

THE RECYCLING VILLAGE LTD



**21 Dukeek Business Park
Commons
Dukeek
Co Meath**

Annual Environmental Noise & Dust Deposition Report

April 2013

Prepared by:

WOOD ENVIRONMENTAL MANAGEMENT LTD
ENVIRONMENTAL MANAGEMENT CONSULTANTS

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Contents

	Page
1. Introduction	1
2. Noise Survey	1
2.1 Methodology	1
2.2 Summary of Noise Survey Results	2
2.3 Conclusion	2
3. Dust Deposition Survey	3
3.1 Methodology	3
3.2 Results	3
3.3 Conclusion	3

TABLES

Table 1. Description of Noise Monitoring Locations.

Table 2. Summary of Site Boundary Noise Levels.

Table 3. Description of Dust Deposition Monitoring Locations.

Table 4. Dust Deposition Results.

FIGURES

Figure 1. Noise & Dust Monitoring Locations.

APPENDICES

Appendix 1. Noise Survey Results.

Appendix 2. Dust Deposition Laboratory Analytical Certificate.

1. Introduction.

- 1.1 Wood Environmental Management Ltd (WEML) was commissioned by The Recycling Village Ltd to carry out an environmental noise and dust deposition survey at The Recycling Village Ltd facility at Duleek Business Park, Co Meath. An annual noise survey is required under clause 7.6 of Waste Permit WFP/MH/11/0005/01 issued by Meath County Council.
- 1.2 WEML carried out the environmental noise survey on 21st January 2013. The dust deposition survey covered the period 21st January – 25th February 2013. The results of the surveys are presented below.
- 1.3 The noise and dust surveys were carried out by Andrew Wood of WEML. Andrew holds a BSc and an MSc Environmental Engineering awarded by the University of Newcastle upon Tyne, UK. Andrew has over 20 years experience in environmental management and has carried out many emissions surveys and monitoring programmes for a wide variety of companys' including permitted waste management facilities.

2. Noise Survey.

2.1 Methodology.

- 2.1.1 Noise monitoring was carried out to the International Standard ISO 1996/1 "Acoustics – Description & measurement of environmental noise" using a Sound Level Meter.
- 2.1.2 Monitoring was carried out over a typical working day. Noise readings were taken over a 30 minute sampling period. .
- 2.1.3 Weather conditions during the noise survey were generally cloudy with no wind.
- 2.1.4 During the noise monitoring survey there was typical activity taking place at the facility. The monitoring equipment was manned throughout the sampling period and comments/notes taken to assist the interpretation and assessment of results eg. noise sources, traffic movements etc.
- 2.1.5 Sampling was carried out at four boundary locations which were previously submitted for agreement with Meath County Council (Figure 1).
- 2.1.6 The noise monitoring locations are described in Table 1.

Table 1: Description of Noise Monitoring Locations

Monitoring Location	Description of Location
N1	Corner site boundary at the main site entrance gate
N2	Corner site boundary at the yard entrance gate
N3	Corner site boundary at the rear of the yard
N4	Corner site boundary at the rear of the building

2.2 *Summary of Noise Survey Results*

2.2.1 The complete set of noise measurement results are included in Appendix 1. These are summarised below;

Table 2. Summary of Site Boundary Noise Levels.

Location	Start Time	LAeq	Comments
N1	10:05	60.8	Site operational. Noise from adjacent sites fridge units.
N2	11:15	60.1	Site operational. Noise from forklifts in yard and lorries visiting site.
N3	12:15	52.1	Site operational. Noise from RV facility.
N4	12:50	65.8	Site operational. Noise from glass cleaning machine and intermittent use of compressor.
N1	13:35	62.3	Site operational. Noise from adjacent sites fridge units.
N2	14:30	66.2	Site operational. Noise from forklifts in yard and lorries visiting site.
N3	15:05	48.4	Site operational. Noise from forklifts in yard and lorries visiting site.
N4	15:45	56.9	Glass cleaning machine and compressor not in use. Noise from angle grinding in neighbouring unit.

2.2.2 The day-time boundary LAeq noise levels recorded ranged between 48.4 dB(A) and 66.2 dB(A). Waste Permit WFP/MH/11/0005/01 specifies a day-time noise emission limit value of 55 dB(A). The noise levels at some of the site boundary monitoring locations exceeded the waste permit noise levels.

2.3 *Conclusion.*

2.3.1 The above results show that during the survey, day time noise levels recorded at some of the site boundary monitoring locations were above the day time Waste Permit limit of LAeq 55 dB (A).

2.3.2 The highest LAeq noise level ie. 66.2 dB (A) was recorded at N2 at the front of the site adjacent to the yard entrance gate. The noise level at this monitoring location is affected by noise from visiting lorries and fork lifts operating in the yard.

2.3.3 The second highest LAeq noise level ie. 65.8 dB (A) was recorded at N4 which is located at the rear of the site opposite the glass processing area. Consequently, the noise level at this monitoring location is affected by noise from the glass cleaning process.

2.3.4 In conclusion, the noise environment that surrounds the monitoring locations is a complex one with several different businesses operating simultaneously which all have an effect on the noise in the immediate area in and around the facility. However, noise emissions from the facility are unlikely to have a negative impact on sensitive locations beyond the site boundary.

3. Dust Deposition Survey.

3.1 Methodology

3.1.1 WEML carried out a dust deposition surveys at the following 4 monitoring locations at The Recycling Village Ltd facility between the period 21st January – 25th February 2013.

Table 3: Description of Dust Deposition Monitoring Locations

Monitoring Location	Description of Location
D1	Corner site boundary at the main site entrance gate
D2	Corner site boundary at the yard entrance gate
D3	Corner site boundary at the rear of the yard
D4	Corner site boundary at the rear of the building

3.1.2 Dust deposition monitoring was based on a modified version of the Bergerhoff method VDI 2119 'Measurement of dustfall using the Bergerhoff instrument (standard method)'

3.2 Results

3.2.2 Dust samples were analysed by Alcontrol Laboratories, Blanchardstown, Dublin 15. Dust deposition results are presented below. Laboratory analytical certificates are presented in Appendix 2.

Table 4. Dust Deposition Results (Jan – Feb 2013).

Location	Solids (mg/l)	Total Volume (l)	Total Solids/sample (mg)	Dust Deposition (mg/m ³ /d)	Nuisance Limit(mg/m ³ /d)
D1	<2	2.0	<4	2.4	350
D2	<2	4.0	<8	4.8	350
D3	<2	2.0	<4	2.4	350
D4	2	4.0	8	4.8	350

3.3 Conclusions

3.3.1 The above dust deposition results are all in compliance with the permit limit of 350 mg/m²/day.

FIGURE 1

Noise & Dust Monitoring Locations

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Surveyed 2000-2004
Revised 2010
Levelled

704918
769617

Emissions Monitoring Locations



705500

769617

ITM CENTRE PT. COORDS
705209,769402

DESCRIPTION

MAP SHEETS
1:2500
2443-C 2443-A



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769187

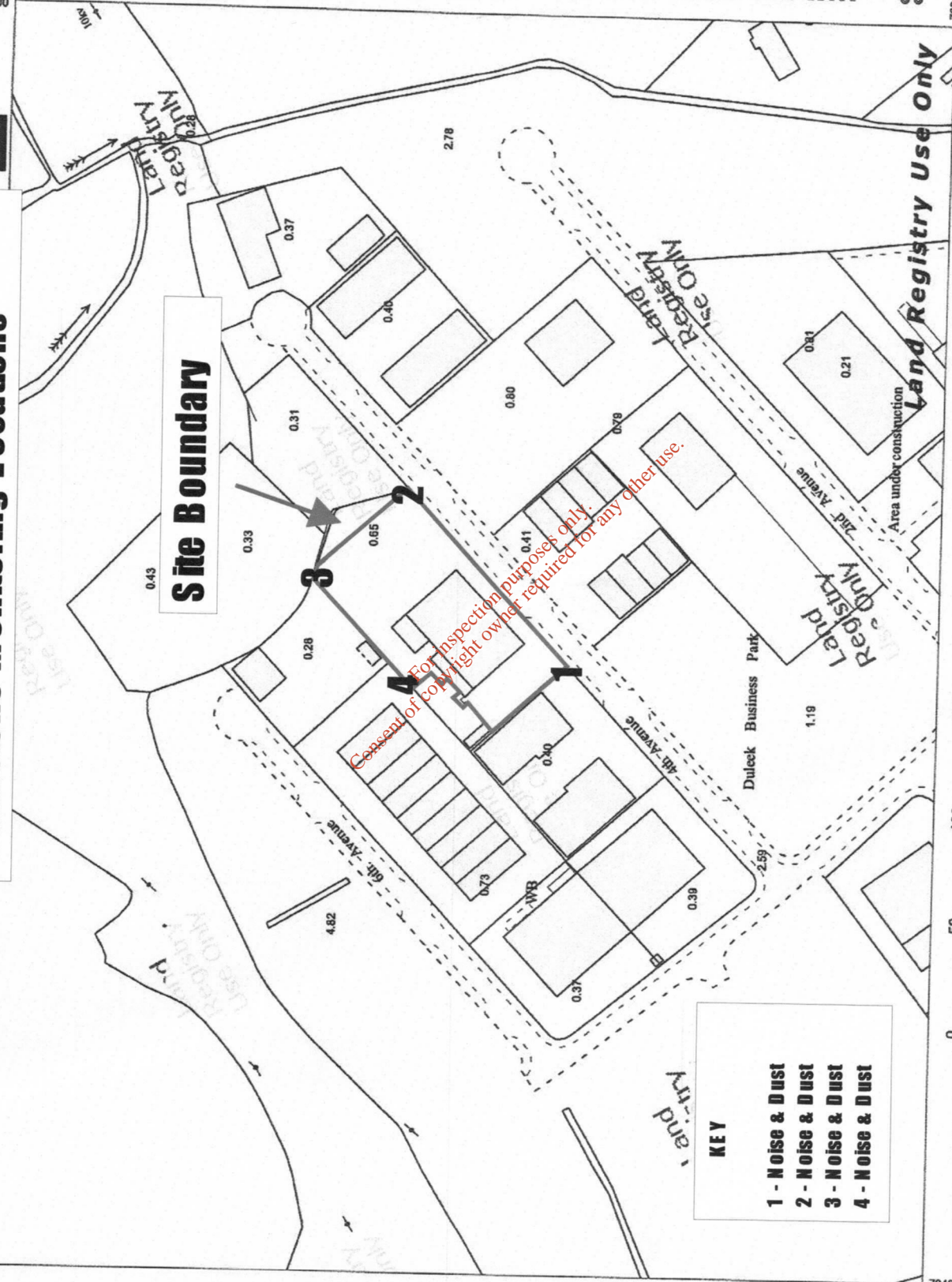
705500

Plot Ref. No. 19606446_1_1
Plot Date 14-MAR-2011

Metres

Feet

Scale:- 1:2,500
Scala:- 1:2,500



KEY	
1 -	Noise & Dust
2 -	Noise & Dust
3 -	Noise & Dust
4 -	Noise & Dust

APPENDIX 1

Noise Survey Results

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ENVIRONMENTAL NOISE SURVEY

Site: The Recycling Village, Duleek, Co Meath.
 Date: 21st January 2013.

Location	Weather	Time Start	Duration	L1	L10	L50	L90	L99	LEQ	Comments
N1	Dry, cloudy	10:05	30 mins	69.7	63.6	56.0	53.7	53.0	60.8	Site operational. Noise from adjacent sites fridge units.
N2	Sleet	11:15	30 mins	70.2	62.7	55.7	49.8	47.9	60.1	Site operational. Noise from forklifts in yard and lorries visiting site.
N3	Sleet	12:15	30 mins	60.8	54.5	49.0	46.2	43.9	52.1	Site operational. Noise from RV facility.
N4	Dry, cloudy	12:50	30 mins	72.2	70.3	55.2	52.7	52.2	65.8	Site operational. Noise from glass cleaning machine and intermittent use of compressor.
N1	Dry, cloudy	13:35	30 mins	70.5	64.3	61.1	52.0	51.2	62.3	Site operational. Noise from adjacent sites fridge units.
N2	Sunny, dry	14:30	30 mins	75.9	69.3	62.4	55.4	51.7	66.2	Site operational. Noise from forklifts in yard and lorries visiting site.
N3	Dry, cloudy	15:05	30 mins	58.5	49.8	45.1	41.4	39.7	48.4	Site operational. Noise from forklifts in yard and lorries visiting site.
N4	Dry, cloudy	15:45	30 mins	69.2	54.1	43.9	40.5	38.1	56.9	Glass cleaning machine and compressor not in use. Noise from angle grinding in neighbouring unit.

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Location	Trucks	Cars	Vans	Bus	Motorbike	Trucks In/Out Site

APPENDIX 2

Laboratory Certificates

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Wood Environmental Management Ltd (WEML)
1 Castlegrove
Killgobbin Wood
Sandyford
Dublin
Dublin 18

Attention: Andrew Wood

CERTIFICATE OF ANALYSIS

Date:	07 March 2013
Customer:	D_WEML_DUB
Sample Delivery Group (SDG):	130227-30
Your Reference:	RV
Location:	RV
Report No:	214929

We received 5 samples on Tuesday February 26, 2013 and 5 of these samples were scheduled for analysis which was completed on Thursday March 07, 2013. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

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Approved By:

Sonia McWhan
Operations Manager



1291

SDG: 130227-30
 Job: D_WEML_DUB-25
 Client Reference: RV

Location: RV
 Customer: Wood Environmental Management Ltd (WEM)
 Attention: Andrew Wood

Order Number: rvq12013
 Report Number: 214929
 Superseded Report:

OC, OP Pesticides and Triazine Herb

Results Legend		Customer Sample R	RV EFF			
#	ISO17025 accredited.	Depth (m)	Water(GW/SW)			
M	mCERTS accredited.	Sample Type	25/02/2013			
aq	Aqueous / settled sample.	Date Sampled	26/02/2013			
disa.filt	Dissolved / filtered sample.	Sample Time				
tot.unfilt	Total / unfiltered sample.	Date Received	130227-30			
*	Subcontracted test.	SDG Ref	6988932			
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Lab Sample No.(s)				
(F)	Trigger breach confirmed	AGS Reference				
1-4&9	Sample deviation (see appendix)					
Component	LOD/Units	Method				
Tecnazene	<0.01 µg/l	TM231	<0.01			
Hexachlorobenzene	<0.01 µg/l	TM231	<0.01			
Trifluralin	<0.01 µg/l	TM231	<0.01			
alpha-Hexachlorocyclohexane (HCH / Lindane)	<0.01 µg/l	TM231	<0.01			
Quintozene (PCNB)	<0.01 µg/l	TM231	<0.01			
Triallate	<0.01 µg/l	TM231	<0.01			
gamma-Hexachlorocyclohexane (HCH / Lindane)	<0.01 µg/l	TM231	<0.01			
Heptachlor	<0.01 µg/l	TM231	<0.01			
Aldrin	<0.01 µg/l	TM231	<0.01			
Chlorothalonil	<0.01 µg/l	TM231	<0.01			
beta-Hexachlorocyclohexane (HCH / Lindane)	<0.01 µg/l	TM231	<0.01			
Telodrin	<0.01 µg/l	TM231	<0.01			
Isodrin	<0.01 µg/l	TM231	<0.01			
Heptachlor epoxide	<0.01 µg/l	TM231	<0.01			
Triadimefon	<0.01 µg/l	TM231	<0.01			
Pendimethalin	<0.01 µg/l	TM231	<0.01			
o,p-DDE	<0.01 µg/l	TM231	<0.01			
Endosulphan I	<0.01 µg/l	TM231	<0.01			
Trans-chlordane	<0.01 µg/l	TM231	<0.01			
cis-Chlordane	<0.01 µg/l	TM231	<0.01			
p,p-DDE	<0.01 µg/l	TM231	<0.01			
Dieldrin	<0.01 µg/l	TM231	<0.01			
o,p-TDE (DDD)	<0.01 µg/l	TM231	<0.01			
Endrin	<0.01 µg/l	TM231	<0.01			
o,p-DDT	<0.01 µg/l	TM231	<0.01			
p,p-TDE (DDD)	<0.01 µg/l	TM231	<0.01			
Endosulphan II	<0.01 µg/l	TM231	<0.01			
p,p-DDT	<0.01 µg/l	TM231	<0.01			
o,p-Methoxychlor	<0.01 µg/l	TM231	<0.01			
p,p-Methoxychlor	<0.01 µg/l	TM231	<0.01			
Endosulphan sulphate	<0.01 µg/l	TM231	<0.01			
Permethrin I	<0.01 µg/l	TM231	<0.01			

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SDG: 130227-30
 Job: D_WEML_DUB-25
 Client Reference: RV

Location: RV
 Customer: Wood Environmental Management Ltd (WEM)
 Attention: Andrew Wood

Order Number: rvq12013
 Report Number: 214929
 Superseded Report:

VOC MS (W)

Results Legend		Customer Sample R	RV EFF			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Water(GW/SW) 25/02/2013 26/02/2013 130227-30 6988932			
M	mCERTS accredited.					
aq	Aqueous / settled sample.					
disa.filt	Dissolved / filtered sample.					
tot.unfilt	Total / unfiltered sample.					
*	Subcontracted test.					
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery					
(F)	Trigger breach confirmed					
1-4&4@	Sample deviation (see appendix)					
Component	LOD/Units	Method				
Dibromofluoromethane**	%	TM208	107			
Toluene-d8**	%	TM208	100			
4-Bromofluorobenzene**	%	TM208	98.3			
Dichlorodifluoromethane	<1 µg/l	TM208	<1	#		
Chloromethane	<1 µg/l	TM208	<1	#		
Vinyl chloride	<1 µg/l	TM208	<1	#		
Bromomethane	<1 µg/l	TM208	<1	#		
Chloroethane	<1 µg/l	TM208	<1	#		
Trichlorofluoromethane	<1 µg/l	TM208	<1	#		
1,1-Dichloroethene	<1 µg/l	TM208	<1	#		
Carbon disulphide	<1 µg/l	TM208	<1	#		
Dichloromethane	<3 µg/l	TM208	<3	#		
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	#		
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	#		
1,1-Dichloroethane	<1 µg/l	TM208	<1	#		
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	#		
2,2-Dichloropropane	<1 µg/l	TM208	<1	#		
Bromochloromethane	<1 µg/l	TM208	<1	#		
Chloroform	<1 µg/l	TM208	<1	#		
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	#		
1,1-Dichloropropene	<1 µg/l	TM208	<1	#		
Carbontetrachloride	<1 µg/l	TM208	<1	#		
1,2-Dichloroethane	<1 µg/l	TM208	<1	#		
Benzene	<1 µg/l	TM208	<1	#		
Trichloroethene	<1 µg/l	TM208	<1	#		
1,2-Dichloropropane	<1 µg/l	TM208	<1	#		
Dibromomethane	<1 µg/l	TM208	<1	#		
Bromodichloromethane	<1 µg/l	TM208	<1	#		
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	#		
Toluene	<1 µg/l	TM208	<1	#		
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	#		
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	#		

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SDG: 130227-30
 Job: D_WEML_DUB-25
 Client Reference: RV

Location: RV
 Customer: Wood Environmental Management Ltd (WEM)
 Attention: Andrew Wood

Order Number: rvq12013
 Report Number: 214929
 Superseded Report:

VOC MS (W)

Results Legend		Customer Sample R	RV EFF				
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s)	Water(GW/SW) 25/02/2013 26/02/2013 130227-30 6988932				
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
dis.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted test.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-4&9&9	Sample deviation (see appendix)						
	AGS Reference						
Component	LOD/Units	Method					
1,3-Dichloropropane	<1 µg/l	TM208	<1	#			
Tetrachloroethene	<1 µg/l	TM208	<1	#			
Dibromochloromethane	<1 µg/l	TM208	<1	#			
1,2-Dibromoethane	<1 µg/l	TM208	<1	#			
Chlorobenzene	<1 µg/l	TM208	<1	#			
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	#			
Ethylbenzene	<1 µg/l	TM208	<1	#			
m,p-Xylene	<1 µg/l	TM208	<1	#			
o-Xylene	<1 µg/l	TM208	<1	#			
Styrene	<1 µg/l	TM208	<1	#			
Bromoform	<1 µg/l	TM208	<1	#			
Isopropylbenzene	<1 µg/l	TM208	<1	#			
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	#			
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	#			
Bromobenzene	<1 µg/l	TM208	<1	#			
Propylbenzene	<1 µg/l	TM208	<1	#			
2-Chlorotoluene	<1 µg/l	TM208	<1	#			
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	#			
4-Chlorotoluene	<1 µg/l	TM208	<1	#			
tert-Butylbenzene	<1 µg/l	TM208	<1	#			
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	#			
sec-Butylbenzene	<1 µg/l	TM208	<1	#			
4-iso-Propyltoluene	<1 µg/l	TM208	<1	#			
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	#			
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	#			
n-Butylbenzene	<1 µg/l	TM208	<1	#			
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	#			
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	#			
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	#			
Hexachlorobutadiene	<1 µg/l	TM208	<1	#			
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	#			
Naphthalene	<1 µg/l	TM208	<1	#			

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