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UNIVERSITY OF CALIFORNIA
Lawrence Radiation Laboratory

reviewer:
D. L. Aron
2/4/94
Dorn Mace 1/23/95

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INDEX NO. 60CD 269
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Date July 16, 1965

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Issued to W. B. Harford

Classification

Each person who receives this document must sign the cover sheet in the space below.

Route to	Noted by	Date	Route to	Noted by	Date
R. P. Connell	[illegible]	10/13/65			
W. D. Douglass					

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OFFICE OF THE MANAGER
SAN FRANCISCO OPERATIONS OFFICE

October 7, 1965

SUBJECT: Request for Approval Procurement Action in accordance with Contract 48, Modification 30, Article XI

PROPOSED PURCHASE ORDER 471-103 - CPFF
MONSANTO RESEARCH CORPORATION - DAYTON, OHIO

Unclassified

Major Funding: Weapons
Sub-Program
Project: General Research

Attached for Commission review and approval is proposed Purchase Order 471-103 in the CPFF amount of $40,622 including fixed fee of $3,182 which covers research and development of injection molding as described in Appendix B to this order.

This requirement has Director's Office approval as to funds and program. Dr. R. E. Batzel of the Chemistry Department has authorized this action under Account No. 5122-13 as necessary for the Weapons Program.

The effective term of this agreement is twelve (12) months commencing upon receipt by Monsanto of an authorized order.

The Chemistry Department selected Monsanto Research Corporation to perform this work as this is a continuation of a program conducted under Subcontract 212. We have attached Dr. B. Rubin's July 16, 1965 classified memorandum COCD-269 to Mr. W. B. Harford in support of the selection of MRC.

The nature of this work involves considerable uncertainties and, therefore, can best be accomplished under a cost reimbursement type order. Monsanto has indicated an unwillingness to perform this work on a fixed price basis.

Monsanto Research Corporation is considered financially responsible to undertake this work.

The Monsanto proposal and the Scope of Work in Appendix B have been reviewed and approved by Mr. L. E. Peck, as a satisfactory statement of the work to be performed. The separate elements of the estimated costs have been carefully reviewed by both Mr. Peck and Procurement Department personnel and are considered reasonable for this procurement. Fixed fee at $3,182 or approximately 8.5% is in line with fee normally paid by the University for this type of work.

In a letter dated September 14, 1965, copy attached, MRC proposed an overhead rate of 103% for cost estimating and provisional billing at this time. If the current AEC/SAN study of the FY-1964 audit proves this rate to be incorrect, MRC will agree to accept a contract modification reducing estimated cost and fee to reflect overhead rates approved by the Commission. Although the attached cost breakdown lists G & A at 10%, Mr. T. Gossage of Monsanto has verbally agreed to change the G & A rate to 9%. Mr. Gossage will confirm this verbal agreement by letter. A G & A rate of 9% and payroll benefit rate of 19% were previously approved by the Commission in a letter dated [illegible]. The attached documents reflect the 9% G & A rate.

CLASSIFICATION CANCELLED OR CHANGED TO Unclassified
BY AUTH. TCG-WM-1950/1137
BY [illegible] ADD DATE 9-12-95
By [illegible] ADD DATE 9/13/95

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Terms and Conditions are standard Laboratory CPFF forms and are consistent with contracts awarded to MRC in the past. We have include Type C Patent provisions with background rights and the usual data and copyrights provisions.

The vendor's personnel and procurement policies are acceptable to the University to the extent they are acceptable to the cognizant Government audit agency.

Monsanto Research Corporation is not a small business concern. Notice of Intent to award this work has previously been submitted to the Commission in our letter of August 12, 1965.

Work under this order is unclassified according to Mr. W. K. House of the Laboratory Classification Office. Documents and information may be classified up to SRD in Sigma Category 2. Classification guidance will be submitted by the Classification Office. Security facility and personnel clearance arrangements will be coordinated by Mr. J. W. Tanner of the Procurement Department.

Attached for your assistance in the review of this purchase order are four copies each of the following documents:

1. Proposed Purchase Order 4714103, including Appendix A - Reimbursement of Costs and Appendix B - Scope of Work.
2. Vendor's proposal.
3. Vendor's Cost Breakdown.
4. MRC ltr. T. L. Gossage-G. V. Brim, 9/14/65.

Should you request additional information, please contact F. G. Heran, Ext. 7911.

C. L. BLUE

CLB:FGH:cm
Att: As indicated

cc: R. P. Connell w/atts.
D. S. Gibbs
W. B. Harford/W. B. Humphrey w/cy. P.O. only
J. A. Jensen - Classification
B. Rubin/L.E.Peck/R. Martin w/App. B.
J. W. Tanner

Note: - copy of Proposed Terms & Conditions for P.O. 4714103 destroyed. See "Conformed Copy"

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DOCUMENT NUMBER COCD 269

THIS DOCUMENT CONSISTS OF 4 PAGES
NO 6 OF 7 COPIES, SERIES A

July 18, 1965

THIS DOCUMENT CONSISTS OF 4 PAGES
NO 1 OF 5 COPIES, SERIES C

MEMORANDUM

TO: W. B. Harford

FROM: B. Rubin

SUBJECT: MATERIALS EVALUATION FOR INJECTION MOLDING

INTRODUCTION

A series of three fundings totaling $248,410.00 have been spent at Monsanto Research Corporation, Dayton Laboratory as Subcontract 212, Project Agreement No. 1. Information gained by this expenditure includes: aspects of die design, polymer rheology and injection molding conditions, etc., applicable to LRL's problems in large scale precision injection molding. The majority of the MRC work has been centered about the (LRL owned) HPM IX-20 oz. molding machine.

In view of several factors, we now believe that the work at MRC for F.Y. 1966 should be continued under a considerably changed scope. These factors include increased capability and experience in molding precision parts at LRL and at Bendix, Kansas City Division. The following scope of work is suggested as the basis for a new agreement between LRL and MRC, for evaluation of injection molding resins, to begin as soon as possible after the expiration of the present agreement.

I. Definition of Requirement

A. Scope:

1. General Scope of Work:

As approved and directed by the University's Technical Coordinator, the Subcontractor shall, on a best efforts basis, devote approximately one and one-half man-years of technical effort towards the evaluation of materials for injection molding. In this effort, Subcontractor shall assemble and develop the information necessary for the evaluation of the suitability of new polymers or grades of polymers for the University's applications in precision injection molding. Where possible existing information will be used. When necessary for adequate evaluation, Subcontractor shall conduct molding studies, shall prepare test specimens and shall determine physical and mechanical properties of the various polymers. Molding studies and determination of properties shall be conducted only as directed by the University's Technical Coordinator.

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2. Technical Scope of Work:

a. Polymer Selection:

As specifically directed by the University's Technical Coordinator, the Subcontractor shall compile information on and shall obtain samples of various new polymers with appropriate combinations of the following properties and characteristics:

i. high heat distortion.
ii. optical clarity.
iii. low density.
iv. low creep.
v. chemical stability.
vi. uniform and low thermal coefficient of expansion.
vii. reasonable availability.

b. Polymer Flow Studies:

When requested, sufficient flow properties, such as intrinsic viscosity, shall be determined on various polymers to determine moldability.

c. Molding Studies:

When requested, molding studies shall be made to determine the molding characteristics of each polymer. These studies should define the operating variables to minimize mold shrinkage and distortion of the molded parts upon machining and thermal cycling. When requested by the University's Technical Coordinator, the Subcontractor shall furnish suitable physical test specimens to the University.

d. Supplemental Development:

Should a given polymer prove to be of particular interest to the University, the University's Technical Coordinator may request supplemental studies to characterize the polymer more completely.

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B. Cost Estimate:

An approximate cost of $35,000.00 is anticipated.

C. Schedule:

1. Start of work:

Research and Development work under this contract shall begin October 1, 1965, and shall continue for a period of approximately 12 months.

2. Location of work:

Monsanto Research Corporation, Dayton, Ohio.

3. Delivery Location:

a) samples - refer to IV-E.
b) reports - refer to IV-D and V-E.

II. Purpose

A. The purpose of this subcontract shall be the review and evaluation of molding resins in terms of the needs and applications of the University for materials for precision injection molding. This work is specifically related to the development of injection molded lenses for multipoint lighting systems.

B. Account to be charged:

5122-13

III. Recommended Sources:

Monsanto Research Corporation is designated for this contract on the basis of their broad experience with molding resins and of their established understanding of the needs of the University. No other source is acceptable.

IV. Special Factors:

A. Security. No classified material or information will be involved with this contract. Consulting by MRC on classified aspects of LRL's work in injection molding will be conducted under our personal services agreement with MRC and Q-clearances will be maintained for that purpose.

B. Monthly letter reports and cost information must be submitted by the 15th day of the month following the work. (seven copies).

C. A detailed summary report, satisfactory to the LRL Technical Director, will be submitted at the termination of the programs. (seven copies).

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D. One copy of all correspondence and reports must be sent to Dr. Barney Rubin and one copy to Dr. Bruce L. Garner.

E. Except as noted above, all reports and materials furnished the University under the provisions of this contract will be shipped to the following address:

University of California
Lawrence Radiation Laboratory
P. O. Box 808
Livermore, California
94551
ATTN: Mr. Lee E. Peck
(or other person designated as Technical Coordinator for the University)

V. Basis for Determining Acceptability:

Reports will be accepted on the basis of completeness and technical competence. Monthly letter reports will be assumed to be acceptable if not rejected by the University within 15 days after receipt. Summary reports must be submitted for review prior to issuance.
Materials requirements under this contract will be limited. Such test specimens, etc., as requested by the University's Technical Coordinator will be accepted if they meet applicable ASTM specifications or such other requirements as may be specified at the time their preparation is requested.

VI. Personnel Assignments:

Dr. Bruce L. Garner is the University's Technical Director for this contract. Dr. Garner has designated L. E. Peck as the Technical Coordinator.

VII. Government Owned Equipment:

A model 75 New Britain Ankerwerk injection molding machine will be furnished by the University. Cost of the installation will be funded by the University but will not be included in the new contract.

The 20 oz. screw injection molding machine now located at MRC will be moved to LRL upon completion of the present agreement.

Barney Rubin
Process and Materials Development Division
Chemistry Department

BR/r

Distribution: W. B. Harford	1/7A
R. Batzel	2/7A
C. Blue/ G. Brim	3/7A
J. McCarthy	4/7A
B. Garner/ L. Peck	5/7A
B. Rubin	6/7A
file	7/7A

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