

MEMORANDUM OF UNDERSTANDING
BETWEEN
INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH, KALPAKKAM
AND
GOVERNMENT ARTS COLLEGE, TIRUVANNAMALAI

This **MEMORANDUM OF UNDERSTANDING** (hereinafter called the "MoU") is made on the **06th of March 2020** between, on the one hand, the President of India represented by **INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH, KALPAKKAM** (hereinafter called **IGCAR** or **Client**), **Kalpakkam 603 102** and, on the other hand, **GOVERNMENT ARTS COLLEGE** (hereafter called **GAC**), **Tiruvannamalai – 606 603**

WHEREAS,

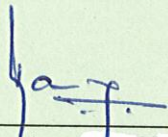
- (A) **IGCAR** has requested MU to undertake the experimental work related to the **"Study of Natural Radioactivity in Soils and Development of Base Line Data for Radiation Map in Tamilnadu"**
- (B) **MU** having represented to **IGCAR** that they have the required professional skills, personnel and infrastructure has agreed to undertake the work on the terms and conditions set forth in this MOU.
- (C) **IGCAR** has received a project proposal from **GAC** outlining the scientific programme to be adopted by **GAC** in order to realize the objectives of **"Study of Natural Radioactivity in Soils and Development of Base Line Data for Radiation Map in Tamilnadu"**
- (D) **IGCAR** has considered and accepted the project proposal and agreed to make available project costs at actual not exceeding a total sum of **Rs. 23,62,800/- (Rupees Twenty three lakhs sixty two thousand eight hundred only)** for carrying out this task covered under this MOU.
- (E) It is noted that payment will be made by **IGCAR** in three installments as per the estimates in the Project Report and based on specific requests by **GAC** duly approved by competent authority in **IGCAR** based on achievements of deliverables / milestones given in MOU. Each payment received by **GAC** should be accounted and fund utilization certificate produced while seeking next payment. Such payments will be subject to, in all respects, the terms and conditions of this MOU.

NOW, THEREFORE, the parties hereto agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of the MOU.
 - a) Conditions of MOU
 - b) Project proposal from **GAC**, and subsequent modifications (see 2(a))
 - c) Following Appendices:
 - Appendix A : Review Committee
 - Appendix B : Key Personnel
2. The mutual rights and obligations of **IGCAR** and **GAC** shall be as stipulated in the MOU, in particular,
 - a) **GAC** shall undertake all work described in the project proposal, in accordance with the provisions of the MOU and in accordance with any mutually agreed modifications. Such modifications will be deemed to be a part of the MOU.
 - b) **IGCAR** shall make payments to **GAC** in accordance with the provisions of the MOU.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written:


FOR AND ON BEHALF OF
PRESIDENT OF INDIA

By 
(Director, SQRMG)
IGCAR

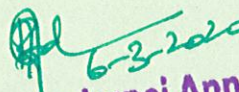
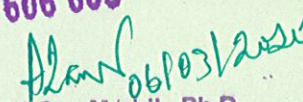
FOR AND ON BEHALF OF THE
DEPARTMENT OF PHYSICS,
GOVERNMENT ARTS COLLEGE

By 
(Principal Investigator
Department of Physics)
Dr. R. RAVISANKAR
Assistant Professor
PG & Research Department of Physics
Government Arts College
Tiruvannamalai-606 603.

Signed in the presence of

1. 
(S. BALASUNDAR)
SQRMG, ICAR
2. S. Chandrak
SQRMG, ICAR

Signed in the presence of

1. 
R. Arunchunai Annadurai
H.O.D of Physics
Government Arts College
Tiruvannamalai 606 603
2. 
Dr. A. RAVI, M.Sc., M.Phil., Ph.D.,
ASSISTANT PROFESSOR
DEPARTMENT OF CHEMISTRY
GOVERNMENT ARTS COLLEGE
TIRUVANNAMALAI - 606 603

CONDITIONS OF MOU

1. GENERAL PROVISIONS

1.1 Definitions:

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings.

- a) **“Applicable Law”** means the laws and any other instruments having the force of law in India as they may be issue and in force from time to time
- b) **“Party”** means **IGCAR** and **GAC** as the case may be and “parties mean both of them.
- c) **“MOU”** means the MOU signed by the Parties, together with all the documents listed in Clause 1 of such signed Contract.
- d) **“Effective Date”** means the date on the this Contract comes into fore and effect pursuant to Clause 2.1
- e) **“Government”** means the Government of India.
- f) **“Personnel”** means persons engaged/employed by **GAC**
- g) **“Experimental work”** means all work to be performed by the Principal Investigator (PI) pursuant to this Contract for the purposes of the Project, as described in the Project Proposal.
- h) **“Third Party”** means any person or entity other than **GAC**.

1.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal between **IGCAR** and the PI. Subject to this MOU, **GAC** have to take complete charge of their personnel performing the work and shall be fully responsible for the work performed by them or on their behalf, hereunder.

1.3 Law Governing the MOU

This MOU, its meaning and interpretation, and the relation between the parties shall be governed by the Applicable law.

1.4 Notices

Any notice, request or consent required or permitted to be given or made pursuant to this MOU shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the

communication is addressed, or when sent by Registered Mail, Telex, Telegram or facsimile to such Party at the address specified.

1.5 Taxes & Duties

GAC shall pay such taxes and duties or fees and other impositions as may be levied in the applicable law. These will be deducted at source as per relevant rules/ laws. Taxes in the nature of service tax if any included in the MOU and paid by MU shall be reimbursed subject to documentary evidence of registration and payment of the same.

2. Commencement, Completion, Modification and Termination of MOU.

2.1 Effectiveness of MOU

This MOU shall come into force and effect on the date 06 March 2020 stipulated in **IGCAR's** notice to **GAC** to begin carrying out the work, and the MOU will be for a period of TWO YEARS from the date and shall be renewed for further periods, if any after review and upon mutual consent by both the parties.

2.2 Termination of MOU for Failure to Become Effective

If this MOU has not become effective within such time period after the date of the MOU signed by the Parties, either Party may, by not less than Four [4] Weeks' written notice to the other Party, declare this MOU to be Null and Void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.

2.3 Commencement of the work

GAC shall begin carrying out the work at the end of such time period after the effective date as shall be specified in the notice issued as per Clause 2.1.

2.4 Expiration of MOU

Unless terminated earlier pursuant to Clause 2.9. here of, this MOU shall expire when all work have been completed and all payments have been made as specified in the Project Proposal, or at the end of such period after the Effective date as specified in the notice under 2.1.

2.5 Entire Agreement

This MOU contains all covenants, stipulations and provisions agreed by the Parties. No Agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for any statement, representation, promise or agreement not set forth herein.

2.6 Modification

Modification of the Terms and Conditions of this MOU, including any modification of the scope of the Work, may only be made by written agreement between the Parties based on mutual consent/Consensus.

2.7 Force Majeure

2.7.1 Definition

a) For the purpose of this MOU, "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes but is not limited to war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action [except where such strikes, lockouts or other industrial action are within the power of the party invoking Force Majeure to prevent], confiscation or any other action by Government agencies.

b) Force Majeure shall not include

- i.** Any event which is caused by the negligence or intentional action of a Party or such a Party's coworkers or agents or Employees,
- ii.** Any event which a diligent party could reasonably have been expected to both
- iii.** Taking into account at the time of the conclusion of this MOU and avoid or overcome in the carrying out of its obligations hereunder.

Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this MOU in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this MOU.

2.7.3 Consultation

Not later than thirty [30] days after **GAC** have become unable to perform a material portion of the work, as the result of an event of Force Majeure, the Parties shall consult each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8 Suspension

IGCAR may, by written notice of suspension to **GAC** suspend all Payments to **GAC** hereunder if **GAC** fails to perform any of their Obligations under this Contract, including the carrying out of the work, provided that such notice of Suspension

- i. Shall specify the nature of the failure and
- ii. Shall request **GAC** to remedy such failure within a period not exceeding thirty days 30 days after receipt by **GAC** of such notice of suspension.

2.9 Termination

2.9.1 By IGCAR

- a) IGCAR reserves the right to terminate the MOU by giving not less than 30 days notice of termination to **GAC**
- b) If the Review Committee [See Appendix A] reports unsatisfactory progress in the work programme and recommends termination of the MOU.
- c) If **GAC** fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 6.2. hereto.
- d) If **GAC** is unable to take up the programme for a period of not less than 60 days from the effective date.
- e) If IGCAR in its sole discretion decides to terminate the contract.

2.9.2 By GAC

GAC may terminate this Contract by giving not less than 30 days written notice to **IGCAR**.

- a) If IGCAR fails to make payments **GAC** pursuant of this Contract and not Subject to disputes.
- b) If, as a result of Force Majeure, **GAC** is unable to perform the work programme for a Period of not less than 60 days.
- c) If IGCAR fails to comply with any final decision reached as a result of arbitration pursuant to Clause 6.2.

2.9.3 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clauses 2.2. or 2.9. Hereof, or upon expiration of this Contract pursuant to Clause 2.4. Hereof, all rights and obligations of the Parties hereunder shall cease, except;

- a) such rights and obligations as may have accrued on the date of termination or expiration.
- b) the obligation of confidentiality set forth in Clause 3.2. hereof.
- c) any right which a Party may have under the Applicable Law.

2.9.4 Cessation of Project

Upon termination of this MOU by notice of either Party to the other pursuant to Clause 2.9.1. or 2.9.2. hereof, **GAC** shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by **GAC** and equipment and materials furnished by **IGCAR**, **GAC** shall proceed as provided, respectively, by Clauses 3.2. or 3.4. hereof.

2.9.5 Milestones and Deliverables

Installment/Phase	Payment & Deliverables	Amount (Rs)
I	1st month release of 1 st year money as advance payment.	11,81,400
II	Submission of 1st year report and based on recommendation of review committee release of 2 nd year money.	11,81,400
Total		23,62,800

2.9.6 Payment Upon Termination

Upon termination of this MOU pursuant to Clauses 2.9.1. or 2.9.2. hereof, **IGCAR** shall make the following payments to **GAC** after offsetting against these payments any amount that may be due from **MU** to **IGCAR** :

- a) Remuneration pursuant to Clause 5 hereof for satisfactorily work performed prior to the effective date of termination.
- b) Reimbursable expenditure pursuant to Clause 5 hereof for expenditure actually incurred prior to the effective date of termination and
- c) Except in the case of termination pursuant to paragraph [a] through [d] of Clause 2.9.1. hereof, reimbursement of any reasonable cost as decided by IGCAR incident to the prompt and orderly termination of the Contract.
- d) Where advance payments have been made by IGCAR to **GAC** in respect of the Contract, upon the termination of the MOU, any balance amount of money available with **GAC**, after accounting for the expenditure, till the date of termination, subject to 2.9.5. [c], shall be returned forthwith to IGCAR.

3. OBLICATIONS OF GAC

3.1 General

3.1.1 Standard of Performance

GAC shall perform the work and carryout their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional technique and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. **GAC** shall always act, in respect of any matter relating to this Contract or to the work, as faithful advisers to IGCAR, and shall at all times support and safeguard legitimate interests of IGCAR, in any dealings with third Parties.

3.1.2 Review of Progress

The Progress of the work undertaken as part of the MOU will be reviewed by a Committee consisting of Senior Members from both the Parties, as well as a few eminent Scientists from outside IGCAR. The Composition of this Review Committee appears in Appendix "A". The PI shall provide a report of the Progress of work to the Review Committee. The Review Committee shall meet once in six months. The Review Committee may suggest modification in the funding

pattern based on the review of the Progress, subject to the ceiling of total quantum of funding as provided in the Project Report duly approved and accepted by IGCAR. The decision of the Review Committee will be binding on both the Parties.

3.2 Confidentiality and Reporting

The data generated in the Research Programme taken up as part of the MOU will be presented in Symposia / Conferences etc., or published as Reports / Journal publications etc., only after mutual discussion between the parties. Any publications arising out of the work to be opened as part of this project will be jointly authored. The decision about the publication of the results will also be taken jointly by the parties. All the Intellectual Property Rights [Patents, Copy rights etc. arising out of the work carried out as part of the Contract, shall be the owned jointly by **GAC** and IGCAR. Principal, **GAC** and Director, IGCAR shall mutually agree on equitable sharing of any income accruing from Premia, License Fee, and Royalty etc. at the appropriate time. IGCAR shall reserve the right to hold from publication any data that in its view could be of strategic importance. The decision of IGCAR in the matter of publication will be binding on **GAC**.

GAC will provide half yearly report on the progress made in the project for review by Review Committee. In addition, at the end of the project, a consolidated report on the achievements of the project as well as summary of the expenditure will be provided by **GAC** to IGCAR.

3.3 Accounting, Inspection and Auditing

GAC shall separately maintain and provide a yearly account of expenditure incurred in the Project. An audited account of the expenditure on the Project and a Certificate of Utilization signed by the Appropriate Authority will also be provided at the end of every one year from the date of effectiveness of the Contract. The following guidelines will be followed in preparing the Statement of Accounts

3.3.1 The expenditure will be listed against each major head mentioned in the project proposal. The expenditure will be contained within the allocation object head-wise as per actual expenditure incurred by **GAC** for this project. The Over-head Charges will be as per a **GAC** accepted norms only.

3.3.2 Items costing more than Rs. 25,000/= will be listed separately, items costing less Rs. 25,000/= will be suitably grouped and listed.

3.3.3 Where the cost of individual item of expenditure exceeds Rs. 1.0 lakh, the original receipts for the purchase shall be produced along with the expenditure statement.

3.4 Equipment and Materials procured by GAC

All Equipments procured by **GAC** out of the funds provided by IGCAR for the purpose of carrying out the project will be considered as a property of IGCAR. Upon termination or expiration of the MOU, **GAC** shall make available to IGCAR the inventory for such equipment and materials and shall return all the equipments to IGCAR or dispose off these equipment and materials in accordance with the instructions from IGCAR.

4. Personnel involved in the Project

4.1 General

GAC shall employ and provide such Qualified and experienced personnel as are required to carry out the project as per the norms stipulated by **GAC**.

4.2 Description of Personnel

The Names, Qualifications and Job Description of the Personnel who will be involved in the Project from both the Parties are described in Appendix "B". **GAC** shall employ temporary additional staff Technical Assistant [TA] and Project Assistant [PA] as per the Project Proposal and as per the terms and conditions of the Contract.

4.3 Recruitment of Temporary Additional Staff

The temporary Additional Staff [TA and PA] to be recruited for carrying out the project shall meet the **GAC** norms. The selection of these staff will be carried out through Notifications, Written Test, Interview and other Procedures as applicable in the case of **GAC**.

4.4 Remuneration to be paid to these staff shall be as per **GAC**, subject to the terms of the MOU.

5 Obligations of IGCAR

In consideration of the work performed by **GAC** under this Contract, IGCAR shall make such payments and in such a manner as has been given below:

- a) The total amount payable to **GAC**, shall not exceed a sum of **Rs.23.62,800/- [Rupees Twenty three lakhs sixty two thousand and Eight hundred only]**, as indicated in the Project Proposal.

- b) IGCAR will extend all possible support to the successful execution of the project, by way of extending its infrastructural facilities such as Library, on a chargeable basis where necessary.

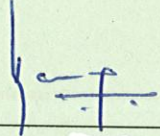
5. Settlement of Disputes

6.1 Amicable Settlement:

The Parties shall use their best efforts to settle amicably all disputes arising out in connection with this MOU or the counterproductive there of.

6.2 Dispute Settlement / Arbitration:


Any disagreement/difference of opinion/dispute regarding the interpretation of the provisions of this MOU shall be resolved by mutual consultation by the signatories. For any dispute unresolved, reference shall be made under the provisions of the Arbitration and Conciliation Act, 1966 or any statutory modification/re-enactment thereof and rules made there under. No payment to **GAC** shall be withheld pending resolution of any differences of opinion, unless such payment is the subject of dispute. The place of arbitration shall be Mumbai and the proceedings shall be conducted in English language. Chairman, Atomic Energy Commission (AEC) or his nominee will be the arbitrator. The award of the arbitrator shall be binding on both the parties.

By 
(Director, SQRMG)

IGCAR

डॉ. बी. वेंकटरामन Dr. B. VENKATRAMAN
निदेशक Director

संका, गुणवत्ता एवं संसाधन प्रबंधन समूह
Safety, Quality & Resource Management Group
इंसापबके, पडुचि, कल्पाक्कम 603 102
IGCAR, DAE, Kalpakkam 603 102.

By 
(Principal Investigator)
Government Arts College

Tiruvannamalai
Dr. R. RAVISANKAR

Assistant Professor
PG & Research Department of Physics
Government Arts College
Tiruvannamalai-606 603.

Appendix A

Project Coordination Committee (PCC)

The PCC will involve itself in the formulation of broad policies and technical programmes in line with the objective of this MoU. The PCC will meet at least once a year to monitor the progress of projects under the MoU. The composition of the PCC would be as follows:

- | | | |
|---|---|-----------------|
| | Dr. B.Venkatraman | |
| 1 | Director, SQRMG
IGCAR, Kalpakkam | Chairman |
| | The Principal | |
| 2 | Government Arts College
Tiruvannamalai | Co-Chairman |
| | Head, HISD | |
| 3 | HSEG
IGCAR, Kalpakkam | Member |
| | Dr. A. Ravi | |
| 4 | Assistant Professor of Chemistry
Government Arts College
Tiruvannamalai | Co-Investigator |
| | Dr.R. Ravisankar | |
| 5 | Assistant Professor of Physics
Government Arts College
Tiruvannamalai | Investigator |

Appendix B

Key Personnel:

GAC:

- | | |
|---|-------------------------------|
| 1. Principal,
Govt. Arts College (GAC),
Thiruvannamalai | Chairman |
| 2. Dr. R. Ravisankar
Assistant Professor of Physics
Govt. Arts College,
Thiruvannamalai | Principal Investigator |
| 3. Dr. A. Ravi
Assistant Professor of Chemistry
Govt. Arts College,
Thiruvannamalai | Co-investigator |

IGCAR:

- | | |
|--|-----------------|
| 1. Dr. B. Venkatraman
Distinguished Scientist
Director, SQRMG
IGCAR, Kalpakkam | Chairman |
| 2. Shri S. Chandrasekaran
Head, RSS, HISD
IGCAR | Member |
| 3. Shri S. Balasundar
Scientific Officer,
RAMS, RESD
IGCAR | Member |



16th January 2020

MEMORANDUM OF UNDERSTANDING (MoU)

BETWEEN

INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH,

KALPAKKAM

AND

MANGALORE UNIVERSITY, MANGALAGANGOTTHRI

This **MEMORANDUM OF UNDERSTANDING** (hereinafter called the "MoU") is made on the 16th January 2020 (Thursday) between, on the one hand, the President of India represented by **INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH, KALPAKKAM** (hereinafter called **IGCAR** or Client), Kalpakkam 603 102 and, on the other hand, **MANGALORE UNIVERSITY** (hereafter called **MU**), Mangalagangothri -574199 represented by its Registrar.

Studies on Site Specific Environmental Transfer Factors for Radionuclides around IGCAR, Kalpakkam

WHEREAS,

- (A) IGCAR has requested MU to undertake the experimental work related to the "Studies on Site Specific Environmental Transfer Factors for Radionuclides around IGCAR, Kalpakkam".

- (B) **MU** having represented to **IGCAR** that they have the required professional skills, personnel and infrastructure has agreed to undertake the work on the terms and conditions set forth in this MOU.
- (C) **IGCAR** has received a project proposal from **MU** outlining the scientific programme to be adopted by **MU** in order to realize the objectives of “**Studies on Site Specific Environmental Transfer Factors for Radionuclides around IGCAR, Kalpakkam**”.
- (D) **IGCAR** has considered and accepted the project proposal and agreed to make available project costs at actual not exceeding a total sum of Rs. **42,97,120/-** (Rupees forty two lakh ninety seven thousand one hundred twenty only) for carrying out this task covered under this MOU.
- (E) It is noted that payment will be made by **IGCAR** in three installments as per the estimates in the Project Report and based on specific requests by **MU** duly approved by competent authority in **IGCAR** based on achievements of deliverables / milestones given in MOU. Each payment received by **MU** should be accounted and fund utilization certificate produced while seeking next payment. Such payments will be subject to, in all respects, the terms and conditions of this MOU.


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1. The following documents attached hereto shall be deemed to form an integral part of the MOU.
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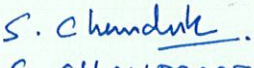
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IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written:

FOR AND ON BEHALF OF
PRESIDENT OF INDIA

By 
(Director, SQRMG, **IGCAR**)


Signed in presence of

1. 
S. CHANDRASEKARAN
एस. चंद्रशेखरन/S. CHANDRASEKARAN
प्रधान, विकिरण संरक्षा अनुभाग/Head, Radiation Safety Section
स्वास्थ्य एवं औद्योगिक संरक्षा प्रभाग
Health & Industrial Safety Division
आरईएसजी, एचएसईजी, इगाअपके, पऊवि, कल्पाक्कम
RESG, HSEG, IGCAR, DAE, Kalpakkam - 603 102.

2. 
डॉ. वी. सुब्रमणियन/Dr. V. SUBRAMANIAN
प्रधान, विकिरण अनुप्रयोग एवं निगरानी अनुभाग
Head, Radiation Application & Monitoring Section
विकिरण एवं पर्यावरणीय संरक्षा प्रभाग
Radiological & Environmental Safety Division
आरईएसजी, एचएसईजी, इगाअपके, पऊवि, कल्पाक्कम
RESG, HSEG, IGCAR, DAE, Kalpakkam - 603 102.


FOR AND ON BEHALF OF

Mangalore University, Mangalagangothri

By 
(Registrar, Mangalore University)

Registrar
MANGALORE UNIVERSITY
MANGALAGANGOTRI - 574 199

Signed in presence of

1. 
DR. KARUNAKARA.N.
KARUNAKARA.N. M.Sc., M.Phil.,
Coordinator
Centre for Advanced Research in
Environmental Radioactivity (CAR)
Mangalore University
Mangalagangothri - 574 199
Mangalore, India

2.

CONDITIONS OF MOU

1. General Provisions:

1.1. Definitions:

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- a] **“Applicable Law”** means the laws and any other instruments having the force of law in India as they may be issued and in force from time to time.
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- h] **“Third Party”** means any person or entity other than parties entering into this MoU.

1.2. Relation between the Parties:

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal between **IGCAR** and the PI. Subject to this MOU, **MU** have to take complete charge of their personnel performing the work and shall be fully responsible for the work performed by them or on their behalf, hereunder.

1.3. Law Governing the MOU:

This MOU, its meaning and interpretation, and the relation between the parties shall be governed by the Applicable law.

1.4. Notices:

- 1.4.1. Any notice, request or consent required or permitted to be given or made pursuant to this MOU shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized

representative of the Party to whom the communication is addressed, or when sent by Registered Mail, Telex, Telegram or facsimile to such Party at the address specified.

1.5. Taxes & Duties:

MU shall pay such taxes and duties or fees and other impositions as may be levied in the applicable law. These will be deducted at source as per relevant rules/ laws. Taxes in the nature of service tax if any included in the MOU and paid by MU shall be reimbursed subject to documentary evidence of registration and payment of the same.

2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF MOU.

2.1. Effectiveness of MOU:

This MOU shall come into force and effect on the datestipulated in IGCAR's notice to MU to begin carrying out the work, and the MOU will be for a period of THREE YEARS from the date and shall be renewed for further periods, if any after review and upon mutual consent by both the parties.

2.2. Termination of MOU for Failure to Become Effective:

If this MOU has not become effective within such time period after the date of the MOU signed by the Parties, either Party may, by not less than Four [4] Weeks' written notice to the other Party, declare this MOU to be Null and Void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.

2.3. Commencement of the work:

MU shall begin carrying out the work at the end of such time period after the effective date as shall be specified in the notice issued as per Clause 2.1.

2.4. Expiration of MOU:

Unless terminated earlier pursuant to Clause 2.9. here of, this MOU shall expire when all work have been completed and all payments have been made as specified in the Project Proposal, or at the end of such period after the Effective date as specified in the notice under 2.1.

2.5. Entire Agreement:

This MOU contains all covenants, stipulations and provisions agreed by the Parties. No Agent or representative of either Party has authority to make, and the Parties

shall not be bound by or be liable for any statement, representation, promise or agreement not set forth herein.

2.6. Modification:

Modification of the Terms and Conditions of this MOU, including any modification of the scope of the Work, may only be made by written agreement between the Parties based on mutual consent/Consensus.

2.7. Force Majeure:

2.7.1. Definition:

a] For the purpose of this MOU, "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes but is not limited to war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action [except where such strikes, lockouts or other industrial action are within the power of the party invoking Force Majeure to prevent], confiscation or any other action by Government agencies.

b] **Force Majeure shall not include**

- [i] Any event which is caused by the negligence or intentional action of a Party or such a Party's coworkers or agents or Employees, not
- [ii] Any event which a diligent party could reasonably have been expected to both
- [iii] Taking into account at the time of the conclusion of this MOU and avoid or overcome in the carrying out of its obligations hereunder.
- [iv] Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2. No Breach of Contract:

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this MOU in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this MOU.

2.7.3. Consultation:

Not later than thirty [30] days after MU have become unable to perform a material portion of the work, as the result of an event of Force Majeure, the Parties shall consult each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8. Suspension:

IGCAR may, by written notice of suspension to **MU** suspend all payments to **MU** hereunder if **MU** fails to perform any of their obligations under this Contract, including the carrying out of the work, provided that such notice of suspension

- [i] Shall specify the nature of the failure and
- [ii] Shall request **MU** to remedy such failure within a period not exceeding thirty days 30 days after receipt by **MU** of such notice of suspension.

2.9. Termination:

2.9.1. By IGCAR:

IGCAR reserves the right to terminate the MOU by giving not less than 30 days notice of termination to **MU**

- a] If the Review Committee reports unsatisfactory progress in the work programme and recommends termination of the MOU.
- b] If **MU** fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 6.2. hereto.
- c] f **MU** is unable to take up the programme for a period of not less than 60 days from the effective date.
- d] If IGCAR in its sole discretion decides to terminate the contract.

2.9.2. By **MU may terminate this Contract by giving not less than 30 days written notice to **IGCAR**.**

- a] If IGCAR fails to make payments to **MU** pursuant of this Contract and not subject to disputes.
- b] If, as a result of Force Majeure, **MU** is unable to perform the work programme for a period of not less than 60 days.
- c] If IGCAR fails to comply with any final decision reached as a result of arbitration pursuant to Clause 6.2.

2.9.3. Cessation of Rights and Obligations:

Upon termination of this Contract pursuant to Clauses 2.2. or 2.9. Hereof, or upon expiration of this Contract pursuant to Clause 2.4.

Hereof, all rights and obligations of the Parties hereunder shall cease, except;

- a] such rights and obligations as may have accrued on the date of termination or expiration.
- b] the obligation of confidentiality set forth in Clause 3.2. hereof.

c] any right which a Party may have under the Applicable Law.

2.9.4. Cessation of the project:

Upon termination of this MoU by notice of either Party to the other pursuant to Clause 2.9.1. or 2.9.2. hereof, MU shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by MU and equipment and materials furnished by IGCAR, MU shall proceed as provided, respectively, by Clauses 3.2. or 3.4. hereof.

2.9.5 Milestones and deliverables

Installment/ Phase	Payment & Deliverables	Amount (Rs)
i	1st month release of 1st year money as advance payment.	16,81,760
ii	Submission of 1st year report and based on recommendation of review committee release of 2nd year money.	12,81,760
iii	Submission of 2nd year report and based on recommendation of review committee release of 3rd year money	13,33,600
Total		42,97,120
Payment will be released as above by IGCAR to the Mangalore University bank account operated by its Finance Officer.		

2.9.5.1 Payment upon Termination:

Upon termination of this MOU pursuant to Clauses 2.9.1. or 2.9.2. hereof, IGCAR shall make the following payments to MU after offsetting against these payments any amount that may be due from MU to IGCAR ;

- a] Remuneration pursuant to Clause 5 hereof for satisfactorily work performed prior to the effective date of termination.
- b] Reimbursable expenditure pursuant to Clause 5 hereof for expenditure actually incurred prior to the effective date of termination and
- c] Except in the case of termination pursuant to paragraph [a] through [d] of Clause 2.9.1. hereof, reimbursement of any reasonable cost as decided by IGCAR incident to the prompt and orderly termination the Contract.

2.9.5.2. Where advance payments have been made by IGCAR to MU in respect of the Contract, upon the termination of the MOU, any balance amount of money

available with MU, after accounting for the expenditure, till the date of termination, subject to 2.9.5.1 [c], shall be returned forthwith to IGCAR.

3. OBLIGATIONS OF MU

3.1. General:

3.1.1. Standard of Performance:

MU shall perform the work and carryout their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional technique and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. MU shall always act, in respect of any matter relating to this Contract or to the work, as faithful advisers to IGCAR, and shall at all times support and safeguard legitimate interests of IGCAR, in any dealings with third Parties.

3.1.2. Review of Progress:

The Progress of the work undertaken as part of the MOU will be reviewed by a Committee consisting of Senior Members from both the Parties, as well as a few eminent Scientists from outside IGCAR. The Composition of this Review Committee appears in Appendix "A". The PI shall provide a report of the Progress of work to the Review Committee. The Review Committee shall meet once in six months. The Review Committee may suggest modification in the funding pattern based on the review of the Progress, subject to the ceiling of total quantum of funding as provided in the Project Report duly approved and accepted by IGCAR. The decision of the Review Committee will be binding on both the Parties.

3.1.3. Final report

The Principal Investigator of the project will be responsible for the submission of the Final Report, and for arranging Statement of Account and Utilization Certificate of the project to IGCAR.

3.2 Confidentiality and Reporting:

The data generated in the Research Programme taken up as part of the MOU will be presented in Symposia / Conferences etc., or published as Reports / Journal publications etc., only after mutual discussion between the parties. Any publications arising out of the work to be opened as part of this project will be jointly authored. The decision about the publication of the results will also be taken jointly by the parties. All the Intellectual Property Rights [Patents, Copy rights etc. arising out of the work carried out as part of the Contract, shall be the owned jointly by MU and IGCAR. Dean-Research, MU and Director, IGCAR shall mutually agree on equitable sharing of any income accruing from Premia, License Fee, and

Royalty etc. at the appropriate time. IGCAR shall reserve the right to hold from publication any data that in its view could be of strategic importance. The decision of IGCAR in the matter of publication will be binding on MU.

MU will provide half yearly report on the progress made in the project for review by Review Committee. In addition, at the end of the project, a consolidated report on the achievements of the project as well as summary of the expenditure will be provided by MU to IGCAR.

3.3 Accounting, Inspection and Auditing:

MU shall separately maintain and provide a yearly account of expenditure incurred in the Project. An audited account of the expenditure on the Project and a Certificate of Utilization signed by the Appropriate Authority will also be provided at the end of every one year from the date of effectiveness of the Contract. The following guidelines will be followed in preparing the Statement of Accounts:

- 3.3.1 The expenditure will be listed against each major head mentioned in the project proposal. The expenditure will be contained within the allocation object head-wise as per actual expenditure incurred by MU for this project. The Over-head Charges will be as per a MU accepted norms only.
- 3.3.2. Items costing more than Rs. 25,000/= will be listed separately, items costing less Rs. 25,000/= will be suitably grouped and listed.
- 3.3.3 Where the cost of individual item of expenditure exceeds Rs. 1.0 lakh, the original receipts for the purchase shall be produced along with the expenditure statement.

3.4 Equipment and Materials procured by MU :

All Equipments procured by MU out of the funds provided by IGCAR for the purpose of carrying out the project will be considered as a property of IGCAR. Upon termination or expiration of the MOU, MU shall make available to IGCAR the inventory for such equipment and materials and shall return all the equipments to IGCAR or dispose off these equipment and materials in accordance with the instructions from IGCAR.

4.0. Personnel involved in the Project:

4.1. General:

MU shall employ and provide such Qualified and experienced personnel as are required to carry out the project as per the norms stipulated by MU.

4.2. Description of Personnel:

The Names, Qualifications and Job Description of the Personnel who will be involved in the Project from both the Parties are described in Appendix "B". MU shall employ temporary additional staff [Research Associates [RA], Junior Research Fellows [JRFs etc.] as per the Project Proposal and as per the terms and conditions of the Contract.

4.3. Recruitment of Temporary Additional Staff:

The temporary Additional Staff [RA, JRF etc.] to be recruited for carrying out the project shall meet the MU norms. The selection of these staff will be carried out through Notifications, Written Test, Interview and other Procedures as applicable in the case of MU.

4.4. Remuneration to be paid to these staff shall be as per MU, subject to the terms of the MOU.

5.0. Obligations of IGCAR:

In consideration of the work performed by MU under this Contract, IGCAR shall make such payments and in such a manner as has been given below:

5.1. The total amount payable to MU, shall not exceed a sum of Rs. **42,97,120** [Rupees Forty Two Lakh Ninty Seven Thousand One Hundred Twenty only) as indicated in the Project Proposal.

5.2 IGCAR will extend all possible support to the successful execution of the project, by way of extending its infrastructural facilities such as Library, on a chargeable basis where necessary.

6.0 Settlement of Disputes:

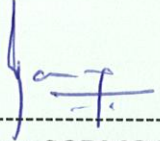
6.1. Amicable Settlement:

The Parties shall use their best efforts to settle amicably all disputes arising out in connection with this MOU or the Counterproductive thereof.

6.2 Dispute Settlement / Arbitration:

Any disagreement/difference of opinion/dispute regarding the interpretation of the provisions of this MOU shall be resolved by mutual consultation by the signatories. For any dispute unresolved, reference shall be made under the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification/re-enactment thereof and rules made there under. No payment to MU shall be withheld pending resolution of any differences of opinion, unless such payment is the subject of dispute. The place of arbitration shall be Mumbai and the proceedings shall be

conducted in English language. Chairman, Atomic Energy Commission (AEC) or his nominee will be the arbitrator. The award of the arbitrator shall be binding on both the parties. Arbitration charges will be borne equally by both parties.

By 

(Director, SQRMG IGCAR)

Place

Date

S. Chandrasekaran

Witness: 1 Signature

By 

(Registrar, Mangalore University)
Registrar
MANGALORE UNIVERSITY
MANGALAGANGOTRI - 574 199

Place

Date

Jan. 16, 2020
Mangalore University

Witness: 2 Signature



एस. चंद्रशेखरन / S. CHANDRASEKARAN
प्रधान, विकिरण सुरक्षा अनुसंधान, Health, Radiation Safety Section
स्वास्थ्य एवं औद्योगिक संरक्षा प्रभाग
Health & Industrial Safety Division
आरईएसजी, एचआईएसजी, इंगांअपर्के, पऊवि, कल्पाक्कम
RESG, HSEG, IGCAR, DAE, Kalpakkam - 603 102.

Prof. KARUNAKARA.N. M.Sc., M.Phil, PhD
Coordinator
Centre for Advanced Research in
Environmental Radioactivity (CARER)
Mangalore University
Mangalagotri - 574 199
Mangalore, India

Review Committee

The PCC will involve itself in the formulation of broad policies and technical programmes in line with the objective of this MoU. The review committee will meet at least once a year to monitor the progress of projects under the MoU. The composition of the PCC would be as follows:

i.	Dr. B.Venkatraman Director, SQRMG IGCAR, Kalpakkam	Chairman
ii.	The Vice Chancellor Mangalore University Mangalagangothri – 574 199	Co-Chairman
iii.	Head, HISD HSEG IGCAR, Kalpakkam	Member
iv.	Dr P M Ravi Adjunct Professor, CARER Mangalore University, Mangalagangothri - - 574 199	Member
v.	Prof. H M Somashekarappa Head, USIC and CARRT Mangalore University, Mangalagangothri - - 574 199	Member
vi.	Prof. B Narayana Dept. of Chemistry Mangalore University, Mangalagangothri - - 574 199	Member
vii.	Prof. Karunakara. N Coordinator, CARER Mangalore University, Mangalagangothri - - 574 199	Coordinator

Key Personnel

Sl. No.	Name and designation	Contact numbers
i.	Dr. B.Venkatraman Director, SQRMG Indira Gandhi Centre for Atomic Research Kalpakkam - 603 102	044-27480500
ii.	The Vice Chancellor Mangalore University Mangalagangothri – 574 199	0824-2287347
iii.	Dr. S. Chandrasekaran Head, Radiation Safety Section Health and Industrial Safety Division Health, Safety and Environment Group (HSEG) Safety, Quality and Resource Management Group Indira Gandhi Centre for Atomic Research Kalpakkam - 603 102	044-27480500-23556
iv.	Prof. Karunakara. N Coordinator, CARER Mangalore University, Mangalagangothri - – 574 199	0824-2287733