Control Number: 2678-1728

ERICK COMEAUX
Koura (Mexichem Fluor Inc.), 4990B ICI Road, St. Gabriel, LA 70776
[redacted] (b) (6)

Education, Training & Certifications

- Master of Science, Industrial Engineering, Louisiana State University Graduate School, 2004
- Batchelor of Science, Chemical Engineering, Louisiana State University Honor's College, 1997
- Licensed Project Management Professional (PMP# 1400338)
- Registered Louisiana Board of Professional Engineers & Land Surveyors (#T-17629)
- Certified, ISA 84 Safety Instrumented Systems
- Certified, ISO 9001 & IATF 16949 Internal Auditor
- Center for Creative Leadership Development Program
- Leading with Finance, Harvard Business School
- Leadership Development Pipeline, Harvard Business School
- Training in Six Sigma, Lean Manufacturing, Kepner Tregoe Problem Solving Tools

Research & Professional Experience

- Director – Technical & Development, Koura, 2018 to Present
  - Led process engineering, controls & automation, capital projects, quality assurance, laboratory, documentation, information technology (IT), maintenance, turnarounds, reliability and instrumentation & electrical functions, as well as growth projects for fluorinated and vinyl products divisions
  - Provide senior leadership the laboratory, with gas chromatograph, FT-IR, ICP, Karl Fisher moisture analysis and wet chemistry capabilities and drive collaboration with global laboratories for additional thermomechanical and composition analytical capabilities
  - Maintained ISO 9001, IATF 16949 and Kosher Compliance & Supported ISO 14001 Compliance
- [redacted] (b) (4)

(b) (4)

[redacted]

Awards & Honors

- Top 40 Under 40, The Baton Rouge Business Report
- Governor's Environmental Leadership Award
- Led Team to Earn International Green Apple Environmental Award
- 1st Place Research Awards from: American Society for Materials International, Society of Plastics Engineers & Sigma Xi Research Society
- Omega Chi Epsilon National Chemical Engineering Honor Society, Phi Eta Sigma Honor Society, Alpha Lambda Delta Honor Society, National Collegiate Honor Society

Publications

- "Fusion Study of Rigid Polyvinyl Chloride (PVC)," *Polymer Bulletin*
- "Optimal Batch Sizes for Cooperative Commerce," *International Journal of Operation Research*
- "Optimal Batch Sizes for Multiple Packages," *International Journal of Operation Research*
- "Revamp of Millisecond Furnaces for Optimal Ethylene Production," *Technip Technology Review*
- "Cold Embrittlement," *AIChE National Meeting*

SEAN CUNNINGHAM
Koura (Mexichem Fluor Inc.), 4990B ICI Road, St. Gabriel, LA 70776
[redacted]

PROFESSIONAL EXPERIENCE

KOURA (PART OF ORBIA) **1991 - Present**

OPERATIONS DIRECTOR (2018-PRESENT) ST. GABRIEL, LA

Responsible for Koura's manufacturing facility in St. Gabriel, Louisiana. Lead approximately 75 employees to ensure a safe operation, meeting all laws and regulations, while delivering the Business goals.

[redacted]

EDUCATION

M.Eng. Chemical Engineering, University of Nottingham, England
1986

PATENTS, PUBLICATIONS AND PROFESSIONAL ACTIVITIES

Member of ASHRAE (American Society Heating, Refrigeration and Air Conditioning Engineers)

Chair ASHRAE SSPC34, Refrigerants and Secondary Coolants committee, 2018-2020

SSPC34 Flammability subcommittee 2004 – 2020

TC3.1 Refrigerants Committee 2004-2020

Co-author ASHRAE Handbook, Fundamentals, chapter 29, 2013 edition.

ISO 817 Flammability Committee designated expert

Society of Automotive Engineers (SAE)

Fluids Committee member

Karthik Venkataraman
Koura (Mexichem Fluor Inc.), 950 Winter Street, Waltham, MA 02451,
[redacted]

Professional Experience

Koura Global, Waltham MA (2020- Present)

Technology Director

- Drive strategic programs and lead development of all chemical processes from inception through commercialization, including novel electrolyte solvents/additives and fluorinated electrolyte salts

[redacted]

Education

- Ph.D. Chemical Engineering, University of Minnesota, 2003
- B.S. Chemical Engineering, Indian Institute of Technology, Kharagpur , 1999

Patents, Publications, Awards

- 5 patents filed, 18 disclosure letters
- 4 peer-reviewed journal publications
- GE Global Technology Team Award (2009), 5 Management Awards
- 3M Doctoral Dissertation Fellowship, 2002-2003
- Dow Graduate Research Fellowship, 2001-2003
- Institute Silver Medal, IIT Kharagpur, 19

MIODRAG OLJACA
Koura (Mexichem Fluor Inc.), 950 Winter Street, Waltham, MA 02451,
[redacted] (b) (6)

PROFESSIONAL EXPERIENCE

KOURA (PART OF ORBIA) **2019- Present**

GENERAL MANAGER GROWTH AND TECHNOLOGY (2019-PRESENT) BOSTON, MA

Responsible for delivering on growth agenda for a ~$1B organization and creating new technologies with owner/entrepreneur mindset. Responsible for driving innovation and growth R&D, developing strategic relationships, and establishing presence and awareness in "new to business spaces".

[redacted]

(b) (4)

[redacted]

[redacted]

[redacted]

EDUCATION

Ph.D. Mechanical Engineering, Georgia Institute of Technology
1998
M.S. Mechanical Engineering, University of Maine
1993

B.S. Mechanical Engineering, University of Zagreb
1989

PATENTS, PUBLICATIONS AND PROFESSIONAL ACTIVITIES

>25 issued patents, numerous other patent applications
>20 refereed publications
Reviewer for Department of Energy Merit Review 2012-17
Invited speaker at the 2014 MRS Fall Meeting and various other meetings
Manuscript reviewer for the Journal of Materials Science and Journal of Power Sources
Chairman of IMI's Engineered Fine Particle Applications conference (2005-2007)
Principal Investigator and participant on grants totaling >$10M
National Academy of Engineering 9th Annual Frontiers of Engineering Symposium (2003)

OMB Number: 4040-0004
Expiration Date: 12/31/2022

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 06/29/2022

4. Applicant Identifier: [redacted] (b) (4)

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Mexichem Fluor, Inc. dba Koura

* b. Employer/Taxpayer Identification Number (EIN/TIN): [redacted] (b) (4)

* c. UEI: [redacted] (b) (4)

d. Address:

* Street1: 4990 B ICI Road
Street2:
* City: Saint Gabriel
County/Parish:
* State: LA: Louisiana
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 70776-4316

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr.
* First Name: Erick
Middle Name:
* Last Name: Comeaux
Suffix:

Title: Business Technical Manager

Organizational Affiliation:

* Telephone Number: [redacted] (b) (6)

Fax Number: [redacted]

* Email: [redacted]

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

Q: For-Profit Organization (Other than Small Business)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Energy

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

*** 12. Funding Opportunity Number:**

DE-FOA-0002678

* Title:

Bipartisan Infrastructure Law (BIL) Battery materials Processing and Battery Manufacturing

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

LiPF6 Manufacturing Plant in Saint Gabriel, Louisiana

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: LA 02
* b. Program/Project: LA 02

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 01/01/2023
* b. End Date: 06/30/2026

18. Estimated Funding ($):

* a. Federal	100,000,000.00
* b. Applicant	306,584,087.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	406,584,087.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- [ ] a. This application was made available to the State under the Executive Order 12372 Process for review on .
- [ ] b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- [x] c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

- [ ] Yes
- [x] No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

- [x] ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name: Miodrag

Middle Name:

* Last Name: Oljaca

Suffix:

* Title: VP of Innovation and Technology

* Telephone Number: [redacted] (b) (6)

Fax Number:

* Email: [redacted]

* Signature of Authorized Representative: Miodrag Oljaca

* Date Signed: 06/28/2022

Instructions and Summary

Award Number: _____ **Date of Submission:** _____

Award Recipient: _____ **Form submitted by:** _____

(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your EERE contact!
Do not modify this template or any cells or formulas!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs. If using this form for invoice submission, fill out tabs a. through j. with total costs for just the proposed invoice and fill out tab k. per the instructions on that tab.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item wi hin each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, vendors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your EERE contact before adding additional budget period rows or columns.
8. ALL budget period cost categories are rounded to the nearest dollar.

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary

	Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1	[redacted]6	[redacted]			[redacted]	[redacted]	[redacted]
Budget Period 2	[redacted]	[redacted]			[redacted]	[redacted]	[redacted]
Budget Period 3	[redacted]	[redacted]			[redacted]	[redacted]	[redacted]
Budget Period 4	[redacted]	[redacted]			[redacted]	[redacted]	[redacted]
Budget Period 5	[redacted]	[redacted]			[redacted]	[redacted]	
Total	$100,0[redacted]				$406,584,087	75%	

(b) (4)

Section B - Budget Categories

CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	Comments (as needed)
a. Personnel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
b. Fringe Benefits	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
c. Travel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
d. Equipment	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
e. Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
f. Contractual								
Sub-recipient	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
Vendor	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
FFRDC	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
g. Construction	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
h. Other Direct Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
Total Direct Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
i. Indirect Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]8	[redacted]	
Total Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	100%	

Additional Explanation (as needed):

a. Personnel

INSTRUCTIONS - PLEASE READ!!!

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and vendors must be included under f. Contractual.
2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base pay rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., actual salary, labor distribution report, state civil service rates, etc.) must also be identified.
3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).
4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.
5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Position Title	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hrs)	Pay Rate ($/Hr)	Total Budget Period 1	Time (Hrs)	Pay Rate ($/Hr)	Total Budget Period 2	Time (Hrs)	Pay Rate ($/Hr)	Total Budget Period 3	Time (Hrs)	Pay Rate ($/Hr)	Total Budget Period 4	Time (Hrs)	Pay Rate ($/Hr)	Total Budget Period 5			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]	[redacted]	[redacted]
				$0			$0			$0			$0			$0	0	$0	
				$0			$0			$0			$0			$0	0	$0	
				$0			$0			$0			$0			$0	0	$0	
				$0			$0			$0			$0			$0	0	$0	
				$0			$0			$0			$0			$0	0	$0	
				$0			$0			$0			$0			$0	0	$0	
	Total Personnel Costs	[redacted]		[redacted]			[redacted]			[redacted]	[redacted]		[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	

(b) (4)

Additional Explanation (as needed):

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!

1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.
2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.
3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.
4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			[redacted]			[redacted]	[redacted]
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
			$0			$0			$0			$0			$0	$0
[redacted]	[redacted]		[redacted]	[redacted]		[redacted]	[redacted]		[redacted]	[redacted]		[redacted]	[redacted]		[redacted]	[redacted]

(b) (4)

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

_____ A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

_____ There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at https://www.energy.gov/eere/funding/downloads/sample-indirect-rate-proposal-and-profit-compliance-audit, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): Please use this box (or an attachment) to list the elements that comprise your fringe benefits and how they are applied to your base (e g. Personnel) to arrive at your fringe benefit rate.

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Es imating Costs are past trips, travel quotes, GSA rates, etc.
2. All listed travel must be necessary for performance of the Statement of Project Objectives.
3. Only travel that is directly associated with this award should be included as a direct travel cost to the award.
4. Federal travel regulations are contained within the applicable cost principles for all entity types.
5. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.
6. Columns E, F, G, H, I, J, and K are per trip.
7. The number of days is inclusive of day of departure and day of return.
8. Recipients should enter City and State (or City and Country for International travel) in the Depart from and Destination fields.
9. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	Budget Period 1									
[redacted]	[redacted] (b) (4)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
										$0	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 1 Total									[redacted]0	
	Domestic Travel	Budget Period 2									
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
										$0	
	International Travel										
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 2 Total									[redacted]	
	Domestic Travel	Budget Period 3									
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
										$0	
	International Travel										
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 3 Total									[redacted]	
	Domestic Travel	Budget Period 4									
										$0	
										$0	
										$0	
										$0	
	International Travel										
										$0	
	Budget Period 4 Total									$0	
	Domestic Travel	Budget Period 5									
										$0	
										$0	
										$0	
										$0	
	International Travel										
										$0	
	Budget Period 5 Total									$0	
	PROJECT TOTAL									[redacted]	

Additional Explana ion (as needed):

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a vendor quote for all equipment items over $50,000 in price. If the vendor quote is not an exact price match, provide an explanation in the additional explanation section below. If a vendor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
	Budget Period 1					
3 4 5	**EXAMPLE!!!** Thermal shock chamber	2	$70 000	$140 000	Vendor Quote - Attached	Reliability testing of PV modules- Task 4 3
	Budget Period 1 Total			$0		
	Budget Period 2					
	[redacted]					
	Budget Period 3					
	[redacted]					for construction. [redacted]
	Budget Period 3 Total			[redacted]		
	Budget Period 4					
	Budget Period 4 Total			$0		
	Budget Period 5					
	Budget Period 5 Total			[redacted]		

Additional Explanation (as needed):

e. Supplies

INSTRUCTIONS - PLEASE READ

1. Supplies are generally defined as an item with an acquisition cost of $5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Please refer to the applicable Federal regulations in 2 CFR 200 for specific supplies definitions and treatment.

2. List all proposed supplies below, providing a basis of costs (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

3. Multiple supply items valued at $5,000 or less used to assemble an equipment item with a value greater than $5,000 with a useful life of more than one year should be included on the equipment tab. If supply items and costs are ambiguous in nature, contact your DOE representative for proper categorization.

4. Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
				Budget Period 1		
4,6	EXAMPLE Wireless DAS components	10	$360.00	$3,600	Catalog price	For Alpha prototype - Task 2.4
	Budget Period 1 Total					
				Budget Period 2		
	Budget Period 2 Total					
				Budget Period 3		
	Budget Period 3 Total			$0		
				Budget Period 4		
	Budget Period 4 Total					
				Budget Period 5		
	Budget Period 5 Total					
	PROJECT TOTAL					

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to sub-recipients, vendors, and FFRDC partners in the applicable boxes below.

2. Sub-recipients (partners sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) $250 000 or (2) 25% of total award costs. These sub-recipient forms may be completed by either the sub-recipients themselves or by the preparer of this form. The budget totals on the sub-recipient's forms must match the sub-recipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

3. Vendors (including contractors): List all vendors and contractors supplying commercial supplies or services used to support the project. For each Vendor cost with total project costs of $250,000 or more, a Vendor quote must be provided. A vendor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Sub-Recipient Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
2,4	EXAMPLE!!! XYZ Corp.	Partner to develop optimal lens for Gen 2 product. Cost estimate based on personnel hours.	$48,000	$32,000	$16,000	$8,000	$4,000	$108,000
								$0
								$0
								$0
								$0
								$0
								$0
								$0
								$0
								$0
								$0
		Sub-total	$0	$0	$0	$0	$0	$0

SOPO Task #	Vendor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
6	EXAMPLE!!! ABC Corp.	Vendor for developing robotics to perform lens inspection. Estimate provided by vendor.	$0	$32,900	$86,500	$0	$0	$119,400
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]	[redacted]		[redacted]	[redacted]

(b) (4)

[redacted]

SOPO Task #	FFRDC Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								$0
								$0
								$0
								$0
		Sub-total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	$0

	Total Contractual		[redacted]	[redacted]	[redacted]		[redacted]	[redacted]

Additional Explanation (as needed):

g. Construction

PLEASE READ!!!

1. Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a vendor or subrecipient should be entered under f. Contractual.

2. List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

3. Each budget period is rounded to the nearest dollar.

Overall description of construction activities: **Example Only!!! - Build wind turbine platform**

SOPO Task #	General Description	Cost	Basis of Cost	Justification of need
	Budget Period 1			
3	EXAMPLE ONLY!!! Three days of excavation for platform site	$28,000	Engineering estimate	Site must be prepared for construction of platform.
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 1 Total	[redacted]		
	Budget Period 2			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 2 Total	[redacted]		
	Budget Period 3			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	Budget Period 3 Total	[redacted]		
	Budget Period 4			
	Budget Period 4 Total	[redacted]		
	Budget Period 5			
	Budget Period 5 Total	[redacted]		
	PROJECT TOTAL	[redacted]		

(b) (4)

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!
1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).
2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.
3. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Description and SOPO Task #	Cost	Basis of Cost	Justification of need
			Budget Period 1	
5	EXAMPLE!!! Grad student tuition - tasks 1-3	$16,000	Established UCD costs	Support of graduate students working on project
[redacted]	[redacted]	[redacted]		[redacted]
	(b) (4)			
	Budget Period 1 Total	[redacted]		
			Budget Period 2	
[redacted]	[redacted]	[redacted]		[redacted]
	Budget Period 2 Total	[redacted]		
			Budget Period 3	
[redacted]	[redacted]	[redacted]		[redacted]
	Budget Period 3 Total	[redacted]		
			Budget Period 4	
[redacted]	[redacted]	[redacted]		[redacted]
	Budget Period 4 Total	[redacted]		
			Budget Period 5	
	Budget Period 5 Total	[redacted]		
	PROJECT TOTAL	[redacted]		

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ

1. Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.

2. The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.

3. The indirect rate should be applied to both the Federal Share and Recipient Cost Share.

4. Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]		
General & Administrative (G&A)	[redacted] (b) (4)	[redacted]	[redacted]	[redacted]	[redacted]		
FCCM Rate, if applicable	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]		
OTHER Indirect Rate	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]		
Indirect Costs (As Applicable):							
Overhead Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
G&A Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
FCCM Costs, if applicable						[redacted]	
OTHER Indirect Costs						[redacted]	
Total indirect costs requested:	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.

There is not a current, federally approved rate agreement negotiated and available*.

***When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided by your DOE contact, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Additionally, any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely.As described in §200.403 Factors affecting allowability of costs, costs must be consistently charged as either indirect or direct costs, but may not be double charged or inconsistently charged as both. If chosen, this methodology once elected must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which the non-Federal entity may apply to do at any time.**

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

Additional Explanation (as needed): *IMPORTANT: Please use this box (or an attachment) to further explain how your total indirect costs were calculated. If the total indirect costs are a cumulative amount of more than one calculation or rate application, the explanation and calculations should identify all rates used, along with the base they were applied to (and how the base was derived), and a total for each (along with grand total).

Cost Share

PLEASE READ!!!

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.

2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. **Vendors may not provide cost share.** Any partial donation of goods or services is considered a discount and is not allowable.

3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. Vendors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.

5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

6. NOTE: A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**

7. NOTE: A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**

8. Each budget period is rounded to the nearest dollar.

Recipient Provided Cost Share	Organization/Source	Type (Cash or In Kind)	Cost Share Item	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total
[redacted]	[redacted]	[redacted]	(b) (4)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]				[redacted]	[redacted]	[redacted]	[redacted]	$0	$306,584,087

i. Subrecipient (3rd Party) Provided Cost Share	Organization/Source	Type (Cash or In Kind)	Cost Share Item For simple cost share contributions from a partner provide the detail below; for complex contributions provide a separate budget justification (if required) or a supplementary detailed explanation	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Sub-Recipient cost share									$0
Total subrecipient provided cost share				$0	$0	$0	$0	$0	$0
Total Contractual Cost Share (Sum of Recipient and Subrecipients)				[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total Cost Share All Sources			**Totals**	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**$306,584,087**
			Cost Share Percentage per Budget Period	**29.1%**	**25.4%**	**36.2%**	**48.7%**	**0.0%**	

Total Project Cost: $406,584,087 **Cost Share Percent of Award: 75.4%**

Additional Explanation (as needed):

Applicant Name: 0 Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1							
2. Budget Period 2							
3. Budget Period 3							
4. Budget Period 4							
5. Budget Period 5				0	$0		
6. Totals				$100,000,000	$306,584,087		$406,584,086

(b) (4)

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity					Total (5)
	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel	$					
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual						
g. Construction						
h. Other						
i. Total Direct Charges (sum of 6a-6h)						
j. Indirect Charges						
k. **Totals** (sum of 6i-6j)						$406,584,087
7. Program Income						$0

Previous Edition Usable

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Applicant Name: 0 Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1		(b) (4)					
2. Budget Period 2							
3. Budget Period 3							
4. Budget Period 4							
5. Budget Period 5							
6. Totals				$100,000,000	$306,584,087		$406,584,086

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity					Total (5)
	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel						
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual						
g. Construction						
h. Other						
i. Total Direct Charges (sum of 6a-6h)						
j. Indirect Charges						
k. **Totals** (sum of 6i-6j)					$0	$406,584,087
7. Program Income						$0

Previous Edition Usable

SF-424A (Rev. 4-92)
Prescribed by OMB Circular A-102

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NETL F 451.1-1/6
Revised: 11/1/2010
Reviewed: 12/9/2014
(Previous Editions Obsolete)

U.S. DEPARTMENT OF ENERGY

PREPARATION OF ENVIRONMENTAL VOLUME

I. GENERAL

This volume shall be submitted with the original proposal and must be found acceptable prior to contract negotiations and award. The Environmental Volume shall provide, in detail, all information as outlined in the following sections.

II. CONTENT

A. ENVIRONMENTAL INFORMATION DESCRIBING THE PROJECT AND THE PROJECT SITE(S).

This section of the Environmental Volume shall contain a detailed, self-contained description that summarizes the proposed action, its alternatives, and, most importantly, the existing environment. It shall be prepared in the following format:

1. Summary

Koura's application for DOE funding ("The Project") proposes to build the first domestic LiPF6 manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana. The plant will produce up to 10,000MT of LiPF6 per year, which is sufficient to support domestic, annual production of 1.7 million new full electric vehicles (EVs). LiPF6 is a critical electrolyte material used in virtually all lithium-ion batteries and represents a significant supply risk due to lack of domestic manufacturing.

Koura and its parent company Orbia are committed to develop sustainable solutions to advance life around the world, through responsible management of resources and engagement with our partners, local communities, suppliers, our people, and customers. Koura's key criteria for the sustainable design of an LiPF6 unit are water consumption and discharge (quality and quantity), fuels, electricity and steam consumption, CO2 equivalent emissions, and potential waste streams. There is a strong intent to eliminate, recycle or re-use potential waste streams to the fullest extent possible through investment in state-of-the-art technologies. Koura's Mine to Market advantage creates several unique opportunities in support of building a circular economy around this new domestic market.

[redacted]

(b) (4)

B. Proposed Project and Its Alternatives

a. Proposed Project

Koura's project will build the first domestic LiPF6 manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana. [redacted]

[redacted]

(b) (4)

[redacted]

[redacted]

b. Alternatives to Proposed Project

[redacted]

[redacted]

[redacted]

(b) (4)

3. Existing Environment

[redacted]

a. Land Use

[redacted]

b. Atmospheric Conditions/Air Quality

The region is classified as an attainment area.

c. Hydrologic Conditions/Water Quality

[redacted]

(b) (4)

[redacted]

d. Geologic/Soil Conditions

[redacted]

[redacted]

e. Vegetation and Wildlife Resources

[redacted]

(b) (4)

f. Socioeconomic Conditions

[redacted]

[redacted]

g. Historic/Cultural Resources

[redacted]

(b) (4)

[redacted]

h. Visual Resources

[redacted]

i. Health and Safety Factors

[redacted]

[redacted]

[redacted]

(b) (4)

Koura also maintains a strong and thorough Process Safety Management program, including annual audits to ensure effective compliance and continuous improvement.

B. ENVIRONMENTAL IMPACTS OF THE WORK TO BE PERFORMED.

This section of the Environmental Volume shall describe the anticipated environmental impacts from the project. It shall describe all impacts and consequences of the project (at the selected site[s] and the alternative site[s], if appropriate). The existing environment (described in Section A.3) shall be evaluated in terms of the potential impacts from any construction, operation/testing, and disposition activities. Any mitigative measures that will address these impacts shall also be identified.

The description shall address the environmental categories listed below. Please ensure that all direct, indirect, short-term, and long-term impacts resulting from project activities are identified clearly.

1. Land Use

The land will be used to build the first domestic LiPF6 manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana.

(b) (4)

2. Atmospheric Conditions/Air Quality:

(b) (4)

[redacted]

3. Hydrologic Conditions/Water Quality

Condensate from reboilers or cooling water streams will normally be recycled, but the pH or [redacted]

4. Geologic/Soil Conditions

[redacted] (b) (4) [redacted]

5. Vegetation and Wildlife Resources

[redacted]

6. Socioeconomic Conditions

[redacted]

[redacted]

[redacted]

7. Historic/Cultural Resources

[redacted]

8. Visual Resources

[redacted] (b) (4) [redacted]

9. Health and Safety Factors

[redacted]

10. Solid and Hazardous Wastes

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

11. Impacts on Regional or Local Plans

[redacted]

C. POTENTIAL LIABILITY TO DOE OF EXISTING CONDITIONS AT THE SITE(S).

[redacted]

(b) (4)

D. ABILITY TO MEET COMPLIANCE REQUIREMENTS AT THE SITE(S).

[redacted]

E. EXPERIENCE AND APPROACH TO THE IDENTIFICATION AND RESOLUTION OF ENVIRONMENTAL ISSUES.

This section of the Environmental Volume shall consist of a discussion of the following areas:

1. [redacted]

[redacted]

[redacted]

[redacted]

(b) (4)

- [redacted]
- [redacted]

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OMB Number 1910-5175
Exp. 11/30/2020

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

ENVIRONMENTAL QUESTIONNAIRE

SECTION I. PROJECT SUMMARY

Control Number:	2678-1728
Project Title:	LIPF6 Manufacturing Plant in St. Gabriel, Louisiana
Applicant:	Mexichem Fluor, Inc., DBA Koura
Other Participants (Subrecipients, Contractors, etc.):	
FOA Number:	DE-FOA-0002678

FOA Title: Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing

SECTION II. BACKGROUND AND INSTRUCTIONS

Pursuant to the U.S. Department of Energy's National Environmental Policy Act (NEPA) implementing regulations (10 C.F.R. Part 1021), the Office of Energy Efficiency and Renewable Energy (EERE) is required to evaluate the potential environmental impact of projects that it is considering for funding. EERE must determine at the earliest possible time whether any proposed project qualifies for a categorical exclusion under 10 C.F.R.§ 1021.410 or will require further environmental review within an environmental assessment or an environmental impact statement.

You are required to answer the questions below for the project as a whole, including all work to be performed by the Recipient, its subrecipients and contractors, including any work outside of the United States. You may not limit your responses to work performed by the Recipient only unless instructed to do so by EERE. In completing this questionnaire, you must provide specific information regarding the nature of your proposed project, including information on its size, operations, and the types and quantities of air emissions, wastewater discharges, solid wastes, land disturbances, etc. You should identify the location(s) of the proposed project and describe the activities that would occur at each location.

The form should be completed and signed by the Principal Investigator for the project or another member of your organization who has sufficient knowledge of the project to answer the questions truthfully and accurately.

Failure to fully and adequately complete this form will delay EERE's environmental review of your proposed project. Please note that false statements or misrepresentations may result in civil and/or criminal penalties under 18 U.S.C. § 1001.

BURDEN DISCLOSURE STATEMENT
Public reporting burden for this collection of information is estimated to average 60 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2-GTN, Paperwork Reduction Project (1910-1800), U.S. Department of Energy, 1000 Independence Avenue S.W., Washington, D.C. 20585; and to the Office of Management and Budget (OMB), Paperwork Reduction Project (1910-1800), Washington, D.C. 20503.

SECTION III. PROJECT EVALUATION

1a. In the box below, please provide a brief summary of the proposed project activities. Describe physical activities, not goals and objectives. Specify if this project is part of a larger project or connected to another project.

Example: The proposed project activities include the design, development, fabrication, and field testing of advanced biomass harvesting equipment. Design, development, and fabrication activities would occur at our research and development facility adjacent to our manufacturing plant in Dearborn, Michigan. Equipment testing would occur in various agricultural fields in the surrounding area over a two-year period.

Explanation:
The Project will expand the St. Gabriel facility to produce up to 10,000 MT of LiPF6 per year,

(b) (4)

[redacted]

1b. Is there other Federal government involvement outside of EERE in any aspect of this project (e.g., funding, permitting, technical assistance, project located on Federally administered land)?

[redacted]

If you checked "Yes," please list the agency, describe the nature of its involvement, and provide a point of contact at the agency, if known.

Explanation:

[redacted] (b) (4)

1c. Is the proposed project limited exclusively to intellectual, academic, or analytical activities?

Intellectual, academic, and analytical activities include, but are not limited to:

- Literature searches and information gathering
- Data analysis
- Computer modeling
- Analytical reviews
- Conceptual design
- Feasibility studies
- Document preparation
- Data dissemination
- Paper studies

You must answer "No" to this question if the proposed project involves any laboratory research and/or development, physical experiments, pilot-scale projects, demonstration projects, field tests, land-disturbance, construction, or similar activities.

[redacted]

If you checked "Yes," proceed directly to Section IV (Certification) and complete the information and signatures as requested. If you checkned "NO" you must complete the entire questionnaire.

Explanation:

[redacted] (b) (4)

If you checked "Yes," proceed directly to Section IV (Certification) and complete the information and signatures as requested. If you checked "No," you must complete the entire questionnaire.

2a. Is the project fully defined at this point (i.e., all sites and activities are known)?

[redacted] (b) (4) [redacted]

If you checked "No," please describe those sites and/or activities/tasks that are yet to be defined and complete the remainder of the questionnaire to the best of your knowledge.

Explanation:

2b. In the chart below, please describe the following four types of identifying information concerning project activities to be performed:

(1) each location where work would be performed, including address or coordinates, names of facilities, and whether this is a Recipient, Subrecipient, or Contractor location;
(2) the nature of the location (e.g., urban, industrial, suburban, agricultural, university campus, manufacturing facility) and the current condition and/or use of the site;
(3) the types of activities to be conducted at that location;
(4) land administration (e.g., BLM, USFWS, DOD, state, private).

(1) *List all Locations Where Project Activities Would Occur (Facility Name and Address or Coordinates) and Indicate Recipient, Subrecipient, or Contractor*	*(2)* *Nature of Location and Current Condition/Use*	*(3)* *Activities to be Performed at Each Location*	*(4)* *Land Administration*
Koura, 4990 ICI Rd. St. Gabriel, LA 70776	[redacted]	[redacted]	[redacted]
[redacted] (b) (4)			
Smith Laboratory (recipient) 1234 College Lane Baltimore, MD XYZ Corporation (subrecipient) 1232 Industrial Drive Golden, CO	Smith Laboratory – Dedicated University Laboratory Facility XYZ Corporation – Manufacturing Facility in Industrial Park	Activities would include design and fabrication of a gallium-nitrate battery at XYZ Corporation's battery manufacturing facility using existing equipment. The battery would then undergo testing including battery charge/discharge cycling at Smith Laboratory. Data analysis would also occur at Smith Laboratory.	Smith Laboratory – State property XYZ Corporation – Private property
Example 2: Capital High School (recipient) 1234 Eagle Lane Golden, CO	High school property in a suburban environment that has been previously disturbed and is owned by the City.	Activities would include the installation of a 50 kW wind turbine adjacent to the football stadium. The final height for the turbine would not exceed 140 feet (hub height) or 170.6 feet (maximum blade height) with a blade radius of 31.5 feet. There is an airport 15 miles away from project site location.	City

2c. In the box below, please identify and describe: (1) any known or potential health and safety hazards to the public or project workers that may result from or are associated with your proposed project; and (2) any efforts that would be taken to mitigate these hazards. Describe individually for each site discussed in Question 2b.

Example (Hazards): The project would involve the use and handling of various hazardous materials, including metals and industrial solvents. All such handling would occur in-lab, and our organization is dedicated to proper hazardous material handling and disposal practices, so the project activities that involve these materials would pose no risk to the public. All hazardous materials would be managed in accordance with Federal, state, and local environmental regulations.

Example (Mitigation): Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified. This would help ensure compliance with applicable health and safety regulations, and minimize health and safety risks to employees and the public.

Explanation:

[redacted]

(b) (4)

2d. In the box below, please identify and describe any of the following that would be associated with the proposed project. Describe individually for each site discussed in Question 2b.

(1) any physical modification of existing facilities or construction of new facilities (this does NOT include modification to equipment, only facilities);
(2) ground disturbing activities;
(3) any change in the use, mission, or operation of existing facilities;
(4) installation or deployment of equipment outdoors including the area of disturbance, what currently exists at the site, the dimensions of the installation, any associated infrastructure, etc.

Example 1: Physical modification of existing facilities and ground disturbing activities -To accommodate testing facilities necessary for the project, the current testing facility would have to be expanded by approximately 4,500 square feet.

Example 2: Change in use of existing facility - A room within our facility that has served as a dedicated wind tunnel would be modified to serve as an environmental test chamber. This would require the adaptation of the chamber's construction to partition off part of the room and seal it to allow generated environmental fluctuations within.

Example 3: Installation of equipment outdoors and ground disturbing activities - The proposed turbine location is on school property located in a previously disturbed area south of the existing school building and near the high school athletic facilities and fields. East of the school are two golf courses; south and north are single family residential neighborhoods; and to the west are two public park properties. There are wooded areas located on the school property to the south and west. The foundation of the wind turbine would be approximately 25 square feet with an additional 5 square feet of disturbance during construction. The foundation would be approximately 10-15 feet in depth. There would be a minor, temporary land disturbance adjacent to the proposed site for crane work and the tower staging area. Existing roads would be used to access the project location.

Explanation:

[redacted]

(b) (4)

2e. In the box below, please identify and describe any existing, modifications to, or new permits, licenses, or authorizations that would be required to perform project activities (such as environmental permits, operating permits, or drilling permits). <u>Describe individually for each site discussed in Question 2b.</u>

Example 1: The project would generate small amounts of effluent waste which will be discharged into the Potomac River, requiring our organization to secure the requisite discharge permit pursuant to state and Federal regulations.

Example 2: The project activities would be conducted for the next three years. We would be required to replace our current solid waste disposal permit with an updated permit that may alter the nature of what and how we are permitted to dispose of solid waste.

Example 3: The project activities would take place in marine navigable waters and would require permits from the U.S. Coast Guard and the U.S. Army Corps of Engineers.

[redacted]

(b) (4)

Explanation:

[redacted]

(b) (4)

2f. In the box below, please list the estimated quantities of materials to be used (e.g., feedstock, chemicals, water) and produced by the project (e.g., biofuel). Describe individually for each site discussed in Question 2b.

Explanation:

[redacted]

2g. In the box below, please quantify, to the extent possible, all emissions into the ambient air resulting from project activities. Indicate if the project site is within an attainment or non-attainment area. Describe air emissions individually for each site discussed in Question 2b.

Note: Potential emissions include, but are not limited to, greenhouse gas emissions, particulate matter, and airborne pollutants. Sources of emissions can include stationary sources, such as boilers, process heaters, generators, and/or solvent usage, or mobile sources such as vehicles. It is presumed that every project would result in some emissions being released into the ambient air, so applicants answering "none" must explain why no emissions would be released. Non-attainment areas are designated parts of the country where air pollution levels persistently exceed the national ambient air quality standards. See 42 U.S.C. 7501(2).

Explanation:

[redacted]

2h. In the box below, please describe: (1) all non-hazardous wastes that would be generated by the proposed project including recycled materials, and (2) the method of their disposal. Describe individually for each site discussed in Question 2b.

Note: It is presumed that every project would generate solid wastes, so applicants answering "none" must explain why no waste would be generated. Non-hazardous waste is any garbage, refuse or trash, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. See 40 C.F.R. § 261.2.

Explanation:

[redacted]

(b) (4)

[redacted]

3. Is the proposed project near, or does it involve, any of the following resources? Please indicate below any and all resources that could be affected by any project activities. (See Attachment 1 to the Environmental Questionnaire for resource definitions.)

- ☐ a. Historical, archeological, or cultural resources (includes listed and eligible resources over 50 years old or of cultural significance)
- ☐ b. Threatened or endangered species (whether proposed or listed by state or Federal governments), including their habitat
- ☐ c. Marine mammals or essential fish habitat
- ☐ d. Floodplains or wetlands
- ☐ e. Tribal lands or resources of Tribal interest/sensitivity
- ☐ f. Ocean resources (e.g., coral reefs)
- ☐ g. Land resources (e.g., tundra, rainforests)
- ☐ h. Coastal zones
- ☐ i. Migratory birds, or Golden or Bald Eagles
- ☐ j. Areas having a special designation (e.g., Federal and state designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries)
- ☐ k. Prime farmland, unique farmland, or other farmland of statewide or local importance
- ☐ l. Special sources of water (e.g., sole source aquifers)

If you checked any boxes above, provide a detailed description of: (1) the resources that could be affected, and (2) how project activities may affect those resources.

Explanation:

4. **Does the proposed project involve any of the following activities or areas of concern? Please indicate below any and all activities or areas of concern that exist in the vicinity of your project, are required for your project, or could affect your project.** (See Attachment 1 for definitions of each activity or area of concern.)

[redacted]

(b) (4)

If you checked any boxes above, provide a detailed description of: (1) each activity or area of concern, and (2) the effects of each activity or area of concern on your project and/or the surrounding area.

Explanation: [redacted]

5. Would the proposed project have the potential to result in impacts to the surrounding community? Please indicate below all areas of concern that exist in the vicinity of your project, are required for your project, or could affect your project.

[redacted]

(b) (4)

If you checked any boxes above, please provide a detailed description of: (1) the communities affected, and (2) what effects the project would have.

Explanation:

[redacted]

6. Would the proposed project use, result in, or require the management, storage, transport, or disposal of radioactive, toxic, or hazardous chemicals, waste, or other materials that require special handling?

Note: Hazardous chemicals and materials include those which, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may increase the risk of mortality or pose a substantial threat to human health or the environment when improperly stored, transported, disposed of, or otherwise managed.

[redacted]

If you checked "Yes," please provide a detailed description of: (1) the materials; (2) approximate quantity of each; (3) their role in the project; and (4) storage, transport, and disposal procedures for each material.

Explanation:

[redacted]

(b) (4)

7. **Would the proposed project involve the use or development of recombinant DNA or genetically engineered microorganisms, plants, animals, or similar technologies?**

[redacted]

If you checked "Yes," please provide a detailed description of: (1) the genetic modifications, (2) the safety procedures in place for their handling and use over the course of the project, and (3) how they would be disposed of at the project's conclusion.

Explanation:

8. Does the project involve the use of any nanoscale materials or nanotechnology?

Note: Nanotechnology is defined as research and technology development at the atomic, molecular, or macromolecular levels using a length scale of approximately one to one hundred nanometers in any dimension; the creation and use of structures, devices and systems that have novel properties and functions because of their small size; or the ability to control or manipulate matter on an atomic scale.

[redacted] (b) (4)

If you checked "Yes," please describe: (1) the nanoscale materials used, (2) potential risks those materials may pose, and (3) how they would be disposed of.

Explanation:

9. Is there any public opposition concerning any of the project activities?

[redacted] (b) (4)

If you checked "Yes," please describe the nature of the opposition and any actions you may have taken or plan to take to address it.

Explanation:

10. Would the project involve activities or deployments into marine/freshwater aquatic environments?

[redacted] (b) (4)

If you checked "Yes," please provide a detailed description of: (1) the proposed activities or deployment, (2) where and when these activities would occur, and (3) what permit/authorizations have been or would be acquired for this activity.

Explanation:

11. Would the proposed project result in a discharge of any type of wastewater, pollutant, or contaminant, including thermal discharges, to a sewer system, stormwater system, soils, retention ponds, or any water resources (e.g., surface water, including lakes, rivers, creeks, and wetlands; and ground water)?

Note: Under Federal law, the term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. See 33 U.S.C. § 1362(6). The term "contaminant" means any physical, chemical, biological, or radiological substance or matter in water. See 42 U.S.C. § 300f(6).

[redacted] (b) (4)

If you checked "Yes", please quantify and characterize the wastewater or pollutants and provide a detailed description of the: (1) wastewater, pollutants, or contaminants to be released; and (2) the water resources that may be affected.

Explanation:

12. Would the proposed project have the potential to generate noise impacts to adjacent communities, employees working at the project site, wildlife, and/or sensitive receptors including hospitals, schools, daycare facilities, and elderly housing? [redacted] (b) (4)

If you checked "Yes", please provide a description of: (1) the receptors that may be impacted and their estimated distance from the project activities, (2) the level of noise generated (in A-weighted decibels (dbA)) to each receptor, and (3) anticipated duration.

Explanation:

13. Please provide a detailed description of how the project would be decommissioned, including the disposition of equipment and materials.

Explanation. [redacted] (b) (4) [redacted]

SECTION IV. CERTIFICATION

I hereby certify that I am authorized to submit, and I do so hereby submit, the information in this questionnaire on behalf of the Recipient named below. I certify that the information provided herein is accurate and complete as of the date shown below. I understand that false statements or misrepresentations may result in civil and/or criminal penalties under 18 U.S.C. § 1001. If I receive any information that would indicate that any of the above-referenced answers are no longer correct or complete, I agree to notify EERE immediately. If it is necessary for EERE to modify the information I provide, EERE will request that I recertify the revised form.

Name	Erick Comeaux
Title	Business Technical Manager
Applicant	Mexichem Fluor Inc., dba Koura
Signature	DocuSigned by: Erick Comeaux BB7D237705294E9...
Date	6/28/2022

Executive Summary

Koura's St. Gabriel, Louisiana fluorochemical plant has been in operation since 1991. [redacted] This manufacturing site has a long track record of safe operation and engagement with the local community.

The Project will expand the St. Gabriel facility to produce up to 10,000 MT of LiPF6 per year, [redacted] This expansion in the scale of employment will create numerous opportunities to expand regional DEIA activities that have not been practical in the past. Manufacturing LiPF6 for use in Li-ion batteries that will ultimately power approximately 1.7 million EVs annually in the U. S. and this direct support of clean energy can also be used as a motivational tool in Koura's recruiting and outreach programs.

We take serious ownership for our contributions to improve the lives of the people in the communities where we do business. At Koura, we understand that expanding our sustainable solutions will only happen if we promote, create, and leverage diversity of thought though increased representation of women, people of color, and other underrepresented groups, and by fostering an inclusive environment where everyone can belong, contribute, and grow. As a result, the Orbia Group, which includes Koura, started measuring and publicly reporting its environmental and social impacts starting in 2019, and is continually searching for new programs that can be initiated to promote diversity and equity.

[redacted]

Detailed Equity Plan: Quality Jobs and Community Benefits

Introduction

[redacted]

At Koura, we understand that expanding our sustainable solutions will only happen if we promote, create, and leverage diversity of thought though increased representation of women, people of color, and other underrepresented groups, and by fostering an inclusive environment where everyone can belong, contribute, and grow.

The Orbia group, which includes Koura, started measuring and publicly reporting its environmental and social impacts in 2019. The 2021 calendar year results were reported in the most recent annual report:

Koura contributes to these benefits through continuous improvement in the efficiency and sustainability of its operations, its internal apprenticeships and mentoring programs, and the investments it is making in materials required for lithium-ion batteries and advanced refrigerants for electric vehicles.

Koura's St. Gabriel facility has been operating in collaboration with the local community since 1991. Koura has been actively supporting the local community with safe, stable, good paying jobs, but also engaging in workforce development. [redacted]

(b) (4)

address concerns and expectations, while also openly and proactively providing information

(b) (4)

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[redacted]

1.1 Job Quality and Skilled Workforce (Criteria 5a, 5b, and 5c)

[redacted]

(b) (4)

[redacted]

Workforce Development

[redacted]

[redacted]

Job Creation

(b) (4)

Health, Safety and Environment

(b) (4)

Re-training Opportunities

[redacted]

(b) (4)

[redacted]

[redacted]

Community Engagement and Benefits (Criteria 5f)

[redacted]

[redacted]

[redacted]

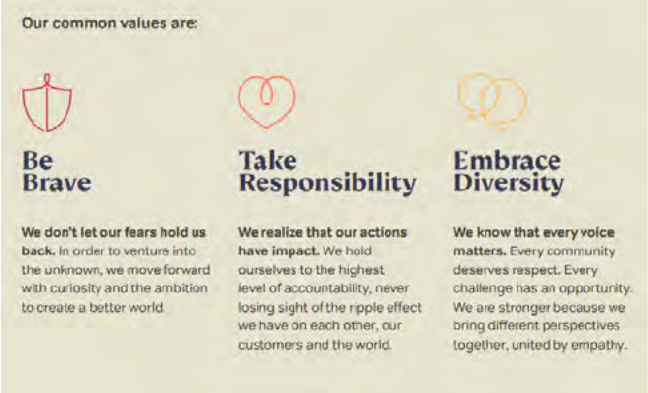
(b) (4)

[redacted]

[redacted]

1.2 Diversity, Equity, Inclusion, and Accessibility (DEIAA) (Criteria 5d)

Koura is part of the Orbia group, which is committed to its vision to foster an inclusive organization that embraces diversity to advance life around the world. We take a collaborative, human-centered approach to create a better future, based on our common values:



Our strategy is to promote, create and leverage diversity of thought through increasing representation of women and other underrepresented groups and fostering an inclusive environment, where everyone can belong, contribute, and grow. [redacted]

(b) (4)

[redacted]

[redacted]

[redacted]

(b) (4)

[redacted]

1.3 Justice40 Initiative Plan (Criteria 5e)

[redacted]

[redacted]

[redacted]

Control Number: 2678-1728

Waiver for Foreign Entity Participation as the Prime Recipient and Subrecipients
DOE FOA- 0002678
June 29, 2022

Information to be included in waiver request

1) Information about the entity: name, point of contact, and proposed type of involvement with the Applicant, and UEI number for the proposed foreign participant and any foreign parent organization.

   This entity is the Applicant:
   Mexichem Fluor, Inc. dba Koura
   Point of Contact: Miodrag Oljaca, [redacted]
   DUNS: [redacted]
   UEI Number: [redacted] (b) (4)

   This entity is the foreign parent organization:
   Orbia Advance Corporation, S.A.B. de C.V.
   Av.Paseo de la Reforma,Col. Cuauhtémoc, Mexico City, Mexico
   DUNS:

2) Country of incorporation, the extent of the ownership/level control by foreign entities, whether the entity is state owned or controlled, a summary of the ownership breakdown of the foreign entity and the percentage of ownership/control by foreign entities, foreign shareholders, foreign state or foreign individuals.

   The applicant, Mexichem Fluor, Inc. dba Koura, is a Delaware corporation with a corporate headquarters located at 950 Winter Street, Waltham, MA 02451. Koura's parent company is Orbia Advance Corporation, S.A.B. de C.V., is a Mexican corporation with a corporate headquarters at Av.Paseo de la Reforma, Col. Cuauhtémoc, Mexico City, Mexico. [redacted]

   [redacted] (b) (4) [redacted]

3) The rationale for proposing a foreign entity participate (must address the following waiver criteria).
   - Its participation is in the best interest of the U.S. industry and U.S. economic development.

     Koura's participation will provide the U.S. Li-ion industry with a domestic, commercial scale, battery grade production of a universal and essential electrolyte material, LiPF6, from St. Gabriel, Louisiana, and access to Koura's secure internal supply of the primary raw material for LIPF6 production – the HF processed in Matamoros, Mexico from the fluorspar ore mined in San Luis Potosi, Mexico. [redacted]

[redacted] (b) (4) [redacted]

Koura is required to seek this waiver due to its ownership structure but has a long history of participation in US economic development. Koura's global headquarters are in Waltham, Massachusetts, the main plant in St. Gabriel, Louisiana has been in continual operation since 1991 and Koura's R&D center in Madison, Wisconsin has been operating since 2008.

- The project team has appropriate measures in place to control sensitive information and protect against unauthorized transfer of scientific and technical information.

[redacted] (b) (4) [redacted]

- Adequate protocols exist between the U.S. subsidiary and its foreign parent organization to comply with export control laws and any obligations to protect proprietary information from the foreign parent organization.

[redacted]

- The work is conducted within the U.S. and the entity acknowledges and demonstrates that it has the intent and ability to comply with the U.S. Manufacturing Plan.

[redacted] (b) (4) [redacted]

4) A description of the project's anticipated contributions to the U.S. economy: How the foreign entity's participation will benefit U.S. research, development, and manufacturing, including contributions to employment in the U.S. and growth in new markets and jobs in the U.S.

As the demand for electric vehicles (EVs) and grid energy storage accelerates in the U.S., domestic demand for Li-ion batteries and the materials used to produce them will experience explosive growth over the next 10 to 20 years. The National Blueprint for Lithium-Ion Batteries prepared by the Federal Consortium for Advanced Batteries (FCAB) in June 21 projects Li-ion battery manufacturing capacity in the U.S. will increase from 59 GWh in 2020 to 224 GWh in 2025, with rapid expansion in the following decade. While estimates vary and projections can change dramatically, Bloomberg projects worldwide sales of 56 million passenger EVs in 2040, of which 17% (about 9.6 million EVs) will be in the U.S. market. If all batteries for Bloomberg's projected 9.6 million are produced in the U.S., nearly 600 GWh of Li-ion manufacturing capacity will be required.
In all batteries the electrolyte is an indispensable component.

[redacted] (b) (4) [redacted]

[redacted]

[redacted]

[redacted]

(b) (4)

- How the foreign entity's participation will promote domestic manufacturing of products and/or services.

  Overall, Koura's proposal will create a more stable and resilient supply chain for U.S. based production of Li-ion batteries. Koura's products, production capability, and supply chain will also contribute to the production of EVs, electric grid energy storage, and many other products intended to reduce U.S. carbon emissions. Specifically, LiPF6 is used in all Li-ion batteries, and Koura's ability to produce this material domestically will benefit all Li-ion battery production operations and OEM applications from electronic devices, to EVs, to large scale grid energy storage.

[redacted]

[redacted]

(b) (4)

5) A description of why the foreign entity's participation is essential to the project.

Koura's participation will provide the U.S. Li-ion industry with a domestic, commercial scale, battery grade production of a universal and essential electrolyte material, LiPF6, from St. Gabriel, Louisiana, and access to Koura's secure internal supply of the primary raw material for LIPF6 production – the HF processed in Matamoros, Mexico from the fluorspar ore mined in San Luis Potosi, Mexico. [redacted]

6) A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP. MESC/EERE may also require a risk assessment with respect to IP and data protection protocols that includes the export control risk based on the data protection protocols, the technology being developed and the foreign entity and country.

[redacted]

7) Countries where the work will be performed (Note: if any work is proposed to be conducted outside the U.S., the applicant must also complete a separate request for a foreign work waiver)

[redacted]

Control Number: 2678-1728

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[redacted]

Lithion Battery Inc.
1350 Wigwam Parkway
Hendesron, Nevada
89074

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Approved by OMB
0348-0046

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

1. Type of Federal Action: a. contract _x___ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	**2. Status of Federal Action:** x a. bid/offer/application ____ b. initial award c. post-award	**3. Report Type:** x a. initial filing _____ b. material change
4. Name and Address of Reporting Entity: __x__ Prime _____ Subawardee Tier_____, if Known: **Mexichem Fluor Inc. dba Koura** **4990 B ICI Rd.** **Saint Gabriel, LA** **70776-4316** **Congressional District, if known: LA 02**	**5. If Reporting Entity in No. 4 is Subawardee,** Enter Name and Address of Prime: **Congressional District, if known:**	
6. Federal Department/Agency: **Department of Energy/EERE**	**7. Federal Program Name/Description:** **Bipartisan Infrastructure Law (BIL) Materials Processing and Battery Manufacturing** CFDA Number, *if applicable*: _____	
7. Federal Action Number, *if known:* DE-FOA-0002678	**9. Award Amount,** *if known:* **$ 100,000,000.00**	
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):*	**b. Individuals Performing Services** *(including address if different from No. 10a)* *(last name, first name, MI):*	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** DocuSigned by: Miki Oljaca 36A57538547D4FE... _____ **Print Name: Miodrag Oljaca** **Title: VP of Innovation & Technology** **Telephone No.:** [redacted] (b) (6) **Date: 6/28/2022**	
Federal Use Only	**Authorized for Local Reproduction** **Standard Form - LLL (Rev. 7-97)**	

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INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks “Subawardee,” then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., “RFP-DE-90-001.”

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Prime Applicant: Mexichem Fluor, Inc. dba Koura(Control #2678-1728)
Project Title: $LiPF_6$ Manufacturing Plant in Saint Gabriel, Louisiana

Principal Investigator:	Erick Comeaux
Key Partners:	
Proposed Project Duration:	[redacted]

	Federal Share	Recipient Share
Total Project Cost	$406,584,087	
Total Shares (Prime+FFRDCs+Subcontractors)	$100,000,000	$306,584,087
Prime	$100,000,000	$306,584,087
FFRDCs Total		
Subcontractors Total	$0	$0

[redacted]

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Proposed Objectives:

- Build the first domestic manufacturing plant for $LiPF_6$ salt (used in electrolyte in all Li-ion batteries - LIBs), with 10,000 MT capacity, at Koura's fluorochemical manufacturing complex in St. Gabriel, LA.
- [redacted] (b) (4) [redacted]

Project Impact/Takeaway:

- Localize production of a critical LIB material in the US. 100% [redacted]
- Build local supply chain - secured commitments for domestic supply of raw materials (including recycled Lithium).
- Provisional offtake commitments from major electrolyte formulators, battery producers, and OEMs for $LiPF_6$ use in the US.
- Minimum environmental impact of $LiPF_6$ plant.

Key Deliverables/Accomplishments:

- [redacted]
- [redacted]
- [redacted]

This space reserved for EERE use.

Statement of Project Objectives

LiPF6 Manufacturing Plant in St. Gabriel, Louisiana

A. OBJECTIVES

The objective of the project is to build the first domestic LiPF6 manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana. The plant will produce up to 10,000MT of LiPF6 per year, [redacted]

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B. SCOPE OF WORK

[redacted]

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[redacted]

Budget period 1	(b) (4)
Budget Period 2	
Budget Period 3	,

C. TASKS TO BE PERFORMED

The following tasks will be conducted:

ALL BUDGET PERIODS:

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BUDGET PERIOD 1

Task 4: Hire Training, Development, and Inclusion (TDI) manager

No.	Milestone	Description	Type
1	[redacted] (b) (4)	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Continuation: The recipient is **NOT** authorized to initiate any scope in the next budget period without the DOE Contracting Officer's prior written approval in accordance with the award terms and conditions.

BUDGET PERIOD 2 [redacted]

[redacted]

[redacted]

(b) (4)

No.	Milestone	Description	Type

Continuation: The recipient is **NOT** authorized to initiate any scope in the next budget period without the DOE Contracting Officer's prior written approval in accordance with the award terms and conditions.

BUDGET PERIOD 3

[redacted]

[redacted]

(b) (4)

[redacted]

[redacted]

[redacted]

No.	Milestone	Description	Type
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]		[redacted]
[redacted]	[redacted]		[redacted]
[redacted]	[redacted]		[redacted]
[redacted]	[redacted]		[redacted]

BUDGET PERIOD 4 [redacted] (b) (4) [redacted]

No.	Milestone	Description	Type
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

D. DELIVERABLES

In addition to the reports specified in the "Federal Assistance Reporting Checklist", the Recipient will provide the following to the DOE Project Officer (identified in Block 15 of the Assistance Agreement as the Program Manager):

- Summary of accomplishments and project work report will be prepared for inclusion in the Vehicle Technologies Office annual programmatic progress report. Report will be due by October 31 of each year.

E. BRIEFINGS AND TECHNICAL PRESENTATIONS

- A technical presentation at the Vehicle Technologies Annual Merit Review Meeting held in Washington, DC.
- Detailed project status update briefings at Washington, DC or via communication/conferencing media approximately twice per year. Briefings will explain the plans, progress, and results of the technical effort.
- Technical paper(s) and presentations as appropriate at technical society meetings, or at technical exchange meetings.

Project Title: $LiPF_6$ Manufacturing Plant in St. Gabriel, Louisiana

FOA: DOE FOA-0002678

Area of interest to which we are applying: AOI 3: Commercial-scale Domestic Separation and Production of Battery-grade Precursor Materials (Open Topic)

Technical Volume

Lead Organization: Mexichem Fluor, Inc. (dba Koura)

The TPOC (PI) for the Prime recipient: Mr. Erick Comeaux
Director – Technical & Development, erick.comeaux@kouraglobal.com
4990B ICI Rd.
St. Gabriel, LA 70776
P. 225-642-6235; F. 225-642-8629

Senior/Key Personnel:

Mr. Erick Comeaux
Koura
Director, Technical & Development

Dr. Miodrag Oljaca,
Koura
Vice President, Growth and Technology

Mr. Sean Cunningham,
Koura
Business Unit Head

Dr. Karthik Venkataraman
Koura
Technology Director

Notice of Restriction on Disclosure and Use of Data:

This document may contain trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government.

1. PROJECT OVERVIEW

1.a. Executive Summary

Koura's application for DOE funding ("The Project") proposes to build the first domestic $LiPF_6$ manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana. The plant will produce up to 10,000MT of $LiPF_6$ per year, which is sufficient to support domestic, annual production of 1.7 million new full electric vehicles (EVs). $LiPF_6$ is a critical electrolyte material used in virtually all lithium-ion batteries and represents a significant supply risk due to lack of domestic manufacturing. [redacted]

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Koura has a unique capability to contribute to the entire US Li-ion battery supply chain by using it integrated supply of fluorine, access to domestic raw materials, fluorochemical processing expertise, access to unique LiPF6 technology through partnership with key industry player, and business relationships with US electrolyte formulators, US battery producers, and automotive companies. This capability will support the broader development of a resilient and stable domestic Li-ion supply chain, reduce the volume of Li-ion materials being imported from China and other parts of Asia, all of which provides direct benefits to the adoption of EVs that reduce the use of fossil fuels. [redacted]

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Koura's unique capability to produce $LiPF_6$ maximizes the leverage and impact of the federal investment for establishing a resilient and stable domestic lithium-ion supply chain for the following reasons:

- Koura is the only company that owns a vertically integrated supply of fluorine in North America, the primary component of $LiPF_6$. This Mine-to-Market capability will secure and align critical mineral and ore processing from the mine in San Luis Potosi, Mexico with domestic battery material supply from this one federal investment.
- Koura has been operating a domestic fluorochemical plant in St. Gabriel since 1991 with a stellar track record of safety and community engagement. This plant, already permitted to handle and store HF, has sufficient space to house the 10,000 MT per year $LiPF_6$ plant, with sufficient room for future expansions.
- [redacted]

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The Project will provide the following benefits and outcomes:

- US-based production of a critical battery material, $LiPF_6$, utilizing vertical integration, [redacted]

- The Project will double employment in the St. Gabriel facility by creating 80 high paying, full time jobs, [redacted]
- Annual capacity up to 10,000MT, enough to power 1.7 million new full EVs annually.
- Elimination of transportation costs, tariffs, and taxes on imported $LiPF_6$, [redacted]
- Koura's Mine-to-Market vertical integration directly supports a stable and resilient supply chain for $LiPF_6$, which will make a significant contribution to a resilient, U.S. based supply chain for Li-ion batteries.
- [redacted]

(b) (4)

1.b. Background

Koura is owned by Orbia – a global company with a mission to harness the power of material science and innovation to serve customer needs, address world challenges, and provide sustainable solutions. [redacted]

Koura is a global leader in the development, manufacture, and supply of fluoro-products that play a fundamental role in enhancing everyday lives. [redacted]

(b) (4)

Based on Koura's strengths in the fluorinated materials market and the potential for Li-ion battery growth, the Company has made a strategic decision to enter the Li-ion battery materials market.

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1.c. Project Goals

As a leading producer of fluorspar and HF, Koura is ideally suited to build a resilient, North American supply chain for $LiPF_6$ by expanding its current fluorochemical manufacturing operation in St. Gabriel, Louisiana to produce up to 10,000 MT of $LiPF_6$ per year. This manufacturing site has a long track record of safe operation and engagement with the local community. The volume of $LiPF_6$ planned in The Project will support annual production of up to 100 GWh of Li-ion batteries, which can in turn power approximately 1.7 million new full EVs in the U.S.

$LiPF_6$ is an essential battery material that composes about 15% by mass of the electrolyte used in virtually all Li-ion batteries. [redacted] (b) (4) [redacted]

The most recent report from Benchmark Minerals indicates that by 2025, the battery production capacity in the US will be ~ 400 GWh. As a result, US market demand for $LiPF_6$ in 2025 will be 40,000 MT, nearly all of which will be imported from China. By 2030, the battery production capacity in the US will be ~ 700 GWh. As a result, US market demand for $LiPF_6$ in 2025 will be in excess of 70,000 MT.

In North America, there is no manufacturing facility for $LiPF_6$, which creates a fundamental weakness in the supply of materials used to manufacture Li-ion batteries domestically. Currently, 90% of the global supply of $LiPF_6$ is concentrated in China with the remainder produced in Japan and South Korea. [redacted]

[redacted] (b) (4) [redacted]

[redacted]

[redacted]

(b) (4)

[redacted]

1.d. Impact of DOE Funding

The market for Li-ion batteries in the U.S. is growing and will undoubtedly continue to grow. However, the scale and timing for future demand is uncertain. Numerous materials in the Li-ion battery supply chain are struggling to keep pace with demand, automotive companies are still in the early stages of EV development and market introduction, and a significant expansion of charge station infrastructure will be required to support the operation of EVs.

[redacted]

[redacted]

Criteria 3a: Use of Federal Funds

[redacted]

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Criteria 3b: Proportion

[redacted]

Criteria 3c: Leverage

[redacted]

1.e. Equity Plan, Quality Jobs, and Community Benefits

Growing Koura's business with sustainable solutions will only happen by promoting and leveraging diversity of thought though increased representation of women, people of color, and other underrepresented groups. To demonstrate its commitment to this principle, the Orbia group, which includes Koura, started measuring and publicly reporting its environmental and social impacts in 2019. [redacted]

[redacted]

(b) (4)

2. Technical Description, Innovation, and Impact

2.a. Relevance and Outcomes

2.a.1. Technology Description

The electrolyte is an indispensable part of any electrochemical device facilitating the conduction of Li-ions within the cell. In Li-ion batteries used today, the predominant electrolyte is a liquid wherein $LiPF_6$ salt is dissolved in a carbonate solvent. The solvent aids in solvation of the Li^+ cation and the PF_6^- anion. The solvated Li^+ ion then migrates between the cathode and anode during charging, and from the anode to the cathode during discharge. In a typical Li-ion

battery electrolyte, $LiPF_6$ concentration would be between 1 – 1.2 M. In this range of salt concentration, the electrolyte conductivity in typical carbonate solvents is maximized.

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Li-ion cell producers typically specify the composition of the electrolyte (salt concentrations, solvent combination, additives, etc.) and purchase customized electrolyte formulations for use in their cells.

2.a.1.1. Manufacturing Process Description

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[redacted]

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2.a.2. Project Outcomes

[redacted]

2.b. Feasibility

2.b.1. Project Costs

Criteria 1c: Project Cost: Calculations, Assumptions, Integration, Equipment, & Labor

[redacted]

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[redacted]

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2.b.2. Raw Materials Supply

Criteria 2b: Suppliers' Ability to Satisfy Production Capacity & Specifications

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2.c. Innovation and Impacts

2.c.1. Innovation

Criteria 2e: Innovation & North American-Owned Intellectual Property

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2.c.2. Project Impact

Criteria 1d and 1e: Recycling Approach, Waste Management and Sustainability

Koura is committed to developing sustainable solutions to advance life around the world through responsible management of resources and engagement with our partners, local communities, suppliers, our people, customers, and future generations to come.

- [redacted]

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[redacted]

[redacted]

[redacted]

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3. Workplan and Market Transformation Plan

3.a. Project Objectives

The objective of the Project is to build the first domestic $LiPF_6$ manufacturing plant on the grounds of Koura's existing fluorochemical manufacturing site in St. Gabriel, Louisiana. The plant will produce up to 10,000MT of $LiPF_6$ per year, which is sufficient to support the domestic production of 1.7 million new, full, electric vehicles.

3.b. Technical Scope Summary

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[redacted]

3.c. Work Breakdown Structure (WBS) and Task Summary

Criteria 1f: Earned Value Management Plan
Criteria 1g and 1h: Risk Management and Regulatory Requirements

The WBS and estimate will be built, and an Earned Value (EV) Model will be generated to monitor and control the Project's progress from funding approval through final completion.

3.c.1.1. Technical Summary:

The Project will result in the engineering, construction, and commissioning of a new domestic manufacturing plant for $LiPF_6$ salt with a capacity of 10,000MT per year in St. Gabriel, Louisiana. [redacted]

Below are the tasks planned for the Project. The tasks by budget periods, milestones and timing of Go-No Go decisions are set forth in the Project Schedule and the SOPO.

[redacted]

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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

3.e. End of Project Goal

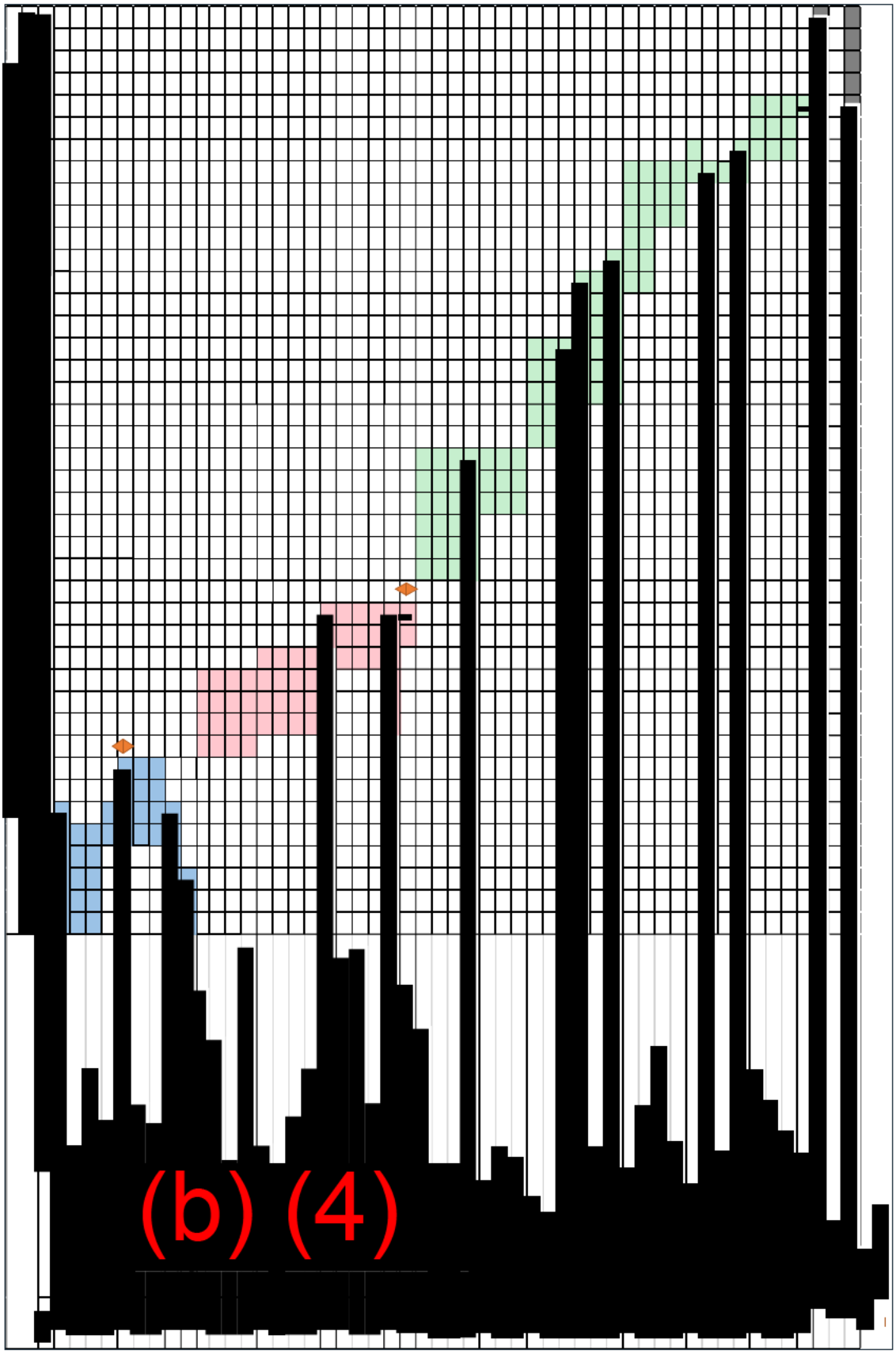
At the end of the Project an $LiPF_6$ manufacturing plant with 10,000MT capacity will be completely commissioned at the St. Gabriel site by the Project management team and the facility will be handed over to operations for startup and sampling for product qualification with customers. The Project will provide the following benefits and outcomes:

- [redacted]

[redacted] (b) (4) [redacted]

- [redacted]
- [redacted]

[redacted]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3.g. Buy American for Infrastructure Projects

The Project will not include applicable infrastructure work.

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or work to be completed. Information will be pulled from SAP, Primavera, and the

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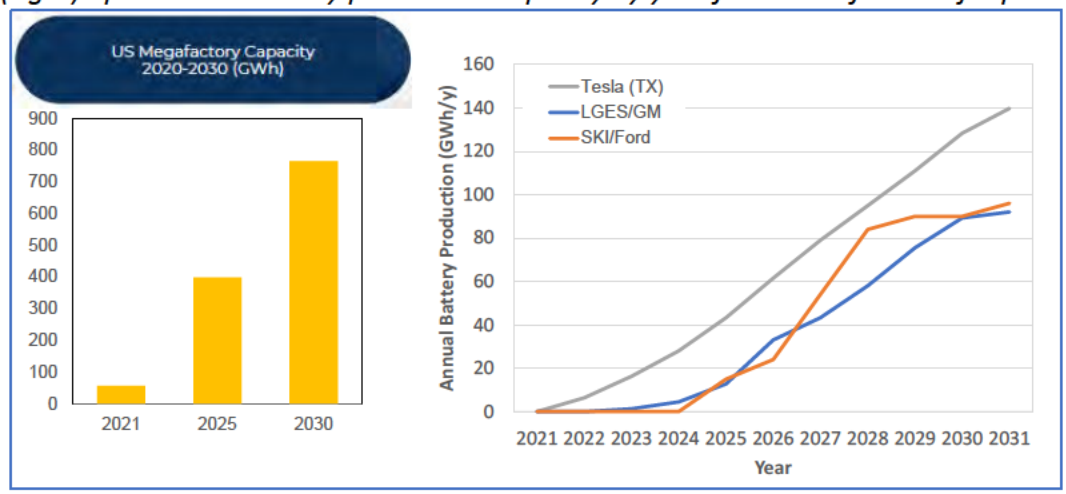
3.i. Market Transformation Plan

Criteria 2a. Strength of business plan, break-even analysis, including customer Letters of intent Commitment

3.i.1. Market Demand for $LiPF_6$

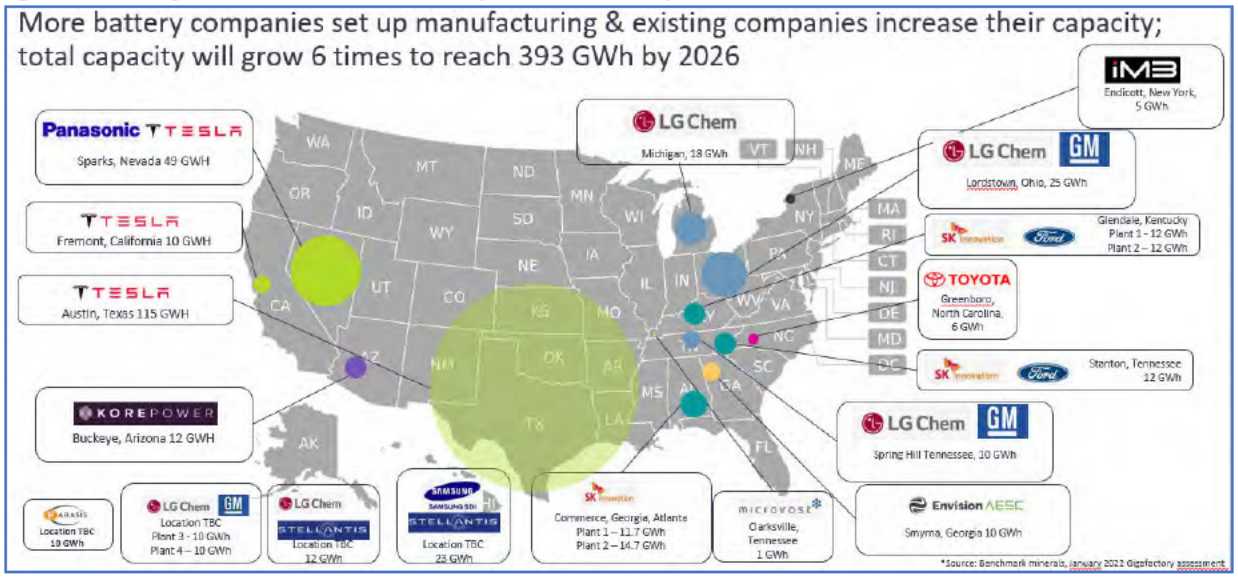
Significant expansion of battery production capacity is expected in the US over the next several years. The most recent Benchmark Minerals publication in March 2022 (Figure 9 left) indicates the installed capacity will increase from 50 GWh in 2020 to 400 GWh by 2025 and further increase to nearly 700 GWh by 2031. The plot on the right in Figure 9 shows how the production capacity at three of the major battery producers in the US will increase, with Tesla's Texas factory poised to be the largest producer of batteries by 2025. In addition, battery production at the LGES/GM and SKI/Ford factories will see significant capacity expansion by 2025. Figure 10 displays projected US Li-ion battery production by producer and location in 2026.

Figure 10: (Left)Growth of installed Li-ion battery production capacity in the US from 2020 to 2030 (right) operational battery production capacity by year for three of the major producers.*



*Benchmark Mineral Intelligence

Figure 11: Projected U.S. Li-ion Battery Production by Producer and Location



$LiPF_6$ is an essential material that composes about 15% by mass of the electrolyte used in virtually all Li-ion batteries, and as a result, the demand for $LiPF_6$ is directly related to the volume of Li-ion batteries produced as expressed in GWh. Using Benchmark Minerals forecast for US installed battery production capacity, the demand for $LiPF_6$ in the US will grow from 6,000 MT in 2021 to more than 70,000 MT in 2030. [redacted]

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[redacted]

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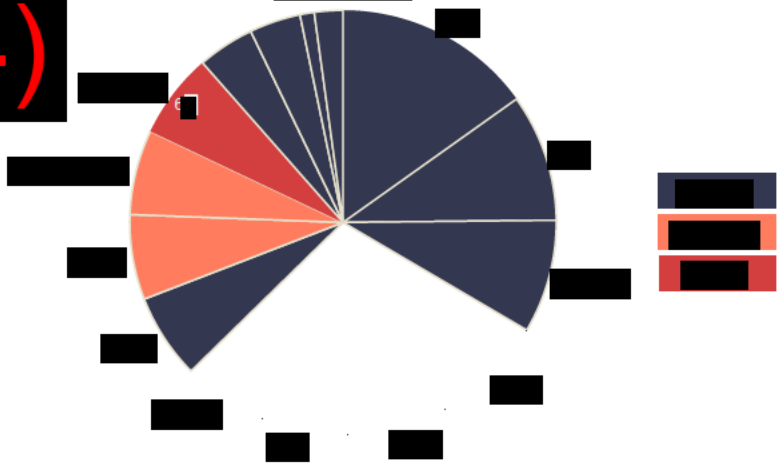

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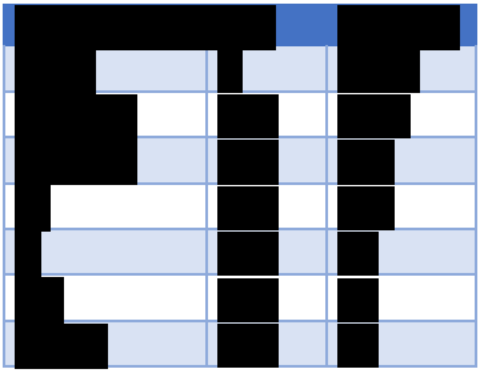

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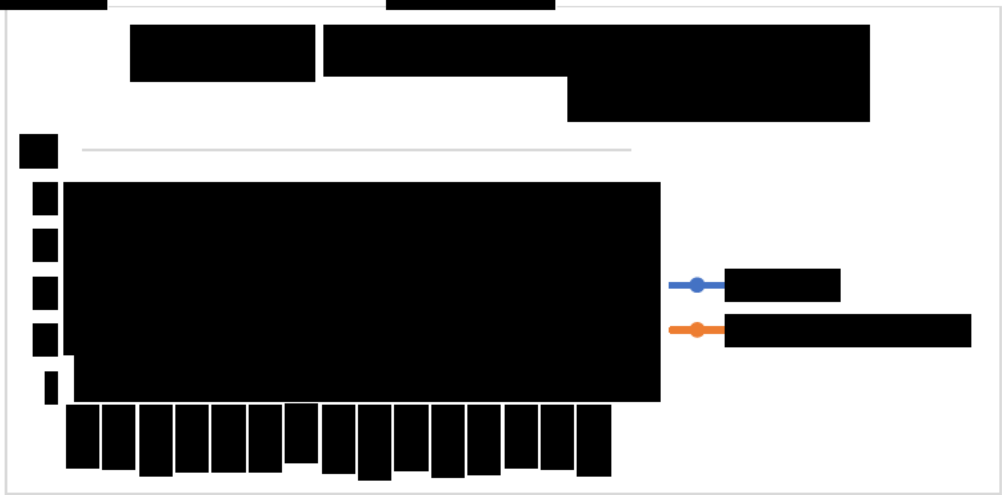

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Criteria 4b: Key Personnel

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4.b. Existing Equipment and Facilities

Criteria 4c: Proposed Site

[redacted]

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Criteria 4d: Facilities & Equipment

[redacted]

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Criteria 4e: Industry Partnerships