

DEC 13 1991
CAPITAL PROJECT AUTHORIZATION
R-1-7 (Rev. 80-08)

PROJECT DATE
12/9/91

PROJECT NUMBER
LQ

COMPANY Reynolds Metals	DIVISION Raw Materials	PLANT OR LOCATION Sherwin	RFI NO. LQ 92-C-5
PROJECT TITLE Capitalized Major Maintenance Repair Plant Insulation - Phase VI		RELATED PROJECTS	SOURCE OF FUNDS 1992 Capital Budget

SECTION A - PROJECT DESCRIPTION

This request covers capital maintenance funds to proceed with Phase VI for repairs of plant insulation. The insulation to be replaced was installed prior to 1967 and is predominately asbestos. Due to climatic conditions, the original insulation is in need of repair and asbestos replaced. Early approval is requested for continuation of an existing program without contractor interruption thereby avoiding additional costs.

(Use Attachment if Needed)

SECTION B - SUMMARY FINANCIAL INFORMATION

Complete Item 1 for required information as transcribed from the RFI attached to this authorization and indicate if original or revised. If the attached RFI is not the original, also complete items 2 and 3.

AMOUNT REQUESTED - FACILITIES CAPITAL

- WORKING CAPITAL

- OTHER

AVERAGE YEAR PROFIT (LOSS)

FINANCIAL VALUES - ROI

- IRR

- PAYBACK PERIOD

1. ATTACHED RFI

☒ Original
☐ Revised

2. ORIGINAL RFI

No. _____
Date Prepared _____

\$ 1,500,000	\$
\$	\$
\$	\$
\$ (99,000)	\$
(6.6) %	%
%	%
YEARS	YEARS

3. REASONS FOR CHANGES:

(Use Attachment if Needed)

SECTION C - ESTIMATED EXPENDITURE SCHEDULE FROM APPROVAL OF PROJECT - FACILITIES CAPITAL

Month 1 - \$ 100,000	Quarter 3 - \$ 100,000	Year 3 - \$
2 - 200,000	4 - 600,000	4 -
3 - 200,000	5 -	5 -
4 - 100,000	6 -	Balance -
5 - 100,000	7 -	
6 - 100,000	8 -	Total \$ 1,500,000

SIGNATURES	DATE	RICHMOND OFFICE SIGNATURES	DATE
PLANT INDUSTRIAL ENGINEER <i>[Signature]</i>	12/9/91	CHIEF ENGINEER <i>[Signature]</i>	12/16/91
PLANT ENGINEER <i>[Signature]</i>	12/9/91	DIRECTOR INDUSTRIAL ENGINEERING	
PLANT CONTROLLER <i>[Signature]</i>	12/9/91	DIVISION OPERATIONS MANAGER	
MAINTENANCE SUPERINTENDENT		DIVISION ADMINISTRATIVE And CONTROL MANAGER	
PLANT SUPERINTENDENT <i>[Signature]</i>	12/9/91	DIVISION VICE PRESIDENT	
MANAGER <i>[Signature]</i>	12/14/91	GROUP VICE PRESIDENT	
		FINANCE	

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FACT SHEET

PROJECT TITLE - REPAIR PLANT INSULATION - Sherwin Alumina Plant

PLANT DESCRIPTION

The Sherwin Plant located near Corpus Christi, Texas, produces alumina for consumption by Reynolds' North American reduction plants and for outside sales. The plant extracts aluminum oxide from bauxite by a high pressure, high temperature process that for reasons of safety and energy conservation requires process vessels and piping to be insulated. The initial plant digester units were installed in 1953 with subsequent expansions in 1957-59 and 1966.

PRESENT SITUATION

During the Sherwin Plant construction periods prior to 1967, vessels, tanks, heat exchangers, evaporators, piping and powerhouse equipment which required personnel safety and heat retention were insulated with asbestos. In the 20+ year period since construction, major portions of the asbestos insulation have deteriorated badly. To remedy the situation, Sherwin began a program of insulation replacement in 1986. In order to avoid the interruption of plant operations and because of the complexities associated with the asbestos removal, the work has been scheduled in phases. To date, five phases, at a total investment of \$5.0 million, have been undertaken. It is estimated that an additional three phases, totaling \$3.5 million, will be required to complete their installation replacement program.

PROPOSAL

The current contractor is scheduled to complete Phase V in December 1991. It would be economically prudent to continue the present arrangement and avoid the added costs and delays associated with moving the contractor off and then back on the job site. Approval is therefore requested for the immediate undertaking of Phase VI of the Insulation Replacement Program (\$1.5 million).

CAPITAL REQUIREMENTS (in thousands)

Facilities Capital - 1992	\$1,500	(This request)
- 1993	\$1,500	
- 1994	\$ 500	

	\$3,500	

This project is on the '92 capital budget list.

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REQUEST FOR INVESTMENT

R-1-27 (Rev. 80-08)

DIVISION Raw Materials	PLANT Sherwin	ESTIMATE NO. 5063	RFI NO. LQ 92-C-5
PROJECT TITLE 1992 Capitalized Major Maintenance Repair Plant Insulation - Phase VI	CATEGORY C	CODE AM	AMOUNT REQUESTED:
	ROI PROPOSAL	(6.6) %	FACILITIES CAPITAL \$ 1,500,000
	ROI ALTERNATIVE	%	WORKING CAPITAL \$ OTHER \$ TOTAL \$ 1,500,000

SECTION A - Present and Proposed Situation

Analysis:

Individual items will be in excess of the amounts established for abnormal asset maintenance expenditures as amounts listed in Financial Planning Manual Section 3.1.4.1 Reference AM 6.20.

This request covers those insulation repairs to equipment used for four digester unit production that is 75% depreciated. The insulation under consideration was installed when the equipment was erected prior to 1967. Asbestos materials were predominantly used. Climatic conditions have caused serious deterioration of the insulation. This request is for repairs of insulation and application of new weather coating where required on equipment that will be used for four unit production.

This project is being submitted as a continuation of phased repair to plant insulation. Since asbestos insulation replacement is involved, it is desired to expedite the repair program. Asbestos removal and replacement is most effectively completed in the winter, spring and fall. Consequently, cash flow indicates minimal spending in 3rd quarter.

Justification:

(USE SPACE ON REVERSE SIDE IF NEEDED)

SECTION B - Financial Summary:

1. INVESTMENT DESCRIPTION	Proposal	Alternative	4. EST. CASH EXPENDITURE SCHEDULE FACILITIES CAPITAL	
			19 92	19
FACILITIES CAPITAL	1,500,000		1Q 500,000	1Q
WORKING CAPITAL CHANGES	0		2Q 300,000	2Q
OTHER	0		3Q 100,000	3Q
TOTAL	1,500,000		4Q 600,000	4Q
2. AVERAGE YEAR NET PROFIT (LOSS)	Proposal	Alternative	19	19
DEPRECIATION	(150,000)		1Q	1Q
OTHER INCOME (EXPENSE)	0		2Q	2Q
INCOME TAXES	51,000		3Q	3Q
INVESTMENT TAX CREDIT (TOTAL ÷ ASSET LIFE)	0		4Q	4Q
TOTAL	(99,000)			
3. ASSET LIFE - NO. OF YEARS	10			

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ENGINEERS ESTIMATE

(EQUIPMENT, MATERIAL, AND LABOR FOR INSTALLATION REQUIRED)

SUBJECT

1992 MAJOR CAPITALIZED MAINTENANCE -
Repair Plant Insulation, Phase VI

PAGE NO. 1 of 1

DATE 12-9-91

ESTIMATE NO. 5063

PLANT Sherwin

DEPARTMENT Engineering

ACCOUNT NO.	DESCRIPTION	QUANTITY	UNIT COST	ITEM COST
1.0 thru 12.0	Not Required			
13.0	<u>MODIFICATION TO EXISTING EQUIPMENT:</u>			
13.1	Fac 30 - Digestion	lot	lot	200,000
13.2	Fac 33 - Mud Settling & Washing	lot	lot	500,000
13.3	Fac 35 - Filtration	lot	lot	100,000
13.4	Fac 42, 45, 50 - Evaporation, Precipitation Calcination	lot	lot	450,000
14.0 thru 19.0	Not Required			
20.0	<u>Taxes</u>	lot	lot	60,000
21.0	<u>Engineering</u>	lot	lot	90,000
22.0	<u>Contingency</u>	lot	lot	\$ 100,000
	TOTAL			\$1,500,000
It is estimated that the start-up of this project will take place <u>12</u> months after approval of the Capital Project Authorization. <i>D. C. Oyle</i> Plant Engineer				

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ENVIRONMENTAL CHECKLIST

PLANT SHERWIN

RFI NO. LA 92-C-5

PROJECT DESCRIPTION: REPAIR PLANT INSULATION - Ph VI

	YES	NO		YES	NO
1. GENERAL					
New Installation?	☐	☒	Is there an applicable new source performance standard?	☐	
Capacity change?	☐	☒	Added monitoring requirements?	☐	
Agency notification needed?	☐	☒	Other effects (fugitives, steam generation)?	☐	
2. POLLUTION					
A. Effluents (Water)		☒	Added emission points?	☐	
Change in flow?	☐		Removal/disposal of asbestos?		
Control for spills necessary?	☐				
Change in pollutants? (Type/quantity/concentration)	☐		C. Solid Waste/Hazardous Waste Suitable disposal method?	☒	☐
Thermal effect?	☐		PCB/oil involved?	☐	☒
Meet current standards?		☐	Application/permit required? (new or modified)	☐	☒
Application/permit required? (new or modified)	☐		Pollution prevention included in project?	☒	☐
Added monitoring requirements?	☐		Potential for reuse as product or raw material?	☐	☒
Impact on receiving stream?	☐		Impact on community?	☐	☒
B. Emissions (Air)		☒	Change in nature and rate of generation?	☐	☒
Change in volume/rates?	☐		3. PRODUCTION CONSIDERATION		☒
Change in pollutants? (Type/quantity/concentration)	☐		Product new to location?	☐	
Effect on groundlevel air?	☐		FDA requirements involved?	☐	
Meet current standards?		☐	Change in raw materials/additives?	☐	
Application/permit required? (new or modified)	☐		TSCA compliance issue?	☐	
Impact on neighbors/complaints?	☐				

NOTE: All checks within brackets must be addressed in Environmental Statement.

CAPITAL BUDGET DATA ENTRY SHEET

R-317-48

COMPANY REYNOLDS METALS	DIVISION RAW MAT'L'S	PLANT SHERWIN	DATE 12-9-91
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Location 042000 RFI NO. 2992005 Project No. Budget Year 912 Misc. ☐ New Investment in Facilities—Amount \$ 1150000000Title of Project RPR PLANT INSULATION - I VIPlant Priority Division Priority Program ☐ Project Code 1 AMRelated Project Reference Equipment qualifies for the additional 10% Investment Tax Credit under the Energy Tax Act of 1978 ☐Working Capital Change \$ 000Total Amount Requested \$ 1150000000Estimated Completion — Days 366Conformed Date Estimated Asset Life: SL 10Tax Investment Tax Credit \$ 000ROI %: (6.6) Pay Back Years IRR Yield %: Net Present Value \$ 000

NEW INVESTMENT IN FACILITIES

Classification of Expenditures

Amount

Land

\$ 000

Building

\$ 000

Machinery and Equipment

\$ 1150000000

Investment

\$ 000

CENTRAL ENGINEERING CAPITAL PROJECT

APPROVAL TRANSMITTAL

No internal departmental approvals or comments are to be made on the official authorization transmittal. Approval/disapproval recommendations and associated comments are listed below:

Plant Sherwin RFI No. LA-92-C-4
LA-92-C-5
Description Overhaul No. 2 Turbine Amount \$ 750,000.
Generators 1,500,000
Routing:

1. Division Engineer J. M. Cracken Date 12/16/91

Approval ✓ Disapproval _____

Recommended
Comments _____

2. Dir. of Operations Engineering R. L. Buckley Date 12/16/91

Approval ✓ Disapproval _____

Recommended
Comments _____

"note two separate
auth requests for
\$750,000 & \$1,500,000

3. Chief Engineer

APPROVAL.CAP