

PD-AAA-292-C1

5120263 (15)

AID 1020-25 (7-68)	SECURITY CLASSIFICATION	001 PROJECT NUMBER
PROJECT APPRAISAL REPORT (PAR) (U-446) See M.O. 1026.1	UNCLASSIFIED	512-11-690-263.11

10p.

003 U.S. OBLIGATION SPAN	004 PROJECT TITLE
AS OF: MO. 09 DAY 30 YR. 70 FY 69 Thru FY 73	Development Science and Technical Research (Chemistry)
008 COOPERATING COUNTRY - REGION - AID/W OFFICE	a) Formerly part of 263.8
Brazil	

006 FUNDING TABLE

AID DOLLAR FINANCING OBLIGATIONS (\$000)	TOTAL	CONTRACT (NON-ADD)	PERSONNEL SERVICES			PARTICIPANTS		COMMODITIES		OTHER COSTS	
			AID	PASA	CONTRACT	DIR. PASA	CONTRACT	DIR. PASA	CONTRACT	DIR. PASA	CONTRACT
CUMULATIVE NET THRU ACTUAL YEAR (FY 19 70)	a) 244	244			187		55			2	
PROPOSED OPERATIONAL YEAR (FY 19 71)	107	107			105					2	

000 VALUE OF P.L. ADD COMMODITIES (\$000) Thru Actual Year : Operational Year Program :

007 IMPLEMENTING AGENCY TABLE

If contractors or participating agencies are employed, enter the name and contract or PASA number of each in appropriate spaces below; in the case of voluntary agencies, enter name and registration number from M.O. 1551.1, Attachment A. Enter the appropriate descriptive code in columns b and c, using the coding guide provided below.

TYPE CODE b	TYPE CODE c	a. IMPLEMENTING AGENCY	TYPE CODE		d. CONTRACT/PASA/VOLAG NO.	e. LEAVE BLANK FOR AID/W USE
			b.	c.		
1. U.S. CONTRACTOR 2. LOCAL CONTRACTOR 3. THIRD COUNTRY CONTRACTOR 4. PARTICIPATING AGENCY 5. VOLUNTARY AGENCY 6. OTHER:	0. PARTICIPATING AGENCY 1. UNIVERSITY 2. NON-PROFIT INSTITUTION 3. ARCHITECTURAL & ENGINEERING 4. CONSTRUCTION 5. OTHER COMMERCIAL 6. INDIVIDUAL 7. OTHER:	1. U.S. National Academy of Sciences	1	0	12-637	
		2.				
		3.				

PART I - PROJECT IMPACT

I-A. GENERAL NARRATIVE STATEMENT ON PROJECT EFFECTIVENESS, SIGNIFICANCE & EFFICIENCY.

This summary narrative should begin with a brief (one or two paragraph) statement of the principal events in the history of the project since the last PAR. Following this should come a concise narrative statement which evaluates the overall efficiency, effectiveness and significance of the project from the standpoint of:

- (1) overall performance and effectiveness of project implementation in achieving stated project targets;
- (2) the contribution to achievement of sector and goal plans;
- (3) anticipated results compared to costs, i.e., efficiency in resource utilization;
- (4) the continued relevance, importance and significance of the project to country development and/or the furtherance of U.S. objectives.

Include in the above outline, as necessary and appropriate, significant remedial actions undertaken or planned. The narrative can best be done after the rest of PART I is completed. It should integrate the partial analyses in I-B and I-C into an overall balanced appraisal of the project's impact. The narrative can refer to other sections of the PAR which are pertinent. If the evaluation in the previous PAR has not significantly changed, or if the project is too new to have achieved significant results, this Part should so state.

008 NARRATIVE FOR PART I-A (Continue on form AID 1020-25 I as necessary):

This project was conceived in 1969 with the objectives of establishing ten high-level chemistry research laboratories in Brazil, in which 50 Brazilians would be trained by October 1974 in research methods and would attain the M.A. or PhD degree. The ten Overseas Research Fellows provided by the NAS under the contract will serve as instructors in the undergraduate schools of chemistry in the three institutions housing the research laboratories (Federal University of Rio de

MISSION DIRECTOR APPROVAL	SIGNATURE	DATE
	<i>[Signature]</i>	Mar 19 1970

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PAR CONTINUATION SHEET

This sheet is to be used for any Narrative Sections for which sufficient space has not been provided on the form. Identify each narrative by its Part and Section Designation.

Janeiro, University of São Paulo, Brazilian Center for Research in Physics). The project is directed toward assisting these entities become centers of excellence in chemistry.

The first Research Fellow arrived in Brazil in early February 1970, and nine more will arrive and begin research and teaching activity during calendar year 1970. The Brazilian National Research Council (CNPq) feels that research capability in chemistry is essential to Brazil's industrial and agricultural development. This view is shared by scientists from the NAS.

1. Overall performance and effectiveness of project implementation in achieving stated project targets:

Final approval of the contract between the CNPq (Conselho Nacional de Pesquisas) was obtained in January 1970.

Seven Research Fellows have arrived and initial research activity has begun. The CNPq has proceeded with procurement and installation of research equipment, as per agreement. Insufficient time has elapsed to report additional progress.

2. Contribution to achievement of sector and goal plans:

As the project progresses, it will contribute to sector and goal plans by upgrading research technology and through strengthening faculties of chemistry in the Brazilian universities that will employ the researchers trained.

3. Anticipated results compared to costs:

Development of research capability could lead to break-throughs on various technological frontiers. The 50 Brazilians who will be trained to the MA or PhD level will markedly strengthen faculties of Brazilian universities, as well as provide Brazil with researchers capable of using their knowledge to assist Brazil overcome problems hampering development of agriculture and industry.

4. Continued relevance to country development and/or furtherance of U.S. objectives:

The U.S. is interested in sharing technological information and in developing techniques for making this exchange possible. This project will bring post-doctoral level U.S. chemists in direct contact with Brazilian chemists and chemistry students, with consequent sharing of research knowledge through joint participation in research projects.

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PART I-B - PROJECT EFFECTIVENESS

I-B-1 - OUTPUT REPORT AND FORECAST - (See detailed instructions)

1. CODE NO. AID/W USE ONLY	2. This section is designed to record progress toward the achievement of each project output target which was scheduled in the PIP, Part II. Where progress toward a target is significantly greater or less than scheduled, describe reason(s) beneath the target.	ACTUAL AND PLANNED OUTPUTS (ALL DATA CUMULATIVE)				
		3. ACTUAL CUM. TO DATE	4. AS OF PRIOR JUNE 30		5. PLANNED BY NEXT JUNE 30	6. PROJECTED TOTAL FOR PROJECT LIFE
			a. PLANNED	b. ACTUAL		
	1. Research Centers in operation staffed by Overseas Research Fellows	8	5	5	10	20

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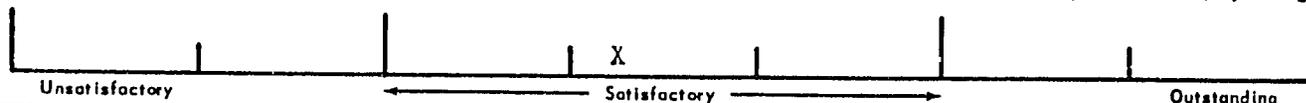
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PART I-B - Continued

010

B.2 - OVERALL ACHIEVEMENT OF PROJECT TARGETS

Place an "X" within the bracket on the following seven-point scale that represents your judgment of the overall progress towards project targets:



PART I-C - PROJECT SIGNIFICANCE

011

C.1 - RELATION TO SECTOR AND PROGRAM GOALS (See detailed instructions M.O. 1026.1)

This section is designed to indicate the potential and actual impact of the project on relevant sector and program goals. List the goals in col. b and rate potential and actual project impact in cols. c and d.

a. CODE NO. (AID/W USE ONLY)	SCALE FOR COLUMN c: 3= Very Important; 2= Important; 1= Secondary Importance SCALE FOR COLUMN d: 3= Superior/Outstanding; 2= Adequate/Satisfactory/Good; 1= Unsatisfactory/Marginal	c. POTENTIAL IMPACT ON EACH GOAL IF PROJECT ACHIEVES TARGETS	d. ACTUAL IMPACT ON GOAL TO DATE RELATIVE TO PROGRESS EXPECTED AT THIS STAGE
	b. SECTOR AND PROGRAM GOALS (LIST ONLY THOSE ON WHICH THE PROJECT HAS A SIGNIFICANT EFFECT)		
(1)	To improve capacity of Brazilian universities to conduct research	3	2
(2)	To improve quality of instruction in Brazilian universities	3	2
(3)	To improve and expand graduate level university education	3	2
(4)			

For goals where column c. is rated 3 or 2 and column d. is rated 1, explain in the space for narrative. The narrative should also indicate the extent to which the potential impacts rated 3 or 2 in column c. are dependent on factors external to the achievement of the project targets, i.e., is there a substantial risk of the anticipated impact being forestalled by factors not involved in the achievement of project targets. If possible and relevant, it also would be useful to mention in the narrative your reading of any current indicators that longer-term purposes, beyond scheduled project targets, are likely or unlikely to be achieved. Each explanatory note must be identified by the number of the entry (col. b) to which it pertains.

012 NARRATIVE FOR PART I-C.1 (Continue on form AID 1020-25 I):

The Brazilian National Research Council (CNPq) has been assigned the responsibility of coordinating Brazil's research efforts and is an entity directly responsible to the President of the Republic. To achieve its objectives of improving research capability, the CNPq provides scholarships for post-graduate training of Brazilians in U.S. and European universities. Individuals receiving this training are required to return to Brazil and provide instruction in Brazilian universities. Leaders in the CNPq have long recognized that a greater number of individuals could be provided post-graduate training if high-level scientists and technicians could be brought to Brazil to teach in the universities. This project will accomplish that objective. 50 Brazilians will be provided instruction by 10 U.S. Overseas Research Fellows in research techniques, raising them to the MA or PhD level. In addition, the Research Fellows will teach undergraduate students, giving them the benefit of depth knowledge not possessed by most Brazilian university faculty members.

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PART I-C - Continued

C.2 - GENERAL QUESTIONS

These questions concern developments since the prior PAR. For each question place "Y" for Yes, "N" for No, or "NA" for Not Applicable in the right hand column. For each question where "Y" is entered, explain briefly in the space below the table.	MARK IN THIS COL.
013 Have there been any significant, unusual or unanticipated results not covered so far in this PAR?	N
014 Have means, conditions or activities other than project measures had a substantial effect on project output or accomplishments?	N
015 Have any problems arisen as the result of advice or action or major contributions to the project by another donor?	N
016 If the answer to 014 or 015 is yes, or for any other reason, is the project now less necessary, unnecessary or subject to modification or earlier termination?	N
017 Have any important lessons, positive or negative, emerged which might have broad applicability?	N
018 Has this project revealed any requirement for research or new technical aids on which AID/W should take the initiative?	N
019 Do any aspects of the project lend themselves to publicity in newspapers, magazines, television or films in the United States?	Y
020 Has there been a lack of effective cooperating country media coverage? (Make sure AID/W has copies of existing coverage.)	N
021 <u>NARRATIVE FOR PART I-C.2</u> Identify each explanatory note by the number of the entry to which it pertains. (Continue on form AID 1020-25 I as necessary):	

019 The project has received considerable publicity in scientific circles. An excellent news article was carried in the January 5, 1970 issue of "Chemistry and Engineering News".

PART II - IMPLEMENTATION REPORT

II-A - STATUS OF SCHEDULE

022 A-1 - INDIVIDUAL ACTIONS (See detailed instructions M.O. 1026.1). This is a listing of major actions or steps which were scheduled for physical start or continuing implementation in the reporting period as reflected in the Project Implementation Plan, Part I.

(a)		(b) STATUS - PLACE AN "X" IN, ONE COLUMN		
PIP ITEM NO.	MAJOR ACTIONS OR STEPS; CAUSES AND RESULTS OF DELAYS; REMEDIAL STEPS	(1)	(2)	(3)
		BEHIND SCHEDULE	ON SCHEDULE	AHEAD OF SCHEDULE
1.	Execution of NAS-CNPq contract		X	
2.	Selection of the first 10 National Academy of Sciences Overseas Research Fellows		X	
3.	Transfer ORF's to Brazil		X	
4.	Acquisition of research equipment		X	
5.	Modification of 10 Advanced Research Laboratories and installation of equipment		X	
6.	Determination of projects and conducting of research in specialty areas in Chemistry		X	
7.	Visits to projects by senior U.S. professors		X	
8.	Teaching undergraduate and graduate classes		X	
9.	Training 50 Brazilian students to MA or PhD level	X		
10.	Identification of Brazilian students for post-graduate training in the U.S.	X		
11.	Publication of research findings		X	

PART II - Continued

023 II-A.2 - OVERALL TIMELINESS

In general, project implementation is (place an "X" in one block):

BLOCK (c): If marked, place an "X" in any of the blocks one thru eight that apply. This is limited to key aspects of implementation, e.g., timely delivery of commodities, return of participants to assume their project responsibilities, cooperating country funding, arrival of technicians.

(a) On schedule	
(b) Ahead of schedule	
(c) Behind schedule	X
(1) AID/W Program Approval	
(2) Implementing Agency (Contractor/Participating Agency/Voluntary Agency)	
(3) Technicians	
(4) Participants	X
(5) Commodities (non-FFF)	
(6) Cooperating Country	X
(7) Commodities (FFF)	
(8) Other (specify):	

II-B - RESOURCE INPUTS

This section appraises the effectiveness of U.S. resource inputs. There follow illustrative lists of factors, grouped under Implementing Agency, Participant Training and Commodities, that might influence the effectiveness of each of these types of project resources. In the blocks after only those factors which significantly affect project accomplishments, write the letter P if effect is positive or satisfactory, or the letter N if effect is negative or less than satisfactory.

1. FACTORS-IMPLEMENTING AGENCY (Contract/Participating Agency/Voluntary Agency)

024 IF NO IMPLEMENTING AGENCY IN THIS PROJECT. PLACE AN "X" IN THIS BLOCK:		032 Quality, comprehensiveness and candor of required reports	P
025 Adequacy of technical knowledge	P	033 Promptness of required reports	P
026 Understanding of project purposes	P	034 Adherence to work schedule	P
027 Project planning and management	P	035 Working relations with Americans	P
028 Ability to adapt technical knowledge to local situation	P	036 Working relations with cooperating country nationals	P
029 Effective use of participant training element	P	037 Adaptation to local working and living environment	P
030 Ability to train and utilize local staff	P	038 Home office backstopping and substantive interest	P
031 Adherence to AID administrative and other requirements		039 Timely recruiting of qualified technicians	P
		040 Other (describe):	

2. FACTORS-PARTICIPANT TRAINING

041 IF NO PARTICIPANT ELEMENT IN PROJECT. PLACE AN "X" IN THIS BLOCK:		TRAINING UTILIZATION AND FOLLOW UP	No participants have returned as yet.
PREDEPARTURE		052 Appropriateness of original selection	
042 English language ability		053 Relevance of training for present project purposes	
043 Availability of host country funding	P	054 Appropriateness of post-training placement	
044 Host country operational considerations (e.g., selection procedures)	N	055 Utility of training regardless of changes in project	
045 Technical/professional qualifications		056 Ability to get meritorious ideas accepted by supervisors	
046 Quality of technical orientation		057 Adequacy of performance	
047 Quality of general orientation		058 Continuance on project	
048 Participants' collaboration in planning content of program		059 Availability of necessary facilities and equipment	
049 Collaboration by participants' supervisors in planning training		060 Mission or contractor follow-up activity	
050 Participants' availability for training	N	061 Other (describe):	
051 Other (describe):			

Participants are covered in contract.

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PART II-B -- Continued

3. FACTORS-COMMODITIES

PLACE AN "X" IN APPROPRIATE BLOCK:	062 FFF	063 NON-FFF	064 NO COMMODITY ELEMENT	072 Control measures against damage and deterioration in shipment.
065 Timeliness of AID/W program approval (i.e., PIC/C, Transfer Authorization).				073 Control measures against deterioration in storage.
066 Quality of commodities, adherence to specifications, marking.				074 Readiness and availability of facilities.
067 Timeliness in procurement or reconditioning.				075 Appropriateness of use of commodities.
068 Timeliness of shipment to port of entry.				076 Maintenance and spares support.
069 Adequacy of port and inland storage facilities.				077 Adequacy of property records, accounting and controls.
070 Timeliness of shipment from port to site.				078 Other (Describe):
071 Control measures against loss and theft.				

Indicate in a concise narrative statement (under the heading a. Overall Implementation Performance, below) your summary appraisal of the status of project implementation, covering both significant achievements and problem areas. This should include any comments about the adequacy of provision of direct hire technicians as well as an overall appraisal of the comments provided under the three headings (b, c & d) which follow. For projects which include a dollar input for generation of local currency to meet local cost requirements, indicate the status of that input (see Detailed Instructions).

Discuss separately (under separate headings b, c & d) the status of Implementing Agency Actions, Participants and Commodities. Where above listed factors are causing significant problems (marked N), describe briefly in the appropriate narrative section: (1) the cause and source of the problem, (2) the consequences of not correcting it, and (3) what corrective action has been taken, called for, or planned by the Mission. Identify each factor discussed by its number.

NARRATIVE FOR PART II-B: (After narrative section a. Overall Implementation Performance, below, follow, on form AID 1020-25 (needed, with the following narrative section headings: b. Implementing Agency, c. Participants, d. Commodities. List all narrative section headings in order. For any headings which are not applicable, mark them as such and follow immediately below with the next narrative section heading.)

a. Overall Implementation Performance.

a) - The implementing agency, NAS, has recruited Overseas Research Fellows per work plan, has provided good backstopping and, from the date the contract was effective, has maintained activity per plan. The CNPq has abided by its commitments to the project; however, a delay in recruiting Brazilian students to work with the NAS Overseas Research Fellows is occurring. The NAS and CNPq project coordinators, assisted by the senior U.S. professors, are currently working with Brazilian professors in the three institutions to assign Brazilian graduate students to work with the NAS Research Fellows. Further delay in making these assignments could seriously interfere with a primary project objective of training 50 Brazilians to the M.A. or Ph.D level.

b) - Implementing agency (above)

c) - Participants - None sent to date, but past experience with the CNPq would indicate excellent handling in this area. Funds are available in the contract for this purpose.

d) - Commodities - The only commodities to be supplied through the contract are minor items of stationery, etc. All chemicals and equipment required for the project will be supplied by the CNPq. Estimated acquisition value of the CNPq-furnished commodities is \$700,000.

* -- The Brazilian professors and universities did not assign students to work with the ORF's until the last half of 1970. This delayed the ORF's in identifying outstanding candidate for training. However, selection and training should now proceed as planned.

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PART III - ROLE OF THE COOPERATING COUNTRY

The following list of illustrative items are to be considered by the evaluator. In the block after only those items which significantly affect project effectiveness, write the letter P if the effect of the item is positive or satisfactory, or the letter N if the effect of the item is negative or less than satisfactory.

SPECIFIC OPERATIONAL FACTORS:

080 Coordination and cooperation within and between ministries.	P
081 Coordination and cooperation of LDC gov't. with public and private institutions and private enterprise.	P
082 Availability of reliable data for project planning, control and evaluation.	P
083 Competence and/or continuity in executive leadership of project.	P
084 Host country project funding.	P
085 Legislative changes relevant to project purposes.	
086 Existence and adequacy of a project-related LDC organization.	P
087 Resolution of procedural and bureaucratic problems.	P
088 Availability of LDC physical resource inputs and/or supporting services and facilities.	P
089 Maintenance of facilities and equipment.	P
090 Resolution of tribal, class or caste problems.	
091 Receptivity to change and innovation.	P
092 Political conditions specific to project.	
093 Capacity to transform ideas into actions, i.e., ability to implement project plans.	P
094 Intent and/or capacity to sustain and expand the impact of the project after U.S. inputs are terminated.	P
095 Extent of LDC efforts to widen the dissemination of project benefits and services.	P
096 Utilization of trained manpower (e.g., participants, counterpart technicians) in project operations.	
097 Enforcement of relevant procedures (e.g., newly established tax collection and audit system).	
098 Other:	

HOST COUNTRY COUNTERPART TECHNICIAN FACTORS:

099 Level of technical education and/or technical experience.	P
100 Planning and management skills.	P
101 Amount of technician man years available.	P
102 Continuity of staff.	P
103 Willingness to work in rural areas.	
104 Pay and allowances.	P
105 Other:	

In the space below for narrative provide a succinct discussion and overall appraisal of the quality of country performance related to this project, particularly over the past year. Consider important trends and prospects. See Detailed Instructions for an illustrative list of considerations to be covered.

For only those items marked N include brief statements covering the nature of the problem, its impact on the achievement of project targets (i.e., its importance) and the nature and cost of corrective action taken or planned. Identify each explanatory note.

106 NARRATIVE FOR PART III (Continue on form AID 1020-25 I):

The quality of performance of the CNPq staff has been excellent. Equipment required for execution of the project was purchased, or orders for fabrication issued, immediately after signing the ProAg and three months prior to signing the contract. Good faith has prevailed since the project was conceived.

Coordination between the Brazilian Center for Research in Physics and Chemistry, Division of the Federal University of Rio de Janeiro, was less than satisfactory prior to the August 1970 visit of Dr. Harry Gray, senior U.S. professor. UFRJ was unwilling to grant course credit for university level work taken by students enrolled at the Physics Research Center; UFRJ has now agreed to accept credit. To assure improved coordination, Dr. Gray and Dr. Eloisa Mano, of UFRJ, have agreed that two of the three ORF's originally scheduled to do research and lecturing at the Physics Center will be transferred to the UFRJ.

During October 1970, a conflict of ideas on methodology of achieving project goals occurred between an ORF and the Brazilian supervising professor. NAS representatives came to Brazil and with CNPq assistance resolved the difficulty.

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PART IV - PROGRAMMING IMPLICATIONS

IV-A - EFFECT ON PURPOSE AND DESIGN

Indicate in a brief narrative whether the Mission experience to date with this project and/or changing country circumstances call for some adjustment in project purposes or design, and why, and the approximate cost implications. Cover any of the following considerations or others that may be relevant. (See Detailed Instructions for additional illustrative considerations.) Relevant experience or country situations that were described earlier can simply be referenced. The spelling out of specific changes should be left to the appropriate programming documents, but a brief indication of the type of change contemplated should be given here to clarify the need for change. For example, changes might be indicated if they would:

1. better achieve program/project purposes;
2. address more critical or higher priority purposes within a goal plan;
3. produce desired results at less cost;
4. give more assurance of lasting institutional development upon U.S. withdrawal.

107 NARRATIVE FOR PART IV-A (Continue on form AID 1020-25 I):

No change appears necessary at this time.

IV-B - PROPOSED ACTION

108 This project should be (Place an "X" in appropriate block(s)):	
1. Continued as presently scheduled in PIP.	<input checked="" type="checkbox"/>
2. Continued with minor changes in the PIP, made at Mission level (not requiring submission of an amended PIP to AID/W).	<input type="checkbox"/>
3. Continued with significant changes in the PIP (but not sufficient to require a revised PROP). A formally revised PIP will follow.	<input type="checkbox"/>
4. Extended beyond its present schedule to (Date): Mo. ___ Day ___ Yr. ___. Explain in narrative, PROP will follow.	<input type="checkbox"/>
5. Substantively revised. PROP will follow.	<input type="checkbox"/>
6. Evaluated in depth to determine its effectiveness, future scope, and duration.	<input type="checkbox"/>
7. Discontinued earlier than presently scheduled. Date recommended for termination: Mo. ___ Day ___ Yr. ___. Explain in narrative.	<input type="checkbox"/>
8. Other. Explain in narrative.	<input type="checkbox"/>

109 NARRATIVE FOR PART IV-B:

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