

A. I. Mytelko

INTERSTATE SANITATION COMMISSION

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ODOR SURVEY

in the

New Jersey - Staten Island Area

and

New Jersey - Upper Manhattan Area

1967

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Introduction

This report will deal with odor emissions noticed from New Jersey and New York industrial and commercial establishments in close proximity to the state boundary around the Staten Island and Upper Manhattan, New York, areas. Our records show that a vast majority of the people who complain to the Commission about interstate air pollution problems mention odors and reside in these areas.

The odor survey was carried out in two parts. The first part consisted of a general evaluation of approximately one month with the primary concern being to cover all the known possible sources in the survey areas in the shortest time. Where it was feasible, this information was compared with past conditions noticed by Commission personnel during various field sampling operations or complaint follow-up investigations conducted during the Commission's five years of authorization in Interstate Air Pollution matters. Using this information gathered from Part I of the survey as a guideline, Part II was initiated to collect and verify information on the industries that appeared to be chronic offenders.

Following is an alphabetical listing of the surveyed industries with Part I findings consisting of a general evaluation about the odor emissions and Part II findings consisting of a listing of specific observations. Individual recommendations will be found with each industry.

Allied Chemical Corporation (Barrett Division)
Edgewater, New Jersey

Part I - General Evaluation

Chemical odor - No odor was detected coming from this plant during Part I of the survey. Various chemical type odors originating from this plant have been detected in Upper Manhattan in the past.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emission</u>	<u>Location of Observer</u>
8/25/67	2:30-2:45 p.m.	Tar	River Rd., Edgewater, N. J.

Recommendations

This plant should be kept under surveillance for possible excessive tar-type odors.

Allied Chemical Company (General Chemical Division)
Elizabeth, New Jersey

Part I - General Evaluation

- (1) Sulfur Dioxide - Sulfur dioxide odor was detected being emitted from this plant during both past and recent investigations.
- (2) Hydrogen Sulfide - Moderate hydrogen sulfide odor noticed during the present survey. The intensity of this odor has been stronger on past occasions.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emission</u>	<u>Location of Observer</u>
8/2/67	12:25-12:35 p.m.	SO ₂	Allen St., Elizabeth, N.J.

Recommendations

This plant should be kept under surveillance for possible excessive sulfur dioxide odor emissions.

Allied Chemical Company
Elizabethport, New Jersey

Part I - General Evaluation

Sulfur Dioxide - Very noticeable sulfur dioxide odor in vicinity of the plant. In the past, a strong sulfur dioxide odor was detected while in the plume from the sulfuric acid plant. Concentrations as high as 4 to 5 ppm were recorded using the mobile unit.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/27/67	2:00-2:10 p.m.	SO ₂	North Ave., & Rt. 1, N.J.
8/ 2/67	1:00-1:45 p.m.	SO ₂	North Ave., & Rt. 1, N.J.
8/15/67	2:30-2:45 p.m.	SO ₂	North Ave., & Rt. 1, N.J.

Recommendations

It is recommended that an in-plant investigation be undertaken to determine if this company still has an excessive sulfur dioxide emission problem.

American Agricultural and Chemical Company
Carteret, New Jersey

Part I - General Evaluation

- (1) NH_3 - No ammonia odor noticed on recent Part I survey. Ammonia type odors originating from this plant have been detected during past investigations.
- (2) Nitrogen Dioxide - No nitrogen dioxide odors noticed during the recent Part I survey. Mild odors of nitrogen dioxide have been noticed on past occasions.
- (3) Fertilizer Type Odor - This odor is still being emitted from this company but not with the intensity that had been noticed in the past.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
1/24/67	10:00-10:30 a.m.	Fertilizer	Richmond Av., Staten Island
7/20/67	11:25-11:45 a.m.	Fertilizer	Loers St., Carteret, N.J.
		Phosphorous Oxide	Loers St., Carteret, N.J.
7/25/67	11:45-12 Noon	Fertilizer	Ft. of Muldoon Rd., Staten Is.
8/15/67	1:10-1:20 p.m.	Fertilizer	Rosevelt Av., Carteret, N.J.
9/15/67	1:35-1:45 p.m.	Fertilizer	Middlesex Av., Carteret, N.J.
		Ammonia	Middlesex Av., Carteret, N.J.

Recommendations

The fertilizer odor seems to be the major problem with this plant and they should be cited to correct the situation. Phosphorous oxide and ammonia odors have not been noticed too frequently; however, an investigation of these odor emissions should be considered.

American Cyanamid Company
Linden, New Jersey

Part I - General Evaluation

- (1) Mercaptan Odor - usually identified as a skunk smell. This was only faintly noticed and not too frequent during the Part I survey; however, in the past, this odor was detected to be quite strong on various occasions causing numerous complaints from residents on Staten Island.
- (2) Hydrogen Sulfide - weak odor noticed during Part I survey. In the past, the intensity of this odor was very strong on Staten Island.
- (3) Sulfur Dioxide - This odor was not noticed during Part I survey. In the past, a strong sulfur dioxide odor was frequently obtained while in the plume from the sulfuric acid plant. Concentrations of over 1.0 ppm were obtained using the mobile unit on many of these occasions.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
3/1/67	All day	Mercaptan	Travis Staten Island & in Plant
	3:30-4:00 p.m.	H ₂ S	In Plant
3/20/67	10:00-12 Noon	Mercaptan	Travis Staten Island

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/18/67	12:45-12:50 p.m.	Moderate Mercaptan	Ft. of Tremley Pt. Rd., New Jersey
7/19/67	2:35- 2:45 p.m.	Moderate Mercaptan	Ft. of Tremley Pt. Rd., New Jersey
7/20/67	12:30-12:35 p.m.	Moderate Mercaptan	Ft. of Tremley Pt. Rd., New Jersey
7/25/67	1:30- 1:45 p.m.	Moderate Mercaptan	Meredith Av., Travis, Staten Island
8/1/67	10:00-10:15 a.m.	Mercaptan	Victory Blvd., & Glen St., Travis, S. I.
8/10/67	10:45-11:05 a.m.	Strong Mercaptan	Meredith Av., Travis, Staten Island
11/27/67	11:00-11:10 a.m.	Moderate Mercaptan	Cannon Av., & Glen St., Staten Island
	11:45-11:55 a.m.	Moderate Mercaptan	Cannon Av., & Glen St., Staten Island
11/28/67	10:25-10:40 a.m.	Strong Mercaptan	Victory Blvd. & Glen St., Travis, S. I.
	10:40-10:45 a.m.	Strong Mercaptan	Glen St. & Melvin St. Travis, Staten Island
11/29/67	3:30- 3:45 p.m.	Moderate Mercaptan	Meredith Av. & Chelsea Rd., Travis, S. I.
12/8/67	1:55- 2:15 p.m.	Strong Mercaptan	Victory Blvd. & Cannon Rd., Travis, S.I.
12/14/67	1:30- 1:45 p.m.	Moderate Mercaptan	Meredith Av., & Neck Creek, Travis, S. I.
12/16/67	10:15-10:30 a.m.	Strong Mercaptan	Meredith Av. & Cannon Rd., Travis, S. I.
	11:30-11:45 a.m.	Strong Mercaptan	Victory Blvd. & Cannon Rd., Travis, S.I.

RECOMMENDATIONS

It is concluded from the above observations that this

company should be cited to cease causing the Mercaptan odor. Hydrogen sulfide emission does not seem to be a major problem and continued surveillance is recommended.

American Mineral Spirits (Division of Union Oil of California
Carteret, New Jersey)

Part I - General Evaluation

Solvent Type Odors - These type of odors have been observed during both past and Part I investigations.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

American Smelting and Refining Company
Perth Amboy, New Jersey

Part I - General Evaluation

Burnt Rubber Odor - A burnt rubber type odor is emitted quite frequently from this plant. This is a situation that has existed for a long time.

Part II - Specific Observations

This plant was shut down during the survey due to a strike.

Recommendations

Close surveillance is recommended when the strike is over.

Anaconda Copper Refinery
Perth Amboy, New Jersey

Part I - General Evaluation

Burnt Rubber Odor - This type of odor has been noticed during past investigations.

Part II - Specific Observations

The plant was shut down during the survey due to a strike.

Recommendations

Close surveillance is recommended when strike is over.

Anlin Company
Perth Amboy, New Jersey

Part I - General Evaluation

- (1) Sulfur - Sulfur odors have been noticed during Part I and past investigations in the vicinity of this plant.

- (2) Hydrogen Sulfide - Hydrogen Sulfide odors have been noticed in both past and recent investigations in the vicinity of this plant.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emission</u>	<u>Location of Observer</u>
8/31/67	12:00-12:15 p.m.	Slight H ₂ S	Amboy Av., Perth Amboy, N.J.

Recommendations

This plant should be kept under surveillance for possible excessive Hydrogen Sulfide odor emissions.

Bird & Son Roofing Company
Perth Amboy, New Jersey

Part I - General Evaluation

Asphalt Odor - This type odor has been noticed during Part I and past investigations in the vicinity of this plant.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emission</u>	<u>Location of Observer</u>
6/14/67	2:45-3:00 p.m.	Asphalt	Amboy Av., Perth Amboy, N.J.

Recommendations

It is recommended that this company be kept under surveillance for possible excessive asphalt odor emissions.

California Oil Company
Perth Amboy, New Jersey

Part I - General Evaluation

- (1) Flowery Type Odor - This is the characteristic type odor noticed when in the plume from the catalytic cracker unit of this plant. This odor was noticed one or two times during the Part I survey when the new CO boiler built to control this emission was reported out of operation. Before the CO unit was put into operation, the release of this odor was a frequent occurrence.
- (2) Crude Oil Odor - This odor was detected to be strong in the vicinity of the plant during Part I investigations. This is a condition that has existed in the past.
- (3) Propane Gas - This odor has been noticed in both past and Part I investigations in the vicinity of the plant.
- (4) Phthalic Anhydride - Mild odor noticed during Part I survey. Stronger and more frequent odor noticed in the past.

Part II - Specific Observations

Date

6/14/67 2:30- 2:45 p.m. Crude Oil Amboy Av., Perth Amboy, N.J.

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/12/67	12:00-12:10 p.m.	Crude Oil	Marrer Rd., Perth Amboy, N. J.
	12:15-12:20 p.m.	Phthalic Anhydride	State St., Perth Amboy, N. J.
7/20/67	10:55-11:10 a.m.	Crude Oil	Amboy Av., Perth Amboy, N. J.
		Propane Gas	Amboy Av., Perth Amboy, N. J.
8/23/67	1:15- 1:25 p.m.	Strong Crude Oil	Amboy Av., Perth Amboy, N. J.
9/15/67	2:15- 2:55 p.m.	Crude Oil	Amboy Av., Perth Amboy, N. J.

Recommendations

The Crude Oil odors appear to be a major problem and this company should be cited to correct the situation. The Phthalic Anhydride and Propane Gas odors do not seem to be a serious problem; however, an investigation of these odors should be considered.

DuPont Chemical Company
Linden, New Jersey

Part I - General Evaluation

- (1) Sulfur Dioxide - No sulfur dioxide odor was observed during the Part I survey. Moderate sulfur dioxide odors have been noticed on past occasions.
- (2) Chlorine Type Odors - This type odor was detected during both Part I and past investigations.
- (3) Amine Type Odors - This type of odor has been noticed during both Part I and past investigations.

Part II - Specific Observations

No odor emissions noticed during this part of the survey.

Recommendations

Continued surveillance for possible excessive Chlorine and Amine type odors should be considered.

Esso Oil Company
Bayonne, New Jersey

Part I - General Evaluation

- (1) Asphalt Type Odor - Strong asphalt type odors are frequently being emitted from this plant. This situation has existed in the past and may be the cause of numerous complaints from residents of Staten Island.
- (2) Crude Oil Odor - Crude oil type odors have been noticed from this plant during Part I of survey. This situation was also a frequent occurrence in the past.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/21/67	11:30-12 Noon	Strong Asphalt	Lower Hook Road, Bayonne, New Jersey
8/11/67	10:25- 1:35 a.m.	Asphalt	Richmond Terrace, Staten Island, New York
	11:05-11:15 a.m.	Asphalt	Richmond Terrace, Staten Island, New York
9/13/67	9:15- 9:20 a.m.	Strong Asphalt	Expressway & Clove Road, Staten Island, New York
9/15/67	11:15-11:30 a.m.	Asphalt	Richmond Terrace, Staten Island, New York
12/ 5/67	11:20-11:30 a.m.	Asphalt	Richmond Terrace, Staten Island, New York

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
12/13/67	10:30-10:45 a.m.	Asphalt	Lower Hook Road, Bayonne New Jersey

Recommendations

It is apparent that this plant should be cited to correct the situation causing excessive asphalt odors.

Esso Oil Company
Linden, New Jersey

Part I - General Evaluation

- (1) Hydrogen Sulfide - Hydrogen Sulfide odors have been noticed being emitted from this plant during the Part I survey. This situation has also occurred very frequently in the past.
- (2) Crude Oil and Gasoline Odors - These type of odors were detected quite often in the vicinity of the plant during both Part I and past investigations.
- (3) Methane and Propane Gas - These light gas odors have been noticed on intermittent occasions during both Part I and past investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/13/67	9:20- 9:30 a.m.	H ₂ S	Richmond Avenue, Staten Island, N.Y.
	9:30-10:00 a.m.	H ₂ S	Travis, Staten Island
7/18/67	12:15-12:30 p.m.	Strong Gasoline	Bedle Road & Park Ave., Linden, N. J.
		Strong Crude Oil	Also Route 1, Linden, New Jersey
7/19/67	1:30- 1:35 p.m.	Gasoline	Rt. 1, Linden, N. J.

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
		Crude Oil	Rt. 1, Linden, New Jersey
8/ 8/67	11:15-11:30 a.m.	Gasoline	Bedle Place & Mack Place, Linden, New Jersey
	11:15-11:30 a.m.	Crude Oil	Bedle Place & Mack Place, Linden, New Jersey
	11:15-11:30 a.m.	Moderate H ₂ S	Bedle Place & Mack Place, Linden, New Jersey
9/15/67	12:50- 1:00 p.m.	Gasoline	S. Wood Ave., near Turn- pike, Linden, New Jersey
	12:50- 1:00 p.m.	Crude Oil	S. Wood Ave., near Turn- pike, Linden, New Jersey
12/28/67	1:00- 1:15 p.m.	Gasoline	Rt. 1, Linden, New Jersey
	1:00- 1:15 p.m.	Crude Oil	Rt. 1, Linden, New Jersey

Recommendations

Gasoline and Crude Oil odors appear to be a major problem. Hydrogen Sulfide odors are not as frequent and do not appear to be a serious problem but continued surveillance is advised. An investigation leading to methods of reducing Gasoline and Crude Oil odors from this plant is recommended.

Food Machinery Corporation
Carteret, New Jersey

Part I - General Evaluation

- (1) Phosphorous Pentoxide - This odor has been observed during both Part I and past investigations.
- (2) Hydrogen Sulfide - This odor has been observed to be quite strong in the vicinity of the plant during both Part I and past investigations.
- (3) Nitrogen Dioxide - Moderate odor of Nitrogen Dioxide has been observed during both past and Part I investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emission</u>	<u>Location of Observer</u>
8/15/67	1:30- 1:45 p.m.	Strong H ₂ S	Lafayette Avenue, Carteret New Jersey

Recommendations

This plant should be kept under surveillance for possible excessive Hydrogen Sulfide odor emissions.

Freshkills Landfill Operation
Staten Island, New York

Part I - General Evaluation

Garbage Odor - This odor has been detected to be quite strong during both Part I and past investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/25/67	11:30-11:45 a.m.	Garbage	Richmond Avenue, Staten Island, N.Y.
8/10/67	11:15-11:45 a.m.	Strong Garbage	Richmond Avenue, Staten Island, N.Y.
	12:00-12:05 p.m.	Strong Garbage	Muldoon Road, Staten Island, New York
11/16/67	8:00- 8:15 p.m.	Garbage	Richmond Avenue, Staten Island, N. Y.
	8:30- 8:35 p.m.	Garbage	Richmond Avenue, Staten Island, N.Y.
11/27/67	11:30-11:40 a.m.	Garbage	Richmond Avenue, Staten Island, N. Y.

Recommendations

It is recommended that the New York City Sanitation Department be notified to take measures to correct the situation causing the excessive garbage odor from the landfill site.

General American Transportation Corporation
Carteret, New Jersey

Part I - General Evaluation

Solvent Type Odors - Very strong odors of this type have been observed in the vicinity of this plant during both Part I and past investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/20/67	11:55-12:05 p.m.	Solvents	Lafayette Street, Carteret, New Jersey
8/15/67	1:45- 1:55 p.m.	Solvents	Lafayette Street, Carteret, New Jersey

Recommendations

This company should be kept under surveillance for possible excessive solvent odor emissions.

General Aniline & Film Corporation
Linden, New Jersey

Part I - General Evaluation

- (1) Chlorine & Ammonium Chloride - These odors have been detected to be quite strong during both Part I and past investigations.
- (2) Mixed Acid Type Odors - This odor is usually a mixture of hydrochloric, nitric and sulfuric acids. These type odors have been detected to be quite strong during both Part I and past investigations.
- (3) Solvent Type Odors - Solvent type odors have been noticed on various occasions during both Part I and past investigations.
- (4) Nitrogen Dioxide - Very strong odor of Nitrogen Dioxide noticed during the Part I survey. This situation has also been detected to a lesser degree in the past.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
6/14/67	11:00-12:00 Noon	NO ₂	Road outside plant
7/18/67	12:50- 1:00 p.m.	Strong Mixed Acids	Road outside plant
	12:50- 1:00 p.m.	Strong Solvents	Road outside plant
	12:50- 1:00 p.m.	Strong Cl ₂	Road outside plant

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/19/67	2:00- 2:30 p.m.	Strong Mixed Acids	Road outside plant
	2:00- 2:30 p.m.	Strong Solvents	Road outside plant
	2:00- 2:30 p.m.	Strong NH ₄ Cl	Road outside plant
	2:00- 2:30 p.m.	Strong Cl ₂	Road outside plant
7/20/67	12:40-12:55 p.m.	Strong Solvents	Road outside plant
	12:40-12:55 p.m.	Strong Mixed Acids	Road outside plant
	12:40-12:55 p.m.	Strong NH ₄ Cl	Road outside plant
	12:40-12:55 p.m.	Strong Cl ₂	Road outside plant
9/11/67	12:30-12:45 p.m.	Strong Solvents	Linden Roselle STP
9/12/67	12 Noon-12:30 p.m.	Strong Solvents	Linden Roselle STP
9/13/67	11:00-11:15 a.m.	Strong Solvent	Linden Roselle STP
	11:00-11:15 a.m.	Strong NH ₄ Cl	Linden Roselle STP
	11:00-11:15 a.m.	Strong Mixed Acids	Linden Roselle STP
9/15/67	1:00- 1:10 p.m.	Solvent	Linden Roselle STP
11/30/67	11:00-11:15 a.m.	Strong Mixed Acids	Linden Roselle STP
	11:00-11:15 a.m.	Strong NH ₄ Cl	Linden Roselle STP
	11:00-11:15 a.m.	Solvents	Linden Roselle STP
12/ 5/67	12:45- 1:00 p.m.	Strong Solvents	Road outside plant
	12:45- 1:00 p.m.	Strong NH ₄ Cl	Road outside plant
	12:45- 1:00 p.m.	Mixed Acids	Road outside plant
12/ 6/67	11:30-11:45 a.m.	Strong Solvent	Road outside plant
	11:30-11:45 a.m.	Mixed Acids	Road outside plant
12/27/67	12 Noon-12:15 p.m.	Solvent	Road outside plant
	12 Noon-12:15 p.m.	Mixed Acid	Road outside plant

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
12/28/67	12:30-12:45 p.m.	Solvent	Road outside plant
	12:30-12:45 p.m.	NH ₄ Cl	Road outside plant
	12:30-12:45 p.m.	Mixed Acids	Road outside plant

Recommendations

It is concluded from the above observations that the company should be cited to correct the situations causing excessive odor emissions of solvents (benzene, acetone, acetic acid, methyl amine, etc., mixed acids (Hydrochloric, Nitric, Sulfuric), Chlorine and Ammonium Chloride. An investigation of possible excessive emissions of nitrogen dioxide is also recommended.

Hess Oil Company
Port Reading, New Jersey

Part I - General Evaluation

- (1) Hydrogen Sulfide - This type odor was not observed during the Part I survey. In the past, on intermittent occasions, the intensity of this odor has been very strong.
- (2) Crude Oil & Gasoline Type Odors - These type odors have been observed during both Part I and past investigations.

Part II - Specific Observations

<u>Date-</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/17/67	12:15-12:30 p.m.	Crude Oil	West Avenue, Port-Reading, N. J.
8/10/67	12:15-12:30 p.m.	Moderate Crude Oil	Arthur Kill Road, Staten Island

Recommendations

It is recommended that this company be kept under surveillance for possible excessive crude oil odor emissions.

Hills Brothers Coffee, Inc.
Edgewater, New Jersey

Part I - General Evaluation

Coffee Odor - Strong burnt coffee odor has been frequently noticed in upper Manhattan during both Part I and past investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/26/67	8:30-8:40 p.m.	Strong Burnt Coffee	Hudson River Drive, New York
8/25/67	2:15-2:30 p.m.	Strong Burnt Coffee	River Road, Edgewater, New Jersey

Recommendations

This plant should be cited to correct the situation causing excessive burnt coffee odor emissions.

Indol Chemical Company
Carteret, New Jersey

Part I - General Evaluation

- (1) Amine Type Odors - This type of odor was noticed in the vicinity of the plant during both Part I and past investigations.
- (2) Solvent Type Odors - These type odors are quite strong in the vicinity of the plant and have been noticed in both Part I and past investigations.
- (3) Hydrochloric Acid - This odor has been noticed in the vicinity of the plant during both Part I and past surveys.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
6/20/67	12:10-12:15 p.m.	Moderate Solvents	Leopard Street, Carteret, New Jersey
		Moderate Amines	Leopard Street, Carteret, New Jersey
8/15/67	2:00- 2:05 p.m.	Solvents	Lefferts Street, Carteret, New Jersey

Recommendations

This plant should be inspected to determine if excessive solvent and amine type odor emissions are still occurring.

Koppers Company
Port Reading, New Jersey

Part I - General Evaluation

Solvent Type Odors - This type of odor has been noticed in the vicinity of the plant during both Part I and past investigations.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

Lever Brothers Company, Inc.
Edgewater, New Jersey

Part I - General Evaluation

Vegetable Oil Odor - This odor was not detected during the Part I survey. In the past, this odor has been noticed in upper Manhattan.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

M & T Chemical Company
Carteret, New Jersey

Part I - General Evaluation

- (1) Sulfur Dioxide - Mild sulfur dioxide odor noticed during the Part I survey. This odor was observed to be much stronger on past occasions.
- (2) Nitrogen Dioxide - No nitrogen dioxide odors noticed during Part I survey. Mild nitrogen dioxide odors noticed in the past.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance for excessive sulfur dioxide emissions should be considered.

Nassau Smelting & Refinery Company
Staten Island, New York

Part I - General Evaluation

Burnt Rubber Odor - Moderate burnt rubber type odors detected during Part I survey. Stronger burnt rubber odors detected in the past.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

National Lead Company
Perth Amboy, New Jersey

Part I - General Evaluation

Burnt Rubber Odor - A burnt rubber type odor is emitted quite frequently from this plant. This is the same situation that has existed in the past.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
8/23/67	12:30-12:50 p.m.	Strong Burnt Rubber	Meinzer Street, Perth Amboy, N. J.
	2:00- 2:30 p.m.	Strong Burnt Rubber	In Plant
9/11/67	11:30-11:45 a.m.	Burnt Rubber	Ft. of Outerbridge, New Jersey
9/15/67	2:00- 2:15 p.m.	Burnt Rubber	State Street, Perth Amboy, New Jersey
11/16/67	6:00- 6:15 p.m.	Burnt Rubber	Arthur Kill Road, Staten Island
12/ 6/67	12:30-12:45 p.m.	Burnt Rubber	State Street, Perth Amboy, New Jersey
12/ 8/67	12:45- 1:00 p.m.	Burnt Rubber	Ft. of Outerbridge, Staten Island

Recommendations

It is recommended that this company should be cited to correct the cause of the excessive burnt rubber odor emissions.

National Lead Company
South Amboy, New Jersey

Part I - General Evaluation

Sulfur Dioxide - Moderate odors were observed during the Part I survey. This odor was detected to be more intense on past occasions.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

Proctor & Gambles Corporation
Staten Island, New York

Part I - General Evaluation

Soap Odor - This odor has been detected to be quite strong during both Part I and past surveys.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
9/12/67	11:15-11:30 a.m.	Soap	Goethals Br., Staten Island, New York
9/15/67	12:20-12:35 p.m.	Soap	Western Ave., Staten Island, New York
11/30/67	10:30-10:40 a.m.	Strong Soap	Goethals Br., Staten Island, New York
12/ 5/67	12:00-12:10 p.m.	Soap	Western Ave., Staten Island, New York
12/ 8/67	2:45- 2:55 p.m.	Strong Soap	Western Ave., Staten Island, New York

Recommendations

It is recommended that this plant be cited to correct the situation causing the excessive soap type odor emissions.

Public Service Utilities Station
Linden, New Jersey

Part I - General Evaluation

Smoke - Moderate smoke odors have been detected coming from this plant during both Part I and past investigations.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

Public Service Utilities Station
Sewarren, New Jersey

Part I - General Evaluation

- (1) Smoke - Strong smoke odors have been noticed coming from this plant on many occasions during both Part I and recent investigations.
- (2) Sulfur Dioxide - No odor of sulfur dioxide noticed during the Part I survey. Moderate sulfur dioxide odors have been noticed in the past.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance for excessive smoke odors is recommended.

Reichhold Chemical Company
Carteret, New Jersey

Part I - General Evaluation

Amine Type Odor - This odor was not observed during the Part I survey. Moderate amine odors have been observed in the past.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

Reichhold Chemical Company
Elizabeth, New Jersey

Part I - General Evaluation

Malic and Phthalic Anhydride Odors - These type odors are usually detected to be of high intensity in the vicinity of the plant during both Part I and past investigations.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
7/18/67	11:45- 12 Noon	Malic Anhydride	Bayway Av., Elizabeth, New Jersey
		Phthalic Anhydride	Bayway Av., Elizabeth, New Jersey
7/19/67	1:15- 1:25 p.m.	Moderate Malic Anhydride	Bedle & Park Place, Linden, New Jersey
		Moderate Phthalic Anhydride	Bedle & Park Place, Linden, New Jersey
8/ 2/67	12:05-12:20 p.m.	Strong Malic Anhydride	Myrtle Street & Polona Av., Bayway, New Jersey
		Strong Phthalic Anhydride	Myrtle Street & Polona Av., Bayway, New Jersey
	12:25-12:35 p.m.	Strong Malic Anhydride	Allen Street, Bayway, New Jersey
		Strong Phthalic Anhydride	Allen Street, Bayway, New Jersey

<u>Date</u>			
8/ 4/67	12:00-12:15 p.m.	Malic Anhydride	Ft. of Goethals Bridge, New Jersey
		Phthalic Anhydride	Ft. of Goethals Bridge, New Jersey
8/28/67	11:45-12 Noon	Malic Anhydride	Ft. of Goethals Bridge, New Jersey
		Phthalic Anhydride	Ft. of Goethals Bridge, New Jersey
11/16/67	7:15- 7:30 p.m.	Malic Anhydride	Ft. of Goethals Bridge, New Jersey
		Phthalic Anhydride	Ft. of Goethals Bridge, New Jersey

Recommendations

It is recommended that this company be cited to correct the situations causing excess odor emissions of Malic and Phthalic Anhydride.

Texaco Oil Company
Bayonne, New Jersey

Part I - General Evaluation

Crude Oil Odor - A moderate crude oil odor has been observed in both Part I and past investigations.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

U. S. Gypsum Company
Staten Island, New York

Part I - General Evaluation

Pasteboard Type Odor - This odor has been detected in the vicinity of the plant during both Part I and past surveys.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
8/11/67	10:40-10:55 a.m.	Pasteboard	Richmond Terrace, Staten Island
9/15/67	11:30-11:40 a.m.	Moderate Pasteboard	Richmond Terrace, Staten Island

Recommendations

It is recommended that this company be kept under surveillance for possible excessive pasteboard type odor emissions.

U. S. Metals Refining Company
Carteret, New Jersey

Part I - General Evaluation

- (1) Sulfur Dioxide - No odors of sulfur dioxide noticed during Part I survey. Sulfur Dioxide odors have been attributed to this plant in the past.
- (2) Burning Type Odor - This odor usually described as burning rubber or a burnt metal type odor, usually is accompanied by thick smoke and dust in the vicinity of the plant, was not noticed during the Part I survey. In the past, this odor was detected to be quite strong in Staten Island.

Part II - Specific Observations

This plant was shut down during the survey due to a strike.

Recommendations

Close surveillance for burning type odors is recommended when strike is over.

Verona Pharma Chemical Company
Bayonne, New Jersey

Part I - General Evaluation

Mixed Acid Odors - In the vicinity of the plant, strong acid odors consisting of Hydrochloric, Nitric, and Sulfuric Acid can be noticed. This situation has also existed in the past.

Part II - Specific Observations

No odor emissions detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

Wesson Oil Company
Bayonne, New Jersey

Part I - General Evaluation

Vegetable Oil Odor - This odor was noticed in the vicinity of the plant during Part I of the survey. In the past, this odor has been detected to be quite strong on Staten Island.

Part II - Specific Observations

<u>Date</u>	<u>Time</u>	<u>Odor Emissions</u>	<u>Location of Observer</u>
8/ 7/67	10:00-10:10 p.m.	Vegetable Oil	Hudson Blvd. & 20th Street, Bayonne, New Jersey
8/11/67	10:10-10:25 a.m.	Strong Vegetable Oil	Richmond Terrace, Staten Island, N.Y.
	11:15-11:25 a.m.	Strong Vegetable Oil	Richmond Terrace, Staten Island, N.Y.
9/13/67	9:15- 9:20 a.m.	Vegetable Oil	Expressway & Clove Road, Staten Island, New York
11/14/67	12:30-12:40 p.m.	Vegetable Oil	Lower Hook Road, Bayonne, New Jersey
11/29/67	10:30-10:45 a.m.	Vegetable Oil	Lower Hook Road, Bayonne, New Jersey
12/ 5/67	11:00-11:15 a.m.	Vegetable Oil	Richmond Terrace, Staten Island, New York

Recommendations

It is recommended that this company be cited to correct the situation causing the excessive vegetable oil odor.

Witco Chemical Company
Perth Amboy, New Jersey

Part I - General Evaluation

Chemical Odors - These odors have been noticed in both Part I and past investigations in the vicinity of this plant.

Part II - Specific Observations

No odors detected during this part of the survey.

Recommendations

Continued surveillance should be considered.

In summary, there are twelve plants that have one or more definite major odor problems that call for immediate corrective action, five that call for a thorough investigation to determine the extent of their odor problem and twenty-seven which should be kept under close surveillance. There are a few industries which fall into more than one of the above categories. It should be mentioned that during both Part I and II of the odor survey, the copper refineries were shut down because of a strike. Naturally, no data on odor emissions from plants such as U. S. Metal Refining Company, American Smelting & Refining Company, Anaconda Copper Refinery was gathered during this time. Observations made in the past attributed burnt rubber odor emissions to each of these plants. Therefore, it is recommended that these plants should be watched very closely when the strike is concluded.