COLLECTIVE BARGAINING AGREEMENT

BETWEEN

DISTRICT NO. 1 - PCD,
MARINE ENGINEERS' BENEFICIAL ASSOCIATION (AFL- CIO)

AND

LAMONT- DOHERTY EARTH OBSERVATORY OF
COLUMBIA UNIVERSITY

JULY 1, 2012 - JUNE 30, 2018
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PREAMBLE

District No. 1 - PCD, Marine Engineers' Beneficial Association (AFL - CIO) (herein "Union") and Lamont - Doherty Earth Observatory of Columbia University (herein "LAMONT"), hereby make the following AGREEMENT (herein "AGREEMENT") concerning certain conditions of work of the Licensed Marine Engineers of LAMONT as follows:

SECTION 1: RECOGNITION

(A) LAMONT recognizes the Union as the exclusive collective bargaining representative for all permanent and relief Licensed Marine Engineers, excluding any temporary employees as defined below, employed by LAMONT aboard all vessels which are owned or operated during the term of this Agreement by LAMONT or its affiliate or subsidiary as an owner, agent or under bareboat charter.

(B) A temporary employee is one who is assigned to the Licensed Assistant Engineer position for a period of up to sixty (60) days or two (2) consecutive science cruises, whichever is longer, provided that such temporary employee is obtained from the vessel's permanent crew and holds the appropriate engineering license, and provided further that no more than one such temporary employee is employed aboard the vessel at any one time.

SECTION 2: UNION SECURITY

All employees covered by this Agreement who are not already members of the Union shall, as a condition of employment, apply for membership in the Union on or after the thirtieth (30th) day following the beginning of their employment or the execution date of this Agreement, whichever is later. All employees who are or who may become members hereafter shall be required to remain in good standing during the life of the Agreement.

SECTION 2A: DUES CHECK-OFF

LAMONT at the request of the Union shall deduct membership dues from the wages and vacation pay of employees who are covered by this Agreement and promptly transmit such funds to the Union, provided that the Union and LAMONT have received from each such employee on whose account such deductions are made a written assignment.

Deductions on the basis of the written assignment shall commence effective as of the date on which the assignment was executed. The Union shall indemnify LAMONT against any and all liability that may arise out of actions taken or not taken pursuant to the provisions of this Agreement or in reliance on any list, nature or assignment furnished to LAMONT by the Union.

LAMONT shall recognize the following authorization card:
DUES CHECK-OFF AUTHORIZATION
DISTRICT NO. 1 - PCD, MEBA (AFL-CIO)

The undersigned employee, a member of the Marine Engineers Beneficial Association, an unincorporated Association, or desiring to become a member of the above Union, hereby directs you, my employer, effective from this date, to deduct from my compensation and vacation pay to be paid to me by you including payments for or made during time off periods, if any, a sum equal to the regular membership dues and vacation dues of such Union. Such sum may be deducted in installment payments, as may be directed by the Union. The monies so deducted shall be remitted by you to the Union quarterly within ten days before the start of each quarter. Written notification by the Union to you of the amount of each regular membership dues and vacation dues and/or the amounts owed by the undersigned for the same shall be conclusive authority to you for each deduction.

I submit this authorization and assignment with the understanding that it will be effective irrevocable for a period of one year from this date, or up to the termination date of the current collective bargaining agreement (if any) between LAMONT and the above Union, whichever occurs sooner.

This authorization and assignment shall continue in full force and effect for yearly periods beyond the irrevocable period set forth above and each subsequent yearly period shall be similarly irrevocable unless removed by me within fifteen (15) days after any irrevocable period. Such revocation shall be effected by individual written notice by registered mail or certified mail to both you, as the employer, and the Union, within such fifteen (15) days period.

This authorization and assignment is made and executed in accordance with the authority and directions of Section 302(c) (4) of the Labor Management Relations Act, as amended, and applicable law.

The above deductions shall be transmitted by LAMONT to DISTRICT NO. 1 -PCD, MEBA (AFL-CIO), 444 North Capitol Street, Washington, D.C. 20001, at which time a receipt shall be issued to the undersigned.

NAME: _______________________________ DATE OF HIRE: _________________
(print)

ADDRESS: _______________________________ EMPLOYER: _______________________________

_________________________________________ SOC. SEC.NO.:_________________________

STATE, ZIP: _______________________________ BOOK NO.: _____________________________

SIGNATURE: ______________________________ DATE: _________________
SECTION 3: PREFERENCE OF EMPLOYMENT

(A) LAMONT agrees that when hiring any Licensed Engineer, other than the Chief Engineer, the employee shall be obtained through the offices of the Union, provided that Engineers so named by the Union shall be qualified to fill the available positions, and further provided that LAMONT shall have the right to select engineers whom LAMONT considers qualified and satisfactory. Qualifications for Licensed Engineer assignments shall include, but shall not be limited to, hands-on experience in the operation and maintenance of the propulsion and generator types carried, and service aboard oceanographic or seismic vessels. Any engineer who has been discharged by LAMONT for cause, in accordance with Section 6 of this agreement, which has not been reversed by Section 5 of the Agreement, shall not be provided by the Union to LAMONT for any available position. In case any person is rejected, the Union feels any rejection has been unjust and has worked a hardship on the person, the Union shall, without delay, take the matter up with LAMONT and attempt to secure an adjustment. In the absence of a satisfactory adjustment, the matter can be submitted for disposition under Section 5 by the Union.

(B) The Company shall have the absolute right of selection for all Licensed Engineers, provided Engineers so selected are members of the Union or a bona fide applicant for membership with the Union and clear through the Union hiring hall. All Officers shall be assigned to permanent billets unless otherwise designated at time of hire. The Company shall have the sole discretion to promote shipboard Officers. Continuous employment shall not be deemed to have been broken if the Engineer is on leave of absence because of seasonal lay-up, or temporary withdrawals from service, vacations, illness, injury, sickness in the family or other reasons related to personal affairs, provided such Engineer does not during such period accept employment with any other company other than Relief Engineer work.

(C) Lamont shall have the absolute right to select its own employees for Chief Engineer, provided such employees are members of the Union in good standing or shall make application to ascertain such fact.

(D) Any assignment to be filled by a licensed engineer that is a relief position shall be filled through the Union Hiring Hall.

(E) All Assistant Licensed Engineers not promoted or assigned from the permanent employees of LAMONT shall be obtained from the Union Hiring Hall, with the understanding that, in referring an Assistant Engineer to LAMONT, the employee's qualifications shall be commensurate with the position and with the particular vessel to which he is referred.

(F) LAMONT shall compile and supply the Union an "Assistant Engineers List" consisting of up to ten (10) Assistant Engineers from among the Engineers who are Union members and who are registered in the Union Hiring hall. This list shall be maintained and/or amended from time to time at the discretion of LAMONT. LAMONT shall have the right to designate its Assistant Licensed Engineers (when not promoted or assigned from the permanent employees of LAMONT) from such List. Relief Assistant Engineers positions shall be filled by engineers on the List who have been without covered employment for the longest period of time.
(G) All Officers shall be subject to a probationary period of seventy-five (75) days or two consecutive science cruises, whichever is longer, at the discretion of the company and or responsible vessel supervisor. The probationary period includes only actual onboard time. During the probationary employment period the Officer may be terminated for any reason, and such termination shall not be subject to the grievance and arbitration provisions of this Agreement. Employment beyond the probationary period reflects only that the Officer met the minimum standards of performance and shall not be used as evidence of good performance in arbitration or in any tribunal.

(H) If LAMONT, with reasonable promptness after the occurrence of a vacancy, requests the Union to furnish a Licensed Engineer to fill such vacancy and the Union is unable to do so in time to meet the requirements of the vessel, the Union shall immediately notify LAMONT which shall then be free to secure an Engineer for this specific vacancy from any source. However, preference shall be given to members of the Union in good standing, when available and qualified to fill the position.

(I) LAMONT shall not make any permanent or relief assignments to any Licensed Assistant Engineer position except through the Union Hiring Hall, provided however, that such assignments may be made within a vessel and not through the Union Hiring Hall by assigning an individual who has previously performed the job as a temporary employee in accordance with the provisions of Section I(B) of this Agreement.

(J) Licensed Engineers shall be on the payroll beginning on the date they begin traveling to join the vessel, and shall start vacation pay on the day following the day that they sign off.

(K) The Shipping Rules of the Union as of the effective date of this Agreement, which are not inconsistent with the terms of this Agreement, shall be deemed to be part of and incorporated in this Agreement. It is understood that this provision is not intended to be used to change any of the employment practices and working conditions aboard the vessels established under and pursuant to this Agreement. A copy of the current shipping rules shall be provided to LAMONT.

(L) In the event LAMONT seeks a replacement through the home port, LAMONT will pay all necessary transportation expenses, wages and subsistence of the Engineer provided by the offices of the Union.

(M) It is understood that the term "offices of the Union" as used in this Section shall be defined as being the offices of the Union in whose jurisdiction the vessel may be located at the time the Engineer is being selected.

(N) The Union shall in its sole discretion designate from time to time the ports in which it maintains an office which shall then be so recognized by LAMONT unless subsequently changed by the Union.

It is agreed that the foregoing paragraph is not intended to be used for the purpose of changing the Ports in which the Union, as of the effective date of this Agreement, maintains an office, unless in any such Port local officials do not comply with the established policies or law of the Union in which event the Union shall have the right to take action hereunder.
SECTION 4: EQUAL OPPORTUNITY

During the term of the Agreement neither Party will discriminate against any employee or applicant for employment because of race, color, sex, age, religion, national origin, marital status, sexual orientation, disability or citizenship status. This nondiscrimination policy includes, but is not limited to, employment, promotion, upgrading, transfer, layoff, demotion, termination, pay rates, forms of compensation and testing.

SECTION 5: GRIEVANCE PROCEDURE AND ARBITRATION

(A) The Union will not authorize or participate in any strike or stoppage of work during the period of this Agreement and will take all reasonable steps to curtail such strike or work stoppage. LAMONT will not authorize, participate in or permit any lockout during the period of this Agreement.

All disputes relating to the interpretation or performance of this Agreement shall be determined in accordance with the provisions in this Section.

No grievance or claim arising from an unjust discharge or other disciplinary action will be entertained after leaving the vessel unless within fifteen (15) days thereafter a written claim from the Licensed Engineer or someone authorized to act in his behalf is received by the Union, unless there are mitigating or extenuating circumstances which prevented the Licensed Engineer or his representative from submitting the claim.

(B) There shall be a Licensed Personnel Board consisting of two (2) persons appointed by the Union and two (2) persons appointed by LAMONT.

The Arbitrator designated will serve as the Chairman of any meeting of the Licensed Personnel Board. If said Board resolves any grievance either by majority vote or by mutual agreement, said grievance shall be deemed settled.

In the absence of such final disposition by the Licensed Personnel Board, the Arbitrator will then have jurisdiction of the case to render a decision as Arbitrator. Either Party may request a further opportunity to present additional evidence for the purpose of the arbitration proceeding. In the absence of such request or if the Arbitrator shall deny such request, the Arbitrator is to proceed to issue an award without the need of any further hearings.

(C) The decision of a majority of the Board or of the Arbitrator, as the case may be, shall be final and binding upon the parties and shall be complied with by both Parties immediately upon its issuance.

(D) The Arbitrator will be appointed by mutual agreement for a one (1) year period, renewable for one (1) year periods by mutual consent. In the event of the termination of the Arbitrator, the Parties will agree within fifteen (15) days upon a successor, failing which, the Parties shall request the American Arbitration Association to designate five (5) names from among which each Party shall have the right to strike two (2), and the agency shall designate a successor who shall serve for the balance of the contract year. The Arbitrator shall continue to serve until his successor has been designated.
(E) A fixed date in each calendar month during the term of this Agreement shall be designated for the meeting of the Licensed Personnel Board with respect to any grievances that each Party may have. LAMONT and the Union agree that in order to properly have a grievance submitted to the Licensed Personnel Board at its regular monthly meeting, at least a five (5) days' notice in writing must be given to the other Party, setting forth the nature of the grievance and the relief requested, unless such time limitation is waived. Failing such notice, no monthly meeting will be held.

Licensed Personnel Board meetings shall continue from day-to-day until complete, unless the Parties agree otherwise.

The use of stenographic reporter, tape recorder, or any other type of recording device during a meeting of the Licensed Personnel Board is prohibited, unless both Parties agree otherwise.

The Arbitrator must render a decision within fifteen (15) days after the hearing has been closed unless the Parties have otherwise extended such time by mutual consent.

(F) Either Party may, in addition to such fixed meetings, have the right, by telegraphic notice to the other Party and to the Arbitrator, to request a convening of the Licensed Personnel Board to consider a grievance, the nature of which requires immediate disposition. In such event the Board shall meet as expeditiously as possible, but in no event later than twenty-four (24) hours after receipt of said notice. In such case, the Award of the Licensed Personnel Board occurs, the Arbitrator, if requested by the aggrieved Party, shall issue forthwith and in no event later than five (5) hours after the conclusion of the hearing, unless the aggrieved Party agrees to waive this time limitation with respect to all or part of the relief requested.

(G) The Award of the Arbitrator shall be in writing and may be issued with or without an opinion. If any Party desires an opinion, one shall be issued, but its issuance shall not delay compliance with and enforcement of the Award.

(H) The failure of any Party to attend an arbitration hearing as scheduled by the Arbitrator shall not delay said arbitration and the Arbitrator is authorized to proceed to take evidence and to issue an award as though such Party were present.

(I) If a dispute concerning the failure and/or refusal of LAMONT to make timely and/or adequate fringe benefit contributions is submitted to the Arbitrator under Section 5 of this Agreement, the Arbitrator shall have authority to reach only one of the two decisions within the time limits set forth in Sections 5 (E) and (F) of the Agreement. He shall either find that LAMONT is in fact delinquent in its contributions, in which event he shall order immediate payment in full of all delinquent contributions, accrued interest thereon, and reasonable attorneys' fees, or that LAMONT is not delinquent, in which event the grievance shall be denied.

(J) It is the desire and the purpose of the Parties that all grievances available for Licensed Personnel Board or arbitration be disposed of as promptly and expeditiously as possible.
(K) Any expense of arbitration and any expense incurred by the Licensed Personnel Board shall be equally divided by the Parties hereto.

(L) Unless some other place is mutually agreed upon, the Licensed Personnel Board and arbitration hearing shall be held in New York City, N.Y.

(M) No Licensed Engineer shall be required to work under conditions which may endanger his health or safety, or be required to either work behind a picket line or cross a picket line. The refusal of a Licensed Engineer to perform work in accordance with this paragraph shall not be cause for discharge and any action taken by a Licensed Engineer or the Association in accordance with this paragraph shall not be deemed to constitute a violation of Section 5 hereto.

(N) Any action to enjoin a grievance or arbitration proceeding under this Agreement shall be instituted in the Federal Courts of the District of Columbia. The Award of the Arbitrator may be enforced in the Courts of the State of New York. Any action to modify or vacate an arbitration Award shall be instituted in the courts of the State of New York. It is expressly agreed that neither LAMONT nor the Union will seek the removal from the Courts of the State of New York to the Federal Courts of any such proceeding to enforce, modify or vacate the Award, and both LAMONT and the Union hereby expressly waive their right to seek such removal or institute proceedings to enforce, modify, or vacate the Award in any forum other than the Courts of the State of New York. Nothing in this paragraph shall preclude either LAMONT or the Union from initiating proceedings in any appropriate State or Federal Court with regard to any matter other than the enforcement, modification, or vacating of an arbitration Award.

(O) The Parties agree that Joseph S. Kiss is to be the designated arbitrator to serve as such under the Agreement in accordance with the terms set forth herein. If Joseph S. Kiss is unavailable and the parties can not mutually agree upon an alternate Arbitrator, the parties shall follow the procedure established in 5(D), above, or as otherwise mutually agreed upon between the parties. It is understood that the order of striking shall be determined by a coin toss.

SECTION 6: DISCHARGE

(A) Nothing in this Agreement shall prevent LAMONT from discharging any Licensed Engineer Officer who is not satisfactory to it but any dispute arising there from shall be settled in accordance with Section 5 and the terms of settlement shall include a provision as to the date of discharge. This paragraph shall also apply in the case of a refusal by Lamont to employ an Engineer duly assigned in accordance with the provisions of this Agreement.

(B) It is understood that should the arbitrator find that a Chief Engineer has been unjustly discharged, the remedy shall be limited only to back pay, maintenance and room allowances from the date of discharge to the date of the arbitrator's award.

(C) An Engineer who is discharged for cause shall be given on the date of discharge, a written statement advising of the discharge and an explanation of the reasons for the discharge. Such statement may be furnished to the Union if the Engineer is not available.

SECTION 7: PASSES TO UNION REPRESENTATIVES
(A) Authorized representatives of the Union shall have the right to go on board ships covered by this Agreement, at all reasonable times, subject to military regulations and any other regulations mutually satisfactory to the Union and LAMONT, for the purpose of consulting with the Licensed Marine Engineers employed thereon.

(B) The Union shall take out insurance which will protect LAMONT and subsidiary or affiliated entities against any claims, loss of life, or injury occurring to a representative of the Union while on the property or while on board a vessel of any of the above mentioned entities while property or said vessel is owned, chartered, leased, or operated under a general agency agreement, and shall furnish satisfactory evidence of such insurance for the benefit of LAMONT and subsidiary or affiliated entities.

SECTION 8: WAGE SCALE, MANNING SCALE AND PENALTY RATE AND COMPENSATION TIME

(A) (i) The wages shall be set forth in Appendix "A".

(ii) Effective January 1, 2001, engineers will receive a non-watch differential which shall be considered base wages for purposes of the MEBA Pension Plan. The non-watch differential will not be included in the calculation of overtime, vacation pay, or the Money Purchase Pension Benefit. For each month of active employment, the differential shall be:

Chief Engineer    the equivalent of six (6) days pay
Assistant Engineers the equivalent of five (5) days pay

The non-watch differential will be prorated for partial months of active employment.

(B) The vessel's manning scale shall normally consist of one (1) Chief Engineer and three (3) Assistant Engineers subject to the continued availability of sufficient funding. However, it is understood that LAMONT, pursuant to the vessel's USCG Certificate of Inspection, shall be permitted to man the vessel with one Chief Engineer and two (2) Assistant Engineers. The Assistant Engineers may be designated as First, Second or Third Assistant Engineers.

(C) It is agreed that when only three (3) Licensed Engineers are carried, the Chief Engineer shall be considered a watchstanding Engineer. A watchstanding Chief Engineer shall be granted two (2) hours overtime per day to prepare necessary paper work. It is understood that under no circumstances shall a Chief Engineer's base wage be reduced by the operation of this Section.

(D) When three Assistant Engineers are on board, the Chief Engineer, when required to be on board in port Monday through Friday inclusive between 5 p.m. and 8 a.m. and on Saturdays, Sundays and holidays, except in the case of emergency involving the safety of the scientists, crew, vessel, vessel's equipment, including scientific supplies and equipment, the Chief Engineer shall be given equivalent time off with pay. Such time off shall be taken by the Chief Engineer at the end of his next scheduled vacation period. Each (8) hours of such excess
time shall constitute one day allowance of time off. The Chief Engineer shall prepare an accurate record of all hours worked in port during said hours.

Comp Time – Chief Engineers

The Chief Engineer shall accrue compensatory time at sea for all hours worked in excess of eight (8) hours per day and for all hours worked on any contract holiday listed in Section 16 herein. Compensatory time shall not exceed thirty-two (32) hours in a thirty (30) day period, excluding holiday compensatory time. (Prorated for cruises that are shorter or longer than 30 days).

(E) A penalty rate shall be paid to any Licensed Engineer for working in tanks, below the floor plates, in the bilges or when required to perform maintenance work which causes contact with the effluent side of the waste disposal system. The penalty rate shall be:

<table>
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<th>Effective Date</th>
<th>Rate</th>
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<tr>
<td>July 1, 2006</td>
<td>$10.15 per hour</td>
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<tr>
<td>July 1, 2007</td>
<td>$10.45 per hour</td>
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<tr>
<td>July 1, 2008</td>
<td>$10.76 per hour</td>
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<td>July 1, 2009</td>
<td>$11.08 per hour</td>
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<tr>
<td>July 1, 2010</td>
<td>$11.40 per hour</td>
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(F) For current employees, discontinued after 30 years.

Effective 7/12/12 the longevity scheduled for new hires is as follows:

2% at 5 years

2% at 10 years

3% at 20 years (capped at 20 years)

SECTION 9: WAGE ADJUSTMENT CLAUSE

(A) Effective July 1, 2012, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2012 base and Non-watch rates.

(B) Effective July 1, 2013, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2013 base and Non-watch rates.

(C) Effective July 1, 2014, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2014 base and Non-watch rates.
(D) Effective July 1, 2015, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2015 base and Non-watch rates.

(E) Effective July 1, 2016, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2016 base and Non-watch rates.

(F) Effective July 1, 2017, all Employees on the payroll on that date shall receive a wage increase of two and a half percent (2.5%) on their June 30, 2017 base and Non-watch rates.

SECTION 10: PHYSICAL EXAMINATION

In the event a Licensed Engineer is discharged for medical reasons, the issue as to whether the Engineer is fit-for-duty or not shall be submitted either to the MEBA Diagnostic Center or to a mutually agreed upon doctor.

SECTION 11: PORT TIME, ARRIVAL AND DEPARTURE

(A) A vessel shall be deemed to have arrived in port thirty (30) minutes after it has anchored or moored at or in the vicinity of a port for purposes of LAMONT.

(B) A vessel shall be deemed to have departed and port time terminated thirty (30) minutes prior to the time when mooring lines are cast off or anchor is aweigh for the purpose of putting to sea directly.

(C) Port time shall not apply while awaiting pilot, quarantine, pratique, safe weather or tide; it is agreed, however, that in the case of awaiting pilot, quarantine and pratique, any such exception shall not apply where the delay is because the vessel is awaiting a berth and in any event shall only apply where the delay is caused by the arrival of the vessel during hours that the officials passing quarantine or pratique are not on duty and only for such limited period.

(D) Port time conditions shall apply whether watches are broken or not.

SECTION 12: HOURS OF LABOR AT SEA

Four consecutive hours shall constitute a watch and two watches shall constitute a day's work. The eight hours of work for non-watch standing Engineers shall be performed between the hours of 8 a.m. and 5 p.m. All work done at sea by any Engineer in excess of 8 hours a day, except that necessary in the case of emergency for the safety of the scientists, crew, vessel, vessel's machinery or scientific supplies and equipment, shall be paid for as overtime. No work shall be performed on Saturdays, Sundays or holidays except that necessary for the navigation and safety of the vessel, and those activities relating to the scientific mission of the vessel, provided that all Licensed Engineers shall stand their respective watches as required by law.

SECTION 13: HOURS OF LABOR IN PORT
Eight (8) hours shall constitute a day's work. A day shall be reckoned from midnight to midnight. The normal hours of labor while in port shall be between 8 a.m. and 5 p.m. from Monday through Sunday inclusive. Overtime shall be paid (1) for all work performed in port on recognized holidays; and (2) for all work performed, including the standing of routine watches, in excess of eight (8) hours per day or fifty-six (56) hours per week.

SECTION 14: HOURS OF LABOR IN PORT AT NIGHT

(A) When the ship's Engineers are assigned to a routine night, weekend or holiday watch, they shall not be required to perform regular maintenance repair work except as may be occasioned due to a mechanical failure occurring during such night, weekend, or holiday watch.

(B) When watches are broken and the Assistant Engineers work overtime in port after midnight, they shall have a rest period during the same day between 8 a.m. and 5 p.m. of one hour for each hour's work, provided, however, that on days of departure such rest period shall not interfere with the Assistant Engineers standing their regular watches. This section shall not be applicable to routine stand-by watch.

SECTION 15: OVERTIME

(A) The overtime rate of pay shall be paid in addition to holiday pay to Licensed Engineers who perform their regular watch work at sea on a recognized a holiday.

(B) For all time that an Assistant Engineer is required to be available for duty at sea and for all time that the Assistant Engineer is required to be available for duty in port, in excess of eight (8) hours in any one day, or in excess of fifty-six (56) hours in one week (any hours in excess of eight (8) in any one day for which overtime is paid shall not be included in this computation) or on holidays, the overtime rate shall be time and one half of the base wage for each rating.

(C) No less than one (1) hour's overtime shall be paid for any work performed. Overtime performed in excess of one hour shall be paid for the next one-half hour period following. Overtime shall be performed only on the order of the Chief Engineer or of the Senior Engineer in charge.

(D) The Licensed Engineer working the overtime shall, within twenty-four (24) hours if practicable (but in no event later than seventy-two (72) hours), present to the Chief Engineer in charge a slip in duplicate stating the hours of overtime and nature of work performed for the signature of the Chief Engineer. One of such signed slips shall be returned to the Licensed Engineer and the other shall be retained as a permanent record by LAMONT.

In the event a question arises as to whether work performed under proper direction is payable as overtime, or if claimed overtime is not paid for, the officers rejecting or disputing the overtime shall note on the Licensed Engineer's copy, the reason or reasons for non-approval or LAMONT, shall at the time of leaving furnish a slip showing the overtime rejected and the reason for the rejection. No claim for overtime will be entertained after leaving the vessel unless within (15) days thereafter a written claim by letter from the Licensed Engineer or someone acting in his behalf is filed with LAMONT except when the filing of such claim is prevented by
some cause beyond the control of the Licensed Engineer.

(E) Where a Licensed Engineer works in excess of eight hours in one day, i.e. midnight to midnight, even though part of said work shall be performed at sea and part in port, he shall be paid overtime for such hours worked in excess of eight in one said day.

SECTION 16: HOLIDAYS

THE FOLLOWING SHALL BE RECOGNIZED AS HOLIDAYS:

New Year's Day
Martin Luther King Jr.'s Birthday
Memorial Day
Labor Day
Independence Day
Election Day
Thanksgiving Day
Day after Thanksgiving Day
Christmas Day
Two days during Christmas/New Year Season as elected by LAMONT

A holiday falling on a Saturday or Sunday in port shall be observed on the preceding Friday or the following Monday.

Holiday pay is a day's straight time pay.

SECTION 17: SEA WATCHES

(A) On days of departure from non-foreign ports, sea watches shall be set at the beginning of the normal period of time required for warming up of engines prior to sailing time. On days of departure from foreign ports, sea watches shall be set at 12:01 a.m. of the day of sailing.

(B) Watches shall be broken one hour after finishing with engines upon arrival at a port where the vessel is to remain more than 24 hours. Port time conditions shall apply whether or not watches are broken.

(C) When sea watches are set, Assistant Licensed Engineers shall be required to report on board and be available for duty not less than one hour before time posted on sailing board. The sailing time shall be posted at the gangway on arrival when the vessel's stay in port is twelve (12) hours, the sailing time shall be posted eight (8) hours prior to scheduled sailing, if before midnight. If scheduled sailing is between midnight and 8 a.m., sailing time shall be posted not later than 5 p.m.

When a vessel arrives on a weekend between 5 p.m. Friday and 8 a.m. Monday and is scheduled to sail prior to 8 a.m. Monday, the sailing board shall be posted not later than 2 hours after arrival.
The sailing board shall be posted no later than 5 p.m. on Friday when a vessel is scheduled to sail on a weekend between 5 p.m. Friday and 8 a.m. Monday.

SECTION 18: MEALS

Meals for Licensed Engineers shall be served over a one hour period and a reasonable time of at least one-half hour shall be allowed for each meal in all cases where the Engineer is not late due to his own fault. Adequate food shall be provided.

SECTION 19: TRANSPORTATION

(A) When a vessel terminates a voyage at a port other than the original port of engagement, transportation as defined in Section 26, wages and subsistence at forty dollars ($40.00) per day back to the original port of engagement shall be furnished to each licensed Engineer who terminates his services aboard the respective vessel; provided, however, that Licensed Engineers on coastwise vessels shall not be furnished transportation to original port of engagement unless he has made a complete voyage.

(B) The original port of engagement shall be port in the United States where the licensed engineers are first employed by LAMONT regardless of where ships articles are signed.

(C) Transportation in accordance with this subsection of the Agreement will be paid to Licensed Engineers whose services are terminated in a United States port other than the port of original engagement for legitimate illness or injury requiring hospitalization or out-patient hospital treatment.

SECTION 20: CONFINEMENT TO VESSEL

Whenever a vessel is in port, the Engineers entitled to be off watch in accordance with this Agreement shall be entitled to shore leave. Where local government restrictions prohibit shore leave, such orders must be in writing from proper shore authorities and shall be posted on the vessel's bulletin board and entry made in the ship's log book. Under the above circumstances, LAMONT shall produce a copy of the government restriction order when the Engineer is paid off. If it is not possible to get a copy of such restriction order, the Master will prepare a letter stating the terms of the restriction for presentation to either the agent of the Government or military and if such agent acknowledges receipt of such letter, this will be ample proof of such restriction.

SECTION 21: EMERGENCIES

No overtime shall be allowed at any time for emergency work performed for the safety of the vessel, crew, scientific supplies and equipment, or the saving of life aboard other vessels in jeopardy.

SECTION 22: MAINTENANCE AND CURE BENEFITS

(A) Licensed Engineers who are entitled to maintenance under the general maritime
law doctrine of wages, maintenance and cure, on account of injury or illness incurred in the service of the ship, shall be paid maintenance at the rate of eight dollars ($8.00) per day. Wages, maintenance and cure under such doctrine shall not be withheld in any case merely because the claimant has also submitted a claim for damages or has filed suit therefore or is taking steps to that end.

(B) In the event a Licensed Engineer must leave his vessel in a foreign port because of illness or injury incurred in the service of the vessel, he shall promptly receive a full statement of his account, showing wages due him, excepting overtime payments. Further, he shall receive eight dollars ($8.00) per day maintenance and cure from the time of his discharge from the hospital until return transportation is made available.

SECTION 23: SUBSISTENCE AND ROOM ALLOWANCE

When in port if board and living quarters are not furnished, a subsistence allowance of forty dollars ($40.00) and a room allowance of forty dollars ($40.00) shall be paid. The subsistence allowance shall be allocated: eight dollars ($8.00) for breakfast, twelve dollars ($12.00) for lunch and twenty dollars ($20.00) for dinner. Any reasonable expenses incurred by an officer in excess of $40.00 dollars for subsistence or $40.00 dollars for room allowance, shall be paid by LAMONT if vouchers or receipts are submitted. The standard of reasonableness for the respective ports will be established by mutual agreement between the Parties.

1) Effective July 1, 2012 and assuming a successor agreement, the following will be added to Section 19 - “Confinement to Vessel” of Chief Engineer agreement

For any reason other than those stated above, an employee shall be paid a rate equal to the Room Allowance rate referenced in Section 12 – “Subsistence and Room Allowance” for each day or part of a day that he/she is confined to the vessel.

SECTION 24: WORK JURISDICTION

The customary work and supervisory jurisdiction of the Licensed Engineers on the vessels of LAMONT shall continue to be the work and supervisory jurisdiction of the Licensed Engineers on the vessels of LAMONT. No other personnel shall be permitted to infringe upon such jurisdiction of the Licensed Engineers.

SECTION 25: LIST OF PERSONNEL AND VESSEL ACTIVITY

LAMONT shall prepare and furnish to the Union semiannually a list which shall show:

(1) The name of each vessel in LAMONT's fleet, including laid-up vessels, reason for lay-up, and intended duration of lay-up;
(2) All Licensed Engineer berths on each vessel in commission or on seasonal lay-up or in temporary lay-up; and

(3) The names of all Licensed Engineers in the employment of LAMONT, whether employed on the vessel or on leave of absence.

SECTION 26: SHIPWRECK AND LAY-UP

·(A) When ships are sold, laid-up or withdrawn from service, or in case of shipwreck or disaster necessitating the abandonment of ship or the services of an Engineer are terminated through no fault of his own, the Licensed Engineer shall be paid wages as well as subsistence and lodging if not furnished, and first class transportation back to the original port of engagement.

(B) In the event of shipwreck or loss of vessel, compensation not to exceed seven hundred and fifty dollars ($750.00) will be paid to each Licensed Engineer for loss of clothing and personal property under this subsection, provided such loss is not recoverable under war risk agreements, between LAMONT and the Union.

(C) First class transportation is defined as follows:

(1) Air transportation -- first class transportation is defined as air tourist class for foreign travel and air tourist class for domestic travel;

(2) Pullman transportation via rail with lower berth on overnight trips;

(3) When transportation by rail or air is not available, bus facilities may be used.

(D) No transportation shall be allowed under the transportation section of the contract should a man be discharged either for cause or by mutual consent.

(E) While traveling, forty dollars ($40.00) per day shall be paid for meals if not furnished.
SECTION 27: QUARTERS

(A) All Licensed Engineer's quarters shall be properly equipped with fresh running water, cleaned, heated and lighted at all times during occupancy. Each vessel shall provide a washroom for the use of the Licensed Engineers, this washroom to be equipped with fresh hot and cold running water, and fresh water shower facilities, as well as sanitary drainage.

(B) Effective July 1, 2012, all MEBA members shall be provided a single berth. If such single berth is not provided to any MEBA member he/she shall be compensated forty ($40.00) dollars per day in addition to any other compensation payable under the collective bargaining agreement.

(C) Clean bed linen and towels are to be provided on a weekly basis.

SECTION 28 COVERAGE OF AGREEMENT:

(A) This Agreement covers all Licensed Marine Engineers employed on LAMONT'S U.S. flag vessels, of whatever type, owned or operated (both at the present or at any time during the life of this Agreement) by LAMONT or its subsidiary or affiliate, or by an entity for which LAMONT acts as a bargaining agent, and whether operated as an agent or under a bareboat charter, including vessels owned by LAMONT or its subsidiary or affiliate and operated by another entity, but not including a vessel operated on a time charter basis.

(B) In the event LAMONT places into operation a new vessel, the Parties shall meet and negotiate such terms and conditions of employment as may be appropriate for the new or replacement vessel.

(C) The term "subsidiary" or "affiliate" shall be deemed to include any business entity whether corporate, partnership, trust or individual which is effectively controlled by LAMONT either directly or indirectly.

SECTION 29: SAVINGS AND SEVERABILITY

(A) To the best knowledge and belief of the Parties this contract contains no provision which is contrary to Federal or State Law or regulations; it is the intent of the Parties that all provisions of the Agreement be interpreted and construed in a manner consistent with all applicable, governing law. Should any provision of this Agreement be in conflict with Federal or State Law or regulation then such provision shall continue in effect only to the extent permitted.

(B) If any article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by any competent authority of the executive, legislative, judicial or administrative branch of the Federal or State government, then, upon ten (10) days' written notice by the Union to LAMONT, the Agreement shall be deemed reopened for the negotiation of such amendments and modifications as the Parties see fit. Notwithstanding any other provision of this Agreement or in any other Agreement to the contrary, it is expressly understood
and agreed that the Union shall have the right to strike or take other economic action in support of its position in such reopened negotiations.

(C) If any article or provision of this Agreement shall be held invalid, inoperative, or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such as to which it has been held invalid, inoperative and unenforceable shall not be affected thereby.

SECTION 30: VACATION BENEFITS

For each thirty (30) days of covered employment the vacation benefit shall be twelve (12) days for the Chief Engineer and ten (10) days for Assistant Engineers. Days of vacation shall not be considered days of work for the purpose of computing vacation benefits.¹

SECTION 31: MEBA MEDICAL AND BENEFITS PLAN

(A) LAMONT continues as a party in the MEBA Medical and Benefits Plan ("Medical Plan"), and agrees to make the necessary contributions to the Plan to meet the cost of benefits, the administrative costs and to maintain such reserve as may be necessary under applicable law and to maintain the Plan on a sound actuarial basis.

(B) The rate of contribution to the Medical Plan shall be:

- Effective July 1, 2012-----$57.68 per day of active duty
- Effective July 1, 2013-----$59.41 per day of active duty
- Effective July 1, 2014-----$61.19 per day of active duty
- Effective July 1, 2015-----$63.03 per day of active duty
- Effective July 1, 2016-----$64.92 per day of active duty

**Effective July 1, 2017 -----$66.87 per day of active duty**

(C) Effective July 1, 2006, the University shall make medical plan contributions under the above schedule for each day that a regular employee (but not a relief employee) is on vacation, up to a maximum of sixty-one (61) days per year.

- Effective July 1, 2007 up to a maximum of sixty-two (62) days per year
- Effective July 1, 2008 up to a maximum of sixty-three (63) days per year
- Effective July 1, 2009 up to a maximum of sixty-four (64) days per year
- Effective July 1, 2010 up to a maximum of sixty-five (65) days per year

¹ As a point of reference, the 2000-2006 CBA initiated the reduction in vacation benefits from 15 days to 12 days for Chief Engineers and 12 days for Assistant Engineers which was offset by the addition of a non-watch differential.
(D) In the event that the MEBA Medical Plan ("Plan") does not require the entire contribution amount as set forth above in any calendar year, such savings shall be re-allocated to the Money Purchase Benefit Plan (MPB) in addition to the current MPB contribution made for each employee. Should the MEBA Medical Plan rate increase again, the aforementioned savings, in whole or in part, shall be reallocated to cover any increase in the contribution to the MEBA Medical Plan.

(E) On May 26, 2006, the MEBA Medical and Benefit Plan Board of Trustees implemented a mandatory contribution requirement for all participants. Effective July 1, 2006 all Employees (regular and relief) working under the Agreement shall be required to make contributions to the MEBA Medical and Benefits Plan equal to one percent (1%) of their gross wages ("Mandatory Contributions"). This Mandatory Contribution obligation will also apply to all vacation pay earned while working under the Agreement on and after July 1, 2006.

Upon receipt of employee authorization, LAMONT agrees to deduct these Mandatory Contributions directly from each Employee's pre-taxed wages and forward them to the Plan. Notwithstanding the forgoing, with respect to Employees working under the Agreement who are on voyages that extend through or beyond July 1, 2006, these Mandatory Contributions will be deducted from wages earned after the completion of those voyages or as soon thereafter as permitted by law.

Notwithstanding the above, MEBA and Lamont shall advise all Employees working under the Agreement that failure to execute the proper Mandatory Contribution authorization shall prohibit any day worked under the agreement counting as a day of covered employment for establishing eligibility under the MEBA Medical Benefits Plan. This provision shall have no affect on Lamont's contractual requirement to the Medical Plan.

(F) Effective July 1, 2006, the rate of contribution for Drug testing shall be $0.75 per man per day of active duty for the duration of the Agreement.

SECTION 32: MEBA PENSION PLAN AND MONEY PURCHASE BENEFIT PLAN

(A) LAMONT will continue as a party to the MEBA Pension Trust, for the Money Purchase Benefit Plan. Lamont will continue as a party to MEBA Pension Trust for the defined benefit plan as per the March 20, 1997 side letter. (Modified per the terms of the 2012 Memorandum of Understanding attached as a side letter.)

(B) LAMONT agrees to contribute an amount equal to ten percent (10%) of base wages paid to each employee into the Money Purchase Benefit ("MPB") Plan for the duration of the Agreement. The contributions and any investments and reinvestments thereof shall be
maintained by the Trust in a separate money purchase fund. An individual contribution account in the name of each employee will be maintained by the Trust.

(C) Employees will cease to be eligible for participation in the University's Tax Deferred Annuity (403(b)) Plan.

LAMONT will be a participating employer in the MEBA 401(k) Plan.

SECTION 33: MEBA TRAINING PLAN

(A) LAMONT agrees to continue to contribute to the MEBA Training Plan.

(B) Effective July 1, 2012, the rate of contribution to the MEBA Training Plan shall be $2.50 per man per day of active duty.

(C) Effective July 1, 2013, the rate of contribution to the MEBA Training Plan shall be $3.00 per man per day of active duty.

(D) Effective July 1, 2014, the rate of contribution to the MEBA Training Plan shall be $3.50 per man per day of active duty for the duration of the Agreement.

(E) Effective July 1, 2015, the rate of contribution to the MEBA Training Plan shall be $4.00 per man per day of active duty.

(F) Effective July 1, 2016, the rate of contribution to the MEBA Training Plan shall be $4.50 per man per day of active duty for the duration of the Agreement.

SECTION 34: MEBA JOINT EMPLOYMENT COMMITTEE

(A) Upon execution and ratification of this agreement, LAMONT agrees to become and remain a party to the MEBA Joint Employment Committee ("JEC") at the rate described below.

(B) Effective July 1, 2012, the rate of contribution to the JEC shall be $2.00 per man per day of active duty.

(C) Effective July 1, 2013, the rate of contribution to the JEC shall be $2.50 per man per day of active duty.

(D) Effective July 1, 2014, the rate of contribution to the JEC shall be $3.00 per man per day of active duty for the duration of the Agreement.

(E) Effective July 1, 2015, the rate of contribution to the JEC shall be $3.50 per man per day of active duty.

(F) Effective July 1, 2016, the rate of contribution to the JEC shall be $4.00 per man per day of active duty for the duration of the Agreement.
SECTION 35: TUITION EXEMPTION

(A) Effective January 1, 2001, the Employer shall provide exemption from tuition as follows:

Full-time Employees: 7 credits per semester (maximum of 2 courses)

In the case of the summer semester, the Employer will retain the right to refuse to offer courses under this tuition exemption plan where such courses are deemed inappropriate or inefficient by the Employer.

(B) Tuition Exemption Limits

The spouse and children of any full-time bargaining unit Employee shall be entitled to utilize any unused portion of credit to which the member is entitled under of the collective bargaining agreement, except that there shall be no accrual of any unused portion of credit.

(C) Eligible Courses

The spouse and children of a bargaining unit Employee shall be entitled to apply the member's unused portion of credit to any course, graduate or undergraduate, subject to the following modifications:

(1) That the course be given by a department or school of the Columbia Corporation. Courses given by Teachers College or Barnard will not be tuition exempt for children or spouses.

(2) That, in the case of children, they must be enrolled as candidates for a Bachelor, Professional or higher degree. In cases where the son or daughter is registered as a degree candidate outside the University system but is able to obtain admission as a non-matriculated special student at Columbia, tuition exemption will be granted.

(3) That enrollment in summer courses is subject to the language in Section (A).

(4) If an Employee who is enrolled in a course and is otherwise eligible for tuition exemption is laid off, such employee will be exempt from payment of tuition for the balance of the semester.

(5) If an Employee is hired and begins a course after the beginning of the semester such employee's eligibility for tuition exemption shall be prorated in accordance with guidelines established by the University at the beginning of the semester.
(D) Age Limits

There shall be no limitation to the utilization of tuition exemption, as outlined in this Agreement, because of the age of a member's spouse or children.

(E) Eligibility

The spouse and children of eligible full time bargaining unit Employees shall be entitled to utilization of any Employee's unused portion of credit as outlined in this Agreement. For all new hires past that date, the Employee's spouse shall be immediately eligible for full utilization as outlined in this Agreement, but the Employee's children shall not be eligible until the Employee has bargaining unit seniority for a minimum of two (2) years at Columbia University.

SECTION 36: WORKERS' COMPENSATION

Licensed Engineers employed as ship's crew on board LAMONT vessels shall not be covered by "standard workers' compensation" for illness or injury suffered while working in the service of the vessel but shall be eligible for remedies prescribed under federal law as included in the Merchant Marine Act of 1920 (Jones Act), as amended.
SECTION 37:  

TERM

This Agreement shall become effective as of 12:01 a.m. **July 1, 2012** and shall continue to be effective until midnight **June 30, 2018**, and shall continue for twelve (12) month periods thereafter unless either party hereto shall give written notice to the other of its desire to amend or terminate same, which notice shall be given at least sixty (60) days, but no sooner than ninety (90) days, prior to the expiration date.

All other provisions of the collective bargaining agreement remain in full force and effect.

This agreement is subject to ratification.

Agreed:

Marine Engineers’ Beneficial Association, AFL-CIO

Columbia University

____________________________________  ______________________________
Signature                           Signature

____________________________________  ______________________________
Title                                Title

____________________________________  ______________________________
Printed Name                         Printed Name

Date:_______________________________  Date:_________________________
### Appendix A CE 7-1-12

Chief Engineer

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### Appendix A Senior Chief Engineers

Chief Engineer Applies to 1 person

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Chief Engineer Applies to 1 employee

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### Appendix A Senior 1AE

#### 1AE

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June 23, 1997

Mr. James LaRiviere, Director
NY Inland and Harbor Contracts
Marine Engineers Beneficial Association
30 Montgomery Street
Jersey City, NJ 07302

RE: Daily Rate of Pay

Dear Jim,

This will confirm our agreement to change the basis of pay for employees represented by MEBA from a monthly salary to a daily rate, effective July 1, 1997. In making this conversion, it is agreed that the following calculations will be utilized:

CHIEF ENGINEER:

- The Chief Engineer will continue to be paid a monthly salary for any calendar month in which he/she is employed for the entire month. For any partial month, the Chief Engineer will continue to be paid one-thirtieth (1/30) of the month's salary for each day of work.

FIRST, SECOND AND THIRD ASSISTANT ENGINEERS:

Assistant Engineers will be paid a daily rate of pay for each day of work. The daily rate as of July 1, 1997, will be calculated by multiplying the current salary by 2.6% (the July 1, 1997, increase), multiplying the new monthly salary by 12, dividing the product by 2912 hours, and multiplying the result by 8 hours.

For overtime purposes, the overtime rate for Assistant Engineers will be based upon the hourly rate as calculated in the preceding paragraph. It is understood that the existing practice has been based on a 2912 hour work year for determining overtime rate.

Sincerely,

Is/
David M. Cohen
Director, Employee and Labor Relations

For MEBA:

I concur:

Is/
James LaRiviere

cc: Paul Ljunngren
     Doreen Mocha
     Mary Mokhteri
March 20, 1997

Mr. James LaRiviere
Director - NY Inland and Harbor Contracts
Marine Engineers' Beneficial Association, AFL-CIO
30 Montgomery Street
Jersey City, NJ 07302

Dear Jim,

This will confirm our agreement that, upon execution of this agreement, Columbia University will execute the "Agreement and Declaration of Trust Establishing the MEBA Pension Plan (Amended and Consolidated through Amendment No. 96-1, 4/30/96)." Columbia University and the Marine Engineers' Beneficial Association will apply for entry into the MEBA Pension Trust for coverage under the defined benefit plan, for all bargaining unit employees represented by MEBA, subject to the terms and conditions set forth below:

1. It is understood that such participation is solely dependent upon the votes of the members of the Pension Trust Board of Trustees, and that Columbia shall have no further obligation under this agreement in the event that the Trustees deny participation in the defined benefit plan.

2. MEBA has provided Columbia with the "Actuarial Report on the MEBA Pension Trust as of January 1, 1995." MEBA has represented that the University's participation in the defined benefit plan would be without cost to the University, and the University has relied upon such representation in agreeing to apply for coverage for MEBA members in its employ.

3. At the present time, employers are prohibited by Internal Revenue Service regulations and the Employee Retirement Income Security Act from making contributions to the defined benefit plan. This prohibition is likely to continue for the future. However, in the event that there is an increase in benefits, a decrease in plan assets as compared to liabilities, statutory or regulatory changes, or other circumstances beyond the University's control, it may become lawful and necessary for employers to make contributions to the defined benefit plan.

4. In the event that any employer contribution is required, the University's contributions to the Money Purchase Benefit provided in the collective bargaining agreement between the parties will be reduced by the amount of any required employer contribution. The University's contributions will be restored to the contractual rate at such time as no further employer contributions are required. In the event that the reduction in Money Purchase Benefit contributions is not sufficient to meet the required defined benefit plan contribution, the University shall reduce the employees' daily wage rate in an amount sufficient to meet the required contribution. The wage rate will be restored at such time as the reduction is no longer required to meet the contribution amount.

5. The Pension Trust Regulations provide for calculation of prior employment credit for newly participating companies, if the employer agrees to provide such credit. MEBA agrees that the University shall have no liability for prior service credit.
The foregoing constitutes our agreement with respect to the MEBA defined benefit plan.

Sincerely,

Is/

David M. Cohen
Director - Employee and Labor Relations

AGREED:

Is/

Is/

James LaRiviere, Director, NY Inland and Harbor Contracts
2012 MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is made as of January 26, 2012 between Lamont Doherty Earth Observatory of Columbia University (herein "University") and DISTRICT NO. 1 – PCD, MEBA (herein "Union").

WHEREAS, the University and Union are party to a Collective Bargaining Agreement (including all side letters, supplementary Memoranda of Understanding, memoranda, arbitration awards and agreements between the Parties) ("CBA"), and

WHEREAS, the University is a party to the MEBA Pension Trust for the Money Purchase Benefit Plan ("Money Purchase Plan") contributing at the rate of 10% of base wages as per Section 32 of the CBA; and

WHEREAS, the University is a party to the MEBA Pension Trust for the Defined Benefit Plan ("Defined Benefit Plan") as per the March 20, 1997 Side Letter; and

WHEREAS, the MEBA Pension Trust has advised that commencing January 1, 2012, a contribution of 11.7% of total wages to the Defined Benefit Plan is required; now therefore the University and the Union hereby agree as follows:

1. Effective January 1, 2012, the University's contribution to the Money Purchase Plan shall be reduced to zero.
2. Effective January 1, 2012, the University's contribution to the Defined Benefit Plan shall be 11.7% of total wages.
3. Effective January 1, 2012, the daily wage of employees shall be reduced by the additional amount necessary to meet the required contribution.
4. In the event that the contribution due to the Defined Benefit Plan is increased above the stated 11.7%, the employees' daily wage shall be reduced by the additional amount necessary to meet the required contribution.
5. The reduction in the University's contribution to the Money Purchase Plan, and the reduction in the employees' daily wage shall continue for so long as they are required to fund the required contribution to the Defined Benefit Plan. To the extent that the required contribution to the Defined Benefit Plan is increased above the stated 11.7%
Plan is reduced, the reductions shall be restored pro tanto, first to wages and then to the contributions to the Money Purchase Plan.

(e) Except as expressly modified by this MOU, all other terms and conditions of employment of the CBA remain in full force and effect.

Columbia University

/s/

By: Sheila Garvey
Date: 1/30/12

DISTRICT NO.1 – PCD, MEBA

/s/

By: Chris Guerra, ACFP
Date: 1/30/12
June 17, 1997

Mr. David M. Cohen  
Director of Employee and Labor Relations  
Columbia University  
Interchurch Center, Room 1220  
Mail Code 7710  
2960 Broadway  
New York, NY 10027

Dear David,

This letter agreement will confirm the following.

It is understood that the employees of Columbia University in the City of New York, Lamont-Doherty Earth Observatory ("Employer") covered under the Memorandum of Agreement dated October 3, 1996, will participate in the MEBA Pension Plan (defined benefits) effective October 1, 1006.

If this letter is okay, please sign and return one of the originals.

Thanks for your cooperation in this matter.

Sincerely,

/s/  
James LaRiviere, Director  
NY Inland & Harbor Contracts

Lamont-Doherty Earth Observatory of Columbia University in the City of New York  
By /s/ David M. Cohen  
Date ____________________  
cc: Paul McCarthy, V.P.  
Paul Green  
MEBA Plans
July 13, 2007

Mr. Frank Dumont  
Manager Employee/Labor Relations  
Human Resources Department  
Columbia University  
650 West 168 Street  
Black Building Room 101, Box #29  
New York, New York 10032

Re: 2006-2011 COLLECTIVE BARGAINING AGREEMENT

Dear Mr. Dumont,

During the course of negotiations for the above Agreement, the parties discussed the feasibility of adopting a provision whereby the Employer would report any longevity wage increases, earned by employees covered under the Agreement, to the MEBA Pension Plan for inclusion as base wages for the purpose of calculating pension benefits only under the MEBA Pension Plan (defined benefit).

It is understood and agreed that the above provision is solely dependent upon the votes of the members of the MEBA Pension Trust Board of Trustees, and that Columbia University and the Union shall have no further obligation regarding this provision in the event that the Trustees deny said provision.

It is further agreed that in the event the Trustees approve said provision, the parties shall meet as soon as practical, thereafter, to memorialize the mechanics to implement the provision.

If the above accurately reflects your understanding, please sign both originals in the space provided returning one original to my office for my files.

Very truly yours,

Ron Davis  
President

AGREED:

/s/ Sheila Garvey  
AVP Labor Relations  
Columbia University