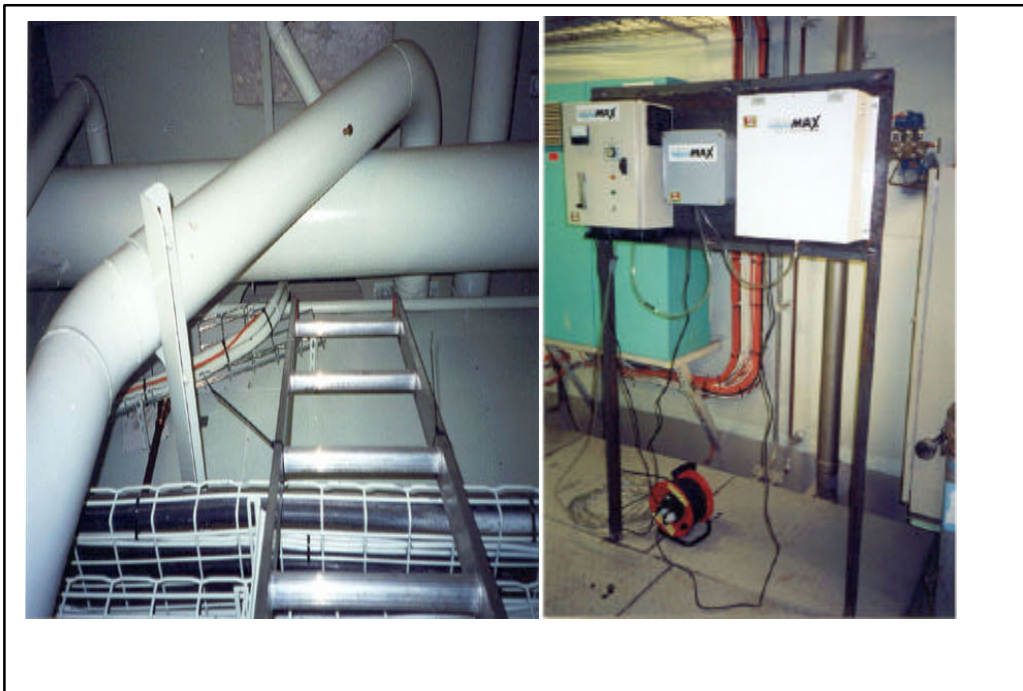




Hydrogen Sulphide destruction with ozone

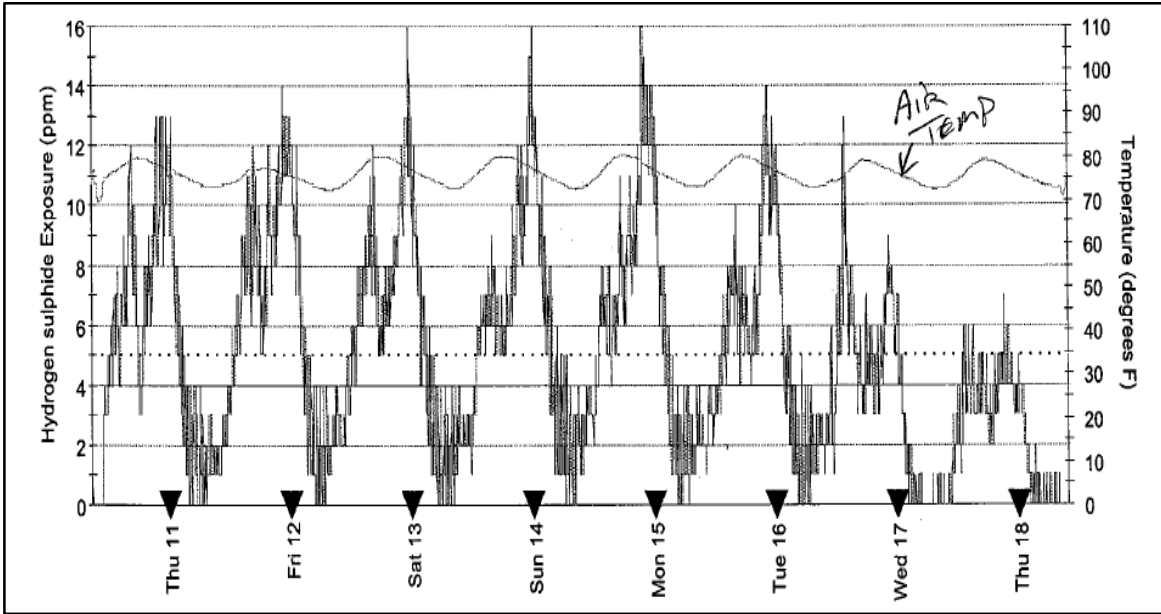


Odour Removal from cruise ships septic storage tanks

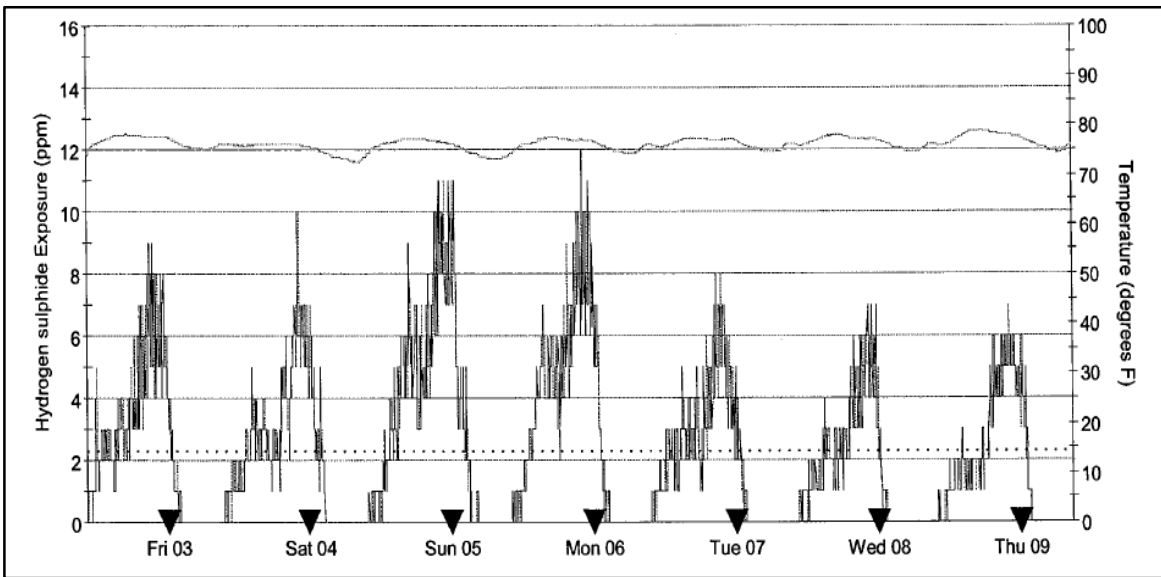


Set-up Used in Cruise ship

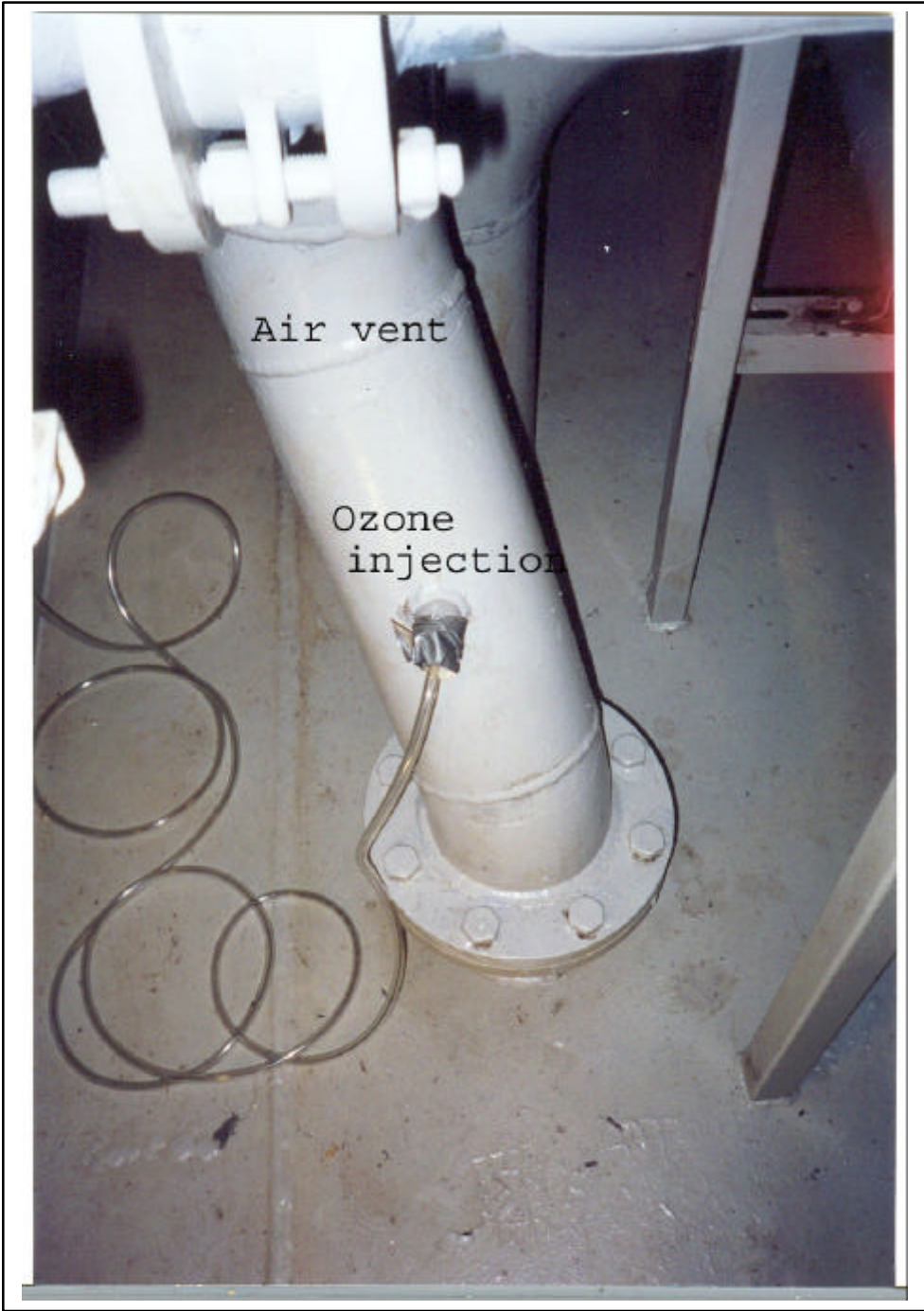
DATA COLLECTED FROM VENTILLATION DUCT LIFT STATION



Average 5 PPM with peaks at 16 PPM



With Ozone average is 2.2 PPM



Black water cruise ship tank& Model OZO 4VTT with air feed (8 g/hr) or O2 feed 20 g/hr)								
DATE	TIME	READINGS	COppm	H2Sppm	water level TK 2255 m3	SMELLS	O3 g/hr	% reduction
Oct.29	20:45	top			81,0	strong	8	Average
	21:10	top	0	8,0-9,0	75,0	strong	8	daily
	23:25	top	0	0	14,0	minimal	8	> 75%
	22:00	top	1,0	0	39,6	none	8	
Oct.31	08:10	top	0	29	56,1	very strong	8	Average
	09:10	top	0	52	57,2	ext.strong	8	morning
	09:40	top	1	15	57,2	moderate	20	
	09:50	top	1	23	57,2	moderate	20	> 50 %
	10:00	top	0	23	62,2	moderate	20	
	10:15	top	0	20	62,0	moderate	20	
	10:30	top	0	15	62	moderate	20	
	11:05	top	0	31	62	moderate	20	
	11:10	top	0	59	62	ext. strong	no ozonation	
	11:30	top	0	0	42,6	minimal	8	
	11:40	top		0	19,6	minimal	8	
	14:30	top	0	22	13,2	medium	no ozonation	Average
	15:30	top	0	5	13,2	minimal	20	PM
	16:00	top	0	5	13,6	none	20	> 75%
	16,30	top	0	2	14,2	minimal	20	
	16,55	top	0	0		none	20	

Conclusion

Ozone is very effective in removing odours specially H2S from LIFT stations & Septic wastage tanks. It is important to note that Odours removal by O3 are function of temperature (winter versus summer) agitation like cruise ships in oceans , amount f O3 injected & contact time in duct or chimneys so adding baffles help in mixing O3 with H2S and other odours.