



**Request For Capital
Expenditures/Retirements**

DIVISION OR COMPANY
Organic Chemicals Division

LOCATION
Chicago Plant

J.O. CONTROL POINT
097

JOB TITLE
**Install air supplied respirator
system.**

REPORTING CLASSIFICATION D2	DATE APPROVED 5/13/81	JOB ORDER NO. OC-5370
SUMMARY OF AMOUNT:		
DESCRIPTION	LOCAL	CURRENCY U.S. DOLLARS
ESTIMATED PROJECT COST		\$30,962.
DISMANTLEMENT EXPENSE		
TRANSFER EQUIPMENT		
GROSS AMOUNT FOR APPROVAL		\$30,962.
LESS TRANSFER EQUIPMENT		
LESS SALVAGE OR TRADE-IN ALLOWANCE		
NET CASH REQUIRED (GOF-3027)		\$30,962.

RETIREMENT DATA		ECONOMICS		REVISION DET		L (GROSS AMOUNTS)	
		as called for in General Procedure Memo #3 Attachment C. (Attach calculations)		REV. #	DATE	COUNT	CUM. AUTHORIZATION
COST	AMOUNT	ECONOMICS PERIOD		1			
DISMANTLEMENT		NET SALES		2			
LESS SALVAGE		NAT. (PROFIT/SAVINGS)		3			
		TOTAL INVESTMENT		4			
		% ROI (ON TOTAL INVEST.)		5			
		INTERNAL RATE OF RETURN		6			
TOTAL - CHARGE RESERVE		PAYOUT OF NEW FIXED CAPITAL		7			

DESCRIPTION AND REASONS REQUIRED

Funds of -----\$30,962
are requested to purchase and install an air supplied respirator
system.

*Closed
9/81*

SUMMARY OF ESTIMATED COST - Details on GOF-3027		ESTIMATE NO.	STARTING DATE	COMPLETION DATE	
			When approved	6 Mo. after approval	
ITEM NO.	DESCRIPTION	MATERIAL	LABOR	ENGINEERING	TOTAL
	See attached sheet				
NET CASH REQUIRED		\$24,062	\$6,700	\$200	\$30,962
ACCOUNTING TREATMENT		APPROVALS			
ITEM NO.	DEPR. RATE	NAME		DATE	
		PROJECT SPONSOR			
		<i>R. Johnson</i>		3/31/81	
		<i>Mr. Esch</i>		2/3/81	
		<i>J. Caporaso</i>		5/1/81	
		<i>MTA</i>		5/5/81	
		<i>Robert H. H.</i>		5/17/81	
		<i>G. H. H.</i>		5/13/81	
ACCOUNTING TREATMENT / ECONOMICS APPROVED BY DIV. CONTROLLER (CHECK BOXES)					
☒	☐				
POST AUDIT PERIOD	POST AUDIT DUE DATE				
	5/1/81				
DISTRIBUTION <i>1h</i>		CORPORATE OFFICE			

Proposed Work and Cost

Funds of -----\$30,962
are requested to purchase and install an air supplied
respirator system.

Present Situation

The OSHA lead standard adapted March, 1979, specifies a maximum allowable blood lead for employees exposed to lead dust. The allowable maximum blood lead was 80ug lead per 100 grams blood at the inception of the lead standard, and drops to 50ug in March of 1982. The standard further specifies that an employee whose lead blood level exceeds the standard must be removed from the area with an airborne lead dust concentration above 50ug/m³, and cannot be returned until the employee's lead blood level is 0 ug lower than the standard. The employee's lead blood level must be below 40 ug for him to return to work if the standard is 60ug.

Due to the lack of feasible engineering technology, the airborne lead dust levels cannot be reduced to a level where respirator protection will not be required. Several corporate industrial hygiene studies have been made of airborne lead concentrations and potential employee exposure. The studies show we continue to have lead exposures above the OSHA limit of 200ug/m³.

OSHA has accepted the company's petition for modification of its abatement program until February 15, 1983. One of the main purposes the company requested this extension was to install a air supplied respirator system.

It is the considered opinion of both division and plant management, a corporate industrial hygiene, that full time personal respirator protection will continue to be necessary to control employee lead dust exposure.

Blood lead levels have shown a steady decline from June, 1971, (date of American Cyanamid Company acquisition of the facility) when they averaged 100ug per 100gm blood. Averages for the last five months in ug per 100 gm blood are:

	<u>12/80</u>	<u>1/81</u>	<u>2/81</u>	<u>3/81</u>	<u>4/81</u>
Average	43	43	41	43	41
% below 50	77	77	69	76	80

To enable the plant's employees to continue this downward trend of lead blood levels the respirator program must be strengthened.

N14633.01

Justification

The OSHA regulations require, starting April 1, 1981, that any employee with a blood lead above 0.060ug/100gm must be removed from his job. By March 1, 1983, those employees above 0.050ug/100gm must be removed from their jobs.

Air supplied respirators will enable the plant's employees meet this OSHA standard. This type of respirator has greater protection factor, and its fit is not as critical as with a cartridge type of respirator.

Continued use of the half or full face cartridge type respirator is not a guarantee that we can maintain the blood lead levels of all plant employees below the 50 level.

We have always been able to comply with the OSHA blood lead level standard but to assure we don't have excursion above the standard the proposed system must be installed.

Commercial Factors

This order supports a plant budget for lead stabilizers as follows:

(k\$/lbs.)	<u>Sales</u>		<u>Marginal Income</u>		<u>POS</u>	
	<u>lbs.</u>	<u>\$</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Actual all stabilizers 1980	7,296	5,618	2,451	43.6	1,782	31.7
Budget all stabilizers 1981	6,400	5,207	2,337	44.9	1,512	29.0
First quarter stabilizers 1981	1,786	1,336	776	58.1	626	46.8

Details of Proposal

A Nash breathing air system will be installed, with a sub micron air intake filter. The compressor will be fitted with an overheating alarm and a failure alarm. The breathing air will be piped throughout the plant to twenty-two (22) work stations. Twenty-two employees will be issued a new respirator, which will work on either the supplied air, or if disconnected from the system, a replaceable filter. Connection between the man and the piped air will be by a flexible hose.

This system has been reviewed and approved by M. G. Kemplin of corporate industrial hygiene.

Production Factors

This proposal will not alter product quality or production rates.

Contingent Future Commitments

The Nash breathing air compressor uses 5 gpm of city water to form the seal, wash the incoming air and humidify it for breathing. The additional cost of water to operate this system will be approximately \$1,000 per year.

Additional cost for electricity will be approximately \$5,900 per year.

Alternatives Considered

The use of self powered air helmet respirators are being tested for use where air line respirators are not practical.

The use of fixed air cylinders to supply the breathing air for year around use is too expensive.

Risks

No operating risks are involved.

Concise Summary

Install an air supplied respirator system to help the plant meet the more stringent OSHA blood lead level regulations.

DETAIL SHEET

SHEET NO.

JOB ORDER NO.

DATE

Mar h 13, 1981

COMPANY

American Cyanamid Company

LOCATION

Chicago Plant

ITEM OR CODE NO.	DESCRIPTION	EQUIPMENT OR MATERIALS	LABOR	ENG. MECH. SVC.	TOTAL
1	Breathing air compressor	7,177		200	7,377
2	Pump alarms	2,707			2,707
3	Piping and compressor installation	4,400	4,500		8,900
4	Electric	1,000	2,000		3,000
5	Respirators	3,277			3,227
6	Air prefilter	350			350
7	Schrader quick connecting system	2,188	200		2,388
8.	Air hoses	1,309			1,309
9	Freight	100			100
10	Illinois sales and use tax	1,554			1,554
		24,062	6,700	200	30,962