Office of Management
& Budget Approval No.
99S-74008

Please complete a separate questionnaire for each manufacturing plant site.

Survey of

LOSSES OF CHEMICAL MATERIALS

DURING MANUFACTURE

conducted by

Stanford Research Institute

for

National Science Foundation

1) Chemical Name: NITROBENZENE

2) Geographical location of manufacturing plant site (check one - OPTIONAL RESPONSE):

New England	☐
Middle Atlantic	☐
South Atlantic	☐
East North Central	☐
East South Central	☐
West North Central	☒
West South Central	☐
Mountain	☐
Pacific	☐

3) Annual plant production level in million pounds per year (check one):

Less than 1	☐
1 - 10	☒
10 - 100	☐
100 - 1,000	☐
1,000 - 10,000	☐

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4) List of 4 most prevalent known impurities in the grades of the chemical produced for sale or captive consumption. Specify concentration of known impurities (e.g., weight %, ppm, gram/liter, etc.).

Name of Known Impurity	Grade of Organic Chemical (e.g., USP, Industrial, etc.)		
	_____ (grade name or purity)	_____ (grade name or purity)	_____ (grade name or purity)
NITROPHENOL	1-10 ppm (conc.)	_____ (conc.)	_____ (conc.)
BENZENE	.1 % (conc.)	_____ (conc.)	_____ (conc.)
DINITROBENZENE	100-300 ppm (conc.)	_____ (conc.)	_____ (conc.)
SULFURIC ACID	.0001 % (conc.)	_____ (conc.)	_____ (conc.)
Specified purity of product	_____ (conc.)	_____ (conc.)	_____ (conc.)
Ash content of product	_____ (conc.)	_____ (conc.)	_____ (conc.)

5) Estimates of losses during manufacture which escape from the plant site after all recovery or pollution control operations (an order of magnitude estimate would be preferred to no estimate):

	Losses of:				
	Chemical during manufacture(1)	Raw materials and major known organic by-products and co-products (specify)			Unidentified organic by-products and wastes(5)
Name →	NITROBENZENE	(2)	(3)	(4)	
Annual total losses, lbs/yr.	6500				
Percent of total losses entering:					
Air	40				
Water	60				
Soil	0				
Deep Well	0				

(Note: See Question 6 for use of identification numbers for chemicals.)

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6) Current methods of disposal of waste materials produced during the manufacture of the organic chemical in (check appropriate boxes):

NO WASTE GENERATED

	On-site	Off-site (Contractor, Muncipal)	Identification of Chemicals Disposed*
Deep well	☐	☐	_____
Burial in landfill, no container	☐	☐	_____
Burial in landfill, in containers	☐	☐	_____
Degradation in soil compost	☐	☐	_____
Incineration	☐	☐	_____
Wet air oxidation	☐	☐	_____
Chemical oxidation or destruction (ozone, chlorine, permanganate, peroxide)	☐	☐	_____
Degradation in water phase (activated sludge, trickling filter)	☐	☐	_____
Adsorption on activated carbon	☐	☐	_____
Evaporation pond	☐	☐	_____
Other (specify: _____)	☐	☐	_____

* Use identification numbers in Question 5 to identify specific chemicals disposed in each category.

Please return the completed questionnaire in the enclosed envelope by January 17, 1975, to:

K. E. McCaleb
Stanford Research Institute
Menlo Park, California 94025

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