

# Ludlow Park Homeowners Association Annual Meeting



Yonkers Joint WWTP  
Wednesday March 19, 2014  
7:30 PM

# Yonkers Joint O&M Management Team

- Jeff Bryant
  - Plant Superintendent
  - 231-2847
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- Steve Sanders
  - Supervisor of Plant Operations
  - 231-2852
- Erwin Vazquez
  - Supervisor of Maintenance
  - 231- 2850

# Odor Remediation Project – SY009

- Phase I – Screen & Grit Bldg HVAC and Odor Control including Ludlow St PS Odor Control
- Phase II – HVAC System Upgrades to Blower, Admin & DAF Bldg's & new boilers
- Phase III – Odor Control for Primary Access Bldg & South Pumping Station, HVAC systems in several other area's and buildings
- 95% Complete
- Disputed Work by Contractor
- Code Review in Process
- Bid 4<sup>th</sup> Q 2014
- Funding Request 1<sup>st</sup> Q 2015

# Plant Capacity

- 2013 Actual Flow
- Design Flow
- Hydraulic Capacity
- Permitted Flow
- 76 MGD
- 92 MGD
- 330 MGD
- 120 MGD (12 MRA)

# Results of Odor Control Projects

Rank	Process Area	Odor Control Method	Cost
1	Primary Settling Tanks	Covered and Odor Control by Primary Settling Tank Mist Scrubbers (addressed items ranked 1 – 4)	\$ 9.5
2	Primary Settling Influent Channel		
3	Aerated Grit Chambers		
4	Grit Chamber Effluent Channel		
5 & 6	South Yonkers Screen House	CSO Odor Control Mist Scrubbers and Treatment System inside the building	\$ 3.0
7	Blower, Admin, Thickener & Secondary Digester building	Building ventilation & Exhaust, odorous air treatment, digester roofs and blow off vents	\$ 4.5
8	Aeration Basins	Process Controls, Foam Control & Misting, Fine Pore Diffusers	\$ 4.9
9	Primary Thickener Building	Mist Scrubber	\$ 3.1
10	Digester Overflow	Covers & Odor Control to Primary and Secondary Digesters – Activated Carbon	\$ 0.28
11	Final Settling Tanks	Automated Skimmer System	\$ 3.5

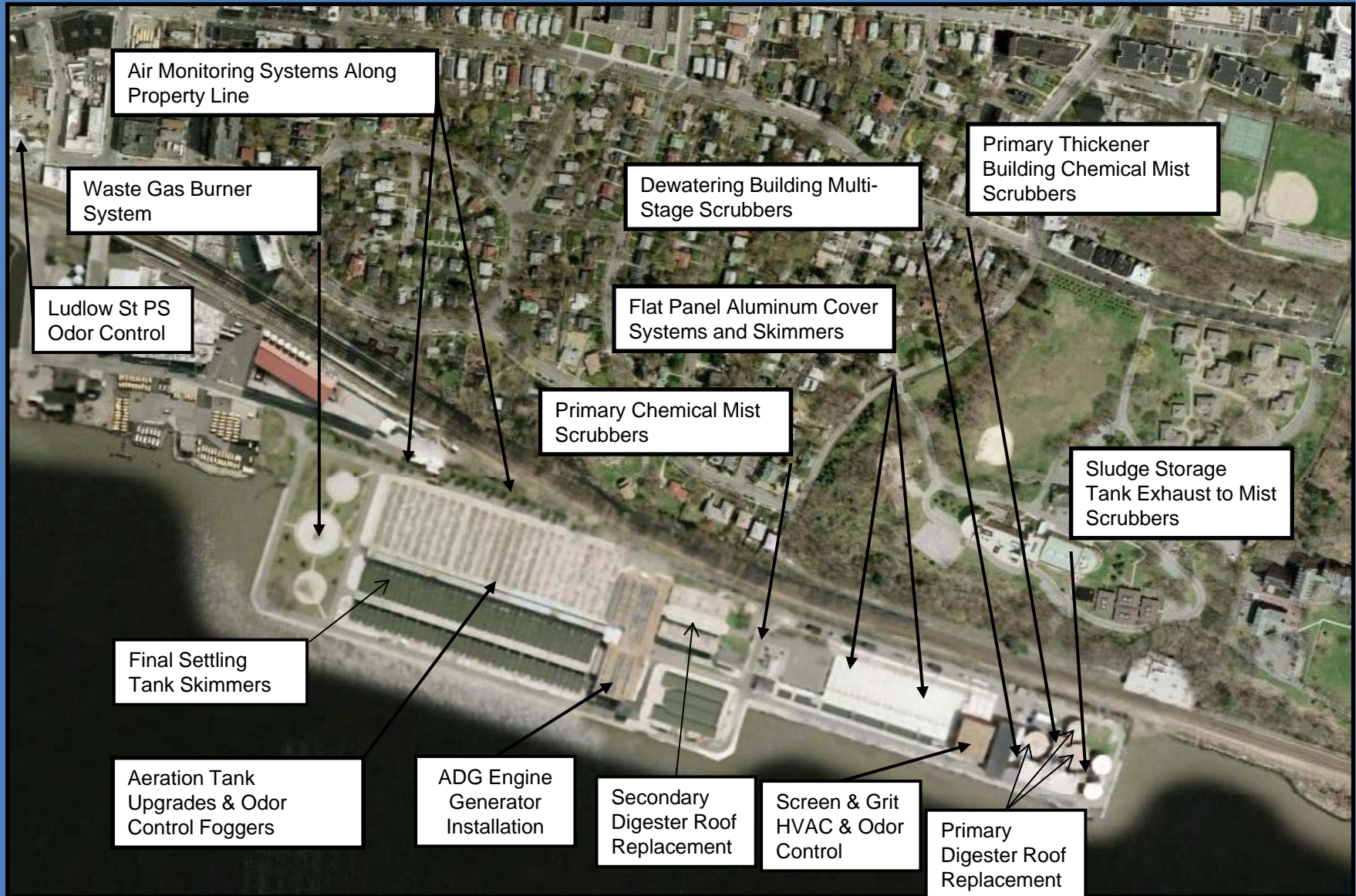
# Results of Odor Control Projects (cont.)

Rank	Process Area	Odor Control Method	Cost
12 & 13	Screen & Grit HVAC and Odor Control / Breezeway	95% Complete	\$ 9.6
14 & 15	Sludge Storage Tank Vents	Primary Thickener Odor Control System	\$ 2.0
	Ludlow St PS Additional Mitigation	Odor Control with Carbon Filters	\$ 3.2
	Dewatering Building & Truck Loading Bay	3 Stage Scrubber	\$ 3.5
	Centrifuge & Cake Pump Room	95% Complete – 3 Stage Scrubber	\$ 3.65
	Digester Gas Flares	Upgrades Controls & Replace Primary Flare	\$ 0.9
	Permanganate Storage Silo	Chemical Storage for Primary Thickener Odor Control	\$ 1.0
	HVAC Phase II (2014)	HVAC Blower, Administration and DAF Thickener Buildings, New Secondary Boilers	\$ 9.8
	HVAC Phase III (2015)	HVAC in many area's, Odor Control for Primary Access Bldg & South Pumping Station	\$ 7.3

# Results of Odor Control Projects (cont.)

Rank	Process Area	Odor Control Method	Cost
	Air Monitoring System	Installed H <sub>2</sub> S Monitors on East Property Line and weather station for real time monitoring	\$ 0.4
	Foam Application to Sludge Cake	Unsuccessful trial in 2008 to reduce odors during hauling	\$ 0.05
	Ludlow Park	Install Carbon Inserts in Manholes	\$ 0.01
		<b>Total Expended including current project construction estimates</b>	<b>\$ 69.8</b>

# Odor Abatement Projects Completed





# Yonkers Joint WWTP H<sub>2</sub>S Monitoring System

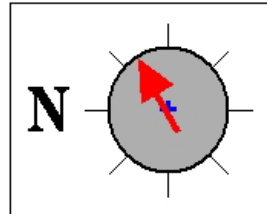
**PRINT H<sub>2</sub>S REPORT SUMMARY**

Weekly Summary

Daily Summary

**PRINT H<sub>2</sub>S REPORT DATA**

Current Week



## H<sub>2</sub>S Units - Current Values

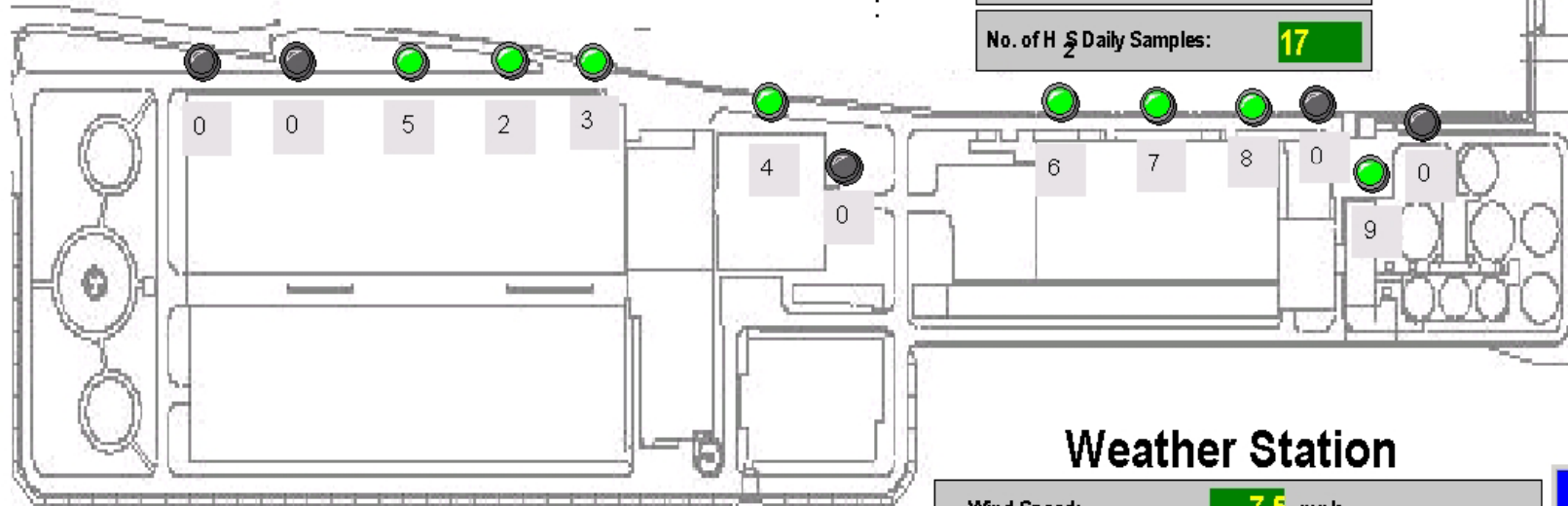
H <sub>2</sub> S Unit 2	0.00 ppb	H <sub>2</sub> S Unit 6	0.16 ppb
H <sub>2</sub> S Unit 3	0.00 ppb	H <sub>2</sub> S Unit 7	0.10 ppb
H <sub>2</sub> S Unit 4	0.00 ppb	H <sub>2</sub> S Unit 8	0.00 ppb
H <sub>2</sub> S Unit 5	0.00 ppb	H <sub>2</sub> S Unit 9	0.00 ppb

Trending Units 2,3,4,5

Trending Units 6,7,8,9

No. of H<sub>2</sub> Weekly Samples: **593**

No. of H<sub>2</sub> Daily Samples: **17**



## Weather Station

Wind Speed: **7.5** mph

Temperature: **22.3** degF **-5.4** degC

Humidity: **48.7** %

Barometric Pressure: **30.1** in of Hg

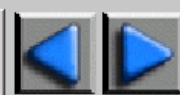
Weather Trending

Direction Trending

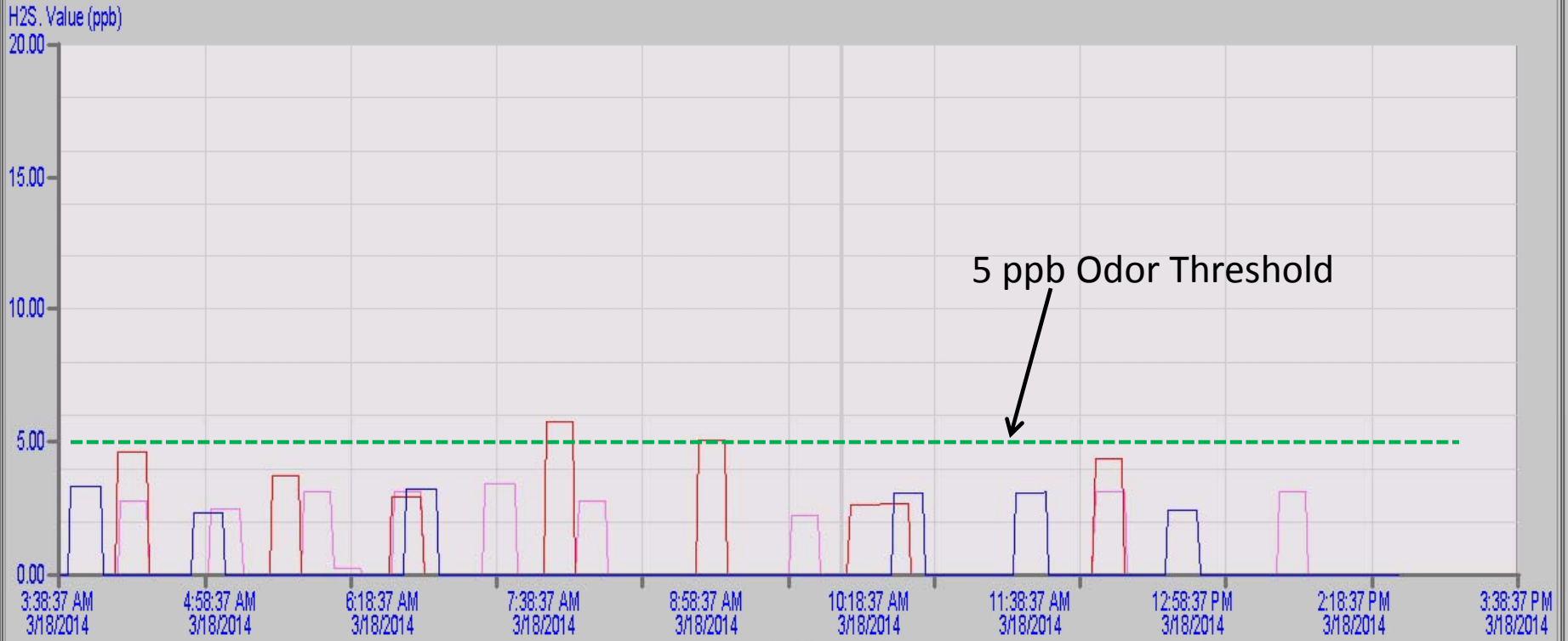
Rain Fall Graph and Report

Rainfall Daily Accumulation: **0.00** in

INFLUENT FLOW  
**85.7** MGD



### YONKERS JOINT H2S HISTORICAL DATA UNITS 2, 3, 4, 5



Hist.YJSCADAX.YJ_H2S_2F_CV	YJ H2S Concentration Unit No.2	0.00	0
Hist.YJSCADAX.YJ_H2S_3F_CV	YJ H2S Concentration Unit No.3	0.00	0
Hist.YJSCADAX.YJ_H2S_4F_CV	YJ H2S Concentration Unit No.4	0.00	0
Hist.YJSCADAX.YJ_H2S_5F_CV	YJ H2S Concentration Unit No.5	0.00	0



6 HR REVERSE



3 HR REVERSE



3 HR FORWARD



6 HR FORWARD

# Odor Monitoring Results

## 2013 “Summer” Monthly Averages

Hydrogen Sulfide Measurement Instruments								
All Readings are Part Per Billion								
2013	Unit #2	Unit #3	Unit #4	Unit #5	Unit #6	Unit #7	Unit #8	Unit #9
May	1.5	0.0	0.2	0.0	3.8	1.7	4.2	0.7
June	1.6	0.0	0.3	0.0	O/S	2.0	9.0	0.6
July	1.9	0.2	0.2	0.0	0.1 *	2.7	15.6	1.3
August	0.9	0.4	0.2	0.0	1.8	1.6	10.2	0.8
September	1.0	0.0	0.2	0.0	0.9	0.0	4.7	0.3
October	0.2	0.0	0.1	0.1	0.6	0.2	0.7	0.0

\* Unit #6 B/S 7-25-14 11:25AM

# Sewer District Ins & Outs Since 2009

- 263 parcels In
- 29 parcels Out

Between 2001-2009, 858+ parcels Out

# Annual Performance Report Page 1

**Yonkers Joint**

**Annual Performance Report**

**2013**

Month	Flow MGD	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge Removed			Removed from Sewage	
		Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	wet tons	% solids	dry tons	Screenings	Grit
		mg/l	mg/l	% removal	mg/l	mg/l	% removal				pounds	cubic yards
January	81	148	6	96	164	7	96	3,842	21.7	834	34,000	100
February	87	132	8	94	154	7	96	2,980	22.8	679	32,000	100
March	94	139	11	92	134	10	93	3,280	21.6	709	36,000	140
April	75	202	9	96	167	8	95	3,090	23.2	716	40,000	100
May	77	200	7	97	153	6	96	3,373	22.5	758	44,000	140
June	104	150	8	94	120	8	93	2,753	25.3	696	36,000	120
July	75	184	7	96	142	6	96	3,219	24.2	778	40,000	140
August	65	216	13	94	175	11	94	2,206	23.4	517	34,000	100
September	65	209	13	94	171	11	94	3,053	22.9	700	42,000	100
October	59	231	7	97	194	6	97	2,966	23.8	707	32,000	120
November	60	199	5	97	192	5	97	2,948	21.5	632	38,000	120
December	69	155	10	94	176	20	89	2,922	21.6	630	44,000	140
<b>Average</b>	<b>75.9</b>	<b>180</b>	<b>9</b>	<b>95</b>	<b>162</b>	<b>9</b>	<b>95</b>	<b>3,053</b>	<b>23</b>	<b>696</b>	<b>37,667</b>	<b>118</b>

# Annual Performance Report Page 2

**Yonkers Joint**

**Annual Performance Report**

**2013**

Month	Sodium Hypochlorite gallons	Liquid Polymer Used Dewatering pounds	Potassium Permanganate pounds	Sodium Bisulfite gallons	Fuel Oil gallons	Water cubic feet	Electric Usage		Digester Gas	
							Used kWh	Demand kW	Produced CF x 1000	Wasted CF x 1000
		January					56,597	43,125	---	15,862
February	48,451	36,995	---	12,620	38,425	359,400	2,429,777	4,046	35,788	33,625
March	48,185	43,530	---	18,865	45,597	569,646	2,667,390	4,046	35,557	32,348
April	41,431	42,254	---	17,569	38,245	376,641	2,417,595	4,046	37,306	34,418
May	54,661	47,732	3,000	23,752	1,004	299,221	2,592,383	4,046	27,385	24,771
June	57,398	34,048	300	19,426	87	250,441	2,466,701	4,046	29,765	26,825
July	53,429	42,795	---	17,907	15	371,197	2,685,581	4,046	28,886	25,720
August	57,561	33,012	900	17,730	3,536	404,880	2,578,862	4,046	29,899	26,841
September	46,168	38,795	1,200	18,030	822	466,760	2,635,375	4,046	27,257	24,619
October	46,255	40,900	---	17,362	957	387,276	2,771,761	4,046	25,556	22,849
November	41,522	40,710	---	13,718	15	329,023	2,757,878	4,046	23,060	20,412
December	44,364	45,767	---	15,173	1,867	445,958	2,881,354	4,226	24,227	21,511
Total	596,022	489,663	5,400	208,014	169,873	4,875,543	31,645,590	48,732	339,365	306,298
Average	49,669	40,805	1,350	17,335	14,156	406,295	2,637,133	4,061	28,280	25,525
Daily Avg.	1,633	1,342		570	465	13,358	86,700	134	930	839

# Odorous Compounds & Characteristic Odor

Compound	Characteristic odor	Compound	Characteristic odor
Acetaldehyde	Pungent, fruity	Ethyl mercaptan	Decayed cabbage
Allyl mercaptan	Strong garlic, coffee	Hydrogen sulfide	Rotten eggs
Ammonia	Sharp, pungent	Indole	Fecal, nauseating
Amyl mercaptan	Unpleasant, putrid	Methylamine	Putrid, fishy
Benzyl mercaptan	Unpleasant, strong	Methyl mercaptan	Decayed cabbage
Butylamine	Sour, ammonialike	Ozone	Irritating above 2 ppm
Cadaverine	Putrid, decaying flesh	Propyl mercaptan	Unpleasant
Chlorine	Pungent, suffocating	Putrescine	Putrid, nauseating
Chlorophenol	Medicinal, phenolic	Pyridine	Disagreeable, irritating
Crotyl mercaptan	Skunklike	Skatole	Fecal, nauseating
Dibutylamine	Fishy	Sulfur dioxide	Pungent, irritating
Diisopropylamine	Fishy	<i>tert</i> -Butyl mercaptan	Skunklike, unpleasant
Dimethylamine	Putrid, fishy	Thiocresol	Skunklike, rancid
Dimethyl sulfide	Decayed vegetables	Thiophenol	Putrid, garliclike
Diphenyl sulfide	Unpleasant	Triethylamine	Ammonia, fishy
Ethylamine	Ammonia		

Questions