01 January 2003.
- 4.1.5 The fifth payment of Sixty Two Million Two Hundred Thirty Two Thousand One Hundred Eighty Eight Pesos (P62,232,188.00) shall be made on 01 January 2004.
- 4.1.6 Upon delivery by LESSOR to LESSEE of the certificate of title to the PROPERTY obtained in accordance with paragraph 7.1 LESSEE shall pay to LESSOR the amount of Forty One Million Four Hundred Eighty Eight Thousand One Hundred Twenty Five Pesos (P41,488,125.00).
- 4.2 The LESSEE shall without need of prior demand, pay the lease rentals on or before the scheduled date of payment as provided above to LESSOR at its principal office or LESSOR's duly authorized representative or to any bank designated by LESSOR. Costs and charges arising from bank transfers of the rental payments shall be for the account of LESSEE.
- 4.3 The amount of Thirteen Million Pesos (P13,000,000.00) paid by LESSEE to LESSOR in July 2000, the receipt of which is hereby acknowledged by LESSOR, shall be fully applied on the second payment mentioned in paragraph 4.1.2.

5.0 RENTAL ADJUSTMENT

In the event that the certificate of title to the PROPERTY issued by the Register of Deeds For The Province of Misamis Oriental indicates a final total area which is larger or smaller than the area reflected in the result of a survey made in accordance with paragraph 7.4 hereof, the total rental herein stipulated shall be adjusted proportionately.

6.0 DELINQUENCY IN THE PAYMENT

- 6.1 In case of delinquency in the payment of the advance rentals pursuant to paragraph 4.1, LESSEE shall pay LESSOR a penalty of two percent (2%) per month on the amount due starting from the date of delinquency. For the purpose of computing the interest delay shall be computed on a daily pro-rata basis.

6.2 If within thirty (30) days from the date of LESSOR's written demand LESSEE does not pay the amounts due, LESSOR may terminate this AGREEMENT in accordance with the provisions of paragraphs 15.0 and 16.0 hereof.

7.0 REGISTRATION

7.1 LESSOR shall register the parcels of land covered by this Agreement in its name under the Torrens System of Registration and shall thereafter promptly cause the annotation of this AGREEMENT thereon. The LESSOR shall furnish the LESSEE with copies thereof after such registration.

7.2 In the meantime, LESSOR shall register this AGREEMENT with the Register of Deeds For The Province of Misamis Oriental in the proper register for liens and mortgages on unregistered lands, immediately after the signing of this AGREEMENT.

7.3 Any and all expenses incurred in connection with the registration shall be borne entirely by LESSEE.

7.4 LESSOR and LESSEE, or their respective representatives, shall conduct a joint land survey and inspection of the boundaries and descriptions of the PROPERTY. After completion of the land survey and inspection, the final actual area surveyed shall become the basis of rentals pursuant to paragraph 5 and shall be accepted both by LESSOR and LESSEE as actual area to be reflected in the certificate of title to the PROPERTY.

8.0 REPRESENTATIONS AND WARRANTIES

Each party hereto represents and warrants to the other that: (a) it has all the requisite power and authority to enter into and perform this AGREEMENT, (b) all necessary actions, corporate or otherwise, for the execution and performance of this AGREEMENT and transactions contemplated herein have been duly obtained and are in full force and effect, and (c) this AGREEMENT constitutes its valid and binding obligation enforceable in accordance with its terms and conditions.

9.0 LESSOR COVENANTS

9.1 LESSOR warrants that LESSEE shall have peaceful and quiet possession and enjoyment of the PROPERTY throughout the term of this AGREEMENT. LESSOR represents further that it has the sole, full and unrestricted right over the PROPERTY without any lien, charges, or encumbrances on or against the ownership of the PROPERTY.

9.2 In the event that LESSEE is deprived of or interrupted in its peaceful and quiet possession and enjoyment of the PROPERTY, LESSEE, without prejudice to the other remedies available under the law, shall have the right to claim reimbursement from LESSOR of any unused amount paid by LESSEE under this AGREEMENT.

9.3 The LESSOR shall not sell, transfer and assign all its rights, title and ownership to and over the PROPERTY without the prior written consent of the LESSEE. LESSEE with prior written consent of the LESSOR, may assign or transfer any of its rights under this AGREEMENT to any company of which the LESSEE has at least forty percent (40%) share equity. Upon such assignment, the LESSEE shall be relieved of all its obligations and covenants under this Agreement, without prejudice to the performance or settlement by the LESSEE of any and all financial liabilities existing at the time of such transfer, provided that LESSOR shall not withhold such consent unreasonably.

9.4 LESSOR shall cause the registration of this AGREEMENT at LESSEE'S expense in all governmental instrumentalities as may be required by law or regulations.

10.0 LESSEE COVENANTS

10.1 LESSEE, during its occupancy of the PROPERTY, shall hold LESSOR free and harmless from any damage, liability or responsibility to any person or property arising out of or as a consequence of LESSEE's use or enjoyment of the PROPERTY.

10.2 To the extent applicable, LESSEE shall observe strictly all prevailing laws, rules and regulations imposed by the Republic of the Philippines.

11.0 TAXES AND CHARGES

11.1 During the lease period, there will be no real property taxes that will be collected on the leased PROPERTY, provided that real property taxes shall be collected on the existing buildings and improvements as well as those that the LESSEE may thereafter put up on the PROPERTY, provided further that should LESSEE or its assignee exercise the OPTION under paragraph 14.0, real property taxes on the PROPERTY shall be collected.

11.2 The value added tax (VAT) imposed by the government on the rental payments shall be for the account of and paid by LESSEE.

12.0 USE AND CARE OF THE LEASED PROPERTY

12.1 LESSEE has examined and knows the condition of the PROPERTY and has received them in good condition suitable to LESSEE's business purposes.

12.2 LESSEE shall, at its expense, maintain the PROPERTY in clean and environmentally friendly manner and do all acts necessary for the care, preservation and maintenance of the PROPERTY.

12.3 LESSEE agrees to use and maintain the PROPERTY in a careful and proper manner, and comply with and conform to all laws, ordinances and

regulations applicable in any way (including but not limited to health, fire, environmental, zoning, law enforcement, nuisance and other public considerations) to the use, operation or maintenance of the PROPERTY.

12.4 LESSOR reserves the right to conduct ocular inspection inside the premises of LESSEE, except for the restricted and/or confidential area designated by LESSEE, anytime during the business hours in order to check and verify compliance to this AGREEMENT by LESSEE or its employees or agents. In the exercise by LESSOR of such right, LESSEE shall not prohibit or inhibit LESSOR or its representatives to perform such functions without any just reason.

12.5 Should LESSEE fail to exercise the OPTION pursuant to paragraph 14.0 hereof upon the expiration of the term of this AGREEMENT, LESSEE shall return the PROPERTY to LESSOR in the condition at the time of the signing of this AGREEMENT free from and clear of any contaminants, which are hazardous, radioactive and toxic chemicals. Any findings to the contrary shall be cleaned or removed at the expense of LESSEE to the satisfaction of LESSOR. If LESSEE fails or refuses to remove or demolish the contaminated improvements, LESSOR shall cause to remove or demolish them at LESSEE's expense. The LESSOR may however retain all improvements on the PROPERTY without any right on the part of LESSEE to claim for the cost or value of such improvements.

13.0 ASSIGNMENT AND SUBLEASE

13.1 LESSEE may assign or transfer any of its rights respecting the lease of the PROPERTY or sub-lease the PROPERTY, or a portion thereof, with improvements upon prior written consent of LESSOR, provided that LESSOR shall not withhold such consent unreasonably.

13.2 The assignment or transfer shall be subject to the same terms and conditions herein provided. Any lease rights and interests accruing to third parties in violation of this provision shall not bind LESSOR in respect of this AGREEMENT.

13.3 In case of sub-lease the term of the sub-lease contract shall be coterminous with the term of this AGREEMENT or should not exceed the original term provided in this AGREEMENT.

14.0 OPTION TO PURCHASE

14.1 Subject to the full payment of the total rental, except the payment mentioned in paragraph 4.1.6 and subject further to LESSEE's eligibility to acquire lands and/or real property within the Philippines; LESSEE shall be entitled to have the first option to purchase the PROPERTY or any portion thereof (herein referred to as the OPTION) and be transferred all its rights, title and ownership to and over the property by LESSOR without any additional cost.

14.2 LESSEE shall exercise the OPTION within Fifty (50) years from the date of effectivity of this AGREEMENT, provided, that should LESSEE fail to exercise the OPTION within the said period for whatever reasons, the parties shall continue to be bound by a lessor-lessee relationship.

14.3 LESSEE shall give a written notice to LESSOR of its intention to exercise the OPTION one (1) year before the 50th year, from the date of effectivity of this AGREEMENT.

14.4 During the term of this AGREEMENT as stipulated in paragraphs 3.1 and 3.2 and in the event that LESSEE is not qualified to acquire and own the PROPERTY at the time LESSEE decides to exercise the OPTION, LESSEE may assign or transfer all its rights in the OPTION to any company of which the LESSEE has at least forty percent (40%) share equity, upon prior written consent of the LESSOR, provided that the LESSOR shall not withhold such consent unreasonably. The assignment or transfer shall be subject to the same terms and conditions herein provided.

14.5 Subject to the receipt by LESSOR of the total rental paid by LESSEE LESSOR also covenants, warrants and agrees that upon the execution of the OPTION by LESSEE or its assignee, the deed of absolute sale shall be promptly executed by the parties and the certificate of title to the PROPERTY shall be delivered by LESSOR to LESSEE or its assignee upon issuance of the same by the Register of Deeds For the Province of Misamis Oriental. In the event that the total rental is not yet paid in full at the time LESSEE or its assignee exercises the OPTION, the parties shall execute the deed of sale after LESSEE or its assignee shall have paid the remaining balance to the LESSOR.

14.6 In consideration of the option, LESSEE shall pay LESSOR the amount of Ten Million Pesos (P10,000,000.00) upon the signing of this AGREEMENT. This amount shall not be refundable to LESSEE except when LESSEE terminates this AGREEMENT pursuant to paragraph 16.1 for any cause attributable to LESSOR as stated in paragraph 15.2.

15.0 TERMINATION

15.1 Subject to the provisions in paragraph 16.0 this AGREEMENT may be terminated at the instance of either party under the conditions hereinafter stipulated or by expiration of the term.

15.2 LESSEE may terminate this AGREEMENT only for causes stated hereunder, after the lapse of a thirty (30) day written notice made upon LESSOR by LESSEE.

15.2.1 If LESSOR commits any act which constitutes materials breach pursuant to paragraph 17.

15.2.2 If LESSOR fails to correct the breach or comply with its covenants, provided that if LESSOR, within the said thirty days period, corrects the breach or complies with such covenants, no termination shall occur.

15.3 LESSOR may terminate this AGREEMENT only for causes stated hereunder, after a lapse of thirty (30) days written notice made upon LESSEE by LESSOR:

15.3.1 If LESSEE commits any act which constitutes material breach pursuant to paragraph 17.

15.3.2 If LESSEE fails to correct the breach or comply with its covenant as stated in paragraph 10.2 provided that if LESSEE within the said thirty days period, corrects the breach or complies with such covenants, no termination shall occur.

16.0 EFFECTS OF TERMINATION

16.1 If termination is made by LESSEE pursuant to paragraph 15.2, LESSEE, without prejudice to the other remedies available under law, is entitled to claim a refund from LESSOR of all payments made by LESSEE in accordance with paragraph 4.1 hereof, less used annual rental payments accrued as of the date of such termination which is understood to be the amount of rental mentioned under paragraph 4.0 hereof divided by Fifty (50) years. A fraction of less than six (6) months shall be proportionately computed while a fraction of more than six (6) months shall be considered as one (1) year. The LESSEE has the duty to return the PROPERTY to LESSOR in an "as is, where is" condition at the time of such return, provided, however, that LESSEE shall at its discretion forfeit or remove any and all improvements introduced by LESSEE on the PROPERTY. In case LESSEE opts to remove the improvements made on the PROPERTY, LESSOR shall reimburse LESSEE the actual cost of demolition or removal of the improvements, but in no case shall the amount to be reimbursed by LESSOR to LESSEE exceed the amount paid pursuant to paragraph 4.1.

16.2 If the termination is made by LESSOR pursuant to paragraph 15.3, LESSEE shall forfeit all payments made in favor of LESSOR pursuant to paragraph 4.1, less any unused amount paid in advance by the LESSEE pursuant to paragraph 4.0 hereof divided by fifty (50) years. A fraction of less than six (6) months shall be proportionately computed while a fraction of more than six (6) months shall be considered as one (1) year. LESSEE shall return the PROPERTY to LESSOR in the original condition prevailing at the time of the signing of this AGREEMENT, free from and clear of any contaminants which are hazardous, radioactive and toxic. Any findings to the contrary shall be cleaned or removed at the expense of LESSEE to the satisfaction of LESSOR. If LESSEE fails or refuses to remove or demolish the contaminated improvements, LESSOR shall cause to remove or demolish them at LESSEE's expenses. The LESSOR may however retain all improvements on the PROPERTY without any right on the part of LESSEE to claim for the cost or value of such improvements.

17.0 BREACH

The failure of either party to comply with the terms and conditions of this AGREEMENT or to perform or observe any or all of such party's covenants herein, including but not limited to any and all other related agreements forming an integral part hereof, constitutes breach of this AGREEMENT which will entitle the other party to the termination referred to in paragraph 15.0

18.0 FORCE MAJEURE

No party shall be responsible or liable to the other in any manner whatsoever for destruction, damage, losses, injury, delay or deviation

from this AGREEMENT as a result of force majeure such as typhoon, conflagration, fire, widespread epidemic, earthquake, lightning and other similar natural calamities, or for those events caused by war, rebellion, civil commotion, strikes, lock-outs and industrial disputes, explosion, not directly or indirectly within the control of each party.

19.0 GOVERNING LAW

The provisions of this AGREEMENT shall be governed in all respects by and construed in accordance with the laws of the Republic of the Philippines.

20.0 AMICABLE SETTLEMENT

Any and all disputes, controversies and conflicts between the parties in connection with this AGREEMENT shall, in so far as possible, be settled amicably. In the event that no amicable settlement is reached by the parties, venue of action shall be the proper courts of Misamis Oriental exclusively.

21.0 ARBITRATION

21.1 Failure to arrive at an amicable settlement, any and all disputes, controversies and conflicts arising out of or in connection with this AGREEMENT shall be submitted to arbitration proceedings in accordance with the laws on arbitration of the Philippines.

21.2 The arbitration proceedings shall be conducted in English. The venue of the arbitration will be in Cagayan de Oro City, Philippines.

21.3 There shall be three (3) arbitrators and the parties shall be entitled to choose and provide one arbitrator each. The arbitrators appointed by the parties shall choose the third arbitrator.

21.4 The cost of arbitration shall be borne by any of the parties as determined by the arbitrators.

22.0 CONTINUING PERFORMANCE

During the period of submission to arbitration and thereafter until the granting of the arbitral award, the parties shall, except in the event of termination, continue to perform all their obligations under the AGREEMENT without prejudice to a final adjustment in accordance with the said award.

23.0 SURVIVAL

The provision in paragraph 21 shall survive the termination and or expiration of this AGREEMENT.

24.0 MODIFICATION

This AGREEMENT shall not be altered, amended or otherwise modified in any respect, except by an instrument in writing and signed by the parties.

25.0 NOTICES

Any and all notices or other forms of communication required or appropriate to be given under this AGREEMENT shall be in writing and shall be personally delivered or transmitted by registered mail, postage pre-paid, at the parties' addresses hereinabove set forth.

26.0 NON-WAIVER

The failure of either party hereto to insist upon a strict performance of any of the terms, conditions and covenants hereof shall neither be deemed a relinquishment or waiver of any right or remedy that such party may have nor shall be construed as waiver of any subsequent breach or default on the terms, conditions and covenants which shall continue to be in full force and effect. The receipt by LESSOR of the rental payment with knowledge of the breach of any covenant hereof, shall not be deemed a waiver of such breach. No waiver by either party of any rights under this AGREEMENT shall be deemed to have been made unless expressed in writing and signed by such party. All rights and remedies existing under this AGREEMENT are cumulative to and not exclusive of any rights or remedies otherwise available.

27.0 EXCLUSIVITY

Except as otherwise indicated herein, the relationship, liabilities and obligations of LESSOR and LESSEE shall be governed solely by the provisions of this AGREEMENT.

28.0 SEPARABILITY

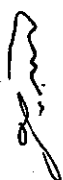
In the event that any provision in this AGREEMENT is declared by competent authority to be invalid, all other provisions not affected thereby shall remain effective and enforceable.

29.0 BINDING EFFECT

This Agreement shall be binding upon the parties hereto, their assigns, successors in interest, executors and administrators.

IN WITNESS WHEREOF, the parties have hereunto signed this Agreement in Sta. Cruz, Tagbayan Philippines:





PHIVIDEC INDUSTRIAL AUTHORITY
"LESSOR"


By:


GABRIEL B. EVANGELISTA
Administrator

-and-

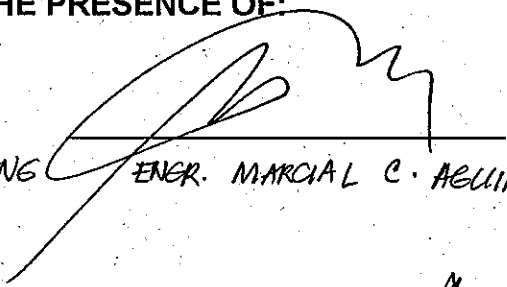
PHILIPPINE SINTER CORPORATION
"LESSEE"

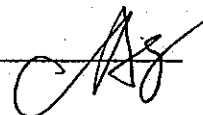
By:


TOSHIYUKI MATSUMOTO
President

SIGNED IN THE PRESENCE OF:


ATTY. RAUL D. RAGANDANG


ENGR. MARCIAL C. AGUIRRE



Republic of the Philippines)
 Province of Misamis Oriental) S.S.
 Municipality of Tagoloan)

ACKNOWLEDGMENT

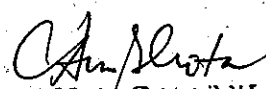
BEFORE ME, a Notary Public, personally appeared the following persons:

1. Mr. Gabriel B. Evangelista, with Community Tax Certificate No. 07929601 issued on January 10, 2000 and Villanueva, Misamis Oriental; and
2. Mr. Toshiyuki Matsumoto, with Passport No. TF 1127240 issued on September 21, 1998 at Japan

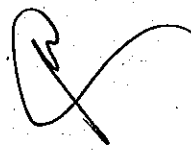
Known to me and to me known to be the same persons who have executed the foregoing instrument consisting of six pages including this Acknowledgment and acknowledged to me that the same is their free and voluntary act and deed.

WITNESS MY HAND AND NOTARIAL SEAL on this 28th day of December 2000 at Tagoloan, Misamis Oriental, Philippines.

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 Page No. 56
 Book No. II
 Series of 2000.


 CHARISSE A. GALARRITA
 Notary Public
 Until December 31, 2000
 PIR No. 4733365-1/10/2000
 Tagoloan, Misamis Oriental
 IBP No. 480859 1/18/2000











REPUBLIC OF THE PHILIPPINES
PHIVIDECA INDUSTRIAL AUTHORITY

PHIVIDECA INDUSTRIAL ESTATE - MISAMIS ORIENTAL
P.O. Box 217, Cagayan de Oro City

SECRETARY'S CERTIFICATE

ANNEX A

I, RAUL D. RAGANDANG, of legal age, Filipino, with office address at PHIVIDECA INDUSTRIAL ESTATE-MISAMIS ORIENTAL, under oath, state and certify that:

1. I am the Corporate Secretary of the PHIVIDECA INDUSTRIAL AUTHORITY (PIA), a government owned and controlled corporation duly organized and existing pursuant to P.D. 538, as amended, with principal office address at Sta. Cruz, Tagoloan, Misamis Oriental.

2. At a meeting of the Board of Directors held at Marco Hotel, Alwana Village, Cugman, Cagayan de Oro City on October 30, 2000, the following resolution was passed and approved and is now in full force and effect:

"BD RESOLUTION NO. XXI-219 S. 2000"

RESOLVED, as it is hereby resolved, that the Basic Terms of the PIA-PSC Lease Purchase Agreement recommended by the PIA Negotiating Panel, herewith attached, inclusive and made an integral part hereof, be, as it is hereby approved;

RESOLVED, FURTHER, that Atty. Raul D. Ragandang be designated as he is hereby designated, to draft the PIA-PSC Lease Purchase Agreement to be submitted to the OGCC for review;

RESOLVED, FURTHERMORE, to authorize Administrator Gabriel B. Evangelista, as he is hereby authorized, to sign on behalf of PIA the said Lease Purchase Agreement upon the approval/review of the OGCC."

3. The said resolution has not been revoked, altered, modified or amended, and the same is still in full force and effect.

4. That the foregoing resolution adopted and approved by the Board of Directors is the same as that which appears in the Minute Books of the Corporation which is under my custody.


FURTHER AFFIANT SAYETH NONE.

IN WITNESS WHEREOF, I have hereunto signed these present and affixed the Corporation seal this 14th of November, 2000.


RAUL D. RAGANDANG
Corporate Secretary

SUBSCRIBED AND SWORN to before me this 14th day of Nov., 2000, affiant exhibited to me his Community Tax Certificate No. 08027046, issued at Tagoloan, Misamis Oriental on February 4, 2000.

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BOOK NO. 1
SERIES OF 2000.


JOAN M. JABAR
NOTARY PUBLIC
UNTIL DECEMBER 31, 2000
PTR NO. 1160762, 1/4/2000
IBP NO. 480803, 12/31/1999
CAGAYAN DE ORO CITY

ma'am martin
11

CORPORATE SECRETARY'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, **CARLOS G. PLATON**, Filipino, of legal age and with business address at 6th & 7th Floors, Tuscan Building, 114 Herrera St., Legaspi Village, Makati City, do hereby certify:


That I am the duly elected and incumbent Corporate Secretary of **PHILIPPINE SINTER CORPORATION**, a corporation duly organized and existing in accordance with Philippine laws with office address at 11th Floor, Allied Bank Centre, 6754 Ayala Avenue, Makati City; that as such Corporate Secretary, I am the custodian of the Minute Books of the Corporation and that said Minute Books show that at a duly constituted special meeting of the Board of Directors of said corporation on December 28, 2000, the following resolution was unanimously adopted and approved:


"RESOLVED, That **MR. TOSHIYUKI MATSUMOTO**, President, be as he is hereby authorized, for and on behalf of the Company, to sign, execute and deliver the Contract of Lease between the Company and Phividec and to perform such acts as may be necessary to give effect to this resolution."


IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of December 2000.


CARLOS G. PLATON
Corporate Secretary

SUBSCRIBED AND SWORN to before me on this 28th day of December 2000 at the City of Makati; affiant exhibiting to me his Community Tax Certificate No. 14403744 on January 5, 2000 at Makati City.


NOTARY PUBLIC
Until December 31, 2000


Doc. No. 164;
Page No. 34;
Book No. 11;
Series of 2000.
CGP/gcd
P-SINTER/SC-SIG-CONT


ENRIQUE JUAN CARLOS VERA
NOTARY PUBLIC
UNTIL DECEMBER 31, 2000
PTR NO. 8882908, 3/7/00
MAKATI CITY

CORPORATE SECRETARY'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, **CARLOS G. PLATON**, Filipino, of legal age and with business address at 6th & 7th Floors, Tuscan Building, 114 Herrera St., Legaspi Village, Makati City, do hereby certify:

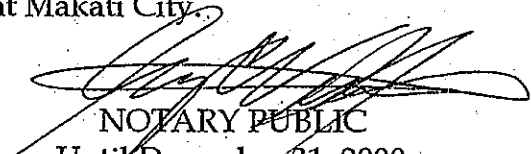
That I am the duly elected and incumbent Corporate Secretary of **PHILIPPINE SINTER CORPORATION**, a corporation duly organized and existing in accordance with Philippine laws with office address at 11th Floor, Allied Bank Centre, 6754 Ayala Avenue, Makati City; that as such Corporate Secretary, I am the custodian of the Minute Books of the Corporation and that said Minute Books show that at a duly constituted special meeting of the Board of Directors of said corporation on December 28, 2000, the following resolution was unanimously adopted and approved:

"RESOLVED, That **MR. TOSHIYUKI MATSUMOTO**, President, be as he is hereby authorized, for and on behalf of the Company, to sign, execute and deliver the Contract of Lease between the Company and Phividec and to perform such acts as may be necessary to give effect to this resolution."

IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of December 2000.


CARLOS G. PLATON
Corporate Secretary

SUBSCRIBED AND SWORN to before me on this 28th day of December 2000 at the City of Makati; affiant exhibiting to me his Community Tax Certificate No. 14403744 on January 5, 2000 at Makati City.


NOTARY PUBLIC
Until December 31, 2000

Doc. No. 164;
Page No. 34;
Book No. 11;
Series of 2000.
CGP/gcd
P-SINTER/SC-SIG-CONT

ENRIQUE JUAN CARLOS VERA
NOTARY PUBLIC
UNTIL DECEMBER 31, 2000
PTR NO. 8382908/3/7/00
MAKATI CITY

CORPORATE SECRETARY'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, **CARLOS G. PLATON**, Filipino, of legal age and with business address at 6th & 7th Floors, Tuscan Building, 114 Herrera St., Legaspi Village, Makati City, do hereby certify:

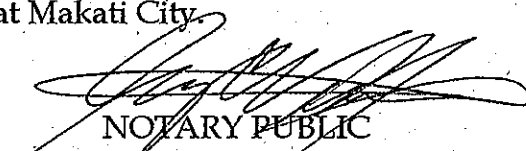
That I am the duly elected and incumbent Corporate Secretary of **PHILIPPINE SINTER CORPORATION**, a corporation duly organized and existing in accordance with Philippine laws with office address at 11th Floor, Allied Bank Centre, 6754 Ayala Avenue, Makati City; that as such Corporate Secretary, I am the custodian of the Minute Books of the Corporation and that said Minute Books show that at a duly constituted special meeting of the Board of Directors of said corporation on December 28, 2000, the following resolution was unanimously adopted and approved:


"RESOLVED, That **MR. TOSHIYUKI MATSUMOTO**, President, be as he is hereby authorized, for and on behalf of the Company, to sign, execute and deliver the Contract of Lease between the Company and Phividec and to perform such acts as may be necessary to give effect to this resolution."

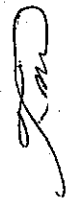
IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of December 2000.


CARLOS G. PLATON
Corporate Secretary

SUBSCRIBED AND SWORN to before me on this 28th day of December 2000 at the City of Makati; affiant exhibiting to me his Community Tax Certificate No. 14403744 on January 5, 2000 at Makati City.


NOTARY PUBLIC
Until December 31, 2000


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CGP/gcd
P-SINTER/SC-SIG-CONT


ENRIQUE JUAN CARLOS VERA
NOTARY PUBLIC
UNTIL DECEMBER 31, 2000
PTR NO. 8382908, 3/7/00
MAKATI CITY



PHILIPPINE SINTER CORPORATION

Makati Head Office
23rd Floor, 6788 Ayala Avenue
Olendan Square, Makati City, Philippines
Tel. No. (632) 886-7421 Fax No. (632) 886-7355



CERT. NO. - Q14470

July 10, 2002

PHIVIDEDEC Industrial Authority (PIA)
Sta. Cruz, Tagoloan, Misamis Oriental

Attention of MR. GABRIEL B. EVANGELISTA
Administrator

Re: Agreement on the Lease of Foreshore and Offshore Areas

Gentlemen:

This is with reference to paragraph 14.0 (Option to Purchase) of our subject lease agreement.

We wish to confirm that under subparagraphs 14.2 and 14.3 of the said agreement, the lessee may give written notice to the lessor of its intention to exercise the option at any time during the term of the agreement but not later than one (1) year before the 50th year from the date of effectivity of the agreement.

Thank you and best regards.

Very truly yours,

PHILIPPINE SINTER CORPORATION

TOSHIYUKI MATSUMOTO

President

CONFORME:

PHIVIDEDEC INDUSTRIAL AUTHORITY

GABRIEL B. EVANGELISTA

Administrator



PHILIPPINE SINTER CORPORATION

Makati Head Office
23rd Floor, 6788 Ayala Avenue
Olendan Square, Makati City, Philippines
Tel. No. (632) 886-7421 Fax No. (632) 886-7355



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Thank you and best regards.

Very truly yours,

PHILIPPINE SINTER CORPORATION

TOSHIYUKI MATSUMOTO

President

CONFORME:

PHIVIDE INDUSTRIAL AUTHORITY

GABRIEL B. EVANGELISTA

Administrator



PHILIPPINE SINTER CORPORATION

Villanueva, Misamis Oriental



July 17, 2002

PHIVIDEC Industrial Authority
Sta. Cruz, Tagoloan, Misamis Oriental

ATTENTION : MR. GABRIEL B. EVANGELISTA
Administrator

R E : Agreement on the Lease of Industrial Lot

GENTLEMEN:

This is with reference to paragraph 14.0 (Option to Purchase) of our subject lease agreement.

We wish to confirm that under subparagraphs 14.2 and 14.3 of the said agreement, the lessee may give written notice to the lessor of its intention to exercise the option at any time during the term of the agreement but not later than one (1) year before the 50th year from the date of effectivity of the agreement.

Thank you and best regards.

Very truly yours,

PHILIPPINE SINTER CORPORATION

By: *Toshiyuki Matsumoto*

TOSHIYUKI MATSUMOTO
President

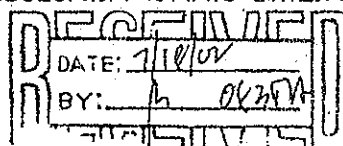
CONFORME :

PHIVIDEC INDUSTRIAL AUTHORITY

By:

Gabriel B. Evangelista
GABRIEL B. EVANGELISTA
Administrator

PHIVIDEC INDUSTRIAL AUTHORITY
TAGOLOAN, MISAMIS ORIENTAL

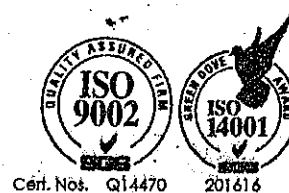


Recd: 7/31/02



PHILIPPINE SINTER CORPORATION

Villanueva, Misamis Oriental



July 17, 2002

PHIVIDEC Industrial Authority
Sta. Cruz, Tagoloan, Misamis Oriental

ATTENTION : MR. GABRIEL B. EVANGELISTA
Administrator

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Thank you and best regards.

Very truly yours,

PHILIPPINE SINTER CORPORATION

By: *Toshiyuki Matsumoto*

TOSHIYUKI MATSUMOTO
President

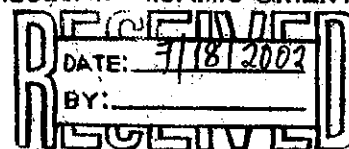
CONFORME :

PHIVIDEC INDUSTRIAL AUTHORITY

By:

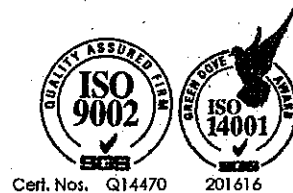
GABRIEL B. EVANGELISTA
Administrator

PHIVIDEC INDUSTRIAL AUTHORITY
TAGOLOAN MISAMIS ORIENTAL





PHILIPPINE SINTER CORPORATION
Villanueva, Misamis Oriental



July 17, 2002

PHIVIDEC Industrial Authority
Sta. Cruz, Tagoloan, Misamis Oriental

ATTENTION : MR. GABRIEL B. EVANGELISTA
Administrator

R E : Agreement on the Lease of Industrial Lot

GENTLEMEN:

This is with reference to paragraph 14.0 (Option to Purchase) of our subject lease agreement.

We wish to confirm that under subparagraphs 14.2 and 14.3 of the said agreement, the lessee may give written notice to the lessor of its intention to exercise the option at any time during the term of the agreement but not later than one (1) year before the 50th year from the date of effectivity of the agreement.

Thank you and best regards.

Very truly yours,

PHILIPPINE SINTER CORPORATION

By:

TOSHIYUKI MATSUMOTO
President

CONFORME :

PHIVIDEC INDUSTRIAL AUTHORITY

By:

GABRIEL B. EVANGELISTA
Administrator

**LEASE CONTRACT OF
FORESHORE AND OFFSHORE AREAS**

KNOW ALL MEN BY THESE PRESENTS:

This Contract made and entered into this 18th day of July, 2002, by and between:

THE PARTIES

PHIVIDEC Industrial Authority (PIA), a government owned and controlled corporation, created and existing pursuant to Presidential Decree No. 538, as amended, with principal office at Sta. Cruz, Tagoloan, Misamis Oriental, Philippines; represented by its Administrator, **GABRIEL B. EVANGELISTA**, as evidenced by its Board Resolution No. XXI - 259, series of 2001 dated June 4, 2001, herein marked as Annex "A" and made an integral part hereof; and hereinafter referred to as "**LESSOR**",


-and-

PHILIPPINE SINTER CORPORATION, a corporation duly organized and registered under and by virtue of the laws of the Philippines, with principal business address at Nabacaan, Villanueva, Misamis Oriental; represented by its President, **TOSHIYUKI MATSUMOTO**, as evidenced by its Corporate Secretary's Certificate, herein marked as Annex "B" and made an integral part hereof; and hereinafter referred to as "**LESSEE**".

WITNESSETH:

WHEREAS, LESSOR is the absolute owner of the foreshore and offshore portions of the PHIVIDEC Industrial Areas of Tagoloan and Villanueva, Misamis Oriental, consisting an area of **ONE HUNDRED SIXTEEN THOUSAND, SEVEN HUNDRED NINETY THREE (116,793) SQUARE METERS**, situated at Nabacaan, Villanueva, Misamis Oriental, which is particularly described in the sketch attached hereto and made an integral part hereof as Annex "C";

WHEREAS, under P.D. 538, Section 4 (e.), LESSOR has full power and authority to lease the aforementioned area for a consideration and under such terms, arrangement and conditions it may deem reasonable and proper to attain its objective to promote and sustain economic and social growth of the country, as it has so deemed and as authorized by its Board of Directors in relation to this Contract;



WHEREAS, the LESSEE is a duly registered manufacturing enterprise of LESSOR;

WHEREAS, the LESSEE, an export-oriented corporation, is expected to contribute to LESSOR's aforementioned objective of pursuing economic and social growth;

WHEREAS, LESSOR and LESSEE entered into two contracts of lease on 13 August 1974 and 01 January 1981, whereby LESSEE leased from LESSOR parcels of land (collectively, the industrial estate lot) with areas of One Million Three Hundred Eighty Thousand square meters (1,380,000 m²) and Eighty Four Thousand Two Hundred Fifty Six square meters (84,256 m²) respectively, located in Villanueva, Misamis Oriental;

WHEREAS, another contract for the lease of the foreshore and offshore areas necessary for the use of the industrial estate lot in the business operations of LESSEE was corollarily executed;

WHEREAS, since the contracts of lease of the industrial estate lot expired on 31 December 1999, LESSOR and LESSEE agreed to renew the lease over the parcels of land and for such purpose, executed and entered into another lease contract entitled Agreement on the Lease of Industrial Estate Lot dated 28 December 2000, with LESSEE having the option to purchase the leased properties.

WHEREAS, the contract for the lease of the foreshore and offshore area also expired after 25 years on 31 December 1999;

WHEREAS, LESSOR and LESSEE executed the said Agreement on the Lease of Industrial Estate Lot with the understanding that LESSEE shall also renew the lease of the above-mentioned foreshore and offshore areas, the use of these areas still being necessary to the use of the industrial estate lot in the operations of LESSEE;

WHEREFORE, for and in consideration of the foregoing premises, and the terms and conditions hereinafter stated, the parties have agreed on the following:

TERMS AND CONDITIONS

1.0 SCOPE OF CONTRACT

1.1 This Contract governs the lease by LESSEE of the above-described foreshore and offshore areas from LESSOR, which lease was intended to be executed by the parties in conjunction with the lease of the industrial lot under the Agreement on the Lease of Industrial Estate Lot dated 28 December 2000 earlier executed by and between them. A copy of the said Agreement on the Lease of Industrial Estate Lot is hereto attached and made an integral part hereof as Annex "D".

1.2 This relationship between the two agreements shall be recognized and respected by the parties in the event that LESSEE exercises its option under the Agreement on the Lease of Industrial Estate Lot dated 28 December 2000.

2.0 TERM

2.1 This Contract shall be for a period of fifty (50) years, commencing on 01 January 2000 and ending on 31 December 2049, unless earlier terminated. This period may be renewable for another twenty-five (25) years subject to existing laws and regulations and on such terms and conditions that the parties may mutually agree upon. In case the LESSEE intends to renew the same, it shall manifest its intention to do so in writing, served upon the LESSOR not less than sixty (60) calendar days prior to expiration of the original period, otherwise the LESSEE loses its option for renewal of this contract.

3.0 TERMINATION OF LEASE:

3.1 Subject to the provisions in paragraph 4, this Contract may be terminated at the instance of either party under the conditions hereinafter stipulated or by expiration of the term.

3.2 LESSOR may terminate this Contract only for causes stated hereunder, after a lapse of thirty (30) days written notice made upon LESSEE by LESSOR:

3.2.1 If LESSEE commits any act which constitutes material breach pursuant to paragraph 5.

3.2.2 If LESSEE fails to correct the breach or comply with its covenant as stated in paragraph 11.2 provided that if LESSEE, within the said thirty days period, corrects the breach or complies with such covenants, no termination shall occur.

3.3 LESSEE may terminate this Contract only for cause stated hereunder, after the lapse of a thirty (30) day written notice made upon LESSOR by LESSEE:

3.3.1 If LESSOR commits any act which constitutes material breach pursuant to paragraph 5.

3.3.2 If LESSOR fails to correct the breach or comply with its covenants, provided if LESSOR, within the said thirty days period, corrects the breach or complies with such covenants, no termination shall occur.

3.3.3 Other cases for termination may include acts of God, or voluntary termination by LESSEE for cause, provided that in case of voluntary termination by LESSEE, a six (6) month written notice to that effect shall be given to the LESSOR.

4.0 EFFECTS OF TERMINATION

4.1 If the termination is made by the LESSOR pursuant to paragraph 3.2, LESSEE shall forfeit all payments made in favor of LESSOR pursuant to Section 6.0 herein, less the advance rentals made for the coming months when area is no longer used, provided that the monthly rental is understood to be the amount of the rental for the year under paragraph 6.0 divided by 12. A fraction of less than one (1) month

original condition prevailing at the time of such return, free from and clear of any contaminants which are hazardous, radioactive and toxic. Any findings to the contrary shall be cleaned or removed at the expense of LESSEE to the satisfaction of LESSOR. If LESSEE fails or refuses to remove or demolish the contaminated improvements, LESSOR shall cause to remove or demolish them at LESSEE's expense. LESSOR, in the exercise of paragraph 8 herein, shall retain all permanent improvements on the leased areas listed in Annex "F" without any right on the part of LESSEE to claim for the cost or value of such improvements.

4.2 If the termination is made by the LESSEE pursuant to paragraph 3.3, LESSEE shall be entitled to refund of all deposits and payments made in accordance with paragraph 6.0 except rentals for months when LESSEE used the leased premises provided that the monthly rental is understood to the amount of rental for a year under paragraph 6.0 divided by 12. A fraction of less than one (1) month shall not be considered. LESSEE may remove its properties movables and improvements except those which shall accrue to the LESSOR pursuant to paragraph 8.0 hereunder and provided that the removal shall not cause damages to the leased premises. The LESSEE shall return the leased areas to the LESSOR free from and clear for any contaminants which are hazardous, radioactive and toxic.

5.0 BREACH

The failure of either party to comply with the terms and conditions of this Contract or to perform or observe any or all of such party's covenants herein, including but not limited to any and all other related agreements forming an integral part hereof, constitutes breach of this Contract which will entitle the other party to the termination referred to in paragraph 3.0.

6.0 RENTAL

6.1 For use and occupancy of the leased foreshore and offshore area, LESSEE shall pay an annual rental equivalent to the mathematical product of: (1) TWO PESOS AND FIFTY CENTAVOS PER SQUARE METER (P2.50/m²) of the leased areas or the amount of TWO HUNDRED NINETY ONE THOUSAND NINE HUNDRED EIGHTY-TWO PESOS AND FIFTY CENTAVOS (P 291,982.50) in Philippine Currency for the first year, escalated every three years using the applicable Escalation Rate.

The applicable Discount Factor and Escalation Rate shall be in accordance with PIA's Standard Discount applicable to Escalation of the Lease Rate for the Foreshore/Offshore Area, which is attached hereto and made an integral part hereof as Annex "E".

6.2 LESSEE shall pay, upon the execution of the Contract, one (1) year deposit and the annual rentals for years 2000, 2001 and 2002. The deposit shall be non-interest bearing and shall apply to whatever valid claims LESSOR may have against LESSEE in cases of pre-termination or upon the expiration of the term of this Contract.

6.3 The subsequent stipulated annual rental shall be paid by the LESSEE at

demand or notice, every year thereafter within the first ten days of the month of the succeeding year. Should the LESSEE fail to pay the amount due or any part thereof within the period stipulated, a penalty of two percent (2%) per month of delay shall be imposed until the amount due is paid. For the purpose of computing the penalty, delay shall be computed on a daily pro-rata basis.

7.0 USE OF PREMISES

7.1 LESSOR authorizes LESSEE at its own expense, to build, construct, and install in or upon the leased area such material loading/unloading and handling facilities, fixtural structures, equipment, building and other improvements as LESSEE may deem necessary, proper and convenient in connection with the requirements of its sintering plant, subject to the pertinent rules and regulations of PIA; LESSEE shall submit the appropriate plans for LESSOR'S approval before the commencement of any construction, improvement or demolition activity.

7.2 LESSEE shall use the leased area exclusively in connection with the requirements of its sintering plant and shall not use or permit the use of the leased area, or any part thereof, for any purpose contrary to law, morals, good customs and public policy.

7.3 LESSEE shall provide for the proper and safe disposal of any and all hazardous toxic wastes or substances within the leased area with the approval of LESSOR. LESSEE shall observe the provisions and standards regarding environmental waste discharges prescribed by LESSOR or by the appropriate governmental agencies. LESSEE shall confine within its leased area its waste, raw materials and finished products. LESSEE shall ensure that no foul odor is emitted outside its leased area.

7.4 LESSEE shall immediately comply with existing and future rules and regulations, prescribed by LESSOR regarding the business of LESSEE, its use and occupancy of the leased areas, including securing the proper permits, licenses, clearances, and prompt payment of prescribed taxes, fees, and charges.

8.0 REVERSION OF OWNERSHIP OF IMPROVEMENTS

Upon the termination/expiration of the term of this Contract or any renewal hereof, subject to the provision in paragraph 4.1, LESSEE shall peaceably surrender possession of the leased area to LESSOR or the latter's duly authorized representative. The permanent pier facilities introduced by LESSEE listed in Annex "F" hereof shall not be taken out by LESSEE and shall remain in the leased area without any obligation on the part of LESSOR to pay or refund its value or cost to LESSEE. All other facilities, such as but not limited to, unloaders, shiploaders, conveyors, and other material and product handling equipment, and others, may be removed or retained by LESSEE.

The abovementioned permanent pier facilities shall likewise accrue to the LESSOR in case of pre-termination of this Contract by the LESSOR pursuant to the provisions of Section 3.2 hereof, or in case of voluntary termination by LESSEE pursuant to Sec. 3.3.3 hereof.

9.0 REPRESENTATIONS AND WARRANTIES

Each party represents and warrants to the other that: (a) it has all the requisite power and authority to enter into and perform this Contract, (b) all necessary actions, corporate or otherwise, for the execution and performance of this Contract and transactions contemplated herein have been duly obtained and are in full force and effect, and (c) this Contract constitutes its valid and binding obligation enforceable in accordance with its terms and conditions.

10.0 LESSOR COVENANTS

10.1 LESSOR warrants that LESSEE shall have peaceful and quiet possession and enjoyment of the PROPERTY throughout the term of this Contract. LESSOR represents further that it has the sole, full and unrestricted right over the leased areas without any lien, charges, or encumbrances on or against the ownership of or title to the leased areas.

10.2 In the event that LESSEE is deprived of or interrupted in its peaceful and quiet possession and enjoyment of the leased areas through any fault of the LESSOR, LESSEE, without prejudice to the other remedies available under the law, shall have the right to claim reimbursement from the LESSOR of any amount paid by LESSEE under this Contract in accordance with Section 4.1 herein.

10.3 LESSOR shall cause the registration of this Contract at LESSEE's expense in all government instrumentalities as may now or hereinafter be required by law or regulations.

11.0 LESSEE COVENANTS

11.1 LESSEE, during its occupancy of the leased areas, shall hold LESSOR free and harmless from any damage, liability or responsibility, penalty, and/or judgments by reason of any damage or injury to any person or property arising out of or as a consequence of LESSEE's use, occupation and control of the leased areas at any time during the term of this lease contract, including those resulting from any work in connection with any construction, alteration, or improvements in the leased areas, except when caused by the express act or negligence of LESSOR or its duly authorized agent or representative.

11.2 To the extent applicable, LESSEE shall observe strictly all prevailing laws, rules and regulations imposed by the Republic of the Philippines.

12.0 ASSIGNMENT AND SUBLEASE

12.1 LESSEE may not assign or transfer any of its rights under this Contract or sublease the leased areas, or a portion thereof, without prior written consent of LESSOR, provided that LESSOR shall not withhold such consent unreasonably.

12.2 The assignment or transfer shall be subject to the same terms and conditions herein provided. Any lease rights and interests accruing to third parties in violation of this provision shall not bind LESSOR. In case of sublease, LESSEE shall remain liable to LESSOR in respect of this Contract.

12.3 In case of sublease, the term of the sublease contract shall be co-terminus with the term of this Contract.

13.0 SECURITY OF AREA AND PREMISES

LESSEE shall provide security measures to protect the leased area and premises against any trespasser or intruder, provided, that LESSOR shall not be liable for any loss or damage suffered by LESSEE resulting from any theft, robbery and other crimes committed within the leased area.

14.0 RIGHT OF INSPECTION

LESSEE shall allow LESSOR or any of the latter's authorized representative access to the leased area and premises, even without court order, for any lawful purpose. The same may be deemed necessary pursuant to the latter's management responsibility over the PIE-MO estate and proper observance of the terms and conditions of this Contract.

15.0 TAXES

The lease rental stated in paragraph 6.0 does not cover any government tax such as realty tax on permanent improvements or fee which any law or regulation imposes or may impose in the future. LESSEE agrees that when the law levies such government tax or fee, this shall be paid by LESSEE to LESSOR, together with the lease rental and LESSOR will be responsible for forwarding this to the appropriate government agency. In no case shall LESSEE remit such tax or fee to the LESSOR after the due date.

16.0 NON-WAIVER

The failure of either party hereto to insist or enforce a strict performance of any or all of the terms and conditions of the covenant hereof and other related instruments shall not be deemed or anyway construed as a relinquishment or waiver of any right or remedy such party may have, and shall not affect the validity or enforceability thereof or right of such party to demand performance of such terms and conditions, nor shall be construed as a waiver or any subsequent breach of condition herein contained, which shall be deemed to have been made unless expressed in writing and signed by such party.

17.0 FORCE MAJEURE

No party shall be responsible or liable to the other in any manner whatsoever

result of force majeure such as typhoon, conflagration, fire, widespread epidemic, earthquake, lightning and other similar natural calamities, or for those events caused by war, rebellion, civil commotion, strikes, lock-outs and industrial disputes, explosion, not directly or indirectly within the control of each party.

18.0 GOVERNING LAW

The provisions of this Contract shall be governed in all respects by and construed in accordance with the laws of the Republic of the Philippines.

19.0 AMICABLE SETTLEMENT

Any and all disputes, controversies and conflicts between the parties in connection with this Contract shall, in so far as possible, be settled amicably.

20.0 ARBITRATION

20.1 Failure to arrive at an amicable settlement, any and all disputes, controversies and conflicts arising out of or in connection with this Contract shall be submitted to arbitration proceedings in accordance with the laws on arbitration of the Philippines;

20.2 The arbitration proceedings shall be conducted in English. The venue of the arbitration will be in Cagayan de Oro City, Philippines.

20.3 There shall be three (3) arbitrators and the parties shall be entitled to choose and provide one arbitrator each. The arbitrators appointed by the parties shall choose the third arbitrator.



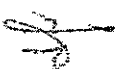
20.4 The cost of arbitration shall be borne by any or both of the parties, as determined by the arbitrators.

21.0 VENUE OF ACTIONS / ATTORNEY'S FEES / COSTS OF SUIT

Should any party be constrained to institute court action to protect its interests, venue of such action shall only be before the proper courts in Cagayan de Oro City. The prevailing party shall be entitled to attorney's fees and costs of suit in amount not less than P 50,000.00.

22.0 CONTINUING PERFORMANCE

During the period of submission to arbitration and thereafter until the granting of the arbitral award, the parties, shall, except in the event of termination, continue to perform all their obligations under this Contract without prejudice to a final adjustment in accordance with the said award.



23.0 BINDING EFFECT OF CONTRACT

This Contract shall be binding upon the successors, assigns, executors, and administrators of the parties hereto, provided, the other party is properly notified in writing of such successors, assigns, executors, and administrators before the latter act in such capacities.

24.0 AMENDMENT OF CONTRACT

This Contract may not hereafter be modified or altered except by instrument in writing duly signed by the parties hereto.

25.0 NOTICES

Any and all notices or other forms of communication required or appropriate to be given under this Contract shall be in writing and shall be personally delivered or transmitted by registered mail, postage pre-paid, at the parties' addresses hereinabove set forth.

26.0 DOCUMENTS INCORPORATED

The following documents shall be deemed incorporated by reference to form as integral parts of this Contract:

1. Presidential Decree No. 538, as amended, as applicable;
2. Rules and Regulations to Implement Presidential Decree No. 538, as amended;
3. PIA Certificate of Registration of LESSEE; and
4. Applicable resolutions of the PIA Board pursuant to Presidential Decree No. 538 as amended.

IN WITNESS WHEREOF, the parties have hereunto set their hands this 18th day of July, 2002 at Sta. Cruz, Tagoloan, Misamis Oriental.


PHIVIDEC Industrial Authority
By:



ENGR. GABRIEL B. EVANGELISTA

Philippine Sinter Corporation
By:


MR. TOSHIYUKI MATSUMOTO

SIGNED IN THE PRESENCE OF:





ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
PROVINCE OF MISAMIS ORIENTAL)
MUNICIPALITY OF TAGOLOAN) S.S.

BEFORE ME, personally appeared the following:

1. **ENGR. GABRIEL B. EVANGELISTA**, with CTC No. 10153051,
issued on January 16, 2002 at Villanueva, Misamis Oriental; and
2. **MR. TOSHIYUKI MATSUMOTO**, with Passport No. TF-1127240
issued on 9/21/98 at JAPAN

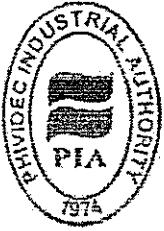
to me known to be the same persons who executed the foregoing instrument and acknowledged to me that the same is their free and voluntary act and deed and of the Corporations they respectively represent.

This instrument consists of ten (10) pages including this page where this acknowledgment is written, duly signed by the parties and their instrumental witnesses and relates to a contract of Lease of Foreshore/Offshore Area.

WITNESS MY HAND AND SEAL, this 15th day of July, 2002 at Santa Cruz, Tagoloan, Misamis Oriental.

Doc. No. 175 ;
Page No. 35 ;
Book No. III ;
Series of 2002.

Joan M. Jabar
JOAN M. JABAR
Notary Public
Until December 31, 2002
PTR No. 00385150-1/15/02
Cagayan de Oro City
Tagoloan, Misamis Oriental



Republic of the Philippines
PHIVIDEC INDUSTRIAL AUTHORITY
PHIVIDEC INDUSTRIAL ESTATE-MISAMIS ORIENTAL
 Sta. Cruz, Tagoloan, Misamis Oriental

ANNEX A

SECRETARY'S CERTIFICATE

I, **RAUL D. RAGANDANG**, of legal age, Filipino, with address at PHIVIDEC INDUSTRIAL ESTATE-MISAMIS ORIENTAL, under oath, state and certify:

1. That I am the Corporate Secretary of the PHIVIDEC INDUSTRIAL AUTHORITY (PIA), a government-owned and controlled corporation duly organized and existing pursuant to P.D. 538, as amended, with principal office address at Sta. Cruz, Tagoloan, Misamis Oriental.

2. That at a meeting of the Board of Directors held at the PHIVIDEC Industrial Authority Conference Room, Sta. Cruz, Tagoloan, Misamis Oriental on April 27, 2001 the following resolution was passed and approved and is now in full force and effect:

"BOARD RESOLUTION NO. XXI-259 s. 2001"

RESOLVED, as it is hereby resolved, to approve, as it is hereby approved the **Lease Contract of Foreshore/Offshore between PIA and Philippine Sinter Corporation**, a copy of which is attached and made an integral part of this resolution."

3. The said resolution has not been revoked, altered, modified or amended, and the same is still in full force and effect.

4. That the foregoing resolution adopted and approved by the Board of Directors is the same as that which appears in the Minute Books of the Corporation which is under my custody.

FURTHER AFFIANT SAYETH NONE.

IN WITNESS WHEREOF, I have hereunto signed these present and affixed the Corporation seal this 4th of JUNE, 2001.

ATTY. RAUL D. RAGANDANG
 Corporate Secretary

SUBSCRIBED AND SWORN to before me this 4th day of JUNE, 2001 affiant exhibited to me his Community Tax Certificate No. 11536395 issued at Tagoloan, Misamis Oriental on January 23, 2001.

Doc. No. 47 ;
 Page No. 20 ;
 Book No. III ;
 Series of 2001.

CHARLES A. GALANILLA
 Notary Public
 UNTIL: SEP 31, 2004
 PTR NO. 12755-1/15/2001
 IBP NO. 12755-1/15/2001
 Tagoloan, Misamis Oriental

CORPORATE SECRETARY'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, CARLOS G. PLATON, Filipino, of legal age and with business address at 6th & 7th Floors, Tuscan Building, 114 Herrera St., Legaspi Village, Makati City, do hereby certify:

That I am the duly elected and incumbent Corporate Secretary of PHILIPPINE SINTER CORPORATION, a corporation duly organized and existing in accordance with Philippine laws with office address at 23rd Floor, 6788 Ayala Avenue, Oledan Square, Makati City; that as such Corporate Secretary, I am the custodian of the Minute Books of the Corporation and that said Minute Books show that at a duly constituted special meeting of the Board of Directors of said corporation on July 17, 2002, the following resolutions were unanimously adopted and approved:

"RESOLVED, That MR. TOSHIYUKI MATSUMOTO, President and Chairman of this Corporation be, as he is hereby, authorized to sign for and in behalf of the Corporation the Foreshore - Offshore Lease Contract between Phividec Industrial Authority and Philippine Sinter Corporation."


IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of July 2002.


CARLOS G. PLATON
Corporate Secretary

SUBSCRIBED AND SWORN to before me on this 17th day of July 2002 at the City of Makati; affiant exhibiting to me his Community Tax Certificate No. 02062329 on January 7, 2002 at Makati City.

Doc. No. 206;
Page No. 60;
Book No. 1;
Series of 2002.

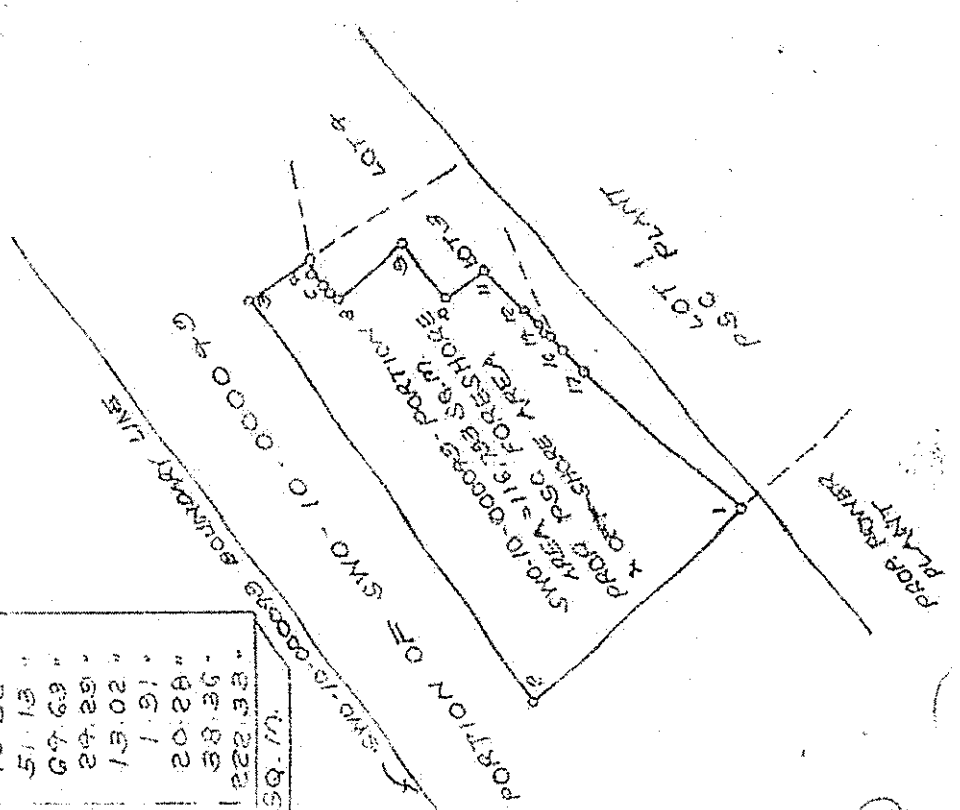
CGP/sg
P-SINTER/SG-ICONT-MATSUMOTO


NOTARY PUBLIC
Until December 31, 2002
ISAGANI ELIAS A. ELACIO
NOTARY PUBLIC
UNTIL DECEMBER 31, 2002
PTR NO. 7726213/JAN. 31, 2001
MAKATI CITY



TIE LINE: FROM BELLMAN'S
PLS-923, VILLANUEVA PUBLIC
LAND SUBDIVISION TO COR. 11:
S 54° 30' W 1,864.81 m

NICAL DESCRIPTION	
RSC FORESHORE & OFF-SHORE	
BEARING	DISTANCE
N 64° 53' W	300.00 m
N 53° 51' E	531.15 "
S 37° 11' E	80.00 "
S 72° 45' W	17.97 "
S 42° 36' W	10.80 "
S 49° 29' W	9.22 "
S 28° 22' W	8.74 "
S 40° 10' E	84.62 "
S 40° 11' W	70.32 "
S 53° 45' E	51.13 "
S 40° 20' W	67.63 "
S 50° 38' W	24.29 "
S 41° 27' W	13.02 "
S 41° 50' W	1.91 "
S 41° 29' W	20.28 "
S 43° 42' W	38.36 "
S 40° 00' W	222.33 "
= 16,793 SQ. M.	



SKETCH PLAN

PORTION OF SWO-10-000099
OF
PROPOSED FORESHORE
& OFF-SHORE AREA
AS PREPARED FOR
PHIVIDEC INDUSTRIAL AUTHORITY

SITUATED IN THE
BARRIO OF NABACANAN
MUN./CITY OF VILLANUEVA
PROVINCE OF MIMAMIS ORIENTAL
ISLAND OF MINORANAO

Containing an area of 16,793 SQ. M.

BEARINGS TRUE

SCALE 1:8000

This is to certify that this is true and correct plan as

Portion of SWO-10-000099, as subdivided

Based on the approved plan on file

For PIA reference purposes

Only

Certified Correct

LEBY K. LINBANTONG
Geomatics Engineer

5301 08-01-2000

Registration Certificate No. 11 Date of Issue

This is issued thru the request of FOR PIA

REFERENCE ONLY

for reference not for Registration



Republic of the Philippines
PHIVIDEC INDUSTRIAL AUTHORITY
PHIVIDEC INDUSTRIAL ESTATE - MISAMIS ORIENTAL
Tagoloan, Misamis Oriental

CERTIFICATION

TO WHOM IT MAY CONCERN:

This is to certify that **PHILIPPINE SINTER CORPORATION** is a registered MANUFACTURING/PROCESSING Enterprise of the PHIVIDEC Industrial Authority (PIA) since January 2, 1975.

This certification is issued upon the request of **PHILIPPINE SINTER CORPORATION** for its Ore Blending Facility Environmental Impact Study application with the Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR).

Given this 5th day of October 2021 in the PHIVIDEC Industrial Authority Administration Building, Tagoloan, Misamis Oriental.


JOSE GABRIEL M. LA VIÑA
Administrator/CEO

"CELEBRATE PHILIPPINES 500"



PHILIPPINE SINTER CORPORATION

Phividec Industrial Estate
Villanueva, Misamis Oriental
Tel (08822) 740-187, 740-156, 890-1111~14 Fax 740-255



February 7, 2022

ENGR. ALBERTO JUDE S. MONTES

OIC - Administrator
PHIVIDEC Industrial Authority
MCT Administration Building
9001 Tagoloan, Misamis Oriental

*Received:
CHANCE SALANDA
2/7/2022
11:08 AM*

SUBJECT: SUBMISSION OF LETTER OF INTENT

Dear Administrator MONTES,

Greetings!

Philippine Sinter Corporation (PSC) is an industrial venture of JFE Steel Corporation of Japan. The sinter plant has a rated annual capacity of **5.0 million metric tons-sintered iron ore per year** and for more than 42 years, PSC has continuously produced high quality sintered ore product which has consistently been among the country's top exports.

PSC is now on the final stage of an Environmental Impact study of putting up an Ore Blending Facility inside PSC. In an Ore Blending process, PSC will conduct mixing of ores in the yard for shipment without undergoing the sintering process. One of the main features of this project is the construction of an additional 324-m berth. PSC believes that this is necessary for the sustained operation of PSC and a very good investment potential inside PHIVIDEC.

During the **Substantive Review** by the DENR-EMB Head Office and Technical Experts of the submitted Environmental Performance Report & Management Plan (EPRMP), the panel required PSC to submit a letter of intent addressed to PHIVIDEC, duly acknowledged by PHIVIDEC through writing, that PSC has intention to lease a foreshore area that will be affected by the proposed berth expansion.

We are therefore writing this letter to express our formal intent to lease a total of 39,701 m² of offshore area subject to the final approval of the Ore Blending project of our parent company, JFE Steel Corporation of Japan. We also request your good office for a formal acknowledgement of this intent.

Thank you very much for your continued support especially .

Very Truly Yours,


Nilo C. Sagrado

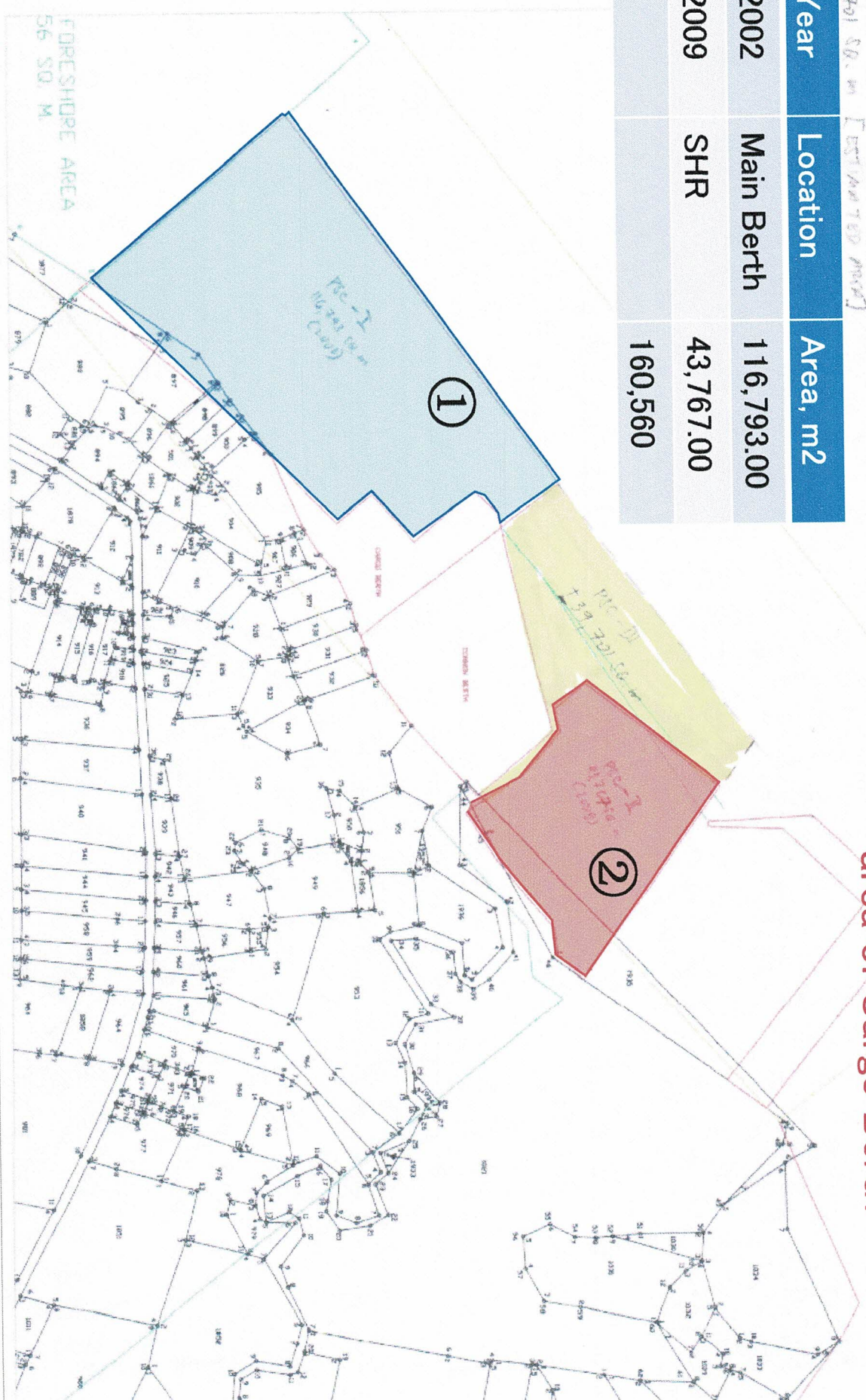
VP & Resident Mgr.- Sinter Plant

Coverage of Offshore Lease Agreement Between PSC & PHIVIDEC

Source: PHIVIDEC

FORESHORE AREA			
I - 116,793 SQ. M (2002)			
II - 43,767 SQ. M (2009)			
III - 24,791 SQ. M [ESTIMATED AREA]			
Year	Location	Area, m ²	
① 2002	Main Berth	116,793.00	
② 2009	SHR	43,767.00	160,560

PSC has only two Offshore lease agreements and this does not include sea area of Cargo Berth





Republic of the Philippines
PHIVIDEC INDUSTRIAL AUTHORITY
PHIVIDEC INDUSTRIAL ESTATE - MISAMIS ORIENTAL
Tagoloan, Misamis Oriental

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This certification is issued upon the request of **PHILIPPINE SINTER CORPORATION** for its Ore Blending Facility Environmental Impact Study application with the Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR).

Given this 5th day of October 2021 in the PHIVIDEC Industrial Authority Administration Building, Tagoloan, Misamis Oriental.


JOSE GABRIEL M. LA VIÑA
Administrator/CEO

Annex 1.5

Geotagged photos of PSC facilities indicated in the ECCs



5.5 MW Diesel Generator



17.9 MW Sinter Cooling Waste Heat recovery



18-ha Yard



Villanueva, Misamis Oriental, Philippines
Tambobong, Villanueva, 9002, Misamis Oriental,
Lat 8.558047, Long 124.761058
02/05/2022 10:08 AM

Burnt Lime Kiln 1



Villanueva, Misamis Oriental, Philippines
Katipunan, Villanueva, 9002, Misamis Oriental,
Lat 8.569291, Long 124.765629
02/05/2022 10:06 AM

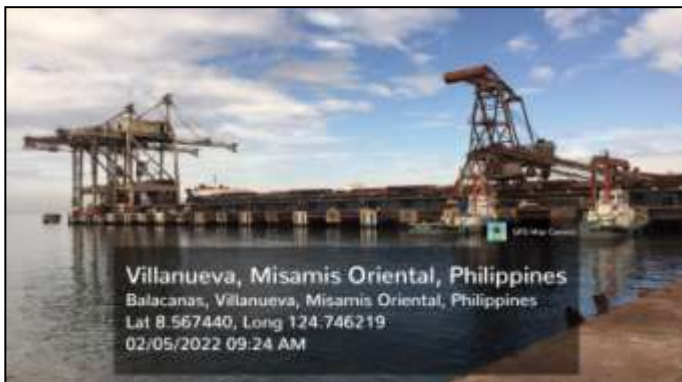
Burnt Lime Kiln 2



Burnt Lime Kiln 3



Coke Grinding



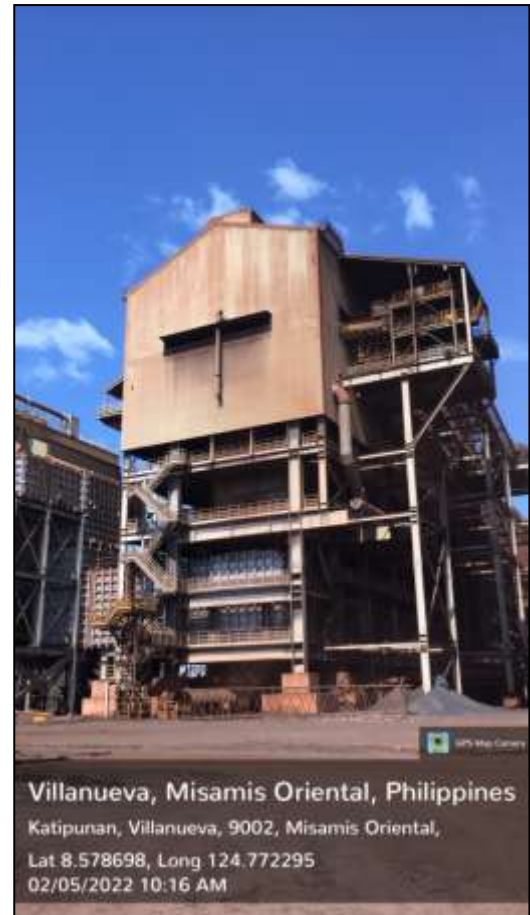
Main Berth



Cargo Berth



Dual Fuel Generator Room



Sinter Machine

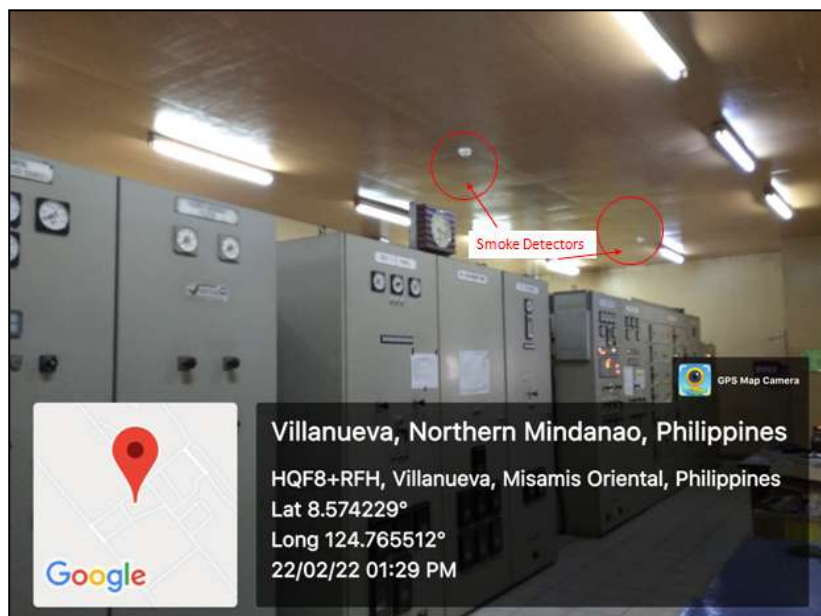
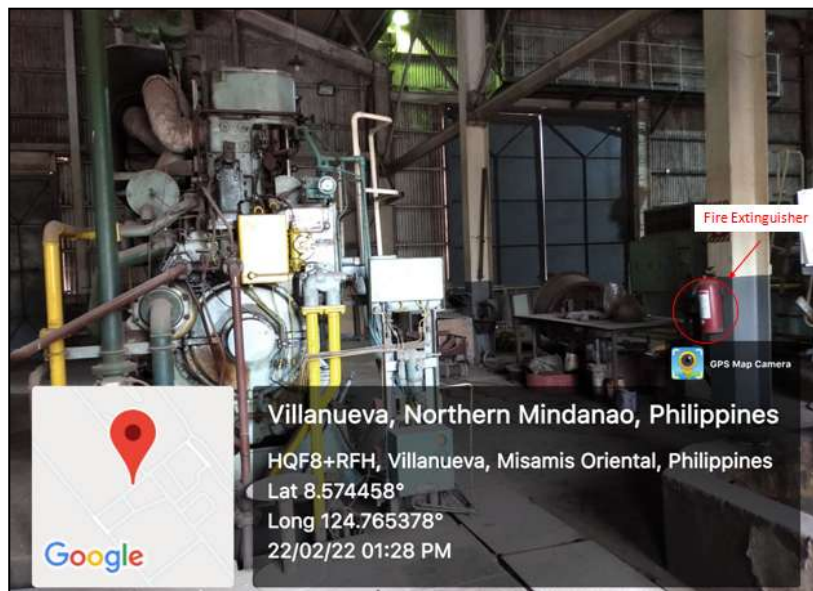
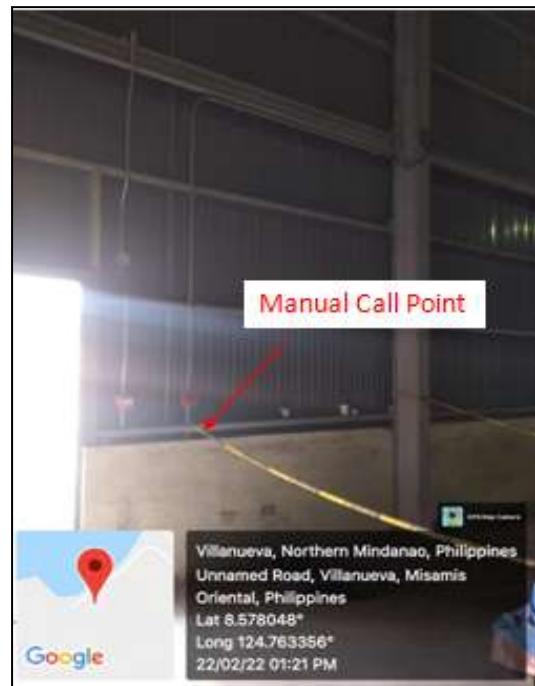


Material Blending and Mixing

Fire Detection and Alarm System in SHR Facility and Coal Fuel Facility









Philippine Sinter Corporation
Villanueva, Misamis Oriental

INTEGRATED MANUAL

Section	: APPENDIX	Doc. No.	: IM-APX-003-05
Subject	: OIL SPILL CONTAINMENT, RECOVERY & CLEAN-UP PROGRAM (APPENDIX D - EMP-05)	Revision No.	: 4
Prepared by	: Safety Officer / PCO / Lab Staff / PLN-MGR / SNT-MGR / MGR-ELE / MGR-MEC / MGR-SUMA / MGR-HRGA / MGR-PWP / MGR & SVR -MTH / BL&HLM-GFM / Div. Mgr-Production & Maintenance		
Reviewed by	: PCO / IMR <i>[Signature]</i>	Effectivity Date	: July 1, 2019
Approved by	: VP & RESIDENT MANAGER <i>[Signature]</i>	Page 1 of 4	

SIGNIFICANT ASPECT:

Abnormal / Accidental Toxic Water Discharges – Petroleum Product Spills from shops , storage tanks, washing area, bus terminal and used/spent cooking oil & spills (from kitchens) (EA-02B-01) and during unloading, hauling and storage (EA-02C-01)

ENV'L. IMPACT

Water Pollution

SOURCE/S:

Warehouse, Sinter, Mech'l., Elect'l., Powerhouse, BFO Storage Tanks, Mat'l. Handling, Uniflow Kitchen/Admin Canteen, Burnt Lime, Holding Station, Wash Rack, SR-1/2 , SHR operation, Contractor's area, Laboratory, Planning-Equipment Refreshment Projects

OBJECTIVE:

To further practice oil spill containment, recovery & clean-up system measures along PSC coastal waters & land environment in order to conform to DAO 34 & 35 & Marine Pollution Decree (PD 600) requirements

TARGET:

To attain PSC – Internal Control Specification on Oil/Grease [< 2.5 mg/liter] along PSC coastal waters at all times

ACTION PLAN		RESPONSIBLE POSITION	SCHEDULE	PERFORMANCE INDICATOR (MEASURABLE -TARGET)	MONITORING / MEASUREMENT
A. Management Plans A.1 Continual / On-going					
1.	Training, orientation of all new employees and contractors Subject : Oil Spill Discharge & Containment. <i>Coordinate with supplier on orientation for above subject.</i>	Safety Officer, PCO, SV/SUMA	1x / 3-years (At least) or as needed	At least one-session / month (briefing) Lower Oil / Grease @ NSP /SSP discharge stream	CSC meeting/SMR Report Actual site survey /inspection
2.	Conduct information, education and communication campaign to Villanueva residents and other interested stakeholders .e.g Environmental Youth camp with EMB-10 /	PCO, Mgr-HRGA	1x / yr-YC 1x/Ctr-In-plant tours	-At least 50-pax (youth camp) / Feedback rating -At least 10-pax / Ctr (in-plant)	MMT-CMVR report SMR Quarterly report HRGA Dept plant tour



Philippine Sinter Corporation
Villanueva, Misamis Oriental

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Reviewed by	: PCO / IMR <i>Ally</i>	Page 2 of 4	
Approved by	: VP & RESIDENT MANAGER <i>JHG</i>		

In-plant tours / Industry forum		As needed	-At least 1-session /yr(industry forum	record	
ACTION PLAN		RESPONSIBLE POSITION	SCHEDULE	PERFORMANCE INDICATOR (MEASURABLE -TARGET)	MONITORING / MEASUREMENT
3. Joint Inspection with Philippine Coast Guard region 10 on PSC plant facilities (potential sources of oil spill)	PCO, Div. Mgr-Production, Mgr-MTH,SNT,SUMA	At least 1x /yr	No Major Violation raised during inspection	Inspection report / photographs	
4. Car wash only in designated area	HRGA- MGR	Continual	No evidence of car washing outside designated area	Spot check actual practices	
5. Strict Implementation on MAIN /CARGO BERTH RESTRICTIONS : NO BILGE WATER discharging , WASHING of DECKS,USED OIL discharging to SEA	PCO , MTH-MGR	Continual	Oil / Grease at Main /Cargo Berth Waters < PSC-ICS limit	Spot check actual practices / SMR Qtrly	
6. Periodic review of Tanker Emergency Response Plan of Pilipinas Shell (Bitumen / Gas Discharging) and PETRON CORP (BFO discharging /Bunkering)	PCO , MTH-MGR,IMR, CS Chairman, Div.	At least 1x / 3-years	-NO MAJOR OIL SPILL noted -Implemented at least 1-drill /yr -Reviewed /Updated OCP on Powerhouse & Main Berth Bunkering	ERP review meeting minutes Oil Spill Drill Schedule / Documentation OCP on PH bunkering	
7. Periodic Oil Spill Containment & Recovery Drill					
8. Periodic review of Powerhouse Bunkering operation OCP	Mgrs-Prod / Maint.				

COMPILED COPY

JUN 11 2019

Documentation
OCP on PH bunkering

DDCC

CONTROLLED COPY
JUL 10 2019
DDCC



Philippine Sinter Corporation
Villanueva, Misamis Oriental

INTEGRATED MANUAL

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Reviewed by	: PCO / IMR <i>[Signature]</i>	Page 3 of 4	
Approved by	: VP & RESIDENT MANAGER <i>[Signature]</i>		

ACTION PLAN	RESPONSIBLE PERSON	SCHEDULE	PERFORMANCE INDICATOR	MONITORING / MEASUREMENT
B. Operational Improvement Plan				
B.1 Continual / On-going				
1. Periodic inspection / cleaning of Oil/Water Separators (based on WI-ECC-064) and lubricants storage areas	All Field Dept. Mgts./SSV	Continual	Well maintained oil-water separators / no traces of oil spill on storage areas	Weekly Schedules
2. Periodic inspection of Heavy Fuel Oil tank farm facilities (valves, pipelines, containment walls, tanks)	WHSE - SV	Continual	No evidence of oil spill	Weekly Schedules
3. Periodic inspection of Sinter day tank facilities and used oil recycling facilities	SNT - MGR	Continual	No evidence of oil spill	Activity (Outside Opt) Logbook Entry
4. Periodic inspection of Powerhouse Oil Storage tanks and facilities	MTH - MGR / MEC - MGR	Continual	No incident of oil spill and tank oil overflow	MTH Weekly Schedules / Spot Check
5. Periodic inspection of Burnt Lime oil storage tank and facilities	BL/HL - GFM	Continual	No evidence of oil spill and tank overflow	Activity logbook entry (BLM Operator)
6. Conduct periodic inspection/test of MTH Settling Pond Effluent Water Quality (Oil/Grease), and check Lubrication, Mobile Shop and Contractors' Shed for oil spill traces	Lab Staff / MTH-SVR	Continual	Lower Oil / Grease content [PSC-ICS]	Oil spill spot report Inspection photographs
7. Recycling of used petroleum products (Lube oil / Bunker oil / Transformer oil / Engine oil) to SM Ignition Furnace	SNT - Mgr.	Continual	No. of liters recycled	Activity (Outside Opt) Logbook Entry, SMR

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PSC

JUL 01 2019



Philippine Sinter Corporation
Villanueva, Misamis Oriental

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Reviewed by	: PCO / IMR <i>Black</i> <i>PHC</i>	Page 4 of 4	
Approved by	: VP & RESIDENT MANAGER <i>JS</i>		

8. Periodic inspection/cleaning of oil around machine shop equipments & lube oil storage areas	MEC - MGR	Continual	No evidence of oil spill	Oil spill spot report Inspection photographs
9. Periodic inspection of Laboratory spent oil containment	Lab-Staff	Continual	No evidence of oil spill	
10. Purchase of Oil spill Dispersant from PCG duly accredited supplier for Tugboats, Power House-DG and BFO Tank Farm	MTH /SUMA - MGR	Continual	At least 1-pail of oil dispersant available on identified site	- PRPO tracking - Spot check

Records of Revision:

Revision Number	Description	Effectivity Date
1	Update of responsibility and inclusion of new action plans	Sept. 19, 2009
2	Inclusion of joint annual inspection with PCG-region 10 on potential sources of oil spill facilities in PSC / Purchase of oil spill dispersant/ Laboratory spent oil containment area inspection	April 5, 2010
3	Update of activities and designations	July 10, 2012
4	Update: Objectives, Targets, Action Plan	July 1, 2019

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PSC
JUL 01 2019
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Philippine Sinter Corporation
Villanueva, Misamis Oriental

INTEGRATED MANUAL

Section	: APPENDIX	Doc. No.	: IM-APX-003-03
Subject	: PETROLEUM PRODUCT WASTE MANAGEMENT PROGRAM (APPENDIX D - EMP-03)	Revision No.	: 6
Prepared by	: PCO / Lab Staff / CSR-MGR / PLN-SV / SNT-MGR / MGR-MEC / SV-SUMA / MGR-HRGA / MGR & SVR-MTH / BLP&HLP-GFM / PWP-MGR / ELE-MGR		
Reviewed by	: PCO /IMR <i>Alind</i>	Effectivity Date	: May 8, 2020
Approved by	: VP & RESIDENT MANAGER <i>Q</i>	Page 1 of 4	

SIGNIFICANT ASPECT:

Toxic Water Discharges – Petroleum Product and Organic Solvent Spills (EA-02A-01)

ENV'L. IMPACT

Water Pollution

SOURCE/S:

Warehouse, Sinter, IMPEX-Material, Mech'l., Powerhouse, Mat'l. Handling, Contractor's area, Burnt Lime, Holding Station, Vehicle Wash Rack station, SR-1/2, SHR Operation, Planning-Equipment Refreshment Projects

OBJECTIVE:

1. To conform with the government regulations on Water Quality and Effluent Standards [DAO 2016-08]
2. To maintain a quality of water that protects human health and aquatic life

TARGET:

1. To attain DAO 2016-08 – PSC Internal Control Specifications on Oil/Grease @ Settling Pond Discharges (< 10 mg/liter) at all times

ACTION PLAN	RESPONSIBLE PERSON	SCHEDULE	PERFORMANCE INDICATOR (MEASURABLE - TARGET)	MONITORING / MEASUREMENT
A. Management Plans A.1 Continual / On-going				
1. Training, orientation of all new employees and contractors Subject: Oil Spill Discharge & Containment Coordinate with supplier orientation for above subject	Safety Officer, PCO, Petroleum product supplier SV – SUMA	1x / 3-years (At least) or as needed	At least one-session / month (briefing) Lower Oil / Grease @ NSP /SSP discharge stream	CSC meeting/SMR Report Actual site survey /inspection
2. Conduct information, education and communication campaign to Villanueva residents and other interested stakeholders e.g Environmental Youth camp with EMB-10 / In-plant tours / Industry forum	PCO, Mgr-HRGA	1x / yr-Youth Camp 1x/Qt-In-plant tours As needed	-At least 50-pax (youth camp) / Feedback rating -At least 10-pax / Qt (in-plant) -At least 1-session /yr (industry forum)	MMT-CMVR report SMR Quarterly report HRGA Dept plant tour record

MAY 08 2020



Philippine Sinter Corporation
Villanueva, Misamis Oriental

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Reviewed by	: PCO /IMR <i>Alvin</i>	Page 2 of 4	
Approved by	: VP & RESIDENT MANAGER <i>[Signature]</i>		

ACTION PLAN	RESPONSIBLE PERSON	SCHEDULE	PERFORMANCE INDICATOR (MEASURABLE -TARGET)	MONITORING / MEASUREMENT
3. Car wash only in designated area	HRGA-MGR	Continual	No evidence of car washing outside designated area	Spot check actual practices
B. Operational Improvement Plan				
B.1 Continual / On-going				
1. Periodic inspection / cleaning of Oil/Water Separators (based on WI-ECC-064) and lubricants storage areas	All Field Dept. Mgrs.	Continual	Well maintained oil-water separators / no traces of oil spill on storage areas	Weekly Schedules
2. Periodic inspection of Heavy Fuel Oil tank farm facilities (valves, pipelines, containment walls, tanks)	Warehousing SV	Continual	No evidence of oil spill	Weekly Schedules
3. Periodic inspection of Sinter day tank facilities and used oil recycling facilities	SNT – MGR	Continual	No evidence of oil spill	Activity (Outside Opt) Logbook Entry
4. Periodic inspection of Powerhouse Oil Storage tanks and facilities	MTH – MGR / MEC - MGR	Continual	No incident of oil spill and tank oil overflow	MTH Weekly Schedules / Spot Check
5. Periodic inspection of Burnt Lime oil storage tank and facilities	BLP/HLP– GFM	Continual	No evidence of oil spill and tank overflow	Activity logbook entry (BLM Opt)
6. Conduct periodic inspection/test of Settling Pond Effluent Water Quality (Oil/Grease), and check Lubrication, Mobile Shop and Contractors' Sined for oil spill traces	Lab Staff / MTH-SVR	Continual	Lower Oil / Grease content [$<$ PSC– ICS]	Oil spill spot report Inspection photographs
7. Usage of used oil to SM Ignition Furnace Policy	SNT – Mgr.	Continual		

CONTROLLED COPY

MAY 08 2020

DDCC



Philippine Sinter Corporation
Villanueva, Misamis Oriental

INTEGRATED MANUAL

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Prepared by	: PCO / Lab Staff / GSR-MGR / PLN-SV / SNT-MGR / MGR-MEC / SV-SUMA / MGR-HRGA / MGR & SVR-MTH / BLP&HLP-GFM / PWP-MGR / ELE-MGR		
Reviewed by	: PCO /IMR <i>M. L. L. L.</i>	Effectivity Date	: May 8, 2020
Approved by	: VP & RESIDENT MANAGER <i>[Signature]</i>	Page 3 of 4	

<ul style="list-style-type: none">- Controlled filtration / charging of used oil at Daytank (1-drum/day)- Prioritize recycling on dirt and water free used Oil- Disposal through duly accredited waste transporter / Treater [sludge, soiled, emulsified used oils]			<div>No occurrence of direct filling to Daytank</div> <div>Vol. of segregated used oil drums</div> <div>Volume of used oil drums sold</div>	<div>Monthly Monitoring</div> <div>Outside Optr Logbook</div> <div>SUMA Report</div>
8. Periodic inspection/cleaning of oil around machine shop equipments & lube oil storage areas	MEC - MGR	Continual	No evidence of oil spill	Oil spill spot report
9. Periodic inspection of Laboratory spent oil containment	Lab-Staff	Continual	No evidence of oil spill	Inspection photographs





Philippine Sinter Corporation
Villanueva, Misamis Oriental

INTEGRATED MANUAL

Section	: APPENDIX	Doc. No.	: IM-APX-003-03
Subject	: PETROLEUM PRODUCT WASTE MANAGEMENT PROGRAM (APPENDIX D - EMP-03)	Revision No.	: 6
Prepared by	: PCO / Lab Staff / CSR-MGR / PLN-SV / SNT-MGR / MGR-MEC / SV-SUMA / MGR-HRGA / MGR & SVR-MTH / BLP&HLP-GFM / PWP-MGR / ELE-MGR		
Reviewed by	: PCO /IMR <i>Alind</i>	Effectivity Date	: May 8, 2020
Approved by	: VP & RESIDENT MANAGER		

Records of Revision:

Revision Number	Description	Effectivity Date
1	→ Update or Responsibility, Performance Indicator (Sinter Day Tank Containment Storage Volume) and New Action Plans	September 19, 2009
2	→ Update of action plan contents: training in-charge /Normal usage of Filtering system for used oil/ Additional Inspection, cleaning & containment measures	April 5, 2010
3	→Updating of Responsible persons and department name changes	June 6, 2014
4	→Changes in Policy of Used Oil Usage to Sinter Ignition Furnace	June 27, 2015
5	→ Update: Objectives, Targets, Action Plan	July 1, 2019
6	→ Update Applicable Law and Action Plan	May 8, 2020





WORK INSTRUCTION MANUAL

Section	: ENVIRONMENTAL CONTROLLING	Doc. No.	: WI-ECC-062
Subject	: PROPER HANDLING, COLLECTION AND DISPOSAL OF RAW MATERIAL SPILLAGE AT MAIN BERTH	Revision No.	: 1
Prepared by	: STAFF - MTH DEPARTMENT	Effectivity Date	: April 12, 2013
Approved by	: MGR - MTH DEPARTMENT	Page 1 of 2	

1. RESPONSIBLE PERSON:

Manager - Material Handling Dept.

2. OBJECTIVE:

3. SCOPE:

4. DEFINITION OF TERMS:

None

5. RELATED DOCUMENTS/REFERENCES:

5.1 IM-APX-001 (Appendix B)

- Masterlist of Environmental Aspects [EA-05 Raw Material Spillages, EA-02D-01 Non-Toxic Water Discharges-Raw Material Spills]

5.2 IM-APX-003-10 (Appendix D)

- Environmental Management Program (EMP-09 Spillage Recovery & Utilization)

6. RECORDS GENERATED:

6.1 Main Berth Spillage Hauling

7. WORK DETAILS:

1. No spillage gathering and hauling at Main Berth unless it is known and inspected by Material Handling Department Manager for:
 - 1.1 Control of Uncontaminated or un-mixed spillage against contaminated or mixed spilled materials.
 - 1.2 Prevent materials from going or falling to the seawater.
2. Material Handling Department Manager will assign spillage gatherer at Main Berth with the following condition:
 - 2.1 Pile raw material spillage according to type
 - Uncontaminated material
 - Contaminated or mixed materials
 - 2.2 No throwing of spillage to seawater
 - 2.3 Avoid using water for spillage cleaning.
3. Material Handling Department Manager will assign spillage hauler at Main Berth in the following conditions:
 - 3.1 Hauling should be by type of materials
 - 3.2 No mixing of uncontaminated materials during hauling unless with confirmation or arrangement with the department.

APR 12 2013



Philippine Sinter Corporation
Villanueva, Misamis Oriental

WORK INSTRUCTION MANUAL

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- 3.3 Assigned hauler will proceed to weighing scale and report to Materials Department for recording and accounting of recovered spilled materials.
- 3.4 Disposal or delivery of material should be on the designated type of material in coordination with Sinter Department – Yard Group.
- 3.5 Monitoring and Analysis of spillage generation be party of the cost control report. Prevention or controlling activity be part of this report
4. Annual underwater survey will be conducted at the PSC Main Berth sea-side. (To be coordinated with PCO)
5. Main Berth or Seaborne Security personnel will inform immediately if they notice contamination at seawater.

8. RECORDS OF REVISION:

Revision Number	Reason for Revision	Effectivity Date
1	Countermeasure to avoid incidence of seawater contamination at Main Berth due to cleaning activities using water spray.	April 12, 2013

APR 12 2013

DBCC

ESTIMATED PGA VALUES FOR THE SITE OF THE PROPOSED EXPANSION PROJECT OF PHILIPPINE SINTER CORPORATION CORPORATION LOCATED IN BRGY. BARANGAY KATIPUNAN, VILLANUEVA, MISAMIS ORIENTAL RELATIVE TO SOME ACTIVE SEISMIC SOURCE ZONES USING THE FUKUSHIMA & TANAKA (1990) ATTENUATION RELATION*

Seismic Source Zones	M	R (km)	PGA VALUES (g) FOR VARIOUS SUBSURFACE SITE CONDITIONS				
				Mean Value of A	Soft Soil	Medium Soil	Rock
			Log A	(100%)	(140%)	(87%)	(60%)
Tagoloan River Fault	7	4.2	2.709774601	0.523056406	0.732278969	0.465520202	0.313833844
Cabanglasan Fault	7	19	2.474749159	0.304454981	0.426236973	0.270964933	0.182672988
Central Mindanao Fault	7.5	46	2.294154932	0.200876372	0.281226921	0.178779971	0.120525823
Lanao Fault System	7.5	66.2	2.131918632	0.138258728	0.193562219	0.123050268	0.082955237
Eastern Mindanao Fault	7.5	106.6	1.852295394	0.072622186	0.101671061	0.064633746	0.043573312
PFZ: Lianga Fault	7.5	113	1.811730822	0.066146177	0.092604647	0.058870097	0.039687706
Western Mindanao Fault	7.5	152.7	1.575396275	0.038385765	0.053740071	0.034163331	0.023031459
Cotabato Trench	7.5	190	1.371004068	0.02397607	0.033566498	0.021338702	0.014385642
MF: Daguma Extension	7.5	194	1.349851983	0.022836309	0.031970832	0.020324315	0.013701785
Philippine Trench	7.5	266	0.987680602	0.009918695	0.013886173	0.008827638	0.005951217
Central Mindanao Fault	8	46	2.394318748	0.252983777	0.354177288	0.225155562	0.151790266
Eastern Mindanao Fault	8	106.6	1.993351438	0.100490582	0.140686815	0.089436618	0.060294349
Western Mindanao Fault	8	152.7	1.73106681	0.054933938	0.076907513	0.048891205	0.032960363
Cotabao Trench	8	190	1.534369982	0.034925602	0.048895843	0.031083786	0.020955361
Philippine Trench	8	266	1.161085793	0.014786307	0.02070083	0.013159813	0.008871784
Cotabato Trench	8.5	190	1.679973385	0.048836812	0.068371537	0.043464763	0.029302087
Philippine Trench	8.5	266	1.319788073	0.021308947	0.029832526	0.018964963	0.012785368
Cotabato Trench	9	190	1.804009555	0.064980564	0.09097279	0.057832702	0.038988339
Philippine Trench	9	266	1.459537729	0.029397585	0.041156619	0.026163851	0.017638551

* $\text{Log}_{10} A = 0.41M - \text{Log}_{10}(R + 0.032 \times 10^{0.41M}) - 0.0034R + 1.30$

NOTES:

- M** = Assumed earthquake magnitude
- R** = Shortest distance between the project site and the possible seismic source zone
- PFZ** = Zone
- MF** = Mindanao Fault

Intensity Level	Explanation	Equivalent Ground Acceleration (%g)
I	<i>Hardly Perceptible Shock</i> Felt only by an experienced observer under favorable conditions	0.0002g
II	<i>Extremely Feeble Shock</i> Felt by a small number of persons at rest or in the upper floors of tall buildings	0.0002g - 0.0005g
III	<i>Very Feeble Shock</i> Felt by several persons at rest. Duration and direction may be perceptible. Sometimes dizziness or nausea experienced.	0.00051g - 0.002g
IV	<i>Feeble Shock</i> Felt generally indoors, outdoors by a few. Hanging objects swing slightly. Creaking of frames of houses.	0.0021g - 0.004g
V	<i>Shock of Moderate Intensity</i> Felt generally by everyone. Hanging objects swing freely. Overturn of all tall vases and unstable objects. Light sleepers awakened	0.0041g - 0.016g
VI	<i>Fairly Strong Shock</i> General awakening of those asleep. Some frightened persons leave their houses. Stopping of pendulum clocks. Oscillation of hanging lamps. Slight damage on very old or poorly built structures.	0.0161g - 0.065g
VII	<i>Strong Shock</i> Overturn of movable objects. General alarm, all run outdoors. Damage slight in well-built houses, old wall, etc. Some landslides from hills and steep banks. Cracks on road surfaces.	0.0651g - 0.26g
VIII	<i>Very Strong Shock</i> Many people are panic-stricken. Trees are shaken strongly. Partial to total destruction of some buildings. Changes in the flow of springs and conditions of wells (e.g. drying up of some wells). Sand and mud are ejected from fissures in soft grounds. Formation of cracks in concrete dikes of fishponds. Occurrences of small landslides and rock falls	0.261g - 1.045g
IX	<i>Extremely Strong Shock</i> Widespread panic among people in the affected areas. Partial or total destruction of many buildings. Formation of ground fissures and sand boils. Subsidence of some sites, especially those on soft grounds. Occurrences of major landslides and rock falls.	>1.045g

Source: PHIVOLCS, 1993

Intensity Scale	Shaking	Description
I	Scarcely Perceptible	Perceptible to people under favorable circumstances. Delicately balanced objects are disturbed slightly. Still Water in containers oscillates slowly.
II	Slightly Felt	Felt by few individuals at rest indoors. Hanging objects swing slightly. Still Water in containers oscillates noticeably.
III	Weak	Felt by many people indoors especially in upper floors of buildings. Vibration is felt like one passing of a light truck. Dizziness and nausea are experienced by some people. Hanging objects swing moderately. Still water in containers oscillates moderately.
IV	Moderately Strong	Felt generally by people indoors and by some people outdoors. Light sleepers are awakened. Vibration is felt like a passing of heavy truck. Hanging objects swing considerably. Dinner, plates, glasses, windows and doors rattle. Floors and walls of wood framed buildings creak. Standing motor cars may rock slightly. Liquids in containers are slightly disturbed. Water in containers oscillate strongly. Rumbling sound may sometimes be heard.
V	Strong	Generally felt by most people indoors and outdoors. Many sleeping people are awakened. Some are frightened, some run outdoors. Strong shaking and rocking felt throughout building. Hanging objects swing violently. Dining utensils clatter and clink; some are broken. Small, light and unstable objects may fall or overturn. Liquids spill from filled open containers. Standing vehicles rock noticeably. Shaking of leaves and twigs of trees are noticeable.
VI	Very Strong	Many people are frightened; many run outdoors. Some people lose their balance. motorists feel like driving in flat tires. Heavy objects or furniture move or may be shifted. Small church bells may ring. Wall plaster may crack. Very old or poorly built houses and man-made structures are slightly damaged though well-built structures are not affected. Limited rockfalls and rolling boulders occur in hilly to mountainous areas and escarpments. Trees are noticeably shaken.
VII	Destructive	Most people are frightened and run outdoors. People find it difficult to stand in upper floors. Heavy objects and furniture overturn or topple. Big church bells may ring. Old or poorly-built structures suffer considerable damage. Some well-built structures are slightly damaged. Some cracks may appear on dikes, fish ponds, road surface, or concrete hollow block walls. Limited liquefaction, lateral spreading and landslides are observed. Trees are shaken strongly. (Liquefaction is a process by which loose saturated sand lose strength during an earthquake and

Intensity Scale	Shaking	Description
		behave like liquid).
VIII	Very Destructive	<p>People are panicky. People find it difficult to stand even outdoors. Many well-built buildings are considerably damaged. Concrete dikes and foundation of bridges are destroyed by ground settling or toppling. Railway tracks are bent or broken. Tombstones may be displaced, twisted or overturned.</p> <p>Utility posts, towers and monuments may tilt or topple. Water and sewer pipes may be bent, twisted or broken. Liquefaction and lateral spreading cause man-made structures to sink, tilt or topple.</p> <p>Numerous landslides and rockfalls occur in mountainous and hilly areas. Boulders are thrown out from their positions particularly near the epicenter. Fissures and faults rupture may be observed.</p> <p>Trees are violently shaken. Water splashes or flows over dikes or banks of rivers.</p>
IX	Devastating	<p>People are forcibly thrown to ground. Many cry and shake with fear. Most buildings are totally damaged.</p> <p>Bridges and elevated concrete structures are toppled or destroyed. Numerous utility posts, towers and monuments are tilted, toppled or broken. Water sewer pipes are bent, twisted or broken. Landslides and liquefaction with lateral spreadings and sandboils are widespread. The ground is distorted into undulations. Trees are shaken very violently with some toppled or broken. Boulders are commonly thrown out. River water splashes violently on slopes over dikes and banks.</p>
X	Completely Devastating	<p>Practically all man-made structures are destroyed. Massive landslides and liquefaction, large scale subsidence and uplifting of land forms and many ground fissures are observed. Changes in river courses and destructive seiches in large lakes occur. Many trees are toppled, broken and uprooted.</p>



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Original Issue	<input checked="" type="checkbox"/>
Duplicate issue by request	<input type="checkbox"/>
Revision Copy	<input type="checkbox"/>

CERTIFICATE OF ANALYSIS

Customer : GAIA SOUTH INC.

Address : 7F Montepino Bldg. 138 Gamboa cor., Adelantado St., Legaspi Village, Makati City

Attention : MS. PATRICIA ERIKA LIM

Contact Information : 0920-973-5003/pllim@gaiasouthinc.com

CAN : C21-06-274

Date of Issue : 6/11/2021

RAN : R21-05-591

INVOICE # :-

Date Received: 5/24/2021

Date Sampled:-

Date Analyzed: 5/24-6/9/2021

RESULTS OF ANALYSIS

Sample Descriptions	Parameters	Results	Units	Methods
<i>Soil Samples</i>				
<i>Date Sampled:</i>				
# 1	Nitrogen (N)	0.2	%	Kjeldahl
	Phosphorus (P)	0.026	%	Titrimetric
	Potassium (K) ^a	0.08	%	Direct Air-Acetylene Flame
	Organic Matter	1.956	%	Walkley - Black (Colorimetric)
	Lead (Pb) ^a	<0.10	mg/kg	Direct Air-Acetylene Flame
	Mercury (Hg) ^b	<0.08	mg/kg	Cold Vapor AAS
	Arsenic (As) ^a	1.59	mg/kg	Manual Hydride Generation AAS
	Cadmium (Cd) ^a	<0.03	mg/kg	Direct Air-Acetylene Flame
	* Hexavalent Chromium (Cr ⁶⁺)	<0.10	mg/kg	Colorimetric
	pH ^c	6.1	-	Electrometric
# 2	Nitrogen (N)	0.1	%	Kjeldahl
	Phosphorus (P)	0.020	%	Titrimetric
	Potassium (K) ^a	0.09	%	Direct Air-Acetylene Flame
	Organic Matter	2.956	%	Walkley - Black (Colorimetric)
	Lead (Pb) ^a	<0.10	mg/kg	Direct Air-Acetylene Flame

Not valid without OMLI dry seal

Page 1 of 2

C21-06-274

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Sample Descriptions	Parameters	Results	Units	Methods
	Mercury (Hg) ^b	<0.08	mg/kg	Cold Vapor AAS
	Arsenic (As) ^a	2.32	mg/kg	Manual Hydride Generation AAS
	Cadmium (Cd) ^a	<0.03	mg/kg	Direct Air-Acetylene Flame
	* Hexavalent Chromium (Cr ⁶⁺)	<0.10	mg/kg	Colorimetric
	pH ^c	6.1	-	Electrometric

Note : Metals are on dry weight basis.

* Parameter which is/are outside the laboratory's PNS ISO/IEC 17025:2017 scope of accreditation.

The customer is given 7 days upon receipt to raise questions or clarifications on any part or content of the certificate, otherwise the result(s) is/are deemed accepted.

Total No. of Samples : 2

Total Analysis : 20

Sample Submission : Submitted by the Customer

Reference : ^aUSEPA Method 3050B.; ^b USEPA Method 245.5.; ^c ICARDA (International Center for Agricultural Research in Dry Areas) Methods of Soil, Plant and Water Analysis, 3rd Edition.

Remarks : Results relate only to the items tested and received by the laboratory.

Certified Correct by:

MA. CRISTINA F. REFERENTE, RCh
PRC No. 0007398
Laboratory Head

Approved by:

ALVIN P. BASCO, RCh
PRC No. 0011786
Head of Operations



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TEST REPORT

Reference No. CD2105-1706

Page 1 of 2


CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDE Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Building, Adelantado, cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: GROUND WATER
SAMPLE CODE	: CD2105-1706-01
DATE / TIME OF SAMPLING	: 10 May 2021 / 09:00 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 PM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
GWQ 1	< 16
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique


Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
 Microbiology Supervisor
 NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RICH
 Laboratory Business Manager
 Chem. Reg. No. 08239

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TEST REPORT

Reference No. CD2105-1706

Page 2 of 2

CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDEC Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Norfepino Building, Adelantado, cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: GROUND WATER
SAMPLE CODE	: CD2105-1706-02
DATE / TIME OF SAMPLING	: 10 May 2021 / 09:30 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 PM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
GWQ 2	< 18
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique


Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
 Microbiology Supervisor
 NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCh
 Laboratory Business Manager
 Chem. Reg. No. 08239

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TEST REPORT

Reference No. CD2105-1707

Page 1 of 6


CUSTOMER : PHILIPPINE SINTER CORPORATION
ADDRESS : PHIVIDEC Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME : GAIA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montapino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED : MARINE WATER
SAMPLE CODE : CD2105-1707-01
DATE / TIME OF SAMPLING : 10 May 2021 / 07:10 AM
DATE / TIME RECEIVED : 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED : 10 May 2021 / 02:13 PM
DATE REPORTED : 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MWQ1	780
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

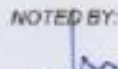
Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:


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NOTED BY:


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Laboratory Business Manager
Chem. Reg. No. 08239

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TEST REPORT

Reference No. CD2105-1707

Page 2 of 6


CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDEC Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAJA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: MARINE WATER
SAMPLE CODE	: CD2105-1707-02
DATE / TIME OF SAMPLING	: 10 May 2021 / 06:20 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MWQ2	450
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA - AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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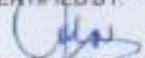
CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDEK Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAJA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montapino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: MARINE WATER
SAMPLE CODE	: CD2105-1707-03
DATE / TIME OF SAMPLING	: 10 May 2021 / 06:40 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MWQ3	200
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique


Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1707

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CUSTOMER : PHILIPPINE SINTER CORPORATION
 ADDRESS : PHIVIDEI Industrial Estate, Villanueva, Misamis Oriental
 PROJECT NAME : GAIA SOUTH INC.
 PROJECT ADDRESS : 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
 SAMPLE(S) SUBMITTED : MARINE WATER
 SAMPLE CODE : CD2105-1707-04
 DATE / TIME OF SAMPLING : 10 May 2021 / 06:55 AM
 DATE / TIME RECEIVED : 10 May 2021 / 12:50 AM
 DATE / TIME ANALYZED : 10 May 2021 / 02:13 PM
 DATE REPORTED : 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MWQ4	200
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique


Ref: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:


 AUREA MELLO M. SANCHEZ
 Microbiology Supervisor
 NRL No. WMLA-13-0267

NOTED BY:


 MA. LOVEBETH S. MENDOZA, RCh
 Laboratory Business Manager
 Chem. Reg. No. 08239

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ADDRESS	: PHIVIDEC Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7 th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Nakati
SAMPLE(S) SUBMITTED	: MARINE WATER
SAMPLE CODE	: CD2105-1707-05
DATE / TIME OF SAMPLING	: 10 May 2021 / 07:30 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MMQS	1,300
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA – AWWA and WEF 2012 & 2017, Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


 AUREA MELLO M. SANCHEZ
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 NRL No. WMLA-13-0257

NOTED BY:


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PROJECT NAME : GAJA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED : MARINE WATER
SAMPLE CODE : CD2105-1707-06
DATE / TIME OF SAMPLING : 10 May 2021 / 06:30 AM
DATE / TIME RECEIVED : 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED : 10 May 2021 / 02:13 PM
DATE REPORTED : 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Fecal Coliform Count
MWQS	780
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDEK Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: WASTEWATER (EFFLUENT)
SAMPLE CODE	: CD2105-1708-01
DATE / TIME OF SAMPLING	: 10 May 2021 / 09:30 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Total Coliform Count
EWQ1	780
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:

AUREA NELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:

MA. LOVEBETH S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDEK Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Building, Adelantado Cor. Gambos Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	: WASTEWATER (EFFLUENT)
SAMPLE CODE	: CD2105-1708-02
DATE / TIME OF SAMPLING	: 10 May 2021 / 08:00 AM
DATE / TIME RECEIVED	: 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	: 10 May 2021 / 02:13 PM
DATE REPORTED	: 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Total Coliform Count
EWQ2	2,000
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

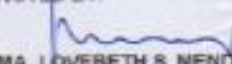
Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:


 19 May 2021
AUREA MELLO M. SANCHEZ
 Microbiology Supervisor
 NRL No. WMLA-13-0267

NOTED BY:


 19 May 2021
MA. LOVEBETH S. MENDOZA, RCh
 Laboratory Business Manager
 Chem. Reg. No. 08239

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ACCREDITATIONS/RECOGNITIONS : Dept. of Environment and Natural Resources (DENR) • Dept. of Health (DOH) • Dept. of Agriculture - Bureau of Animal Industry (DA-BAI)
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 BRANCHES: Calamba - Allied Concrete Building, 301 54, Makiling, Calamba City, Laguna 4027 • Tels. (044) 304-7134, 300-4530, 302-6254, 303-0254, 304-0725, 305-0725, 306-0725, 307-0725, 308-0725, 309-0725, 310-0725, 311-0725, 312-0725, 313-0725, 314-0725, 315-0725, 316-0725, 317-0725, 318-0725, 319-0725, 320-0725, 321-0725, 322-0725, 323-0725, 324-0725, 325-0725, 326-0725, 327-0725, 328-0725, 329-0725, 330-0725, 331-0725, 332-0725, 333-0725, 334-0725, 335-0725, 336-0725, 337-0725, 338-0725, 339-0725, 340-0725, 341-0725, 342-0725, 343-0725, 344-0725, 345-0725, 346-0725, 347-0725, 348-0725, 349-0725, 350-0725, 351-0725, 352-0725, 353-0725, 354-0725, 355-0725, 356-0725, 357-0725, 358-0725, 359-0725, 360-0725, 361-0725, 362-0725, 363-0725, 364-0725, 365-0725, 366-0725, 367-0725, 368-0725, 369-0725, 370-0725, 371-0725, 372-0725, 373-0725, 374-0725, 375-0725, 376-0725, 377-0725, 378-0725, 379-0725, 380-0725, 381-0725, 382-0725, 383-0725, 384-0725, 385-0725, 386-0725, 387-0725, 388-0725, 389-0725, 390-0725, 391-0725, 392-0725, 393-0725, 394-0725, 395-0725, 396-0725, 397-0725, 398-0725, 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TEST REPORT

Reference No. CD2105-1708

Page 3 of 5

CUSTOMER : PHILIPPINE SINTER CORPORATION
 ADDRESS : PHIVIDE Industrial Estate, Villanueva, Misamis Oriental
 PROJECT NAME : GAJA SOUTH INC.
 PROJECT ADDRESS : 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
 SAMPLE(S) SUBMITTED : WASTEWATER (EFFLUENT)
 SAMPLE CODE : CD2105-1708-03
 DATE / TIME OF SAMPLING : 10 May 2021 / 07:25 AM
 DATE / TIME RECEIVED : 10 May 2021 / 12:50 AM
 DATE / TIME ANALYZED : 10 May 2021 / 02:13 PM
 DATE REPORTED : 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Total Coliform Count
EWQ3	1,300
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA – AWWA and WEF 2012 & 2017, Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:

AJREA MELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:

MA. LOVERBETH S. MENDOZA, RCH
Laboratory Business Manager
Chem. Reg. No. 08239

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ACCREDITATIONS/RECOGNITIONS : Dept. of Environment and Natural Resources (DENR) • Dept. of Health (DOH) • Dept. of Agriculture - Bureau of Animal Industry (DA-BAI)
Food and Drug Administration (FDA) • Bureau of Fisheries and Aquatic Resources (BFAR) • Laguna Lake Development Authority (LLDA)

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TEST REPORT

Reference No. CD2105-1708

Page 4 of 5


CUSTOMER	PHILIPPINE SINTER CORPORATION
ADDRESS	PHIVIDE Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME	GAIA SOUTH INC
PROJECT ADDRESS	7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED	WASTEWATER (EFFLUENT)
SAMPLE CODE	CD2105-1708-04
DATE / TIME OF SAMPLING	10 May 2021 / 07:20 AM
DATE / TIME RECEIVED	10 May 2021 / 12:50 AM
DATE / TIME ANALYZED	10 May 2021 / 02:13 PM
DATE REPORTED	19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Total Coliform Count
EWQ4	450
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref.: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample/s tested.

CERTIFIED BY:


AUREA NELLO M. SANCHEZ
 Microbiology Supervisor
 NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCh
 Laboratory Business Manager
 Chens. Reg. No. Q8239

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TEST REPORT

Reference No. CD2105-1708

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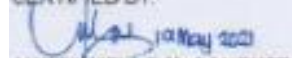
CUSTOMER : PHILIPPINE SINTER CORPORATION
ADDRESS : PHIVDEC Industrial Estate, Villanueva, Misamis Oriental
PROJECT NAME : GAMA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montepino Building, Adelantado Cor. Gamboa Sts., Legaspi Village, Makati
SAMPLE(S) SUBMITTED : WASTEWATER (EFFLUENT)
SAMPLE CODE : CD2105-1708-05
DATE / TIME OF SAMPLING : 10 May 2021 / 06:25 AM
DATE / TIME RECEIVED : 10 May 2021 / 12:50 AM
DATE / TIME ANALYZED : 10 May 2021 / 02:13 PM
DATE REPORTED : 19 May 2021

SAMPLE DESCRIPTION(S)	Most Probable Number (MPN) per 100 mL
	Total Coliform Count
EWQ5	200
TEST METHOD	(9221 B-C) Multiple Tube Fermentation Technique

Ref: APHA – AWWA and WEF 2012 & 2017. Standard Methods for the Examination of Water and Wastewater, 22nd and 23rd ed.

Results are those obtained at time of examination and relate only to the sample's tested.

CERTIFIED BY:


AUREA MELLO M. SANCHEZ
Microbiology Supervisor
NRL No. WMLA-13-0267

NOTED BY:


MA. LOVEBETH S. MENDOZA, RCT
Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1709

Page 1 of 6

TEST REPORT

CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDE Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS	: MARINE WATER
SAMPLE CODE	: CD2105-1709-01
DATE / TIME OF SAMPLING	: 10 May 2021 / 7:10 AM (By Customer)
DATE / TIME RECEIVED	: 10 May 2021 / 1:15 PM
DATE ANALYZED	: 10 May - 09 June 2021
ANALYZED BY	: S.S. SÁBEJON, L.P. ORINAY, J.J. CLEMENA, C.O. PONFERRADA
DATE REPORTED	: 10 June 2021

Parameters	Results	Test Method
pH / Temperature	8.22 @ 21.4 °C	4500 H* B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	151	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.7	4500-O C. Iodometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	9	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1709

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CUSTOMER : PHILIPPINE SINTER CORPORATION
ADDRESS : PHIVIDEC Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME : GAIA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS : MARINE WATER
SAMPLE CODE : CD2105-1709-02
DATE / TIME OF SAMPLING : 10 May 2021 / 6:20 AM (By Customer)
DATE / TIME RECEIVED : 10 May 2021 / 1:15 PM
DATE ANALYZED : 10 May - 09 June 2021
ANALYZED BY : S.S. SABELON, L.P. ORINAY, J.J. CLEMEÑA, C.O. PONFERRADA
DATE REPORTED : 10 June 2021

Parameters	Results	Test Method
pH / Temperature	MWQ 2 8.24 @ 20.8 °C	4500 H ⁺ B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	153	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.7	4500-O C. Iodometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	7	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed. Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1709

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TEST REPORT

CUSTOMER : PHILIPPINE SINTER CORPORATION
 ADDRESS : PHIVIDEC Industrial Estate Villanueva, Misamis Oriental
 PROJECT NAME : GAIA SOUTH INC.
 PROJECT ADDRESS : 7th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
 SAMPLE(S) SUBMITTED AS : MARINE WATER
 SAMPLE CODE : CD2105-1709-03
 DATE / TIME OF SAMPLING : 10 May 2021 / 6:40 AM (By Customer)
 DATE / TIME RECEIVED : 10 May 2021 / 1:15 PM
 DATE ANALYZED : 10 May - 09 June 2021
 ANALYZED BY : S.S. SABEJON, L.P. ORINAY, J.J. CLEMENA, C.O. PONFERRADA
 DATE REPORTED : 10 June 2021

Parameters	Results	Test Method
pH / Temperature	8.22 @ 21.3 °C	4500 H* B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	154	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.6	4500-O.C. Iodometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	10	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit ** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh

Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh

Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1709

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TEST REPORT

CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDE Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7 th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS	: MARINE WATER
SAMPLE CODE	: CD2105-1709-04
DATE / TIME OF SAMPLING	: 10 May 2021 / 6:55 AM (By Customer)
DATE / TIME RECEIVED	: 10 May 2021 / 1:15 PM
DATE ANALYZED	: 10 May - 09 June 2021
ANALYZED BY	: S.S. SABEJON, L.P. ORINAY, J.J. CLEMEÑA, C.O. PONFERRADA
DATE REPORTED	: 10 June 2021

Parameters	Results	Test Method
	MWQ 4	
pH / Temperature	8.29 @ 20.4 °C	4500 H* B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	155	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.8	4500-O C. Iodometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	9	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Lapasan Hi-way corner Camp Alagar Road CDO City

Reference No. CD2105-1709

Page 5 of 5

TEST REPORT

CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDE Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS	: MARINE WATER
SAMPLE CODE	: CD2105-1709-05
DATE / TIME OF SAMPLING	: 10 May 2021 / 7:30 AM (By Customer)
DATE / TIME RECEIVED	: 10 May 2021 / 1:15 PM
DATE ANALYZED	: 10 May - 09 June 2021
ANALYZED BY	: S.S. SABELON, L.P. ORINAY, J.J. CLEMEÑA, C.O. PONFERRADA
DATE REPORTED	: 10 June 2021

Parameters	Results	Test Method
pH / Temperature	8.30 @ 20.7 °C	4500 H ⁺ B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	137	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.5	4500-D C. Iodometric Method
Oil and Grease, mg/L	1	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	9	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh

Laboratory Chemist

Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh

Laboratory Business Manager

Chem. Reg. No. 08239

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Reference No. CD2105-1709

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TEST REPORT

CUSTOMER	: PHILIPPINE SINTER CORPORATION
ADDRESS	: PHIVIDE Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME	: GAIA SOUTH INC.
PROJECT ADDRESS	: 7 th Flr. Montepino Bldg. Adelantado Cor. Gamboa St. Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS	: MARINE WATER
SAMPLE CODE	: CD2105-1709-06
DATE / TIME OF SAMPLING	: 10 May 2021 / 6:30 AM (By Customer)
DATE / TIME RECEIVED	: 10 May 2021 / 1:15 PM
DATE ANALYZED	: 10 May - 09 June 2021
ANALYZED BY	: S.S. SABEJON, L.P. ORINAY, J.J. CLEMENTE, C.O. PONFERRADA
DATE REPORTED	: 10 June 2021

Parameters	Results	Test Method
	MWQ 6	
pH / Temperature	8.31 @ 20.6 °C	4500 H ⁺ B. Electrometric Method
Chemical Oxygen Demand (COD), mg/L	140	5220 B. Modified Open-Reflux Method
Dissolved Oxygen, mg/L	6.6	4500-O C. Iodometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	7	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	Extraction/Direct Air-Acetylene Flame
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Lapasan Hi-way corner Camp Alagar Road CDO City

Reference No. CD2105-1711

Page 1 of 2

TEST REPORT

CUSTOMER : PHILIPPINE SINTER CORPORATION
ADDRESS : PHIVIDEC Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME : GAIA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montepino Bldg. Adelantado Cor. Gamboa St.
Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS : GROUND WATER
SAMPLE CODE : CD2105-1711-01
DATE / TIME OF SAMPLING : 10 May 2021 / 9:00 AM (By Customer)
DATE / TIME RECEIVED : 10 May 2021 / 1:29 PM
DATE ANALYZED : 10 May - 09 June 2021
ANALYZED BY : S S SIBEJON, L P ORINAY, J J CLEMEÑA, C O PONFERRADA
DATE REPORTED : 10 June 2021

Parameters	Results	Test Method
	GWQ 1	
pH	8.41 @ 23.0 °C	4500 H ⁺ B. Electrometric Method
Oil and Grease, mg/L	1	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	Less than 2*	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	3030 E. Nitric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

J.S. Anasco
J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

M.L.S. Mendoza
M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Reference No. CD2105-1711

Page 2 of 2

TEST REPORT

CUSTOMER : PHILIPPINE SINTER CORPORATION
ADDRESS : PHIVIDE Industrial Estate Villanueva, Misamis Oriental
PROJECT NAME : GAIA SOUTH INC.
PROJECT ADDRESS : 7th Flr. Montapino Bldg. Adelantado Cor. Gamboa St.
Legaspi Village Makati City
SAMPLE(S) SUBMITTED AS : GROUND WATER
SAMPLE CODE : CD2105-1711-02
DATE / TIME OF SAMPLING : 10 May 2021 / 9:30 AM (By Customer)
DATE / TIME RECEIVED : 10 May 2021 / 1:29 PM
DATE ANALYZED : 10 May - 09 June 2021
ANALYZED BY : S.S. SABEJON, L.P. ORINAY, J.J. CLEMEÑA, C.O. PONFERRADA
DATE REPORTED : 10 June 2021

Parameters	Results	Test Method
	GWQ 2	
pH	8.36 @ 23.0 °C	4500 H ⁺ B. Electrometric Method
Oil and Grease, mg/L	Less than 1*	5520 B. Liquid-Liquid, Partition-Gravimetric Method
Total Suspended Solids, mg/L	Less than 2*	2540 D. Gravimetric, Dried @ 103-105 °C
Lead, mg/L	Less than 0.01*	3030 E. Nitric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Mercury, mg/L	Less than 0.001*	Cold Vapor AAS
Arsenic, mg/L	Less than 0.01**	Silver Diethyldithiocarbamate- Colorimetric Method (Modified)
Cadmium, mg/L	Less than 0.002*	3030 F. Nitric Acid-Hydrochloric Acid Digestion, 3111 B. Direct Air-Acetylene Flame AAS
Chromium as Hexavalent Chromium, mg/L	Less than 0.01*	3500-Cr B. Colorimetric Method

Note: * - Method Detection Limit

** - Reporting Limit

Reference: APHA-AWWA and WEF 2017. Standard Methods for the Examination of Water and Wastewater, 23rd ed.

Results are those obtained at time of examination and relate only to the sample(s) tested.

CERTIFIED BY:

[Signature]
J.S. ANASCO, RCh
Laboratory Chemist
Chem. Reg. No. 13329

APPROVED BY:

[Signature]
M.L.S. MENDOZA, RCh
Laboratory Business Manager
Chem. Reg. No. 08239

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Philippine Atmospheric, Geophysical and Astronomical Services Administration
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION
PAGASA Science Garden Complex, Agham Road, Diliman Quezon City, Philippines
Telefax: (632)-434-2698

CLIMATOLOGICAL NORMALS

STATION: LUMBIA AIRPORT, MISAMIS ORIENTAL
PERIOD: 1981 - 2010

LATITUDE: 08°24'32.70"N
LONGITUDE: 124°36'43.57"E
ELEVATION: 182m

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16a)	(16b)
MONTH	RAINFALL		TEMPERATURE						VAPOR PRESS. (mbs)	RH (%)	MSLP (mbs)	WIND		CLOUD AMT. (okta)	NO. OF DAYS W/	
	AMOUNT (mm)	NO. OF RD	MAX (°C)	MIN (°C)	MEAN (°C)	DRY BULB (°C)	WET BULB (°C)	DEW POINT (°C)				DIR (16pt)	SPD (mps)		TSTM	LTNG
JAN	98.9	12	29.6	21.6	25.6	25	23	22.2	26.7	84	1010.7	N	2	5	2	2
FEB	68	8	30.2	21.4	25.8	25.2	22.9	22	26.3	82	1011	N	2	5	2	1
MAR	49.8	6	31.3	21.6	26.5	25.9	23.3	22.3	26.8	80	1010.7	N	2	4	4	2
APR	52.6	5	32.5	22.4	27.5	26.9	23.8	22.6	27.3	77	1009.8	N	2	4	7	4
MAY	125	10	32.9	23.2	28	27.3	24.3	23.2	28.3	78	1009.2	N	2	5	17	12
JUN	212.7	17	32	22.8	27.4	26.5	24	23.1	28.1	81	1009.4	S	2	6	18	11
JUL	245.6	18	31.6	22.4	27	26.1	23.8	22.9	27.9	83	1009.5	S	2	6	17	10
AUG	195.8	15	32.1	22.5	27.3	26.4	23.8	22.8	27.7	80	1009.4	S	2	6	13	9
SEP	219.7	16	31.8	22.3	27.1	26.1	23.7	22.8	27.6	82	1009.8	S	2	6	17	10
OCT	185.9	16	31.4	22.3	26.9	26.1	23.8	22.9	27.9	83	1009.5	S	2	5	16	13
NOV	136	12	30.9	22.1	26.5	25.9	23.7	22.9	27.8	83	1009.3	S	2	5	10	8
DEC	113.2	11	30.1	21.8	26	25.5	23.4	22.6	27.3	84	1010	N	2	5	5	4
ANNUAL	1703.3	148	31.4	22.2	26.8	26.1	23.6	22.7	27.5	81	1009.9	N	2	5	128	95

Definition of Terms:

Climatological Normals - Period averages computed for a uniform and relative long period comprising at least three (3) consecutive 10-year period.
Rainfall Amount (column 2) - The amount of precipitation (rain, hail, etc.) expressed in millimeters depth of the layer of the water which has fallen.
Number of Rainy Days (column 3) - A rainy day is defined as a period of 24 hours beginning at 8AM to 8 AM of the next day during which at least 0.1 mm of rain is recorded.

Maximum Temperature (column 4) - The maximum temperature in °C recorded for the day, usually occurring in the early afternoon.

Minimum Temperature (column 5) - The minimum temperature in °C recorded for the day, usually occurring during early hours of the morning (before sunrise).

Mean Temperature (column 6) - The average of the maximum and minimum temperature in °C recorded for the day. Mean Temperature = Maximum + Minimum / 2

Dry Bulb Temperature (column 7) - It gives the air temperature in °C at the time of observation.

Wet Bulb Temperature (column 8) - It gives the temperature in °C that an air parcel would have if cooled adiabatically to saturation at constant pressure by evaporating water in it.

Dew Point Temperature (column 9) - The temperature in °C at a given pressure, to which the air must be cooled to become saturated. It is the temperature when atmospheric moisture begins to condense to liquid forming "dew" upon objects.

Vapor Pressure (column 10) - Denotes the partial pressure of water vapor in atmosphere in millibars (mbs). As the water evaporates, additional water vapor is introduced into space above and pressure increases slightly as the new vapor is added. The increasing pressure is due to an increase in the partial pressure of water vapor.

Relative Humidity (column 11) - The ratio of the amount of water vapor actually in the air to the maximum amount the air can hold at that temperature.

Mean Sea Level Pressure (column 12) - The force exerted by the weight of the atmosphere on a unit area at the mean sea level. It is also the atmospheric pressure at mean sea level measured in millibars (mbs).

Prevailing Winds (column 13 & 14) - The prevailing wind direction expressed using the 16 compass points which is most frequently observed during a given period while the average wind speed in meters per second is the arithmetic average of the observed wind speed.

Cloud Amount (column 15) - The amount of cloud present in the sky, expressed in oktas of the sky cover. Okta is the fraction used in denoting cloud amount and is equal to 1/8 of the whole sky.

Days with Thunderstorm (column 16a) - A thunderstorm day is defined as an observational day during which thunder is recorded at the station.

Days with Lightning (column 16b) - A day with lightning is reported whenever lightning is observed.

PREPARED BY: CADS/CAD/PAGASA



Republic of the Philippines
 Department of Science and Technology
 Philippine Atmospheric, Geophysical and Astronomical Services Administration
 Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION
 PAGASA Science Garden Complex, Agham Road, Diliman Quezon City, Philippines
 Telefax: (632)-434-2698

CLIMATOLOGICAL EXTREMES

STATION: LUMBIA AIRPORT-EL SALVADOR, MISAMIS ORIENTAL
 YEAR: AS OF 2020

LATITUDE: 08°24'32.70"N
 LONGITUDE: 124°36'43.57"E
 ELEVATION: 182m

MONTH	TEMPERATURE (°C)				GREATEST DAILY RAINFALL (mm)		STRONGEST WINDS (mps)			SEA LEVEL PRESSURES (mbs)			
	HIGH	DATE	LOW	DATE	AMOUNT	DATE	SPD	DIR	DATE	HIGH	DATE	LOW	DATE
JAN	36.2	01-08-2016	16.1	01-03-1991	104.4	01-13-2009	14	WNW	01-28-2017	1018.1	01-27-1983	982.8	01-21-1989
							14	NNE	01-27-2019				
FEB	36.0	02-14-2003	17.1	02-05-1980	107.8	02-05-1999	14	N	02-02-1993	1018.8	02-25-2016	1001.6	02-24-1980
							14	N	02-02-2015				
							14	N	02-12-2017				
MAR	37.6	03-28-1998	17.1	03-10-1992	84.2	03-19-1982	13	ENE	03-26-1984	1018.9	03-07-1981	1002.0	03-19-1982
APR	37.0	04-11-1998	18.0	04-13-1983	88.4	04-14-2014	20	NNW	04-29-1983	1017.3	04-14-1993	1002.8	04-01-2000
MAY	38.2	05-07-1998	20.7	05-28-1984	94.3	05-21-1990	18	W	05-27-1998	1015.6	05-10-2016	1003.3	05-05-2002
JUNE	38.4	06-06-2009	20.0	06-11-1992	124.2	06-21-2016	18	WNW	06-10-1997	1015.6	06-20-1982	1002.4	06-17-2007
JULY	36.2	07-11-2002	20.0	07-17-1994	142.0	07-13-1999	22	W	07-31-1999	1016.0	07-22-2015	1001.0	07-03-2001
			20.0	07-02-2015									
AUG	37.8	08-28-1990	19.4	08-26-1995	129.3	08-21-1998	25	SW	08-05-1997	1015.6	08-11-1997	1002.9	08-17-1990
SEP	36.7	09-02-1992	19.0	09-23-1991	117.0	09-09-2017	24	NNW	09-23-1996	1016.1	09-26-1982	983.8	09-16-1988
OCT	35.2	10-20-2015	19.0	10-31-1982	114.1	10-20-1980	18	SW	10-04-2014	1017.5	10-04-2015	1001.4	10-29-1995
			19.0	10-25-2015									
NOV	34.7	11-30-2006	18.0	11-25-1992	237.1	11-24-2009	18	NW	11-20-1990	1016.3	11-17-1982	1000.7	11-06-1996
DEC	34.4	12-08-1996	17.8	12-31-1990	180.9	12-16-2011	34	S	12-04-2012	1017.8	12-28-2015	1001.0	12-22-2017
ANNUAL	38.4	06-06-2009	16.1	01-03-1991	237.1	11-24-2009	34	S	12-04-2012	1018.9	03-07-1981	982.8	01-21-1989
Period of Record	1979 - 2020				1977 - 2020		1979 - 2020			1979 - 2020			

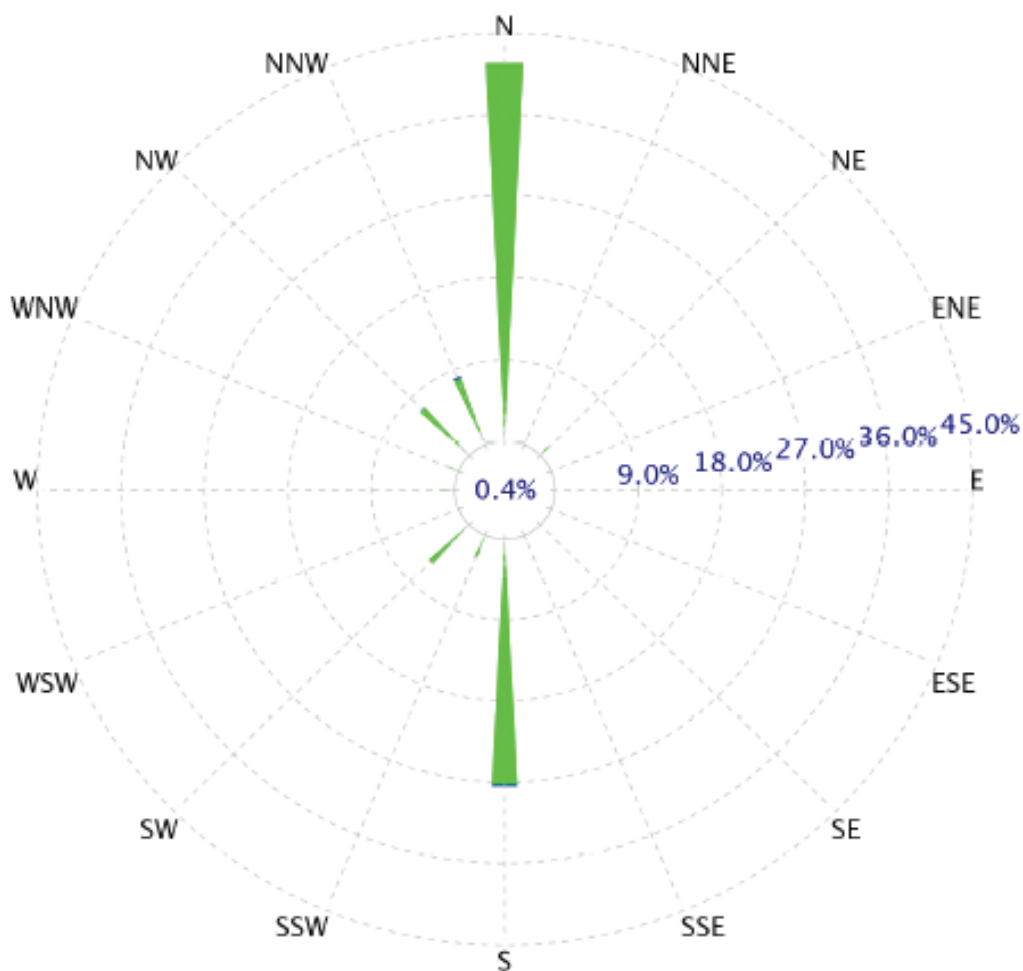
Note: The station transferred from Lumbia to El Salvador on September 2013

PREPARED BY: CADS/CAD/PAGASA



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental
January 1981 - 2010



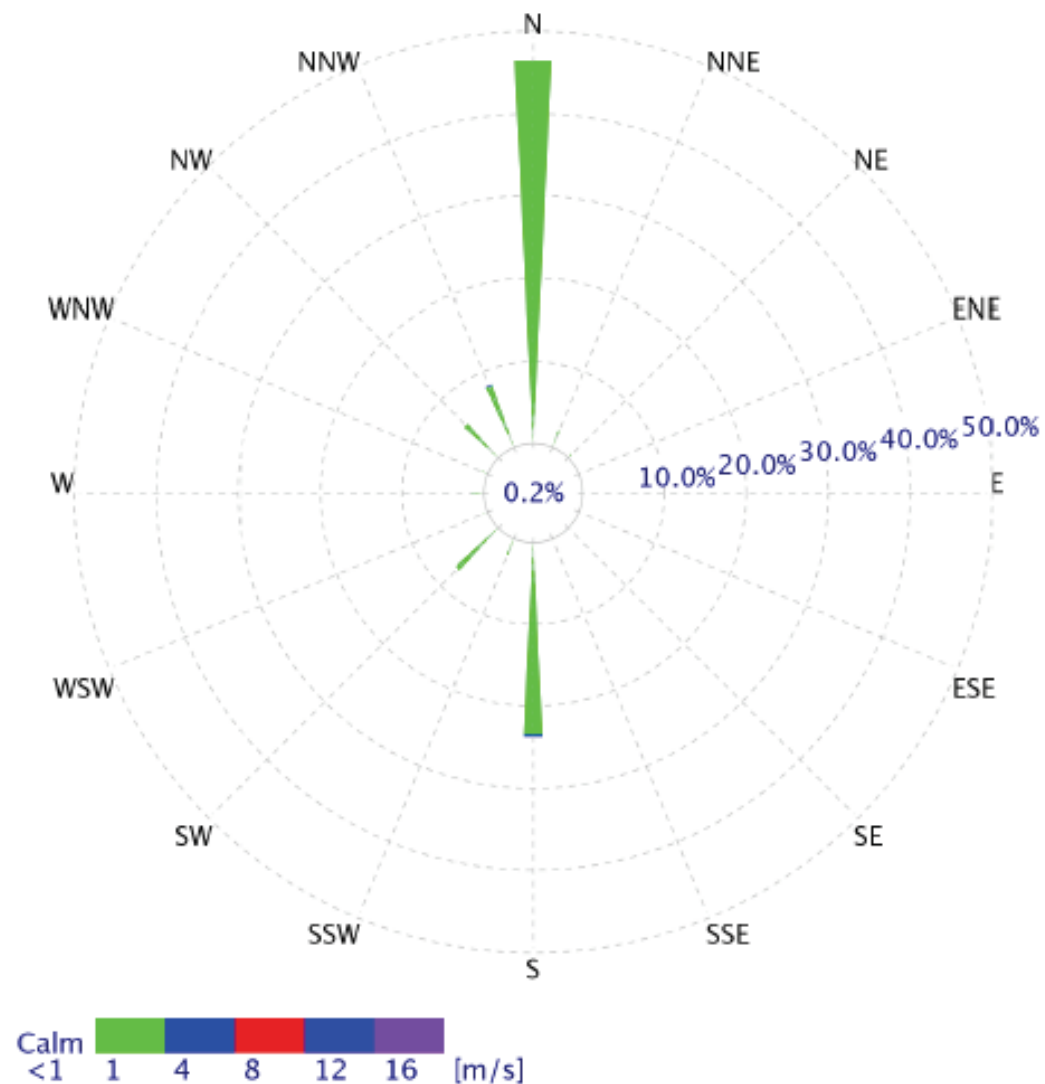
Calm
<1 1 4 8 12 16 [m/s]

Mean speed: 2.0 m/s
No. of obs.: 930 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental
February 1981 – 2010

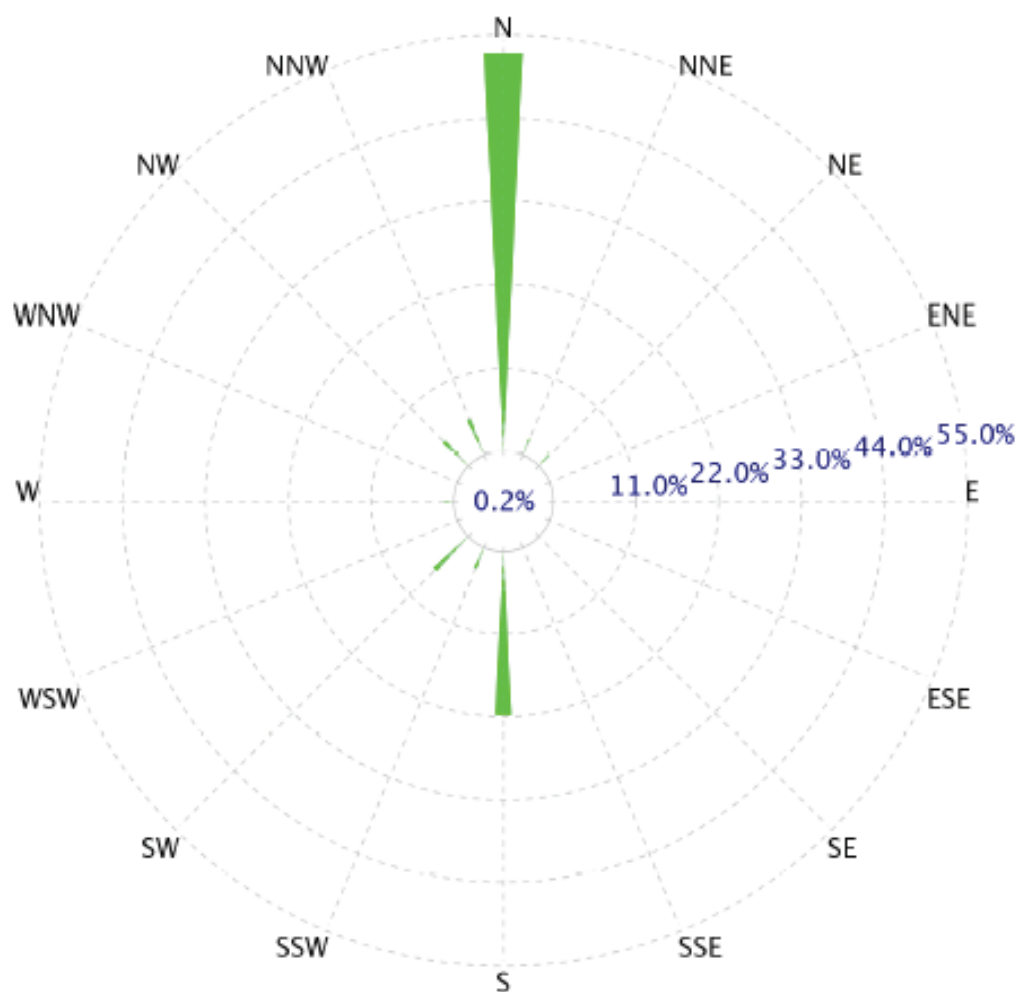


Mean speed: 2.0 m/s
No. of obs.: 846 / 847
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental
March 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

Mean speed: 2.1 m/s

No. of obs.: 930 / 930

Wind Group: Daily Wind

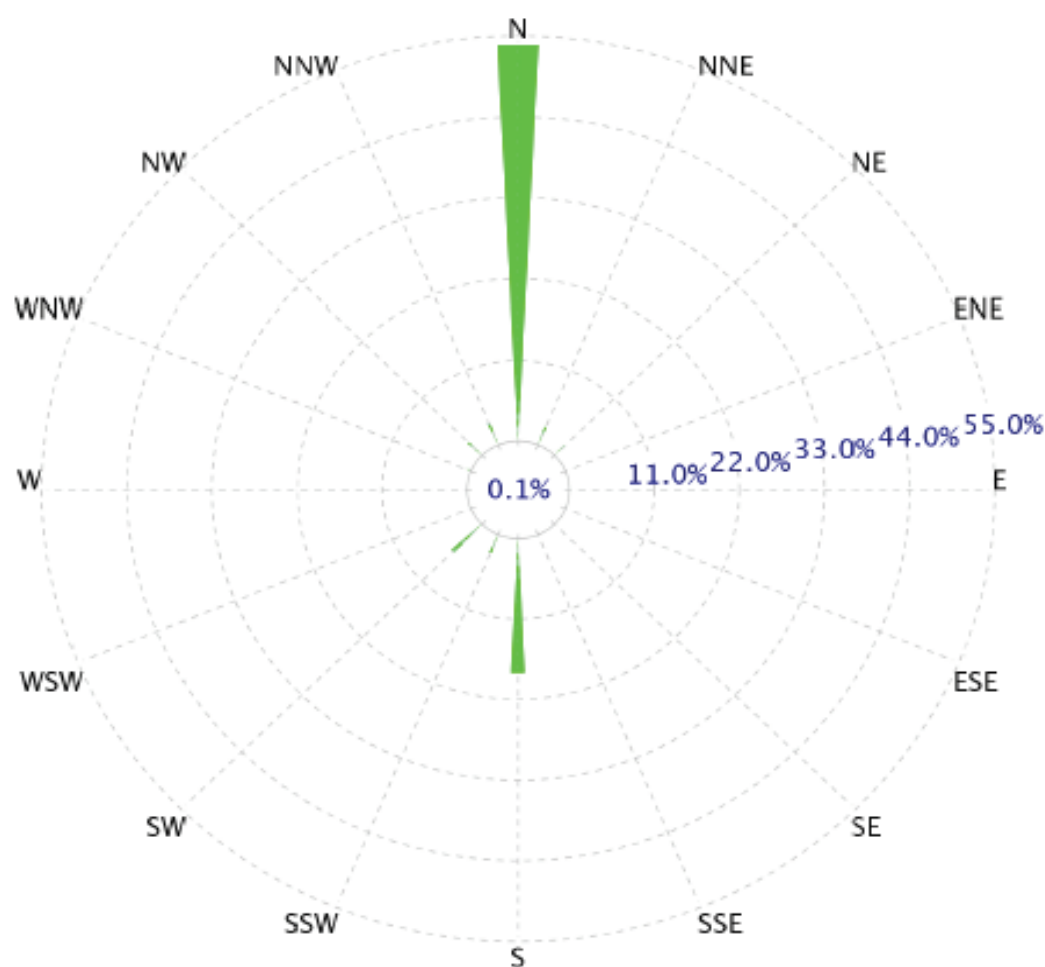
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

April 1981 – 2010



Calm <1 1 4 8 12 16 [m/s]

Mean speed: 2.1 m/s

No. of obs.: 838 / 900

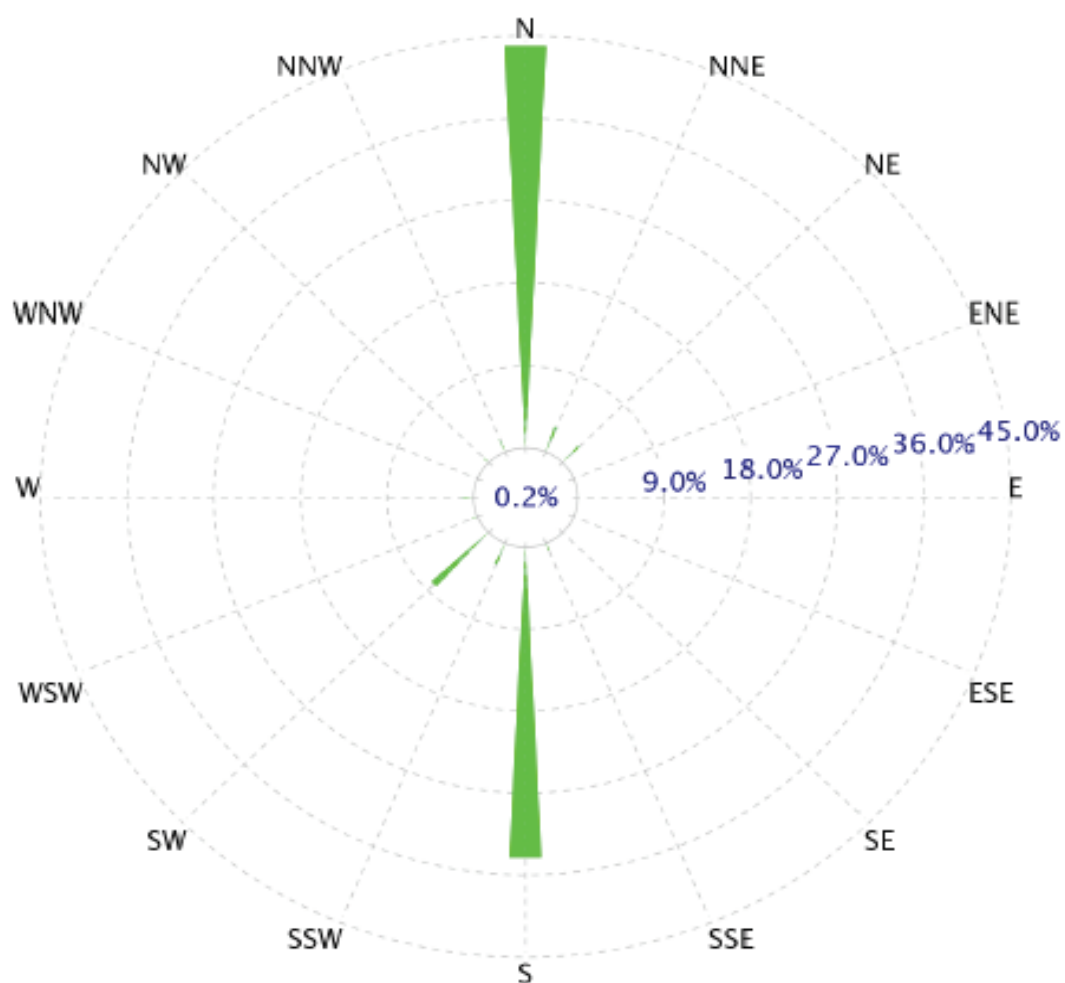
Wind Group: Daily Wind

Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental
May 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

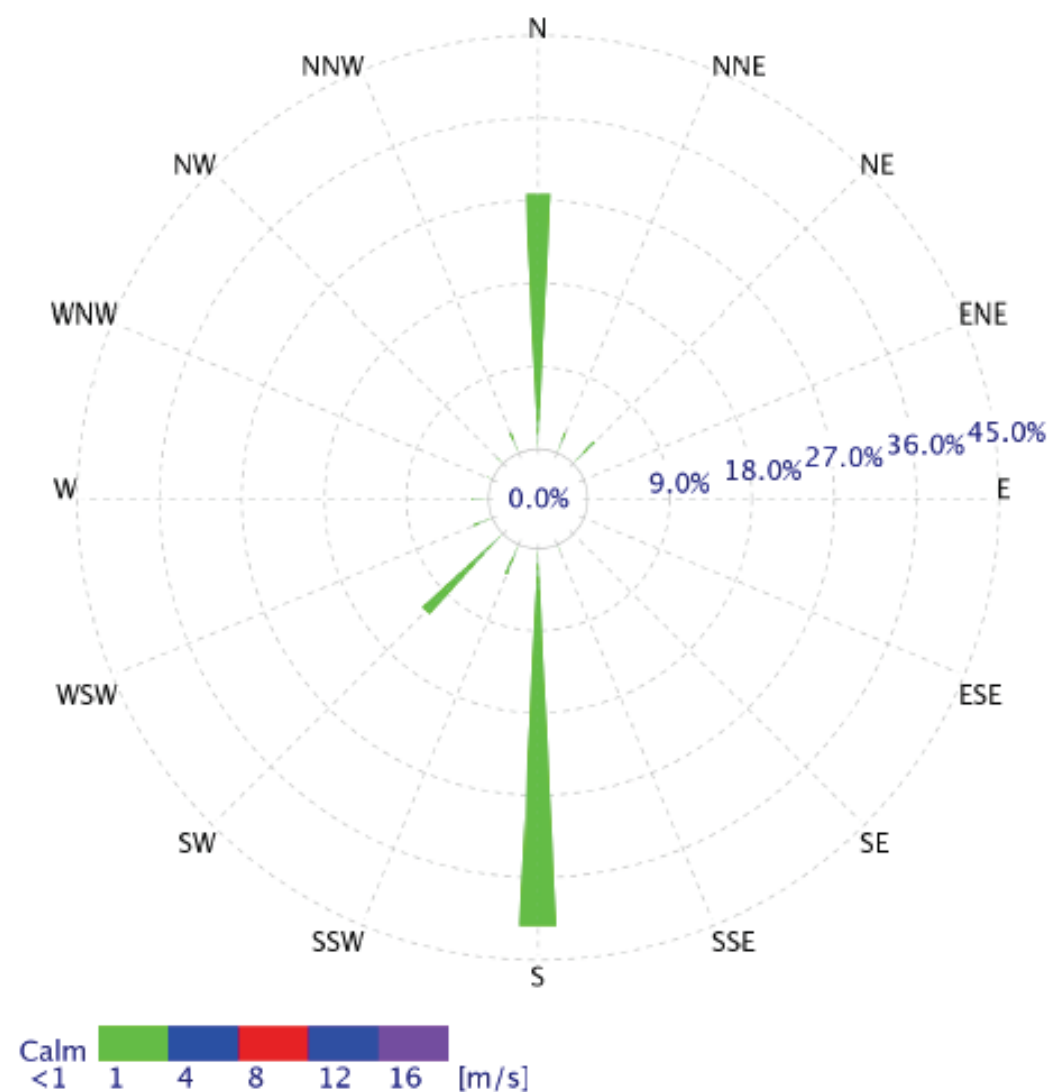
Mean speed: 1.9 m/s
No. of obs.: 929 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

June 1981 – 2010



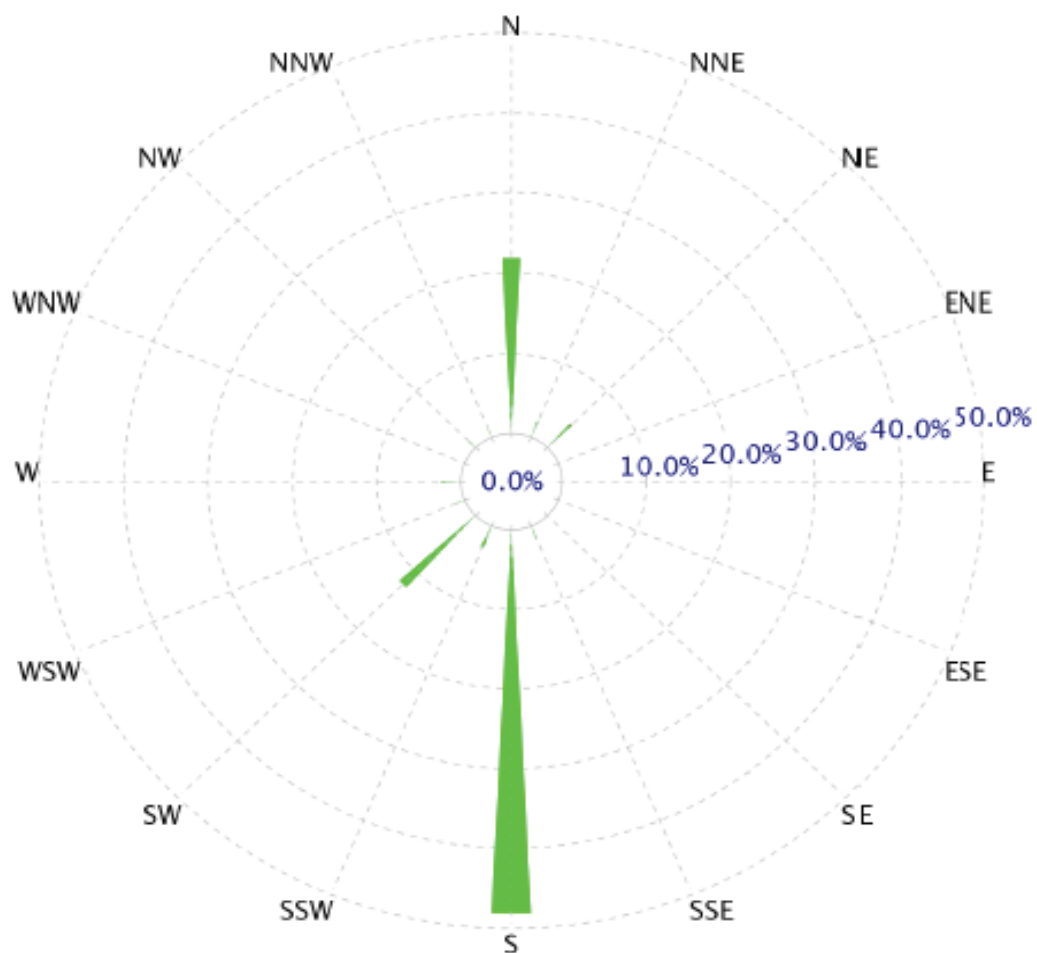
Mean speed: 1.7 m/s
No. of obs.: 900 / 900
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

July 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

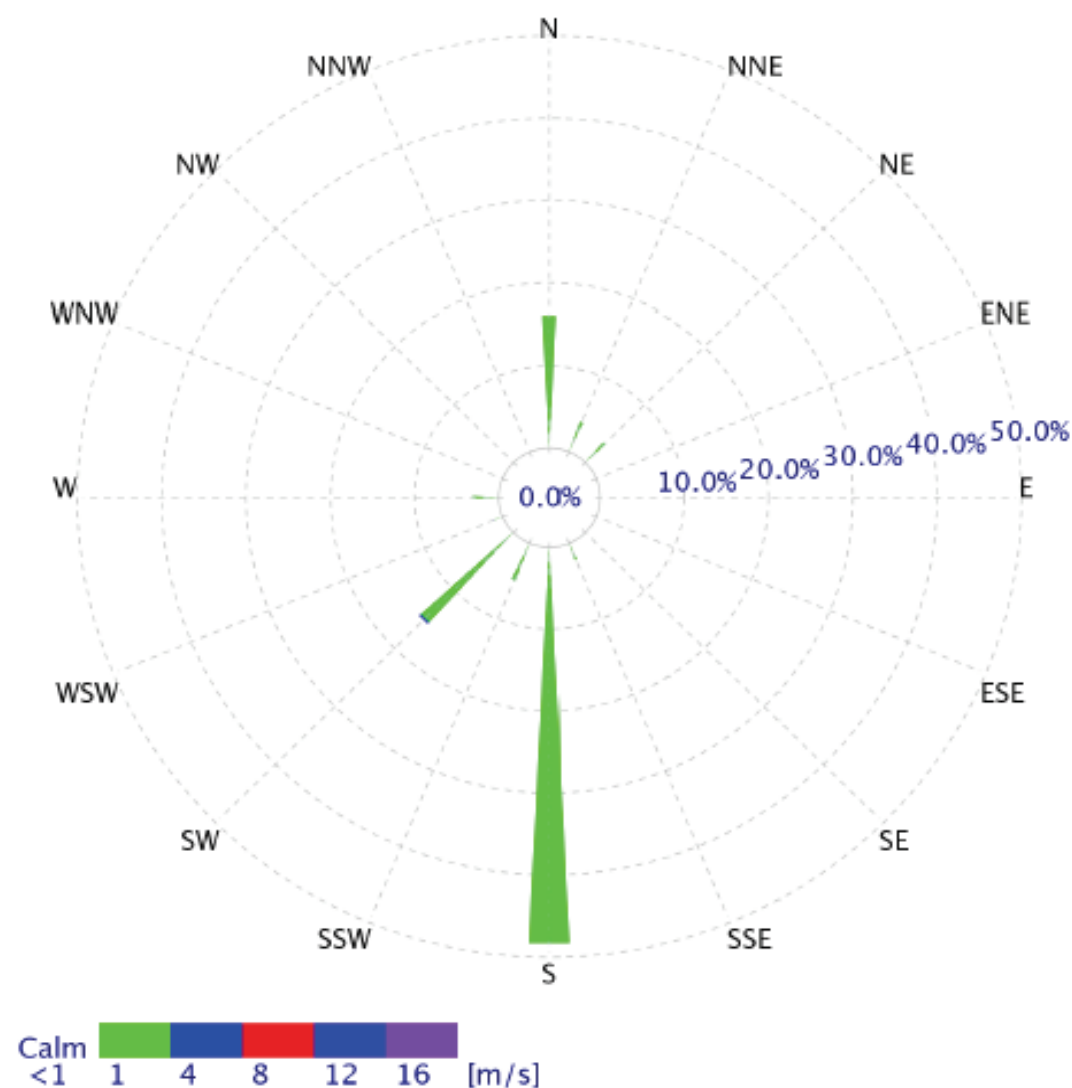
Mean speed: 1.7 m/s
No. of obs.: 930 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

August 1981 – 2010

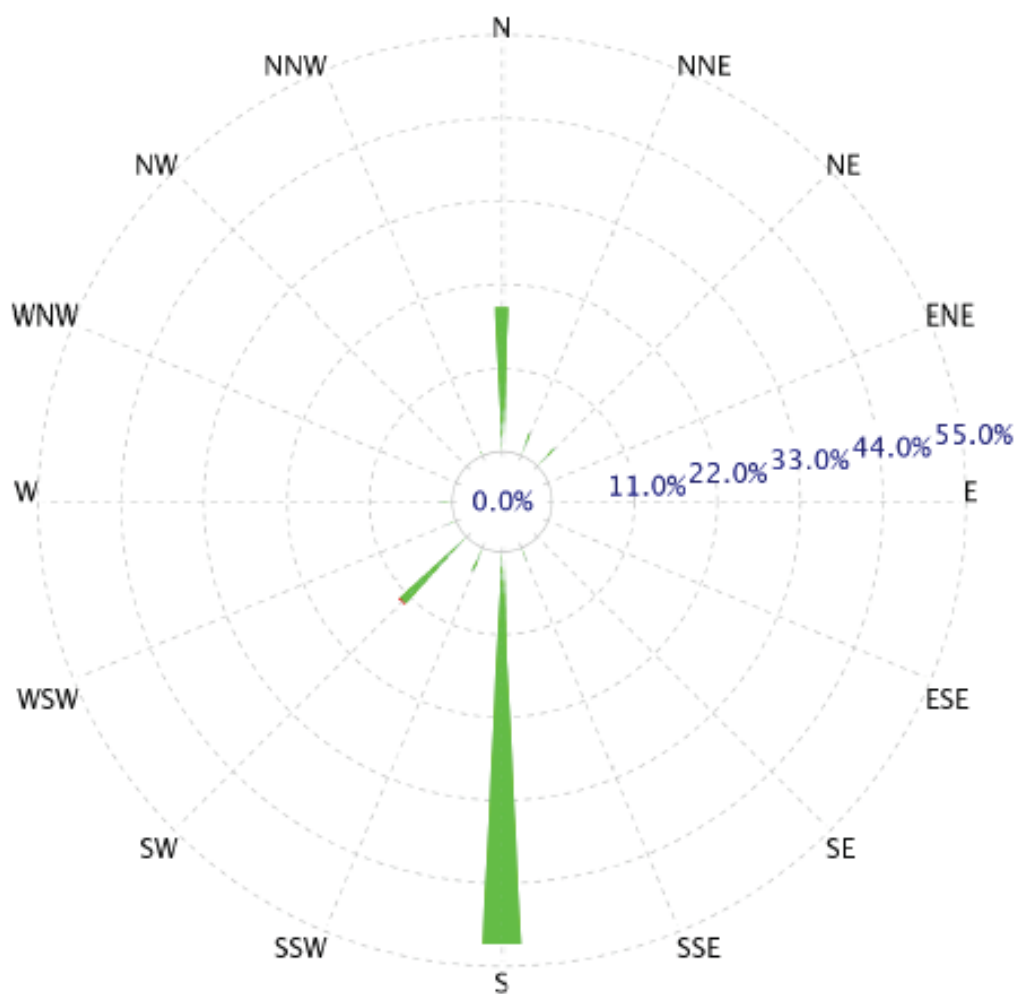


Mean speed: 1.8 m/s
No. of obs.: 930 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental
September 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

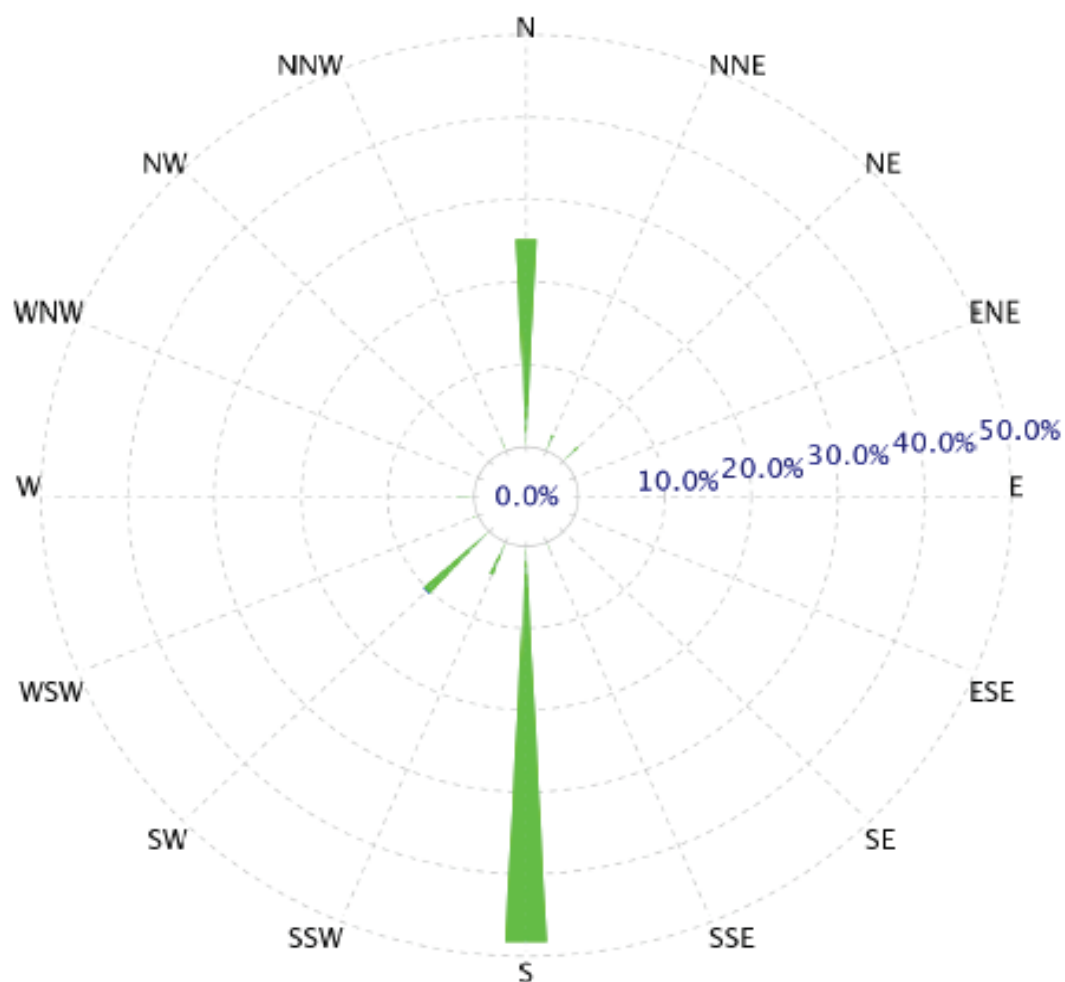
Mean speed: 1.8 m/s
No. of obs.: 900 / 900
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

October 1981 – 2010



Calm
<1 1 4 8 12 16 [m/s]

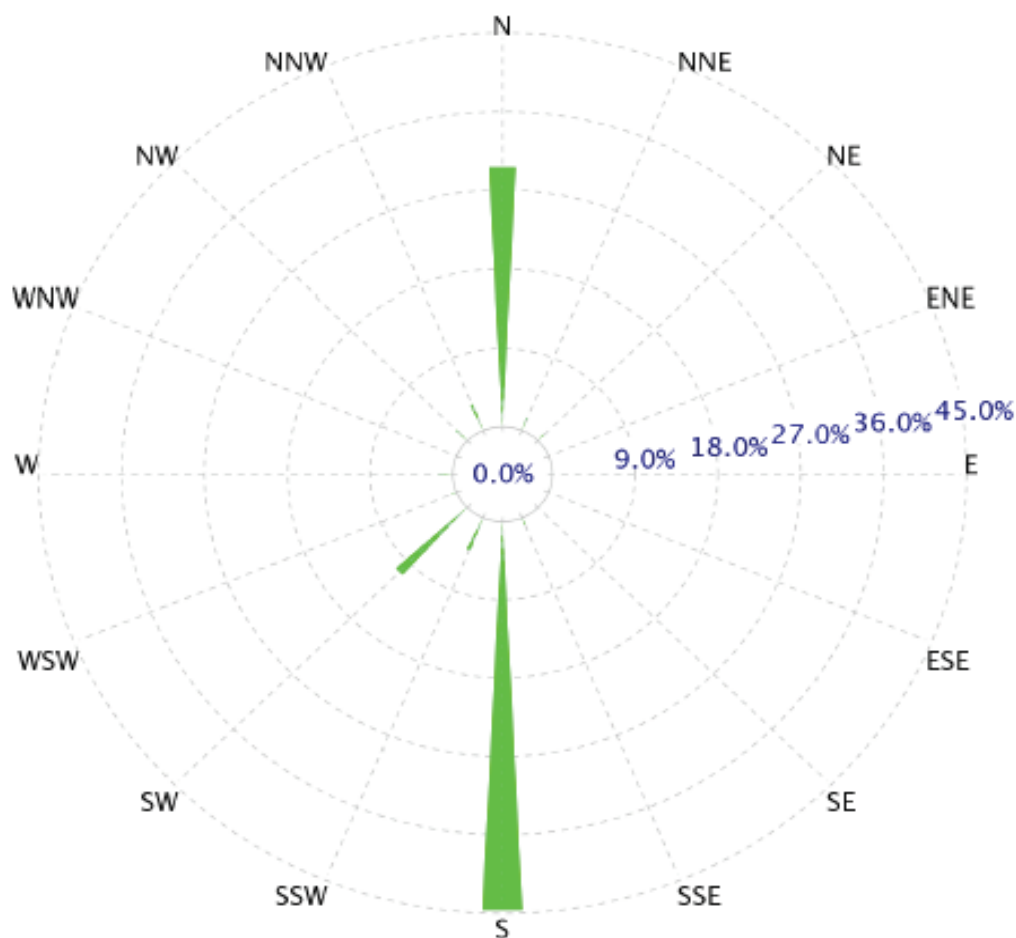
Mean speed: 1.7 m/s
No. of obs.: 930 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

November 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

Mean speed: 1.7 m/s

No. of obs.: 900 / 900

Wind Group: Daily Wind

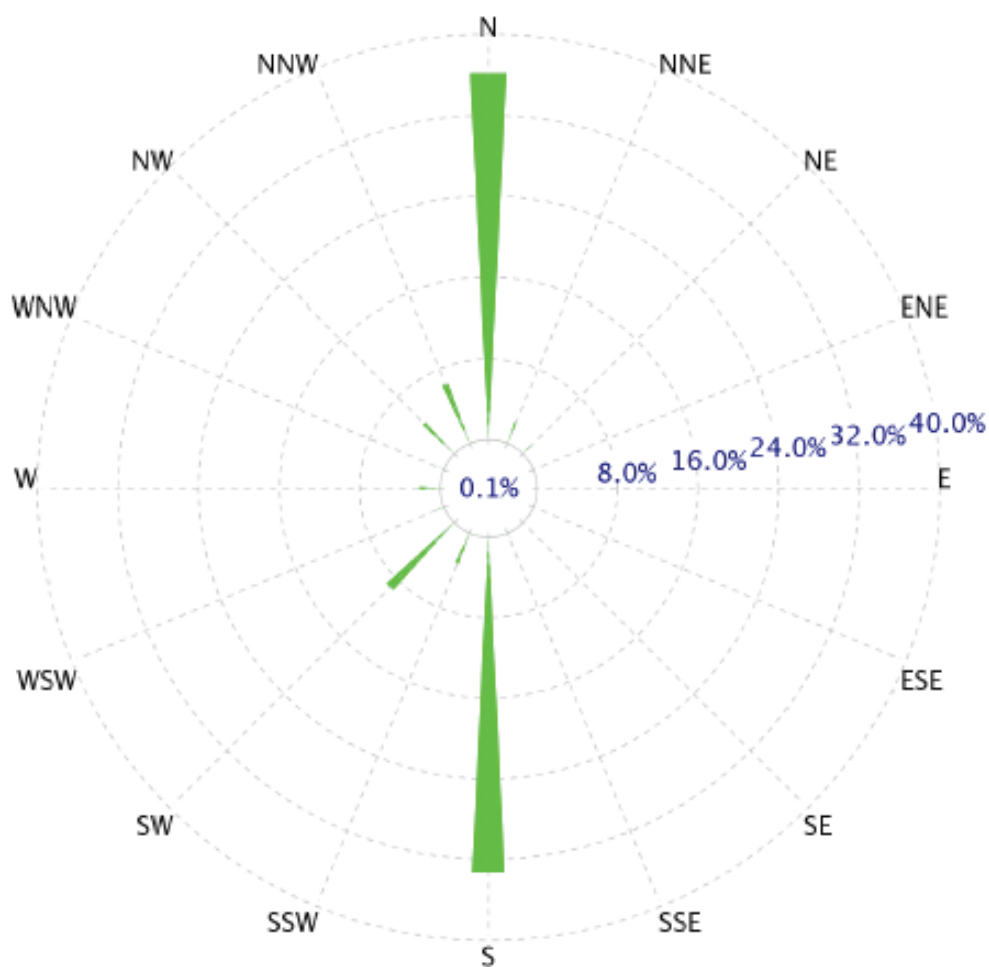
Data Source: Climatic observation



PAGASA
Climatology and Agrometeorology Division
CLIMATE AND AGROMET DATA SECTION

Lumbia Airport, Misamis Oriental

December 1981 – 2010



Calm 
<1 1 4 8 12 16 [m/s]

Mean speed: 1.8 m/s
No. of obs.: 930 / 930
Wind Group: Daily Wind
Data Source: Climatic observation



JCG INDUSTRIAL TECHNOLOGIES

"Engineering Services and Supply of Environmental Equipment"

Date : June 11, 2021

To : **PHILIPPINE SINTER CORPORATION**
PHIVIDEC Industrial Estate - Economic Zone
9002 Villanueva, Misamis Oriental

Thru : **GAIA SOUTH, INCORPORATED**
7F Montepino Bldg., Gamboa cor. Adelantado St.
Legazpi Village, Makati City 1229

Attention : **Ms. Diano Rose C. Simoy**

Subject : **Advance Results on Ambient Air Quality Monitoring
and Noise Level Measurement**
(P.O.#/Date: 45000034907 / 21 May 2021)

Dear Sir :

We are sending in advance, the results of the air quality monitoring and noise level measurement performed at five barangays surrounding the facility of Philippine Sinter Corporation. The monitoring activity for the five stations were conducted from **May 12 – 18, 2021**.

Elevated levels of particulates (TSP and PM10) were obtained during the one hour air sampling at the five stations where the highest was at Station 1. This station also recorded an NO₂ of 43 ug/Nm³ based on one hour air sampling, which was the highest among the five NO₂ results. SO₂ was not detected during the one hour measurement. Out of the five trace metals sampled, only lead (Pb) was consistently present in all the five stations, but in small amounts.

The twenty four hour sampling also showed Station 1 having the highest TSP and PM10 levels. SO₂ was present in small concentrations and was not detected in Stations 4 and 5. NO₂ is also very low when compared with the air quality standard.

Noise levels in the five stations exceeded the noise limit for a Class A (Residential) areas, in all the four time periods.

It was observed that the particulates in the sampling stations were contributed by passing vehicles and pedestrians. The nearby construction of a building and the on-going aerobics class may have added to the suspended particulates at Station 1.

Vehicular traffic and the daily activities near each of the sampling station have also resulted to high noise levels.

Please feel free to contact us for any questions or clarification on the results. Thank you for the opportunity to serve your air sampling needs.

Sincerely,


JOVY G. GARINGGAN
Sales & Marketing Manager


JOEY C. GARINGGAN
Operations Manager

Sampling Sites and Dates

Station No.	Location	Sampling Date	Start Time	End Time
1	Near Katipunan Baranggay Hall	May 12 -13, 2021	4:00 PM	5:30 PM
2	Tam-Bal Area (Bgy. Tambobong and Balacanas)	May 13 – 14, 2021	7:45 PM	9:15 PM
3	Bgy. San Martin, approx. 50m away from baranggay hall & covered court	May 15 – 16, 2021	9:15 PM	10:30 PM
4	Phividec Road, approx. 150m away from Butuan-Iligan Road	May 16 – 17, 2021	11:30 AM	1:00 PM
5	Near baranggay hall of Poblacion 3, approx. 10m away from covered court	May 17 -18, 2021	03:30 PM	04:45 PM

Particulates and Gases – 1 Hour Sampling

Station No.	Location	TSP ug/Nm ³	PM10 ug/Nm ³	SO ₂ ug/Nm ³	NO ₂ ug/Nm ³
1	Near Katipunan Baranggay Hall	208	87	<0.29	43
2	Tam-Bal Area	32	32	<0.29	13
3	Bgy. San Martin	96	58	<0.29	23
4	Phividec Road	54	28	<0.29	13
5	Near baranggay hall of Poblacion 3	81	44	<0.29	11
DENR Standards		300	200	340	260

Trace Metals – 1 Hour Sampling

Station No.	Location	As ug/Nm ³	Cd ug/Nm ³	Cr ⁺⁶ ug/Nm ³	Pb ug/Nm ³	Hg ug/Nm ³
1	Near Katipunan Baranggay Hall	<0.09	<0.20	<0.1	0.10	<0.01
2	Tam-Bal Area	<0.09	<0.20	<0.1	0.12	<0.01
3	Bgy. San Martin	<0.09	<0.20	<0.1	0.12	<0.01
4	Phividec Road	<0.09	<0.20	<0.1	0.09	<0.01
5	Near baranggay hall of Poblacion 3	<0.09	<0.20	<0.1	0.08	<0.01
DENR Standards		20	10	---	20	---

* As – Arsenic; Cd – Cadmium; Cr⁺⁶ – Chromium Hexavalent; Pb – Lead; Hg - Mercury

Particulates and Gases – 24 Hour Sampling

Station No.	Location	TSP ug/Nm ³	PM10 ug/Nm ³	SO ₂ ug/Nm ³	NO ₂ ug/Nm ³
1	Near Katipunan Baranggay Hall	167	72	2	16
2	Tam-Bal Area	62	33	2	8
3	Bgy. San Martin	51	35	5	9
4	Phividec Road	109	45	<0.29	7
5	Near baranggay hall of Poblacion 3	87	52	<0.29	10
DENR Standards		230	150	180	150

Noise Level Measurement

Morning Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	56.7	63.9	59.5	59.1	50
2	49.6	67.1	56.1	55.4	50
3	54.4	63.4	56.3	55.6	50
4	54.4	59.8	56.1	55.7	50
5	54.5	62.2	56.9	56.5	50

* Class A (Residential Areas)

Daytime Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	56.3	71.4	62.0	61.4	55
2	48.5	64.2	53.4	53.0	55
3	52.7	57.2	53.8	53.5	55
4	51.0	67.7	55.1	54.0	55
5	52.8	64.9	57.5	57.1	55

* Class A (Residential Areas)

Evening Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	55.9	65.6	59.7	59.0	50
2	48.1	61.0	50.7	49.4	50
3	54.5	56.9	55.1	54.9	50
4	56.8	59.6	58.0	58.0	50
5	55.2	64.5	57.8	57.6	50

* Class A (Residential Areas)

Nighttime Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	57.2	62.7	58.8	58.5	45
2	47.5	55.0	49.0	48.6	45
3	53.8	55.2	54.1	54.1	45
4	55.5	59.0	56.0	55.8	45
5	54.9	59.9	56.9	56.8	45

* Class A (Residential Areas)





JCG INDUSTRIAL TECHNOLOGIES

"Engineering Services and Supply of Environmental Equipment"

June 30, 2021

GAIA SOUTH, INCORPORATED

7F Montepino Bldg., Gamboa cor. Adelantado St.
Legazpi Village, Makati City 1229

Attention : **MR. NEIL DURAN**
MR. RAYMUNDO CRUZ

Subject : **Advance Results on Ambient Air Quality Monitoring
and Noise Level Measurement**
Reference: P.O. # 4500035643

Dear Sir :

We are sending in advance, the results of the air quality monitoring and noise level measurement performed at five barangays surrounding the facility of Philippine Sinter Corporation. The monitoring activity for the five stations were conducted from June 03-09, 2021.

Both the 1-hour and 24-hour sampling showed elevated levels of particulates at the 5 stations. The nearby construction of a commercial building and the frequent passing of vehicles may have caused the exceedance of TSP at Station 1, both during 1-hour and 24-hour averaging.

Other parameters from each sampling station are well within their respective air quality standards. It is assumed that all the ground level concentration of particulates and other pollutants are mostly influenced by vehicular traffic and other day to day activities near each station.

Noise levels in the five stations exceeded the noise limit for a Class A (Residential) areas, in all the four time periods. Background noise were mostly from vehicular and pedestrian traffic.

Please feel free to contact us for any questions or clarification on the results. Thank you for the opportunity to serve your air sampling needs.

Sincerely,


JOEY C. GARINGGAN
Operations Manager

Sampling Sites and Dates

Station No.	Location	Sampling Date	Start Time	End Time
1	Near Katipunan Barangay Hall	June 03-04, 2021	4:15 PM	4:15 PM
2	Tam-Bal Area (Brgy. Tambobong and Balacanas)	June 04-05, 2021	5:30 PM	5:30 PM
3	Brgy. San Martin, approx. 50m away from Barangay Hall & covered court	June 06-07, 2021	9:45 AM	9:45 PM
4	Phividec Road, approx. 150m away from Butuan-Iligan Road	June 07-08, 2021	12:15 PM	12:15 PM
5	Near Barangay hall of Poblacion 3, approx. 10m away from covered court	June 08-09, 2021	02:30 PM	02:30 PM

Particulates and Gases – 1 Hour Sampling

Station No.	Location	TSP ug/Nm ³	PM10 ug/Nm ³	SO ₂ ug/Nm ³	NO ₂ ug/Nm ³
1	Near Katipunan Barangay Hall	314	131	10.28	17
2	Tam-Bal Area	99	98	<0.29	4
3	Brgy. San Martin	56	29	<0.29	27
4	Phividec Road	41	28	<0.29	16
5	Near Barangay Hall of Poblacion 3	75	31	<0.29	9
DENR Standards		300	200	340	260

Trace Metals – 1 Hour Sampling

Station No.	Location	As ug/Nm ³	Cd ug/Nm ³	Cr ⁺⁶ ug/Nm ³	Pb ug/Nm ³	Hg ug/Nm ³
1	Near Katipunan Barangay Hall	0.02	<0.2	0.02	0.07	0.003
2	Tam-Bal Area	0.02	<0.2	<ND	0.06	0.003
3	Brgy. San Martin	0.02	<0.2	<ND	0.08	0.004
4	Phividec Road	<0.09	<0.2	0.03	0.04	0.002
5	Near Barangay hall of Poblacion 3	0.07	<0.2	0.04	<ND	0.001
DENR Standards		20	10	---	20	---

* As – Arsenic; Cd – Cadmium; Cr⁺⁶ – Chromium Hexavalent; Pb – Lead; Hg – Mercury; <ND – Not Detected

Particulates and Gases – 24 Hour Sampling

Station No.	Location	TSP ug/Nm ³	PM10 ug/Nm ³	SO ₂ ug/Nm ³	NO ₂ ug/Nm ³
1	Near Katipunan Barangay Hall	247	78	6	6
2	Tam-Bal Area	68	36	3	3
3	Brgy. San Martin	42	20	6	3
4	Phividec Road	72	34	4	1
5	Near Barangay Hall of Poblacion 3	118	52	5	2
DENR Standards		230	150	180	150

Noise Level Measurement

Morning Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	55.2	61.6	57.4	57.3	50
2	53.1	67.8	58.9	58.2	50

3	52.2	64.0	54.5	53.7	50
4	55.2	61.4	57.3	57.2	50
5	54.9	63.5	57.5	56.9	50

* Class A (Residential Areas)

Daytime Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	56.1	67.6	60.9	60.8	55
2	53.7	63.7	56.9	55.7	55
3	51.5	61.4	52.8	52.3	55
4	53.3	58.2	55.4	55.4	55
5	55.3	62.6	59.1	59.5	55

* Class A (Residential Areas)

Evening Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	59.4	64.6	61.5	61.4	50
2	52.1	60.1	53.8	53.5	50
3	55.0	57.7	56.0	55.9	50
4	57.3	61.3	58.2	58.0	50
5	54.2	61.5	55.7	55.5	50

* Class A (Residential Areas)

Nighttime Period

Station No.	Noise Level, dBA				DENR Standard* dBA
	Minimum	Maximum	Mean	Median	
1	53.3	55.5	53.9	53.9	45
2	48.2	52.6	49.4	49.1	45
3	55.0	58.5	55.7	55.6	45
4	54.3	57.1	55.7	55.7	45
5	53.8	55.1	54.4	54.4	45

* Class A (Residential Areas)

Ang Gaia South Inc. ay isang pribadong kompanya na nagsasagawa ng pag-aaral hinggil sa kapaligiran at tao sa mahigit-kumulang 28 taon. Ang resulta ng kanilang pag-aaral ay walang pinapanigan at base lamang sa masusi at siyentipikong pag-aaral na naaayon sa pamantayan ng Department of Environment and Natural Resources (DENR). Ang lahat ng mga datos ay maayos na idodokumento at bibigyang-pansin sa pagsasagawa ng Environmental Impact Assessment (EIA) Report.


Ang panayam na ito ay patungkol sa kasalukuyang estado ng komunidad na sakop ng pinaplanong *Ore Blend and New Berth Facility Project* ng Philippine Sinter Corporation (PSC).

Nilalayon ng panayam na ito ang mga sumusunod:

- Malaman ang katangian ng mga komunidad na sakop ng PSC;
- Malaman ang opinyon ng mga tao hinggil sa panghinaharap na operasyon ng PSC; at
- Upang maidokumento ang mga saloobin, opinion at rekomendasyon ng mga indibidwal patungkol sa nilalayong proyekto ng PSC.

Maraming salamat po.

DEMOGRAPHIC, SOCIAL, HEALTH, ECONOMIC AND PERCEPTION SURVEY
Ore Blend and New Berth Facility Project
Phividec Industrial Authority, Municipality of Villanueva, Province of Misamis Oriental

	Environmental Impact Assessment (EIA) for Philippine Sinter Corporation		<i>Respondent Code:</i>
	Pangalan ng Nagtatanong:		
	Katayuan sa Pamilya ng Iniinterbyu:		
	Petsa ng Interbyu (mm/dd):	Oras ng simula (hh:mm):	:
	Petsa na bumalik para sa interbyu (mm/dd):	Oras na natapos (hh:mm):	:
Araw na natapos (mm/dd):	Bilang ng pagbisita:		

A. KATANUNGAN TUNGKOL SA SARILI:

A1. Kasarian: 1) Lalake 2) Babae

A2. Edad: **1)** 15-19 **3)** 25-29 **5)** 35-39 **7)** 45-49 **9)** 55-59 **11)** 65 pataas

2) 20-24 **4)** 30-34 **6)** 40-44 **8)** 50-54 **10)** 60-64

A3. Katayuang sibil: 1) Binata o Dalaga 2) May asawa 3) Balo 4) Hiwalay 5) Live-in

A4. Relihiyon:

1) Katoliko	4) Born Again	7) Jehovah's Witness
2) Islam/ Muslim	5) Iglesia ni Cristo	8) Iba pa _____
3) Aglipayan	6) Protestante	

A5. Naabot na pinag-aralan:

1) Elementarya, Grade_____	5) College, Antas at Kurso _____
2) Tapos ng elementarya	6) Tapos ng College, Kurso _____
3) High school, Grade_____	7) Vocational, Antas at Kurso _____
4) Tapos ng high school	8) Wala / hindi nakapag-aral

A6. Kayo ba ay may trabaho/hanapbuhay? 1) Mayroon 2) Wala

A6.1 Kung mayroon, ano ang inyong trabaho/hanapbuhay?

A6.2 Saan kayo nagtatrabaho/naghahanapbuhay?

- 1) Sa loob ng barangay
- 2) Labas ng barangay – Kung Oo, saang barangay? _____
- 3) Labas ng bayan – Kung Oo, saan? (*bayan, probinsiya, bansa*) _____

A6.3 Buwanang sahod/kita: 1) Wala pang P1,000 4) P5,001-7,250 7) P15,001-17,250
2) P1,001- 2,500 5) P7,251-10,000 8) P17,251-20,000
3) P2,501- 5,000 6) P10,001 – P15,000 9) Higit sa P20,000

A7. Bukod sa nabanggit na trabaho o hanapbuhay, mayroon ka pa bang ibang pinagkakakitaan?

1) Mayroon 2) Wala

A7.1 Kung mayroon, ano ito?

A7.2 Magkano ang kinikita kada buwan?

B. KATANGUNGAN TUNGKOL SA SAMBAHAYAN :

B1. Ilan ang miyembro ng inyong sambahayan? _____

B2. Sinu-sino ang kumikita sa inyong sambahayan?

RELASYON (A)	ESTADO SIBIL (B)	NATAPOS SA PAG- AARAL (C)	EDAD (D)	TRABAHO	KONTRIBUSYONG KITA/BUWAN (PhP)

Mga Pagpipilian:

(A) 1) Anak 2) Pinsan 3) Tiyo/Tiya 4) Kamag-anak 5) Iba pa _____

(B) 1) Binata o Dalaga 2) May asawa 3) Balo 4) Hiwalay 5) Live-in

(C) G – Grade school (1, 2, 3, 4 ,5, 6, 7)

H – High school

JH – Junior High

SH – Senior High

C – College

V – Vocational N- None

(D) 1) below 15 years 2) 15-65 years 3) above 65 years

B3. May kinabibilangan ba kayong grupong etniko? 1) Mayroon 2) Wala

Kung mayroon, ano ito? (Hal. Tagalog, Cebuano, Ilonggo, Bikolano, Kapampangan, Maranao, Tausug, etc.) _____

B4. Ano ang pananalitang gamit/dialect ng pamilya? _____

B5. Mayroon pa bang ibang pinagkakakitaan ang miembro ng sambahayan?

1) Mayroon 2) Wala

Kung mayroon, anu-ano ang mga ito?

IBANG PINAGKAKAKITAAN	HALAGA/BUWAN (PhP)
Ani sa lupang pasaka/kita sa paalagang hayop	
Pera/tulong mula sa ibang bansa	
Kita ng paupahang lupa, bahay o iba pa	
Kita mula sa bangko o pautang	
Pensyon	
Dibidendo	
Iba pa:	

B6. Mayroon bang pinagkakagastusan ng inyong sambahayan?

1) Mayroon 2) Wala

Kung mayroon, anu-ano ang mga ito?

PINAGKAKAGASTUSAN	GASTOS BAWAT BUWAN (PhP)	GASTOS BAWAT TAON (PhP)
Pagkain		
Damit		
Gamit sa Bahay		
Transportasyon		
Edukasyon		
Kalusugan		
Utilities – Tubig, Kuryente		
Bisyo		
Load sa cellphone		
Iba pa:		

B7. Saan kayo namimili o namamalengke ng pagkain o gamit sa bahay?

C. KATANUNGAN TUNGKOL SA BAHAY:

C1. Saan nanggagaling ang tubig na inyong iniinom?

- 1) Gripo sa loob ng bahay 2) Gripo ng barangay/syudad 3) Deep well 4) Bukal/ spring
5) Poso 6) Ilog/ batis 7) Water Refilling Station 8) Iba pa _____

C2. May sarili ba kayong linya ng kuryente?

- 1) Mayroon
2) Wala _____

Kung mayroon, saan galing? _____

Magkano ang binabayaran kada buwan? _____

C2.1 Kung wala, ano ang ginagamit ninyong ilawan?

- 1) Generator 2) Kerosene lamp
3) Kandila 4) Iba pa (pakisaad) _____

C2.2 Magkano ang nagagastos sa nakasaad sa C2.1? PhP _____ kada _____

C3. Ano ang gamit ninyo sa pagluluto?

- 1) LPG/Gasul 2) Uling 3) Kuryente
4) Kahoy 5) Gaas/Kerosene 6) Iba pa _____

C4. Anu-anong mga kagamitang pambahay ang mayroon kayo?

- 1) Microwave 2) Stereo 3) TV 4) Refrigerator 5) Electric Fan
6) Personal Computer 7) Laptop 8) Washing machine
9) Gas/Electric Stove 10) Electric iron 11) Iba pa _____

C5. May sarili ba kayong palikuran/ kubeta? 1) Mayroon 2) Wala

Kung mayroon, ano ang klase ng palikuran/ kubeta?

- 1) De-flush 2) De-buhos 3) Hukay 4) Iba pa _____

C6. Kayo ba ang nagmamay-ari ng inyong bahay? 1) Oo 2) Hindi

C6.1 Kung hindi, kayo ba ay:

- 1) Nangungupahan Magkano ang upa/renta kada buwan? _____
 2) Nakikitira

C7. Kayo ba ang nagmamay-ari ng lupang tinitirikan ng inyong bahay? 1) Oo 2) Hindi

C7.1 Kung hindi, sino ang may-ari ng lupa?

- 1) Kamag-anak
 2) Pribadong tao
 3) Gobyerno

C7.2 Kayo ba ay pinagbabayad sa lupa na tinitirikan ng inyong bahay? 1) Oo 2) Hindi

C7.2.1 Kung Oo, magkano ang ibinabayad kada buwan? _____

C8. Gawa sa anu-anong materyales ang inyong bahay?

Bubong

Katawan ng bahay

- | | |
|--------------------|-----------------|
| 1) Kahoy | 1) Kahoy |
| 2) Cemento | 2) Cemento |
| 3) Nipa/ cogon | 3) Nipa/ cogon |
| 4) Kawayan | 4) Kawayan |
| 5) Yero/ GI sheets | 5) Iba pa _____ |
| 6) Iba pa _____ | |

D. KATANUNGAN TUNGKOL SA KOMUNIDAD:

D1. Ilang taon na kayong naninirahan sa barangay na ito?

- | | | |
|----------------------|--------------|------------------|
| 1) Mula kapanangakan | 3) 1-5 taon | 5) higit 10 taon |
| 2) Wala pang 1 taon | 4) 5-10 taon | |

D1.1 Kung hindi mula kapanganakan, saan ang probinsyang pinagmulan? _____

D1.2 Bakit kayo lumipat sa lugar na ito? 1) Pamilya/asawa 2) Kabuhayan 3) Ibapa _____

D2. Kasapi/Miyembro ba kayo ng organisasyon sa inyong lugar? 1) Oo 2) Hindi

D2.1 Kung Oo, ano ang pangalan ng organisasyon? _____

KLASE NG ORGANISASYON	PANGALAN NG ORGANISASYON	PARTISIPASYON MO
Civic		
Religious		
Economic		
Political		
Iba pa:		

D3. Saan nag-aaral ang mga miembro ng sambahayan mo?

Elementary (pakisaad ang pangalan at lokasyon nito): _____

High School (pakisaad ang pangalan at lokasyon nito): _____

Junior Highschool (pakisaad ang pangalan at lokasyon nito): _____

Senior Highschool (pakisaad ang pangalan at lokasyon nito): _____

College/ Vocational (pakisaad ang pangalan at lokasyon nito): _____

- D4. Saan kayo karaniwang nagpapatingin o nagpapagamot ng sakit?**
1) Barangay Health Center
2) Public Hospital (*pakisaad ang pangalan at lokasyon nito*): _____
3) Private Hospital (*pakisaad ang pangalan at lokasyon nito*): _____
4) Clinic (*pakisaad ang pangalan at lokasyon nito*): _____
5) Iba pa (*pakisaad*): _____

- D5. Anu-ano ang mga alam/nakikita ninyo na problemang panlipunan sa inyong barangay?**
1) Wala 2) Drug addiction 3) Kawalan ng trabaho
4) Maraming hindi nakapag-aral 5) Prostitusyon
6) Child labor 7) Politikal
8) Maruming kapaligiran 9) Traffic
10) Iba pa _____

- D6. Anu-ano ang mga alam/nakikita ninyong magagandang katangian ng inyong barangay?**
1) Wala 2) Maraming may trabaho 3) Maayos na palakad ng gobyerno
4) Maraming nakapag-aral 5) Malinis na kapaligiran
6) Iba pa _____

- D7. Anu-ano ang hanapbuhay/pinagkakakitaan ng mga kababaihan dito?**
1) pagtitinda 2) pananahi 3) iba pa _____

- D8. May mga problema bang kinakaharap ang mga kababaihan dito?**

- 1) Oo 2) Wala

- D8.1 Kung Oo, anu-ano ang mga ito?**

- 1) kawalan ng trabaho 2) Biktima ng Pang-aabuso o Diskriminasyon

- 3) Iba pa _____

- D9. Anu-ano ang maaaring gawin ng mga kababaihan dito upang makatulong sa pagpapaunlad ng inyong lugar?** _____

- D10. Anu-ano ang mga pangkaraniwang gawain ng mga kabataan sa inyong lugar?**

- a. _____ b. _____ c. _____

- Iba pa _____

- D11. Mayroon pa bang maaaring gawin ang mga kabataan upang makatulong sa pagpapaunland ng inyong lugar?**

- 1) Mayroon 2) Wala

- D11.1 Kung mayroon, ano-anu ang mga ito?**

- a. _____ b. _____ c. _____

E. KATANGUNGAN TUNGKOL SA KALUSUGAN:

- E1. Sa nakalipas na 5 taon, anu-ano ang tatlong pinakamadalas na naging sakit mo at ng inyong miyembro ng sambahayan at ng mga tao sa inyong lugar?**

E2. Kanino kayo nagpapagamot o nagpapakonsulta?
 1) Duktur 3) Kumadrona (midwife) 5) Wala/ sarili
 2) Brgy health worker 4) Albularyo/ hilot 6) Iba pa (*pakisaad*) _____

E3. Saan mo kinukuha/binibili ang mga gamot para sa iyong pamilya?
 1) Botika 2) Tindahan 3) BHU (Brgy. Health Unit)
 4) City Health Unit 5) Iba pa (*pakisaad*) _____

E4. Kung gumagastos sa pagpapagamot, saan nanggagaling ang pondo para dito?
 1) Sariling bulsa 2) Tulong mula sa gobyerno
 3) Tulong mula sa CSR ng mga kompanya 4) Iba pa (*pakisaad*) _____

E4.1. Magkano kada taon ang nagagastos mo sa gamot? _____

E5. Anong serbisyong medical o medical mission na ang napakinabangan mo?

	Sangay	Gaano kadalas
Galing Gobyerno:	_____	_____
Galing Pribado:	_____	_____
	_____	_____

E6. Sa nakalipas na 5 taon, ano ang tatlong pinakamadalas na dahilan ng pagkamatay sa inyong lugar?

E7. Ikaw ba ay naninigarilyo? 1) Oo 2) Hindi

E7.1. Kung oo, gaano katagal na (taon)? _____
Dami ng sigarilyong nauubos sa isang araw (piraso) _____

E8. Ikaw ba ay umiinom ng alak? 1) Oo 2) Hindi

E8.1. Kung oo, gaano kadalas?
 1) Araw-araw 2) Lingu-lingo 3) Buwanan 4) Bihira

E9. Ikaw ba ay gumagamit ng birth control measure o contraceptive? 1) Oo 2) Hindi

E9.1. Kung oo, anong klase o pamamaraan?
 1) Pills 2) Rhythm method 3) IUD 4) Withdrawal
 4) Condom 6) iba pa _____

E10. Water Facility
Saan nanggagaling ang tubig na ginagamit ng inyong sambahayan para sa:

E10.1. Paliligo/paglalaba? _____

E10.2. Pagluluto/inumin? _____

E11. Sanitation

Anung paraan ang ginagamit mo sa pagtatapon ng basura?

1) Sinusunog 2) Ibinabaon 3) Itinatambak sa isang lugar hanggang sa mabulok
 4) Kinokolekta ng basurero 5) Iba pa _____

E12.1 Ikaw ba ay nagse-segregate ng basura? 1) Oo 2) Hindi

F. KATANGUNGAN TUNGKOL SA KAPALIGIRAN:

F1. May napansin ba kayong pagbabago sa kapaligiran ng inyong barangay sa nagdaang 5 taon?

- 1) Mayroon 2) Wala

Kung mayroon, anu-ano ito?

MGA PAGBABAGO sa nagdaang limang taon	DAHILAN/SANHI	KAILAN NAPANSIN ANG PAGBABAGO
1.		
2.		
3.		
4.		
5.		
Iba pa:		

F2. Ano ang mga suliranin ukol sa kapaligiran dito sa inyong lugar?

ASPETO	SULIRANIN	KAILAN NARANASAN	DAHILAN
Halaman			
Tubig			
Lupa			
Hangin			
Iba pa:			

F3. Sino ang tumutulong sa inyo upang malutas ang mga suliraning ito?

GRUPO	SULIRANIN	MGA NAITULONG
Barangay		
Munisipyo		
Probinsiya		
National Government _____ (DA,DENR,DOST, Iba pa)		
NGO o pribadong organisayon		
Simbahan		
Iba pa		

F4. Kuntento ka ba sa kaayusan ng inyong kapaligiran?

- 1) Oo 2) Hindi 3) Hindi ko alam

F4.1 Kung hindi, ano sa inyong palagay ang dapat gawin upang magiging maayos ang kapaligiran?

F5. Anu-anong mga sakuna o kalamidad na dulot ng kalikasan ang dumaan o nangyari sa inyong lugar sa nakaraang 5 taon ?

- 1) Bagyo
2) Lindol
3) Baha
4) Pagputok ng Bulkan
5) Landslide/Pagguho ng Lupa
6) Iba pa _____

G. PANGKALAHATANG PAGTATAYA AT PAGTINGIN/OPINYON TUNGKOL SA PHILIPPINE SINTER CORPORATION

G1. Narinig o alam nyo po ba ang kompanyang PSC o Philippine Sinter Corporation?
1) Oo 2) Hindi _____

G1.1 Kung Oo, kanino, paano o saan ninyo po ito narinig o nalaman? _____

G2. Maliban sa amin o bago pa sa amin, alam ninyo na ba ang tungkol sa plano ng PSC na Ore Blend and New Berth Facility Project?

1) Oo 2) Hindi

G2.1. Kung Oo, paano ninyo nalaman?

- 1) Gobyerno/ barangay officials
- 2) Balita ng kamag-anak/ kaibigan/ kapitbahay
- 3) Radio/ TV/ pahayagan
- 4) Sa mga barangay meetings/ konsultasyon
- 5) Surveys at iba pang pag-aaral
- 6) Iba pa (*pakisaad*) _____

G3. Ano po ang inyong nalalaman tungkol sa pinaplanong proyekto ng PSC na Ore Blend and New Berth Facility?

G4. Sa inyong kaalaman, mayroon bang maidudulot na mabuting epekto ang pinaplanong proyekto?

1) Mayroon 2) Wala

G4.1. Kung mayroon, tukuyin ang mga ito: _____

G5. Sa ngayon, mayroon ba kayong alam na mga benepisyo o tulong na naibigay sa inyo o sa barangay na nagmula sa mga pribadong kompanya sa lugar? 1) Mayroon 2) Wala

G5.1. Kung mayroon, tukuyin ang mga ito: _____

G5.2. Rekomendasyon kung paano mas mapapaganda ang positibong epekto ng proyekto:

G6. Sa inyong kaalaman, mayroon bang maidudulot na masamang epekto ang pinaplanong proyekto?

1) Mayroon 2) Wala

G6.1. Kung mayroon, tukuyin ang mga ito: _____

G6.2. Rekomendasyon kung paano maisasaayos ang negatibong epekto ng proyekto:

G7. Sa pangkalahatan, sa inyo pong palagay ang planong proyekto ng PSC kung papayagan ng gobyerno ay:

- 1) Makakatulong ng malaki sa komunidad at sa mga residente dito
- 2) Makakatulong ng bahagya.
- 3) Walang maitutulong para sa komunidad
- 4) Makakasama sa komunidad.

G8. Ano ang masasabi ninyo sa plano ng PSC na Ore Blend and New Berth Facility Project? Kayo ba ay:

- 1) Strongly Agree 2) Agree 3) No Opinion 4) Disagree 5) Strongly Disagree

Ibigay ang inyong rason _____

G9. Kung sakaling payagan ng gobyerno ang PSC, sang-ayon ba kayo na maging aktibo sa pag-alam sa resulta ng monitoring ng operasyon nito para siguraduhin na ito ay sang-ayon sa DENR standards at siguraduhin na walang masamang epekto sa inyong pamilya at barangay?

- 1) Oo 2) Hindi 3) Hindi Alam

Bakit ? _____

G10. Handa ba kayong dumalo sa mga pagtitipon na ipapatawag ng PSC at barangay para mas maipaliwanag ng kompanya ang proyekto at mga alituntunin nito tungkol sa mga hakbang na ginagawa nito para maprotektahan ang kapaligiran, empleyo, livelihood, educational assistance, community development at iba pang programa ng kompanya?

- 1) Oo 2) Hindi 3) Hindi Alam

Bakit ? _____

G11. Sang-ayon ba kayo na magkaroon ng grievance mechanism o mekanismo ng hinaing ang PSC para matugunan ang mga problema at alintana ng mga taga barangay ninyo kung sakaling matuloy ang proyekto?

- 1) Oo 2) Hindi 3) Hindi Alam

G11.1. Kung oo, sa inyong palagay, paano ito maipatutupad?

G11.2. Kung hindi, bakit? _____

G12. Sa inyo pong palagay, kung sakaling payagan ng gobyerno ang plano ng PSC na Ore Blend and New Berth Facility Project, ito ba ay makapagbibigay ng karagdagan empleyo sa mga residente ng barangay at makakatulong sa pag-unlad ng komunidad?

- 1) Oo 2) Hindi 3) Walang Opinyon

Bakit ? _____

MARAMING SALAMAT PO!

Annex 6.15

Compliance to ECC Conditions

ECC Condition	Status of Implementation	Proof of Compliance/ Objective Evidence
ECC Ref 0807-021-2711 dated April 14, 2009		
<p>Scope</p> <p>This Certificate covers the proposed expansion of the iron ore sintering facility and all the existing facilities and operations of the PSC located at the PHIVIDEC Industrial Estate, Barangay Katipunan, Municipality of Villanueva, Misamis Oriental.</p> <p>Essentially, this Certificate consolidates the four (4) projects that were given ECCs earlier, namely:</p> <ol style="list-style-type: none"> 1. ECC Reference No. 9207-006-120A issued on August 10, 1992 which covered the proposed 5.5MW Diesel Generator Set of the PSC 2. ECC Reference No. 9807-004-120 issued on May 14, 1999, which covered the one hundred forty-four (144) hectares Mindanao Sinter Plant composed of limestone crushing, coke grinding, material blending, mixing, feeding, and a sinter machine with a rated capacity of five (5) million metric tons per year (MMTY); a burnt lime facility with an aggregate capacity of one hundred forty (140) metric tons per day (MTPD) of burnt lime; an existing port with three hundred fifty one (351) meters long main berth having a mooring depth of twenty five (25) meters for big carriers and a 230 meters long smaller cargo berth with six (6) meters mooring depth; and an existing eighteen (18) hectare ore year with a storage capacity of 1.5 million metric tons (MMT) which is divided into four (4) yards, each being 4.5 hectares; 3. ECC Reference No. 0101-028-120 issued on September 16, 2002, which covered the installation and operation of two (2) additional burnt lime kilns and facilities having an aggregate production capacity of 200 MTPD; one (1) hydrated lime plant and facilities with a capacity of 100 MTPD and; one (1) rotary dryer and its facilities; and 4. ECC Reference No. 10(43) 0608-084262-41100 issued on August 8, 2006 which covered the construction and operation of 17.9 MW Sinter Cooling Waste Heat Recovery 	<p>Complied/Constructed</p>	<p>All were installed except the 7MMTPY of pelletized iron ore. However, the status of the component is regularly included in the CMR. Please see the attached submitted latest CMR for 2H 2021 (Attachment 1). The geotagged photos of the established/constructed facilities are included as Annex 1.5.</p>

<p>Power Generation System consisting of a Heat Recovery Boiler, steam turbines, waste treatment plant, and cooling water system</p> <p>The Certificate also covers the proposed expansion of the Iron Ore Sintering Facility from five (5) to twelve (12) MMTPY with the following components: production capacity of five (5) MMTPY sintered ore and seven (7) MMTPY of pelletized iron ore; addition of 100 meters to the existing 351-meter main berth; a new material and product stockyard and a water intake and pipeline system.</p>		
Attachment A - Environmental Management and Monitoring Plan		
1. Adequate mitigating measures and buffer zones shall be provided and maintained along the entire periphery of the project site with appropriate species/dense vegetation cover to enhance the condition of the ecosystems and to serve as noise, vibration and dust buffers.	Complied/Established	The environmental management plan, as described in Table 6.2 summarizes the implementation of the mitigating measures. Buffer zones are maintained by PSC. Please see the attached submitted latest CMR for 2H 2021 (Attachment 1).
2. Establishment of a reforestation program and carbon sink to mitigate greenhouse gas (GHG) emissions from the plant's operations which is in line with the DENR's thrust for GHG emission reduction program	Complied/Established	The undisturbed vegetation cover inside PSC premises is approximately 69 hectares planted with a total of 2,900 trees. Continuous operation of Sinter Heat Recovery facility as CDM project for the reduction of carbon emission. This has been reported in the CMR. Please see the attached submitted latest CMR for 2H 2021 (Attachment 1) and Annex 6.15 for the copy of PSC's Reforestation Program.
3. An effective and continuing Information, Education and Communication (IEC) Program shall be undertaken to inform and educate all stakeholders about the proposed expansion and the project's mitigating measures embodied in its EPRMP and EIS, the conditions stipulated in this Certificate and safety measures in the plant operations for greater awareness, understanding and sustained acceptance of the project. The IEC program shall be submitted to DENR-EMB Region X. The IEC activities shall be funded by the proponent and shall be implemented in coordination with DENR-EMB Region X.	Complied/Conducted	PSC submits IEC program to DENR-EMB Region X and implemented in coordination with the same Office. In some cases, however, DENR-EMB did not attend the IEC. Annex 5.2 presents the IECs conducted by PSC.
4. Implementation of the Social Development Program formulated and developed in consultation with the other stakeholders and in concurrence with the LGUs.	Complied	The formulation and development of SDP is done by PSC Foundation, for and on behalf of PSC. Based on consultation and dialogues, PSC Foundation identifies the program to be implemented. A stakeholder engagement program has been developed for PSC Foundation to ensure that program identified is responsive to needs of the community. Please refer to Annex 5.1 for the proof of SDP implementation.

5. Implementation of an Emergency Response Plan and Disaster Preparedness Program (ERPDPP) in case of emergencies in coordination with the LGUs.		PSC has its own emergency response plan and responds to the need of the LGU, when required and follows the protocols agreed between them and the LGU. Please see Annex 4.1 for the Safety Protocols of PSC.
General Conditions		
6. The plant and berth operations shall conform with the provisions of RA 6969 (Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990), RA 9003 (Ecological Solid Waste Management Act of 2000), RA 9275 (Philippine Clean Water Act of 2004) and RA 8749 (Philippine Clean Air Act of 1999)	Complied/Secured	Please see Annex 6.1 for the PCL Compliance Certificate, Annex 6.2 for the CCO Registration Certificates, Annex 6.12 for PNP Purchase License for Controlled Chemicals; and Annex 6.13 for PDEA License to Handle CPECS.
7. Modify the Memorandum of Agreement (MOA), specifically the provisions on Environmental Guarantee Fund (EGF) and Environmental Monitoring Fund (EMF) to include additional facilities and operation as well as the duties and functions of the Multi-partite Monitoring Team (MMT), which shall be submitted to EMB within sixty (60) days after the final approval of the proposed expansion. Failure of the proponent to comply herewith shall automatically cancel this Certificate.	Complied	As reported in the latest CMR for 2H 2021 (Attachment 4), the most recent communication from EMB-CO dated 03 Nov 2020 instructed PSC to finalize the MOA based on DAO 2017-15 and for the concurrence of all signatories. As of 05 February 2022, the MOA has been signed by all the members and currently routing the document to the EMB Central Office for signature and final final approval by the EMB Director. Annex 6.18 includes the MOA on the Creation of MMT, EMF and EGF.
8. The proponent shall ensure that all relevant conditions of this Certificate are properly complied with by its commissioned contractors/sub-contractors throughout the project implementation.	Complied/Conducted	PSC conducts orientation to all its service providers on EMS, ECC conditions, and other compliance obligations. All new employees of service providers undergo the orientation program prior to deployment in their respective work areas. Please see Annex 5.2 for the photos.
9. The existing Environmental Unit (EU) shall competently handle the environment related aspects of the project. In addition to the monitoring requirements as specified in the Environmental Monitoring Plan (EMoP) for the EIS and EPRMP, EU shall have the following responsibilities: <ul style="list-style-type: none"> • Monitor actual impacts vis-à-vis the predicted impacts and management measures • Ensure that monitoring and reporting are carried out as required; • Comply with the condition of the ECC; and • Formulate suggestions on the revision of the EMP/EMoP, whenever necessary, subject to the approval of the EMB Central Office. 	Complied/Established	Environmental Section is under the Laboratory and Environment Department. Chapter 8 includes the table of organization of PSC showing the environment section of PSC. PSC's Environmental Management System has been certified to ISO 14001 by SGS Philippines since Nov 2021. On Oct 29, 2019, PSC was awarded a certification for ISO 14001:2015 by the same certifying body.
Restrictions		
10. Any significant and/or modification of the currently approved operations shall be subjected to a new EIA	Complied/Constructed	All project components are consistent with the approved EPRMP and ECC.

requirement.		
11. A detailed abandonment plan shall be submitted to the EMB not later than one year before abandonment. The plan shall include rehabilitation measures/clean-up, remediation of areas possibly contaminated with oil, grease and other substances, and proposed alternative projects in the area.	<i>Not applicable</i>	The sinter plant and its components are still operational. As a preparatory document, the previous EIA Report (and this Report) cited basic mechanisms for the future project cessation.
12. In the case of transfer of ownership of this project, these same conditions and restrictions shall apply and the transferee shall be required to notify the EMB within fifteen (15) days from the date of the transfer of ownership.	<i>Not applicable</i>	No transfer of ownership as of the audit period.
Attachment B - Regulatory Conditions		
1. Proponent needs to comply with: <ul style="list-style-type: none"> • Sanitation Code of the Philippines; • Labor Code of the Philippines including occupational health and safety standards; • Building Code of the Philippines for building structures, drainage system and flood control; and • Regulations, operations and management of vessels in ports and coastal waters 	Complied/Secured	The necessary permits have been secured by PSC as reported in the latest CMR for 2H 2021 (Attachment 4).
2. Allocation of water supply	Complied	All sources of water used in the operations were covered by permits as reported in the latest CMR for 2H 2021 (Attachment 1). Please refer also to Annex 6.11 for the Water Permit from Phividec.
3. Solid waste management system	Complied. Established	PSC has established a solid waste management program. The geotagged photos of the established/constructed facilities are included as Annex 1.5 .
4. A Community Assistance Program (CAP) for livelihood and skills training that shall entail the meaningful participation of the residents, including women that shall be continuously executed throughout the project implementation. This program shall include livelihood/skills training and community assistance.	Complied/Conducted	CAP is implemented by the PSC foundation and undergoes similar process on the development of SDP. The programs implemented are reported in the latest CMR for 2H 2021 (Attachment 1) and included in <i>Chapter 5</i> of this EPRMP.
5. Prepare an Emergency Response Plan (ERP) and Disaster Preparedness Program which will include an off-site emergency plan based on APELL (Awareness and Preparedness for Emergency at the Local Level). It should also include ERP for oil and chemical response.	Complied/ Submitted	Revision of Emergency Response Plan (ERP) and Disaster Preparedness Program (DPP) of PSC is already in place including procedures on Emergency Food Storage allocated for emergencies. This is reported in the latest CMR for 2H 2021 (Attachment 4). Please refer also to Annex 1.6 for the Oil Spill Containment, Recovery and Clean-Up Program, Annex 1.7 for the Petroleum Product Waste Management Program, and Annex 1.5 for the Emergency Response Plan.
6. Implementation of a roadway maintenance and transport	Complied	PSC maintains the road network within their premises. In similar

management program to offset impacts of heavy vehicular traffic on pavement and bridges and nuisance/damages to people and properties.		manner, transport management. The geotagged photos of the established/constructed facilities are included as Annex 1.5
7. Given priority in employment to qualified local residents, including women. Adequate public information for jobs available to local residents in the affected areas needs to be implemented.	Complied	PSC implements hiring policy and included coordination with the local PESO.
8. Commission an independent third party auditor to undertake an environmental audit, including a continuing study on the effects of the project on the workers and affected residents, particularly women and children. The results of the third party environmental audit, including the auditing of risks and hazards of the project need to be submitted to DENR-EMB every two (2) years.	Complied/Conducted	ISO 14001 surveillance audit by SGS Philippines annually is among the audits that occur. Health assessments were carried out by PSC among its employees during annual physical and medical examination. No studies on the effects of PSC operations on the health of the local residents had been carried out. This audit is undertaken as part of the compliance to this condition. Please see also Annex 5.2 for the photos.
ECC-R10-1107-0212 dated July 15, 2011		
Scope		
<p>The proposed installation of 2 units (7.5 MW each) Dual fuel generator Sets and its auxiliary equipment project shall have the following components:</p> <ul style="list-style-type: none"> • Engine generator room • Electrical room • Workshop • Transformer yard • Exhaust gas boiler • Fuel, oil and sludge tanks • Transformer pumps • Compressed air system • Cooling system • Radiator area <p>It shall be located at PSC Plant, PHIVIDECA Industrial Estate, Barangay Katipunan, Villanueva, Misamis Oriental.</p>	Complied/Constructed	The project was implemented as designed. The geotagged photos of the established/constructed facilities are included as Annex 1.5 .
Environmental Management		
The proponent shall strictly implement the following mitigating, enhancement, and rehabilitating measures:		
1. Air emission and effluent discharge from the power house shall conform to the standards set by the DENR. Any exceedance thereof shall be ground for automatic cancellation or suspension of this Certificate and imposition of penalties.	Complied/Submitted	Please see Attachment 3 for the copy of SMRs. See also Annex 6.10 for the APSE and APCF Breakdown of Incidence.
2. Noise, vibration and dust emissions shall be confined within the project area.	Complied	Please see Attachment 3 for the copy of SMRs. No community complaints as recorded.
3. Solid waste generated shall be collected effectively and	Complied/Implemented	Please see Annex 6.5 for the Storage Management System. Photos

disposed properly. Good housekeeping and sanitation shall be maintained at all times.		of other waste management facilities are presented in <i>Chapter 1</i> of this EPRMP.
General Conditions		
Further administrative conditions for the grant of this certificate shall be strictly complied with:		
5. The local residents shall be prioritized for employment.	Complied	
6. Adequate firefighting equipment shall be provided	Complied	The power plant has adequate firefighting systems, in compliance with the Fire Code of the Philippines. The geotagged photos of the Fire alarm system is included in Annex 1.5 .
7. The proponent shall initiate to put up an Environmental Monitoring Fund for the use of the multipartite monitoring team in monitoring compliance to ECC.	Complied	The cost is discussed in <i>Chapter 6</i> of this EPRMP. Please see Annex 6.18 for the signed MOA on the Creation of the MMT, EMF and EGF.
8. The DENR-EMB Region 10 and/or multipartite monitoring team can initiate an on-the-spot monitoring and inspection anytime without prior notice.	Complied	PSC allows visits from the MMT and the DENR-EMB Region X. Please see also Annex 5.2 for the photos.
9. In case of abandonment, the proponent shall notify the EMB Regional Office concerned within three (3) months prior to abandonment and the proponent shall submit its abandonment mitigation plan.	<i>Not applicable</i>	The project is still operational.
General Conditions		
10. No other activities should be undertaken other than what was stipulated in the IEE document.	Complied	All activities undertaken by PSC are covered under its EPRMP and ECC.
11. Expansion of the project beyond the project description, or any change in the activity beyond those stated in the IEE document, shall be made subject to a new Environmental Impact Assessment.	Complied	All activities are covered by its EPRMP and ECC per Attachment 1 copy of the ECC.
12. All other permits from the concerned government agencies shall be secured prior to project implementation wherein copies of which shall be submitted to this Office within fifteen (15) days upon receipt hereof, otherwise this ECC shall be considered null and void; and	Complied/Secured	The fact that PSC is operational, it has secured all the necessary local permits.
13. In case of transfer of ownership of this project, the same conditions and restrictions shall apply and the transferee shall be required to notify the EMB Regional Office concerned within fifteen (15) days as regards to the transfer of ownership.	<i>Not applicable</i>	No transfer of ownership as of the audit date.



PHILIPPINE SINTER CORPORATION

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Reforestation Program

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INTRODUCTION

Philippine Sinter Corporation is located within the Phividec Industrial Estate in the Municipality of Villanueva Province of Misamis Oriental. Its current operation has the following major components: 1) Port, 2) Ore yard, 3) Sintering Facility, 4) Burnt Lime and Hydrated Lime Facilities, 5) Sinter Heat Recovery Facility and lastly, 6) Proposed Iron Ore Pellet Facility. The project is covered with an Environmental Compliance Certificate with Reference No. 0807-021-2711 issued on April 14, 2009. It has a land area of 133 ha with only 63.8 ha currently utilized for its current operation.

Geographically, five rock units are underlying the area which includes Upper Miocene Opol Formation, the Pliocene Indahag Limestone, the Pleistocene Bukidnon Formation and the Recent Cagayan Terrace Gravel and Quaternary Alluvium. The main structural features in the area are two (2) northwest-trending faults alongside the trend of Tagoloan River. It is also dominated by three (3) major landforms which are deltaic plain, the alluvial terrace and the hilly to rugged terrain. PSC plant-site rests entirely on the deltaic plain which is made of flat land formed by heavy deposition along its flanks and river mouths.

A tree inventory was conducted on March ~ April 2008. The vegetation assessment documented a total of 17 families composed of 36 genera with a total of 3,766 individual species. The species with the highest frequency count is the Alim, Ipil-ipil, Antipolo, Iggyo and the Big Leaf Mahogany. These tree species have an estimated volume of 3,642.18 cu. m. Table 1 shows the latest inventory of the number of trees planted within the Greenbelt Zone.

Location	Frequency Count
Middle to South Area of Sinter Plant [Block A] includes road trees	420
South East area of Sinter [Block B] including road trees	205
South West area of Sinter Plant [Block C]	2,313
Total	2,938

Table 1: *Inventory of Trees as of April 2011*



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PROGRAM OBJECTIVES

- To sequester carbon dioxide through the planting and maintenance of a GREENBELT CONTROL ZONE. This activity will also serve as buffer from noise, dust and vibration as a result of PSC's operation.
- To ensure reduction of greenhouse gas emitted to the atmosphere through the SHR CDM PROJECT.

PROPOSED ACTIVITIES

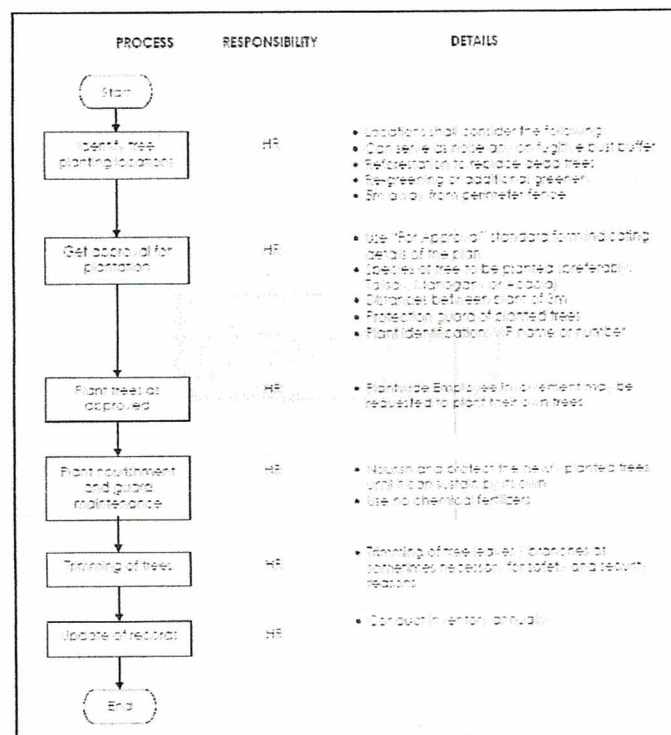
I. GREENBELT CONTROL ZONE

A. General Maintenance of Existing Vegetation

Through PSC's General Management Division, pruning, watering and trimming of trees planted within its perimeter is done regularly.

B. Tree planting at Perimeter Areas

In order to preserve the clean and green environment in PSC, a tree planting will be conducted and facilitated by PSC General Services through Human Resource Department.





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C. TREE GROWING PROJECTS

An activity conducted jointly with various groups such as the DENR and the Local Government Units in Villanueva. This activity is conducted in time with a specific environmental celebration preferably on the rainy season. Area or location of planting site will be identified by the local government unit. Tree species often planted are the Narra or Antipolo.

D. CARBON SEQUESTRATION COMPUTATION

The adaption of the Greenbelt Control Zone will significantly reduce CO₂ emission based on this computation (www.americanforests.org)

- Step 1: Determine the quantity of Carbon Dioxide emitted by PSC's operation.
- Step 2: Determine number of fully grown trees in the area.
- Step 3: Compute for the amount of CO₂ sequestered using the ratio,
1 tree planted = 911 lbs CO₂ sequestered

II. CLEAN DEVELOPMENT MECHANISM PROJECT (SINTER HEAT WASTE RECOVERY)

The 18.6 MW waste heat power generation system started test run on May 8, 2008. While full synchronization with the Mindanao grid happened on September 8, 2008. In this project, the superheated steam is used to drive a turbine thus generating electricity with a capacity of 18.6MW.

The electricity produced by the project is used by PSC to replace imported electricity from the Mindanao grid. This project contributes to sustainable development in several ways, including the introduction of environmentally friendly technology to the PSC plant. In terms of sustainable use of natural resources, recycling the waste heat for power production ensures that the plant's energy sources are used more efficiently. Also, by producing new power from a waste source, the Project also helps stabilize the power supply in the area which helps domestic users to obtain a reliable supply of electricity.

Finally, since it produces electricity without the need for imported fuel, total Carbon emissions produced in connection to the continued operation of PSC is reduced.

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**EMISSION REDUCTION CALCULATION.**

$$E.R = B.E - P.E$$

Where : *E.R* = emission reduction in tons CO₂ / yr

B.E = baseline emission in tCO₂/y

P.E = Project emission in tCO₂/ty which is calculated based on the quantity fossil fuel used in the SHR start-up operations or combusted supplementary fuel.

In the case of the SHR *P.E* = 0 tCO₂/y

Therefore:

$$E.R = B.E$$

Baseline Emission Computation

$$BE_{activity} = EG_y \times EF_{displacing}$$

Where

EG_y = Net quantity of electricity supplied to the manufacturing facility during the year *y* in MWh, and

EF_{displacing} = CO₂ baseline emission factor for the electricity displaced due to the project activity during the year *y* (tCO₂/MWh)

STEP 1. Calculate the Operating Margin emission factor(s) (EF_{OM, y})

$$EF_{(OM, y)} = (1 - \lambda_{y, OM}) \frac{\sum F_{i, y, OM} \times COEF_{i, y}}{\sum GEN_{i, y}} - \lambda_{y, OM} \frac{\sum F_{i, y, OM} \times COEF_{i, y}}{\sum GEN_{i, y}}$$

Where

F_{i, y, OM} = the amount of fuel *i* (in a mass or volume unit) consumed by relevant power sources *i* in years *y* in years *y*.

j = the power sources delivering electricity to the grid, not including low-operating cost and must-run power plants, and including imports to the grid

k = the low-operating cost and must-run power plants delivering electricity to the grid

COEF_{i, y, OM} = the CO₂ emission factor of the fuels used by the relevant power sources *i* and the percent oxidation of the fuel in years *y*

COEF_{i, y} = the CO₂ emission factor of the fuels used by the relevant power sources *i* and the percent oxidation of the fuel in years *y* (Note that this will be zero, as the low-operating cost and must-run power plants are all considered carbon neutral)

GEN_{i, y} = the electricity (MWh) delivered to the grid by source *i*

λ_{y, OM} = number of hours per year for which low-cost / must-run sources are on the margin

8760 hours per year



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STEP 2 – Calculate the Baseline emission factor

The Baseline Methodology stipulates that the default baseline emission factor is the weighted average of the OM emission factor (50%) and the BM emission factor (50%). This default value is used to calculate the baseline emission factor for the Project.

$$\begin{array}{l} \text{Baseline emission} \\ \text{factor} \\ \text{CO}_2/\text{MWh} \end{array} = \frac{(\text{OM emission factor} + \text{BM emission factor})}{2}$$

Source : www.americanforests.com


DOCUMENTATION

Records of implementation of the activity will be kept by PSC's Environmental Unit. In compliance with existing ECC conditions, such will also be reported in the regular environmental monitoring reports.

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