

Annex J

Odour Monitoring Result

Annex J1

Odour Patrol Result

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	1 / 3 / 2019
Type of Patrol	Weekly Patrol / <u>Monthly Independent Patrol</u> /
Weather Condition	Sunny / <u>Cloudy</u> / Windy / Humid / Foggy /
Average Temperature (°C)	23.1
Average Relative Humidity (%)	77.8

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	10:37	0 / 1 / 2 / 3 / 4	P1:0 P2:1 Biogas	<u>Intermittent</u> / Continuous	Biogas Holder	
Location 2	10:38	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 3	10:39	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 4	10:42	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	10:44	0 / 1 / 2 / 3 / 4	Grass	<u>Intermittent</u> / Continuous	Grass	
Location 6	10:46	0 / 1 / 2 / 3 / 4	P1:1 P2:0 Biogas	<u>Intermittent</u> / Continuous	Biogas Holder	
Location 7	10:49	0 / 1 / 2 / 3 / 4	P1:1 P2:0 Biogas	<u>Intermittent</u> / Continuous	Biogas Holder	
Location 8	10:51	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM		Edwin Wong	HO Tsz Kin	Sarah HO
Signature		NA			Sarah
Date	1/3/2019		1/3/2019	1/3/2019	1/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	1 / 3 / 2019
Type of Patrol	Weekly Patrol / <u>Monthly Independent Patrol</u> /
Weather Condition	<u>Sunny</u> / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	22.5
Average Relative Humidity (%)	80.2

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	17:05	0 / ① / 2 / 3 / 4	Biogas	Intermittent / <u>Continuous</u>	Biogas Holder	
Location 2	17:06	0 / ① / 2 / 3 / 4	Biogas	Intermittent / <u>Continuous</u>	Biogas Holder	
Location 3	17:07	0 / ① / 2 / 3 / 4	Biogas	Intermittent / <u>Continuous</u>	Biogas Holder	
Location 4	17:09	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	17:11	0 / ① / 2 / 3 / 4	Grass	Intermittent / <u>Continuous</u>	Grass	
Location 6	17:13	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 7	17:16	0 / ① / 2 / 3 / 4	Biogas	Intermittent / <u>Continuous</u>	Biogas Holder	
Location 8	17:17	0 / 1 / 2 / 3 / 4	Rubbish	<u>Intermittent</u> / Continuous	Rubbish Truck	

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM		Edwin Wong	Ho Tsz kin	Sarah Ho
Signature		NA			
Date	1/3/2019		1-3-2019	1-3-2019	1/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	4 / 3 / 2019
Type of Patrol	<u>Weekly Patrol</u> / Monthly Independent Patrol /
Weather Condition	<u>Sunny</u> / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	23.8
Average Relative Humidity (%)	66

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	11:07	0 / 0 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 2	11:09	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 3	11:10	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 4	11:13	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	11:15	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 6	11:19	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 7	11:25	0 / 1 / 2 / 3 / 4	Diesel	Intermittent / Continuous	Machine	
Location 8	11:26	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	TESS CHAN				Sarah HO
Signature	Jess	NA	NA	NA	Sarah
Date	04 MAR 2019				4 / 3 / 2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	8 / 3 / 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol /
Weather Condition	Sunny / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	20.1
Average Relative Humidity (%)	71

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	10:09	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 2	10:11	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 3	10:12	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 4	10:15	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	10:19	0 / 1 / 2 / 3 / 4	Grass	Intermittent / Continuous	Grass	
Location 6	10:22	0 / 1 / 2 / 3 / 4	Rubbish	Intermittent / Continuous	Unknown source	
Location 7	10:29	0 / 1 / 2 / 3 / 4	Engine	Intermittent / Continuous	Truck	
Location 8	10:31	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

EPD Representative		Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	Fiona Lam				Sarah Ho
Signature		NA	NA	NA	
Date	8/3/2019				8/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	11 / 3 / 2019
Type of Patrol	<u>Weekly Patrol</u> / Monthly Independent Patrol /
Weather Condition	<u>Sunny</u> / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	24.8
Average Relative Humidity (%)	50

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	14:03	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 2	14:06	0 / 1 / 2 / 3 / 4	Biogas (strong) wastewater	Intermittent / <u>Continuous</u>	Biogas Holder Desulphurization Unit area	
Location 3	14:07	0 / 1 / 2 / 3 / 4		<u>Intermittent</u> / Continuous		
Location 4	14:11	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	14:13	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 6	14:17	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 7	14:22	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 8	14:23	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM				11/3/2019 Sarah Ho
Signature					Sarah
Date	11/3/2019	NA	NA	NA	11/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	13 / 3 / 2019
Type of Patrol	<u>Weekly Patrol</u> / Monthly Independent Patrol /
Weather Condition	<u>Sunny</u> / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	26.8
Average Relative Humidity (%)	50

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	13:31	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		
Location 2	13:33	0 / 1 / 2 / 3 / 4	Biogas	<u>Intermittent</u> / Continuous	Biogas Holder	
Location 3	13:34	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		
Location 4	13:36	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		
Location 5	13:38	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		
Location 6	13:41	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		
Location 7	13:44	0 / 1 / 2 / 3 / 4	oil	<u>Intermittent</u> / Continuous	Machine	
Location 8	13:46	0 / 1 / 2 / 3 / 4		<i>Intermittent / Continuous</i>		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	TESS CHAN				Sarah HO
Signature		NA	NA	NA	
Date	13 MAR 2019				13 / 3 / 2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	15 March 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol /
Weather Condition	Sunny / <u>Cloudy</u> / Windy / Humid / Foggy /
Average Temperature (°C)	22.8
Average Relative Humidity (%)	70%

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	10:59	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		
Location 2	11:02	0 / 1 / 2 / 3 / 4	Biogas smell/plastic	Intermittent / Continuous	Biogas Hold PRV	—
Location 3	11:03	0 / 1 / 2 / 3 / 4	Biogas smell	Intermittent / Continuous	Setpoint Adjuster	—
Location 4	11:05	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		
Location 5	11:06	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		
Location 6	11:09	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		
Location 7	11:11	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		
Location 8	11:13	0 / 1 / 2 / 3 / 4	—	Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	TES CHAN				Isience CHAN
Signature					
Date	15 MAR 2019				15/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	18 Mar 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol
Weather Condition	Sunny / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	26°C
Average Relative Humidity (%)	65%

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	14:14	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 2	14:15	0 / 1 / 2 / 3 / 4	Plastic Smell	Intermittent / Continuous	PRV of Gas Holder	
Location 3	14:16	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 4	14:19	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	14:21	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 6	14:23	0 / 1 / 2 / 3 / 4	Soil Smell	Intermittent / Continuous	Landscap works nearby at B2/B1	
Location 7	14:26	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 8	14:27	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	David Choi				Kerence CHAN
Signature					
Date	18/3/2019				18/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	20 Mar 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol
Weather Condition	Sunny / <u>Cloudy</u> / Windy / Humid / Foggy /
Average Temperature (°C)	25°C
Average Relative Humidity (%)	80%

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	11:05	0/1/2/3/4		Intermittent / Continuous		
Location 2	11:07	0/1/2/3/4	Plastic smell	Intermittent / Continuous	PRV of Gas Holder	
Location 3	11:08	0/1/2/3/4		Intermittent / Continuous		
Location 4	11:10	0/1/2/3/4		Intermittent / Continuous		
Location 5	11:12	0/1/2/3/4		Intermittent / Continuous		
Location 6	11:14	0/1/2/3/4		Intermittent / Continuous		
Location 7	11:16	0/1/2/3/4		Intermittent / Continuous		
Location 8	11:17	0/1/2/3/4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	Daniel Choi				Terence TAN
Signature					
Date	20/3/2019				20/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	22 Mar 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol /
Weather Condition	Sunny <u>Cloudy</u> / Windy / Humid / Foggy /
Average Temperature (°C)	27°C
Average Relative Humidity (%)	85%

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	1:04	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 2	1:06	0 / ① / 2 / 3 / 4	Plastic smell	Intermittent / Continuous	PSV of Gas Holder	
Location 3	1:07	0 / ① / 2 / 3 / 4	H ₂ S smell	Intermittent / Continuous	desulfur Analyzer	
Location 4	1:10	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	1:12	0 / ① / 2 / 3 / 4	Glass smell	Intermittent / Continuous	Landscaper	
Location 6	1:16	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 7	1:17	0 / ① / 2 / 3 / 4	Rubbish smell	Intermittent / Continuous	Retreatment	
Location 8	1:19	0 / ① / 2 / 3 / 4	Rubbish smell	Intermittent / Continuous	unknown	

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM				TERENCE CHAN
Signature					
Date	22/3/2019				22/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOV Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	25 / 3 / 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol /
Weather Condition	Sunny / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	23.3
Average Relative Humidity (%)	70

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	11:06	0 / ① / 2 / 3 / 4	Grass Smell	Intermittent / Continuous	Grass	
Location 2	11:08	0 / ① / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 3	11:10	0 / ① / 2 / 3 / 4	H ₂ S	Intermittent / Continuous	Desulphurization Unit	
Location 4	11:13	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	11:16	① / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 6	11:18	0 / ① / 2 / 3 / 4	Compost	Intermittent / Continuous	Composting Hall	
Location 7	11:22	0 / ① / 2 / 3 / 4	Generator	Intermittent / Continuous	Electric Generator	
Location 8	11:25	① / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM				Sarah HO
Signature					
Date	25/3/2019	NA	NA	NA	25 / 3 / 2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)

Odour Patrol Record Log Sheet



Date	27 / 3 / 2019
Type of Patrol	Weekly Patrol / Monthly Independent Patrol /
Weather Condition	Sunny / Cloudy / Windy / Humid / Foggy /
Average Temperature (°C)	24.4
Average Relative Humidity (%)	69

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	10:05	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 2	10:07	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 3	10:08	0 / 1 / 2 / 3 / 4	Biogas	Intermittent / Continuous	Biogas Holder	
Location 4	10:11	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 5	10:14	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 6	10:16	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 7	10:18	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		
Location 8	10:19	0 / 1 / 2 / 3 / 4		Intermittent / Continuous		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	FIONA LAM				Sarah HO
Signature		NA	NA	NA	Sarah
Date	27/3/2019				27/3/2019

Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Organic Resources Recovery Centre (Phase 1)
Odour Patrol Record Log Sheet



Date	29/3/2019
Type of Patrol	<u>Weekly Patrol</u> / Monthly Independent Patrol /
Weather Condition	Sunny <u>Cloudy</u> / Windy / Humid / Foggy /
Average Temperature (°C)	25.8
Average Relative Humidity (%)	80

Monitoring Location	Time	Odour Intensity	Odour Characteristics	Duration	Possible Source of Odour	Remark
Location 1	9:20	0/1/2/3/4		<i>Intermittent / Continuous</i>		
Location 2	9:22	0/1/2/3/4	Biogas	<i>Intermittent / Continuous</i>	Biogas Holder	
Location 3	9:23	0/1/2/3/4	Biogas	<i>Intermittent / Continuous</i>	Biogas Holder	
Location 4	9:26	0/1/2/3/4		<i>Intermittent / Continuous</i>		
Location 5	9:28	0/1/2/3/4	Grass	<i>Intermittent / Continuous</i>	Grass	
Location 6	9:30	0/1/2/3/4		<i>Intermittent / Continuous</i>		
Location 7	9:33	0/1/2/3/4	Rubbish	<i>Intermittent / Continuous</i>	Inert Truck	
Location 8	9:35	0/1/2/3/4		<i>Intermittent / Continuous</i>		

Remark

	EPD Representative	Employer Representative	Independent Odour Patrol Team	Independent Odour Patrol Team	OSCAR Bioenergy JV
Name	Fiona Lam				Sarah HO
Signature	<i>Fiona</i>	NA	NA	NA	Sarah
Date	29/3/2019				29/3/2019

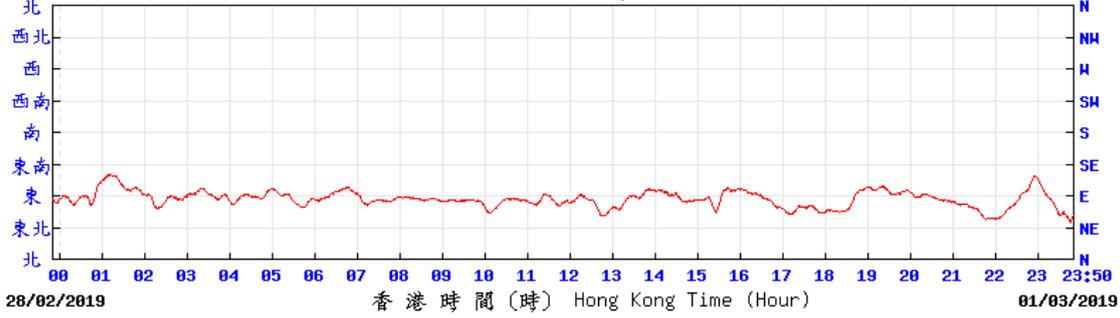
Example of Odour Characteristics	Example of Possible Source of Odour
Biogas / Compost / sewage / rotten-egg smell / decayed vegetables / Diesel / ammoniacal / dischargeable odour / putrefaction / sharp / pungent / fish / irritating / fruit / vinegar	PRVs of Gas Holder / Sediment / Water / SSOW Trucks / Doors Opened / Stack emission / Sewage / food waste / Pretreatment / Machine Operation / Material / others /

Annex J2

Local Wind Direction and Wind Speed

Wind Direction

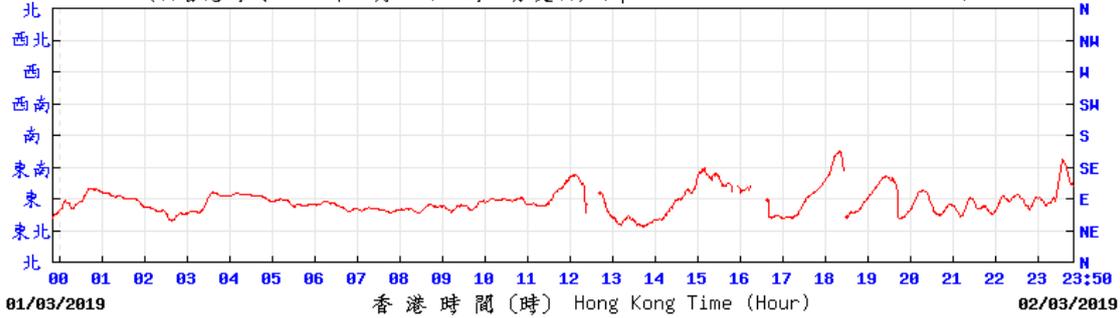
(於香港時間 2019 年03月01日23時50分更新) (Updated at 23:50H on 1 Mar 2019)



R2C

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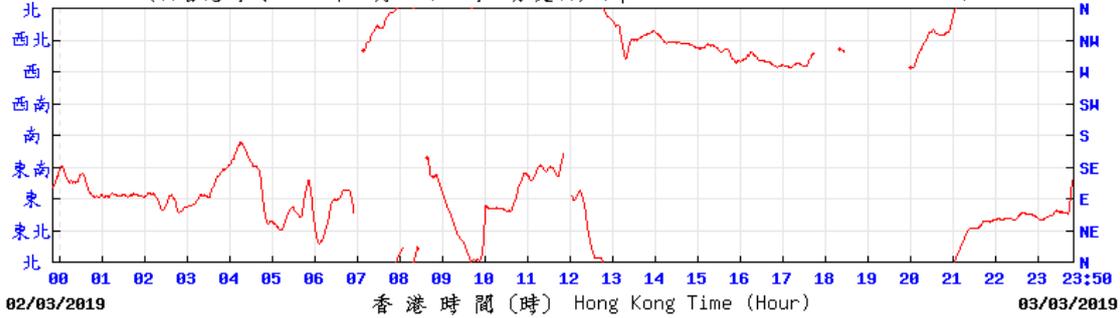
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R2C

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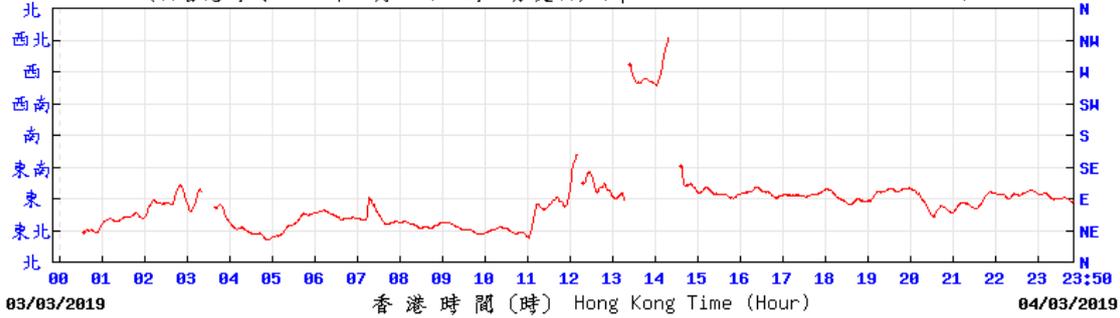
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R2C

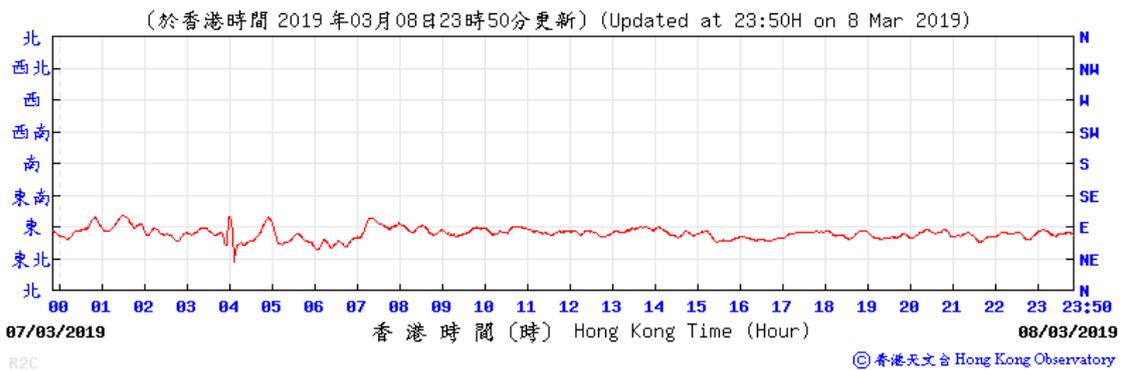
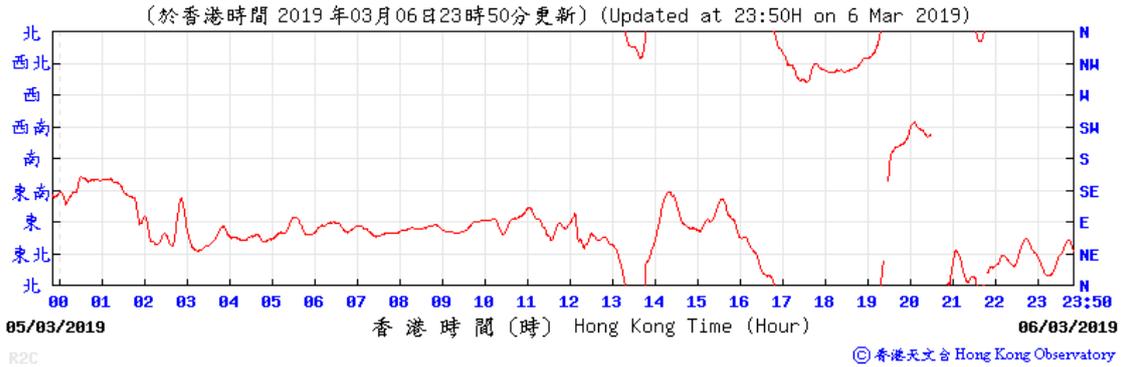
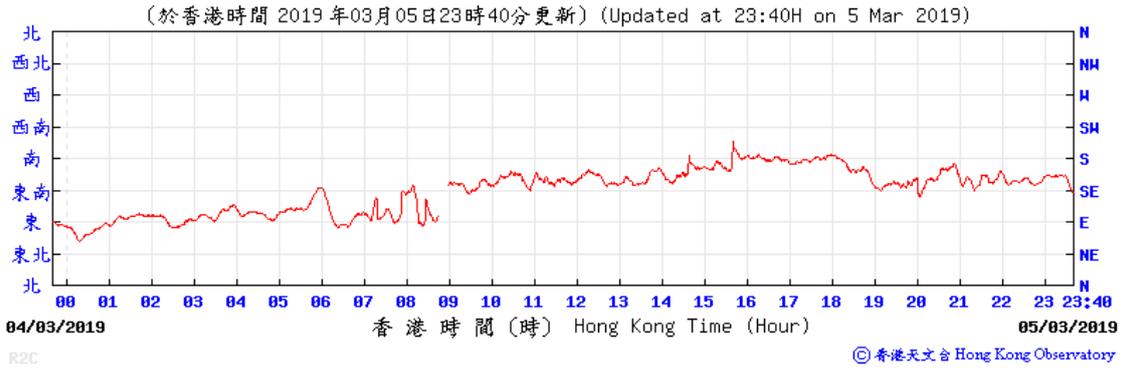
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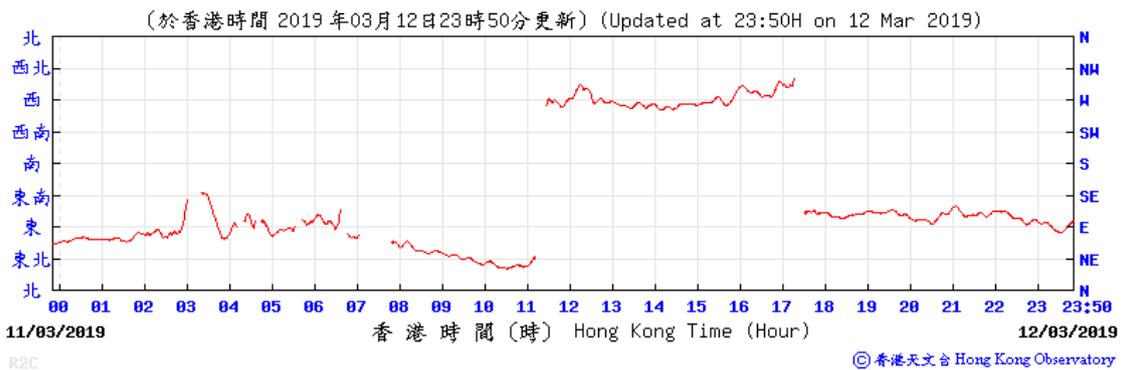
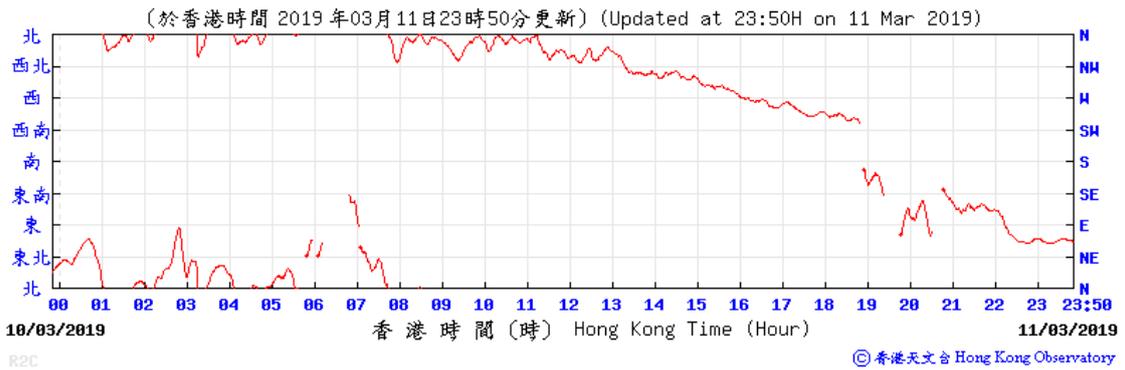
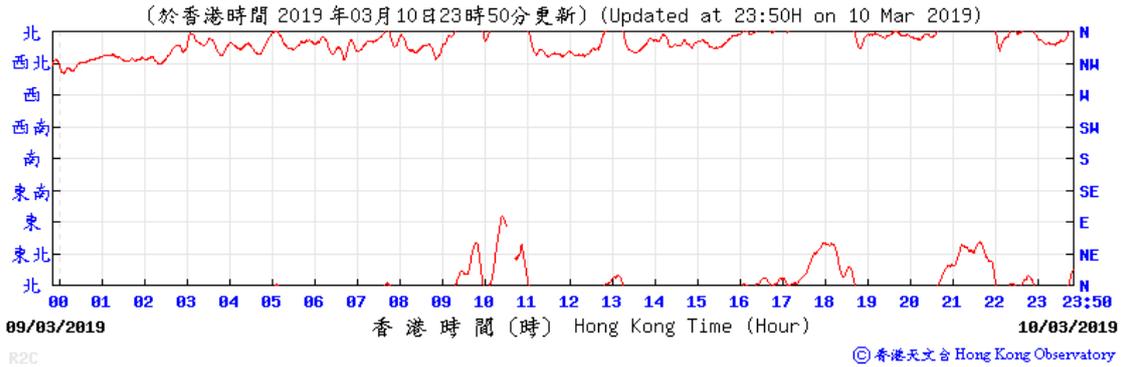
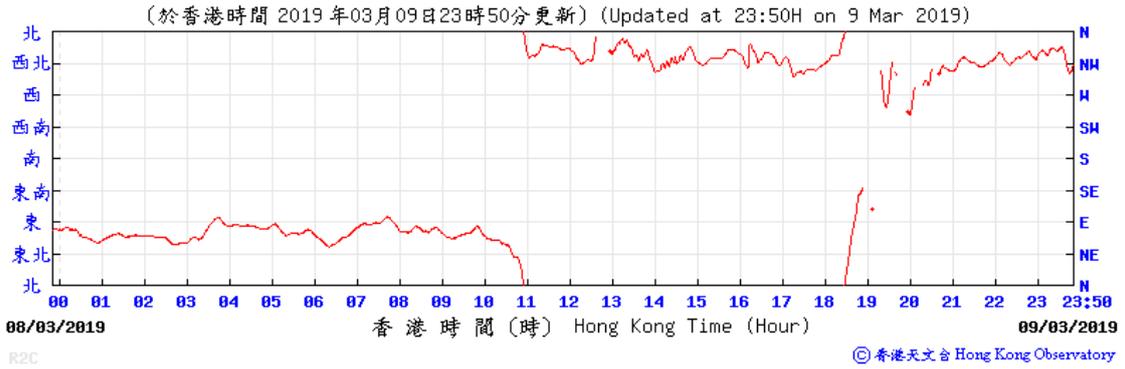
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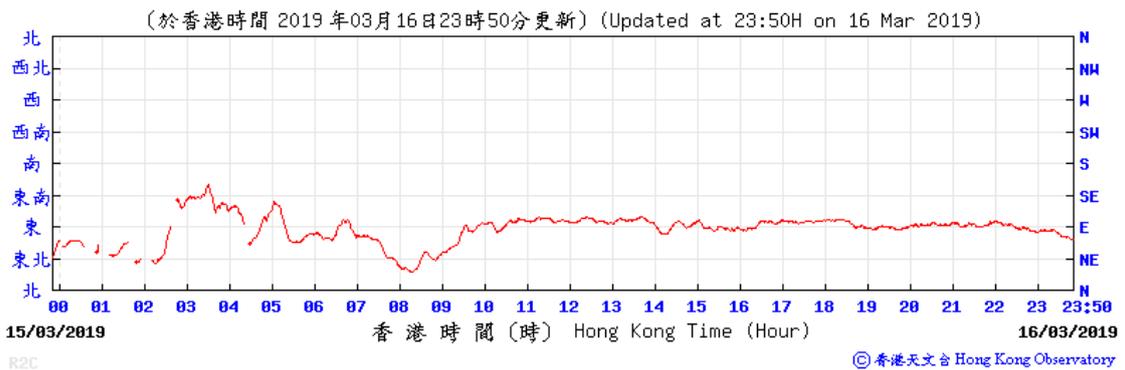
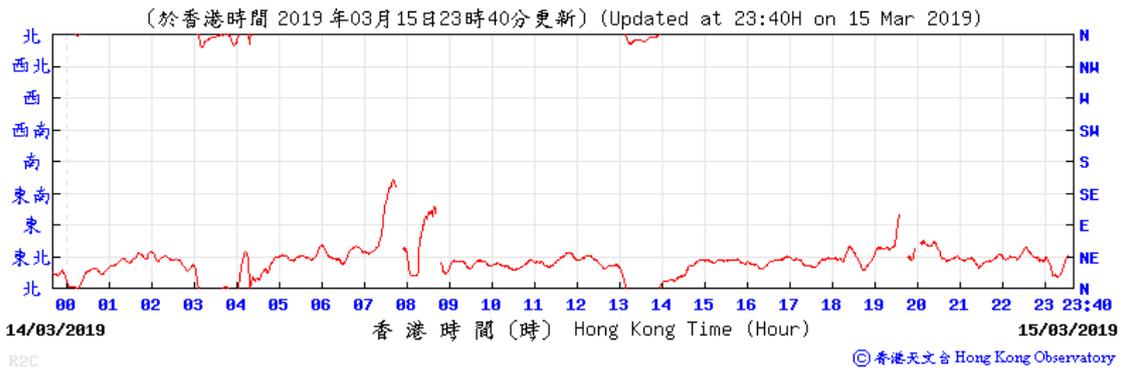
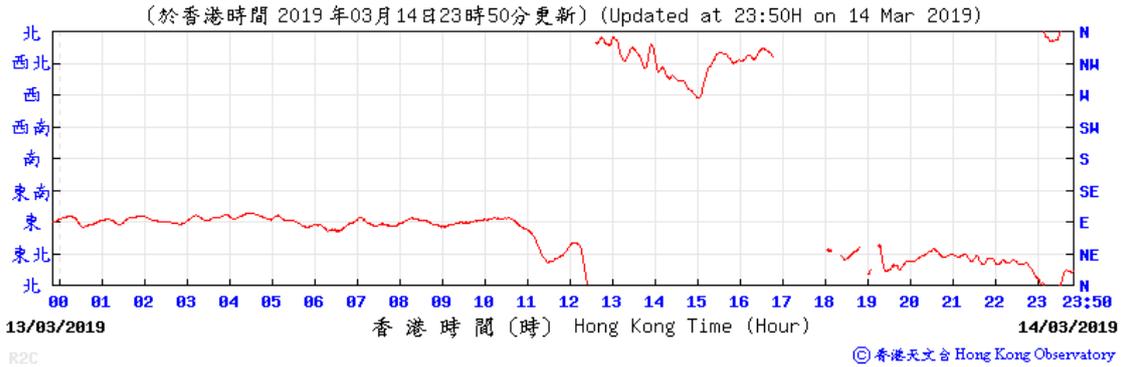
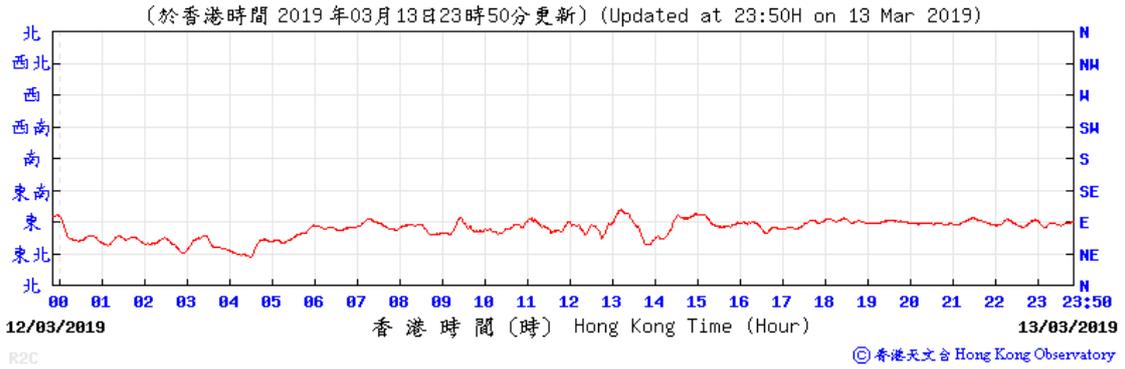


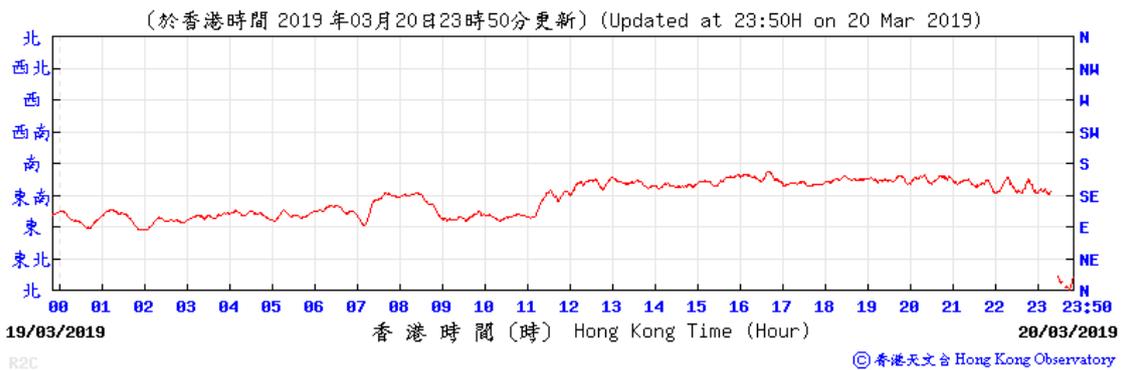
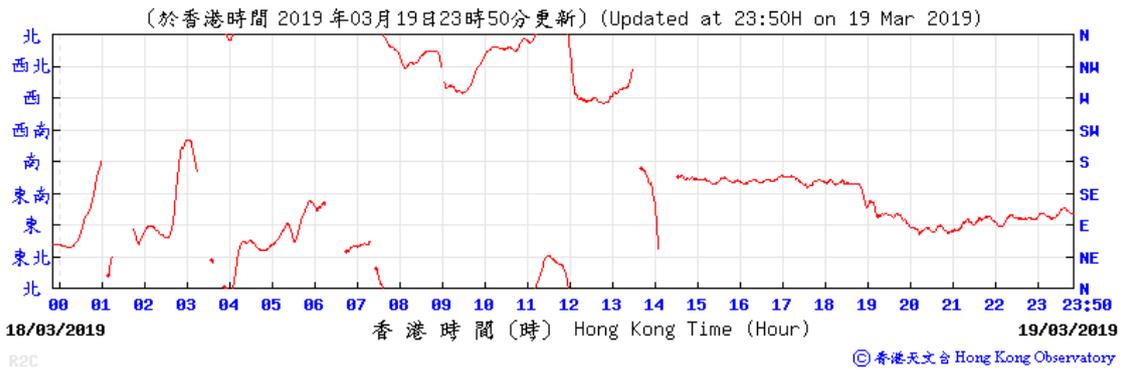
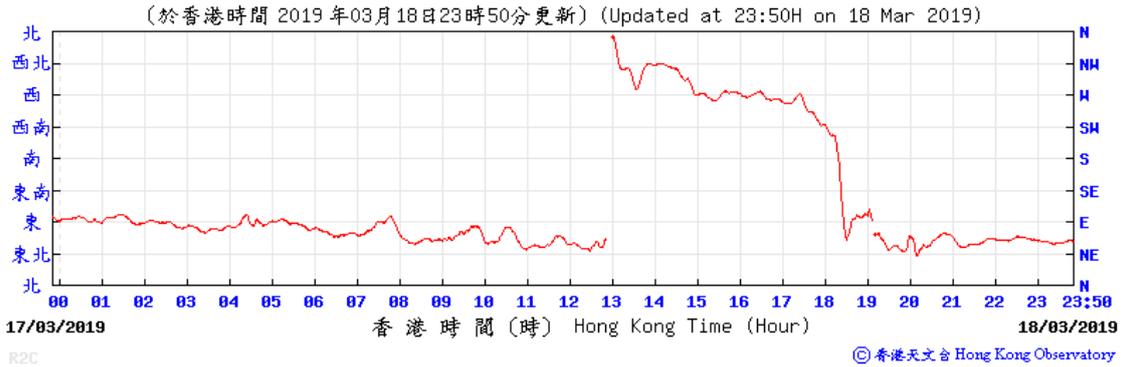
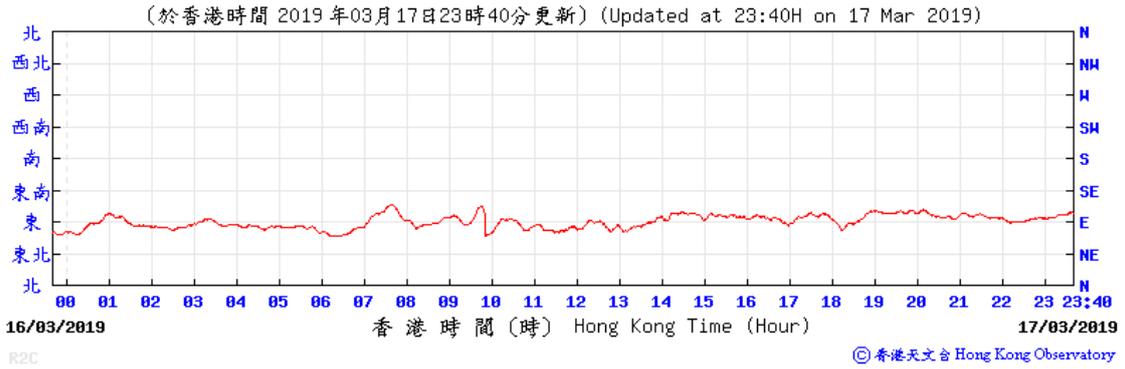
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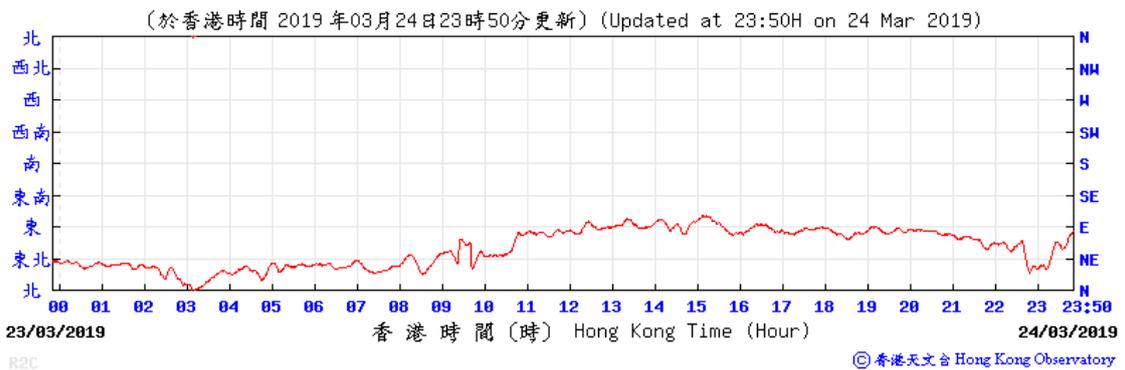
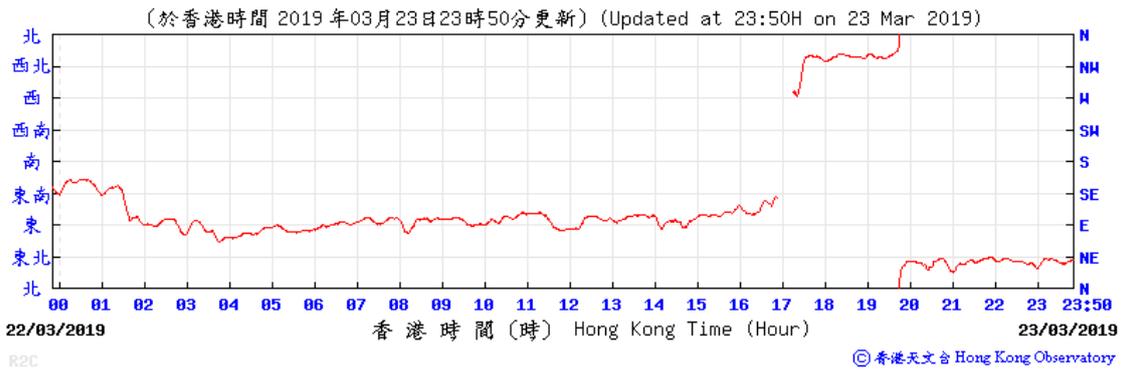
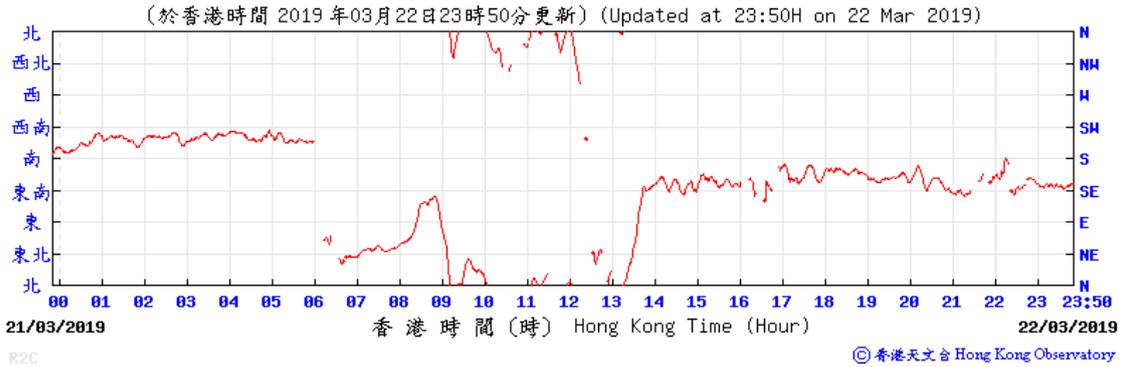
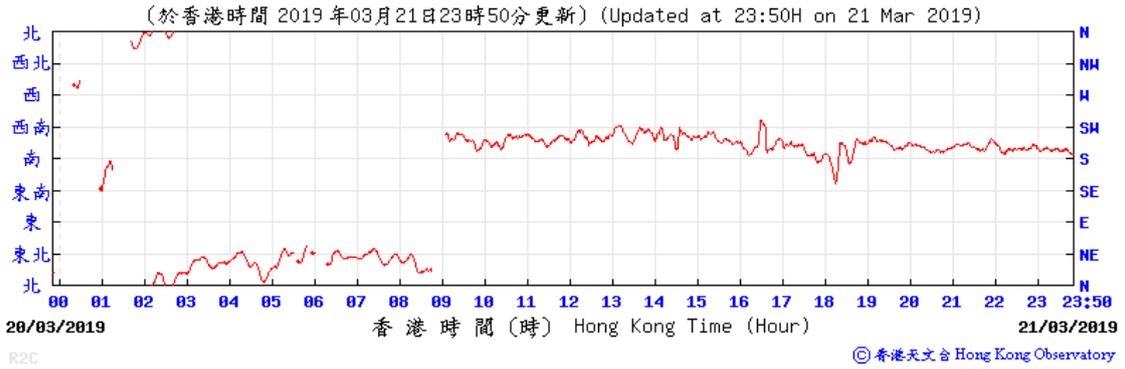
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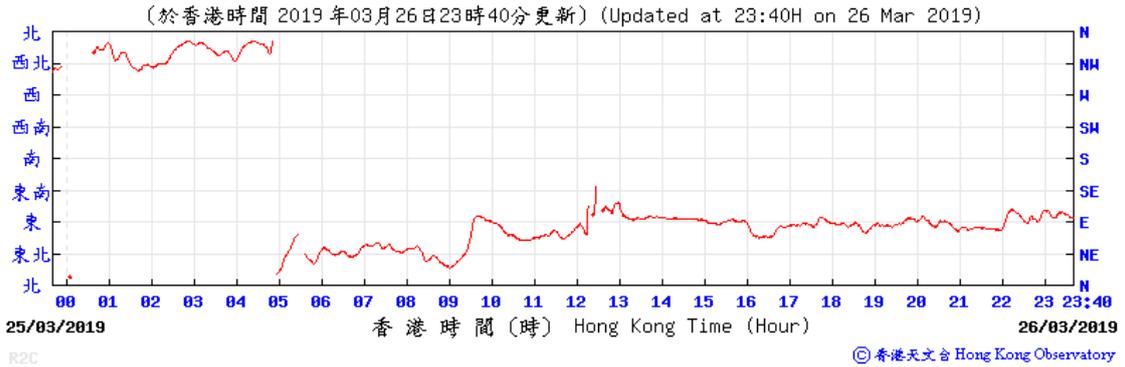
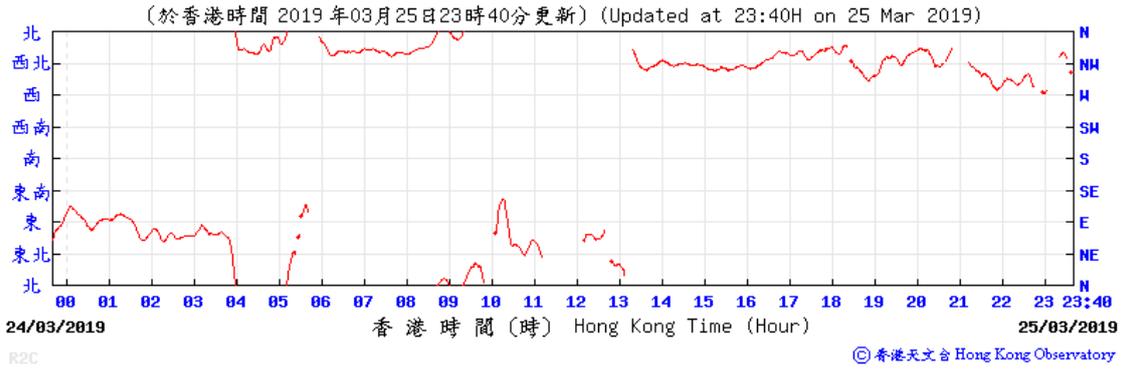


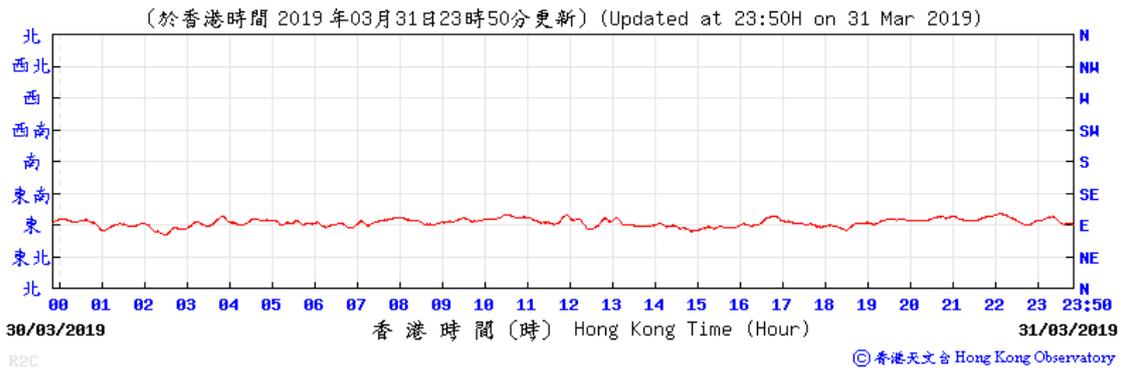
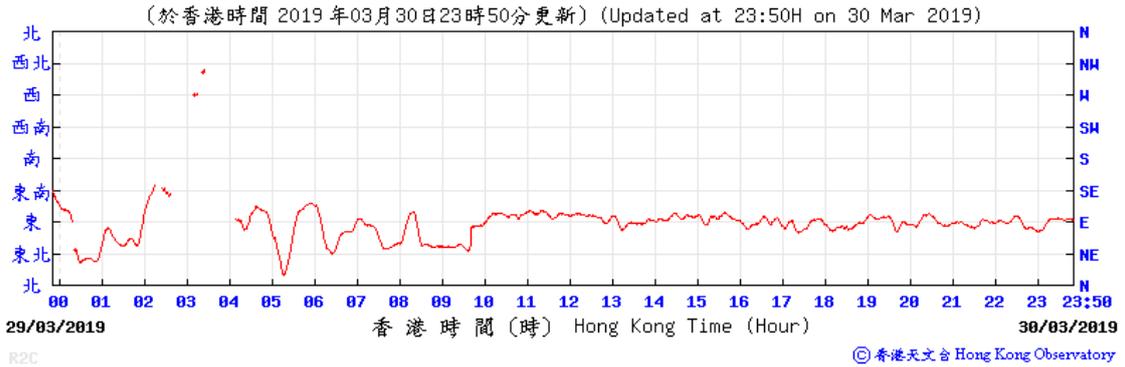
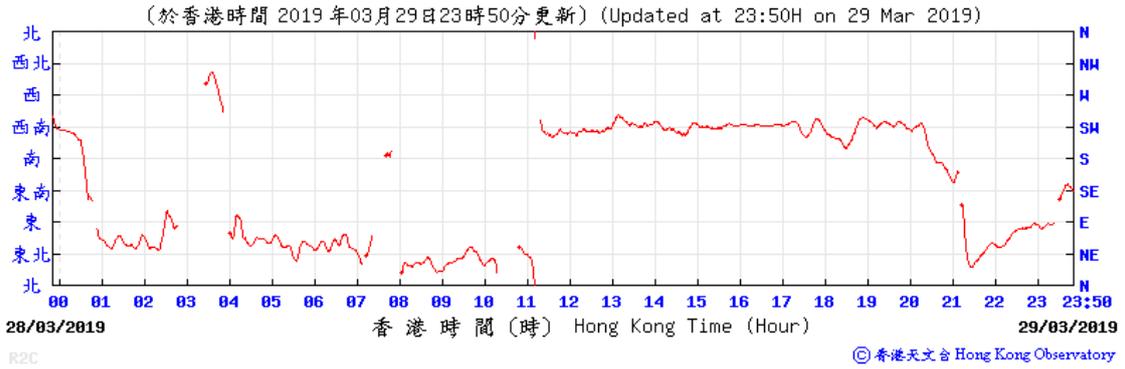












Annex J3

Odour Sampling Result



CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1864017
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	10 December 2018
		DATE OF ISSUE:	14 December 2018
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:			

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 10th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_e/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 OU_e/m^3 . The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 OU_e/m^3 to 10^7 OU_e/m^3 .

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1864017-001	CAPC Unit (Bypass AC Filter)	10-Dec-18	11:36-11:41	11	828	Decayed orange with minor bleach smell	1267.4	63,000,000
HK1864017-002	CAPC Unit (Bypass AC Filter)	10-Dec-18	11:41-11:46	11	886	Decayed orange with minor bleach smell	1267.4	67,400,000
HK1864017-003	Field Blank	10-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	10-12-18	11:36 - 11:46	17.3	64.6	1019.4	0.7	320	NA	NA	No odour was smelled.	NA	Cloudy

Note:

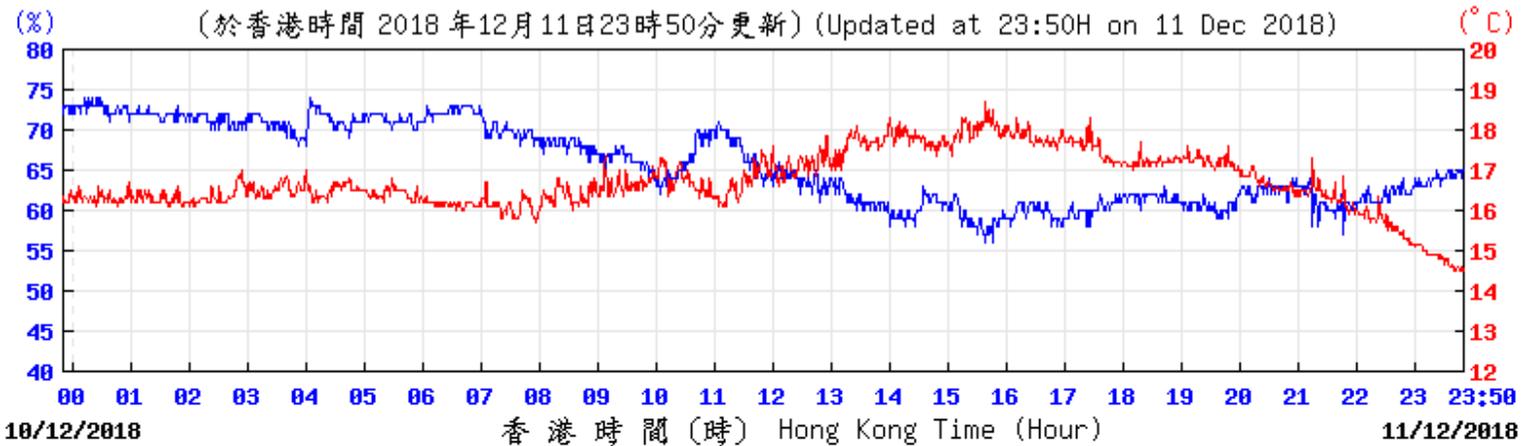
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



APPENDIX 2

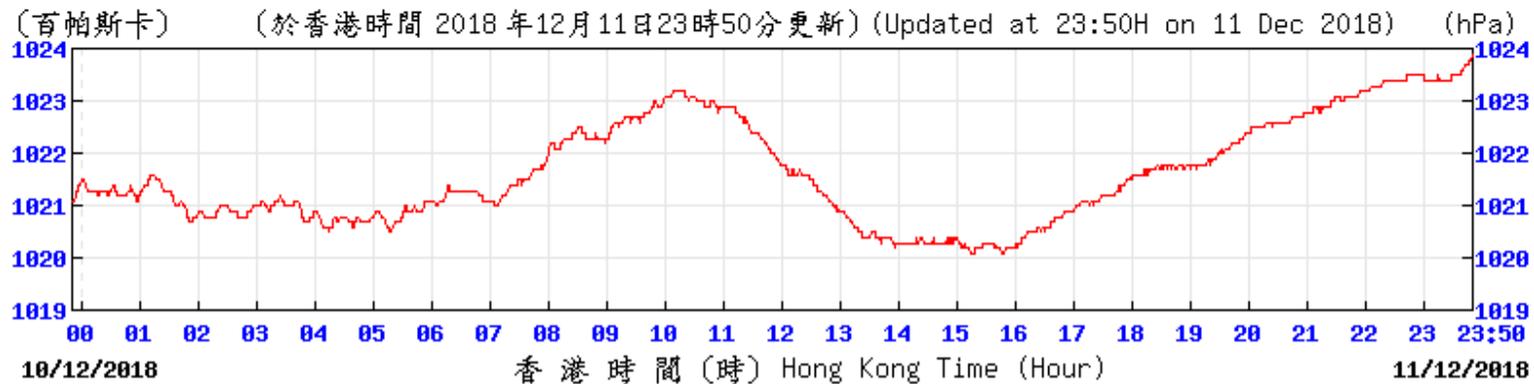
A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

Temperature/Humidity:



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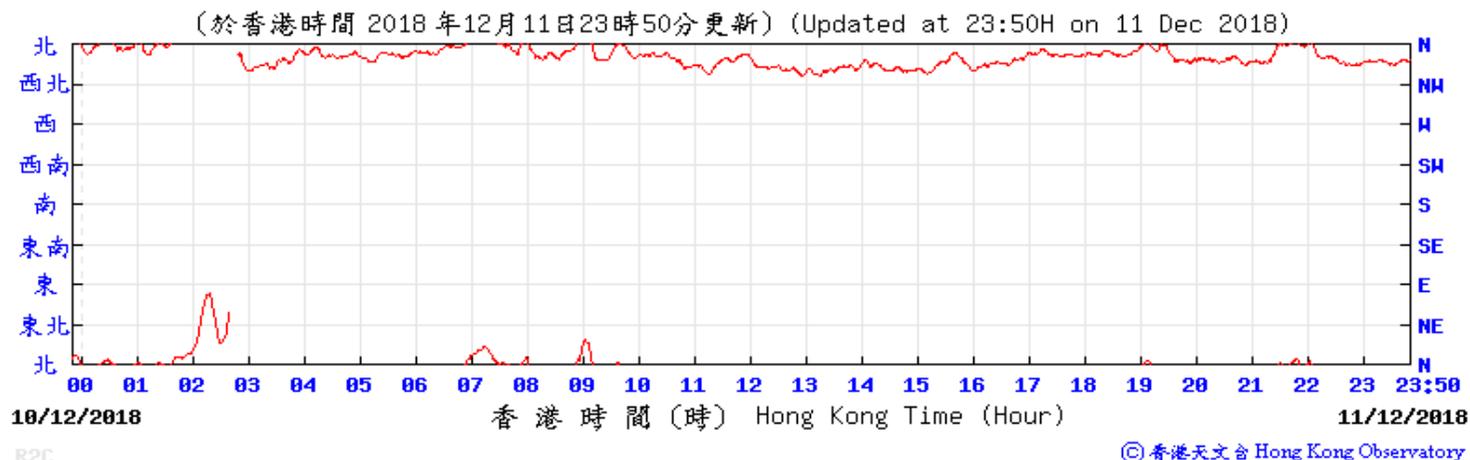
Pressure:



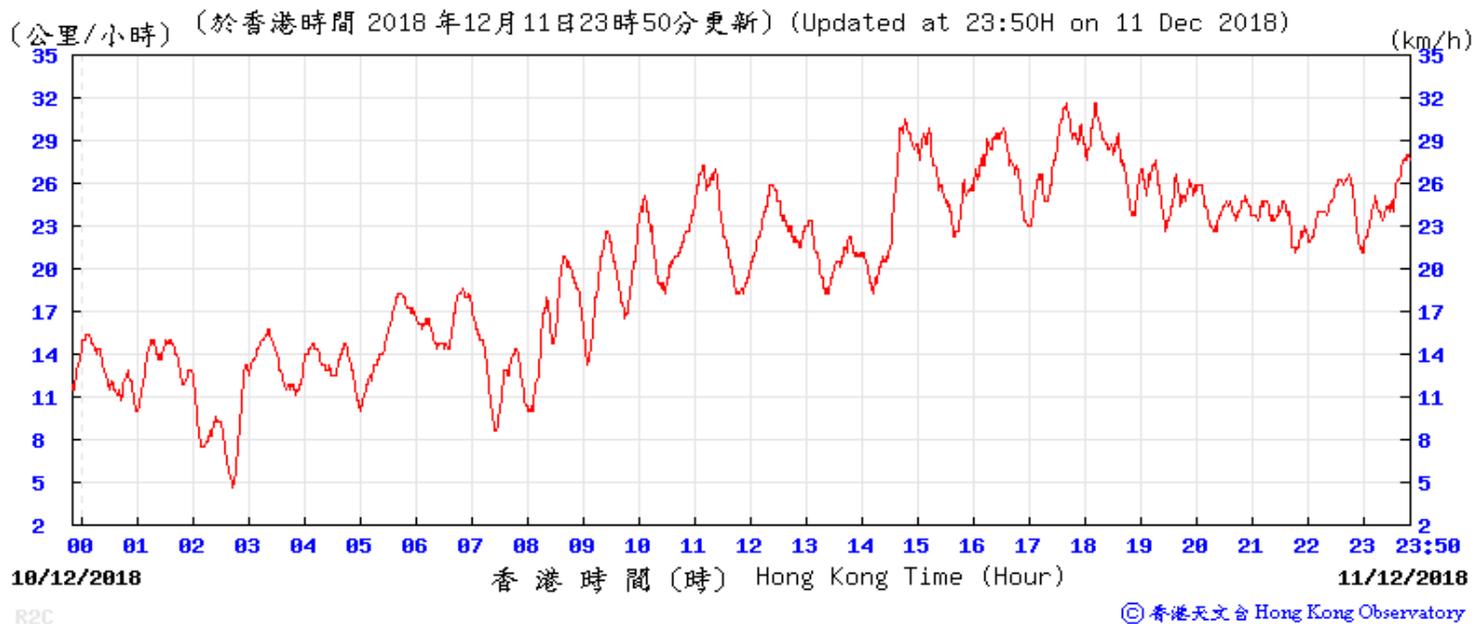
© 香港天文台 Hong Kong Observatory



Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1864595
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	10 December 2018
		DATE OF ISSUE:	14 December 2018
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 10th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

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Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition $1 OU_E/m^3$. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1 OU_E/m^3$ to $10^7 OU_E/m^3$.

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1864595-001	CAPC Unit (With AC Filter)	10-Dec-18	11:56 - 12:02	11	773	Decayed orange	1156.5	53,600,000
HK1864595-002	CAPC Unit (With AC Filter)	10-Dec-18	12:02 - 12:07	11	674	Decayed orange	1156.5	46,800,000
HK1864595-003	Field Blank	10-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	10-12-18	11:56 - 12:07	17.8	64.1	1019.4	0.8	291	NA	NA	No odour was smelled.	NA	Cloudy

Note:

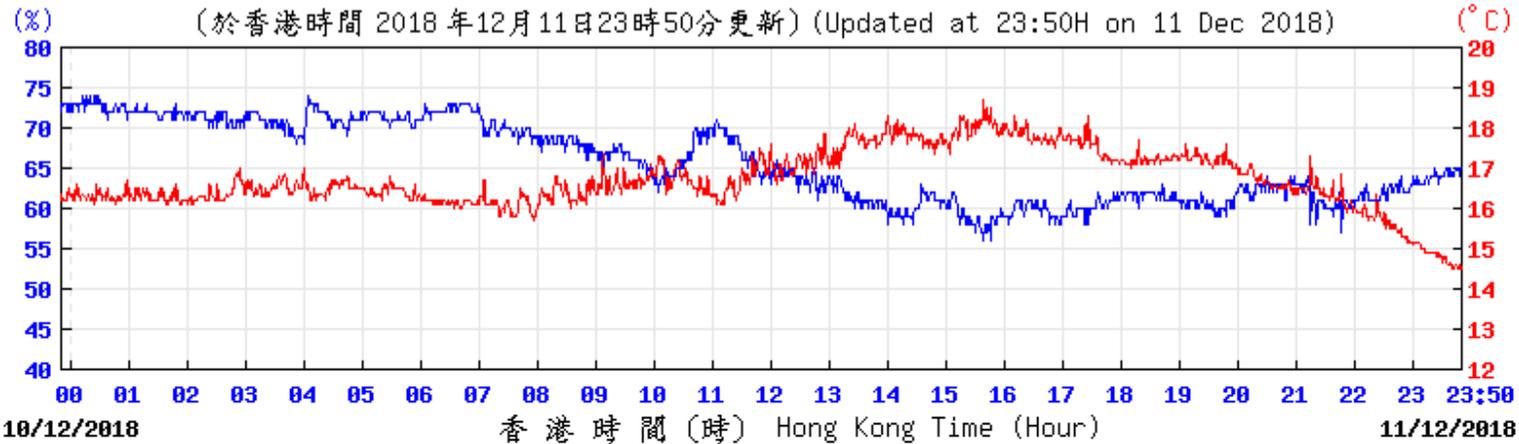
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



APPENDIX 2

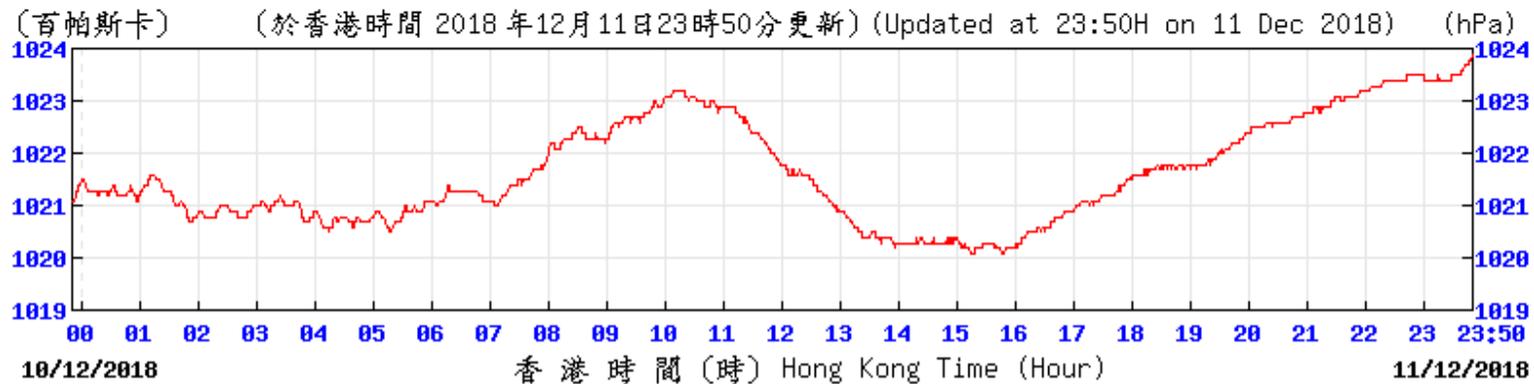
A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

Temperature/Humidity:



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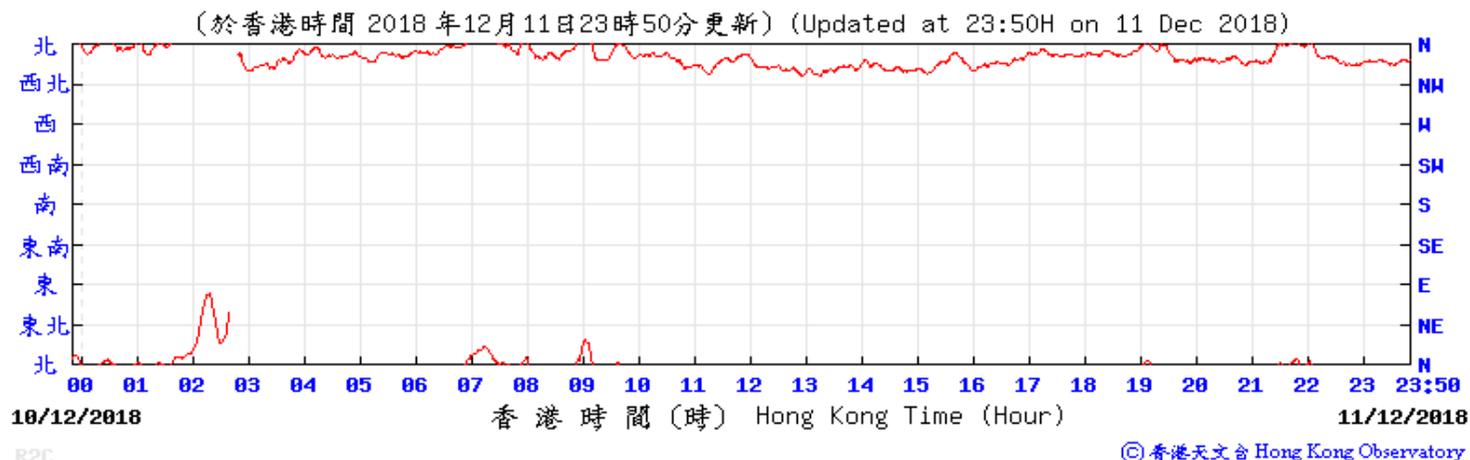
Pressure:



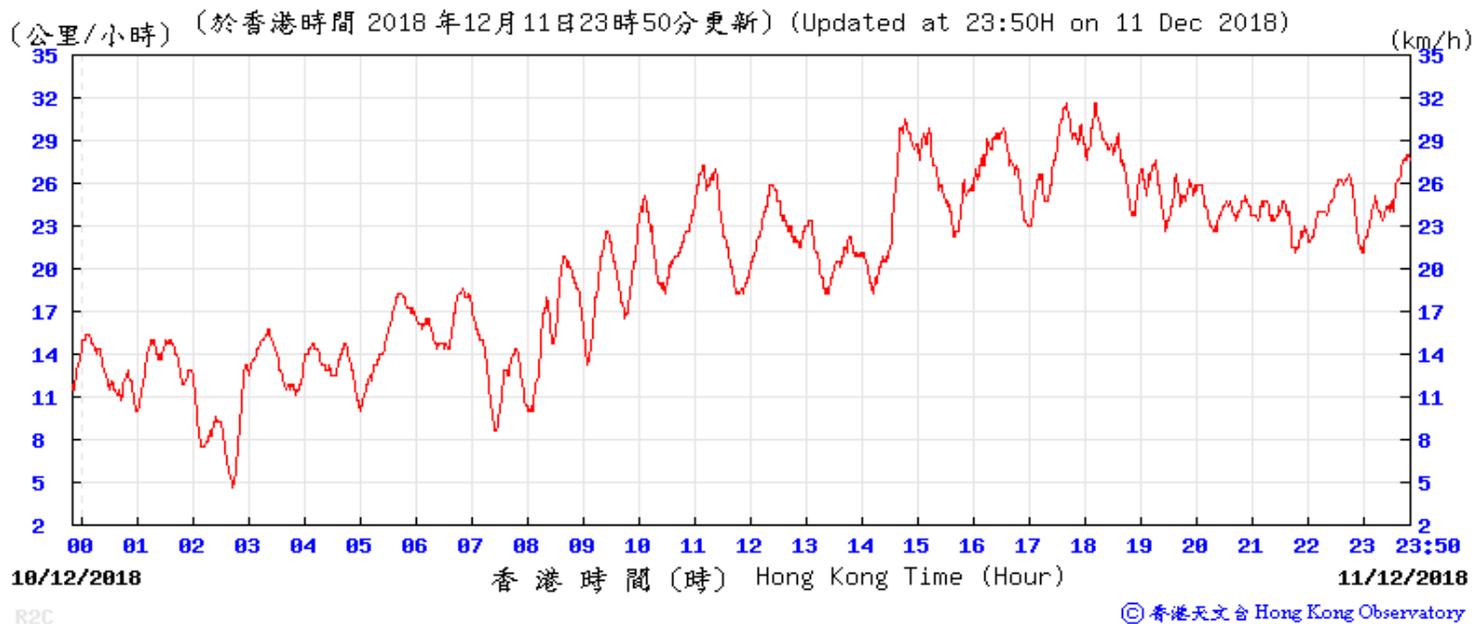
© 香港天文台 Hong Kong Observatory



Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1864596
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	DATE RECEIVED:	11 December 2018
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	DATE OF ISSUE:	14 December 2018
PO:		SAMPLE TYPE:	Air
		NO OF SAMPLES:	3

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 11th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

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Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_e/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 OU_e/m^3 . The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 OU_e/m^3 to 10^7 OU_e/m^3 .

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1864596-001	CAPC Unit (Bypass AC Filter)	11-Dec-18	15:13 - 15:17	11	476	Decayed orange with minor bleach smell	1419	40,500,000
HK1864596-002	CAPC Unit (Bypass AC Filter)	11-Dec-18	15:19 - 15:23	11	510	Decayed orange with minor bleach smell	1419	43,400,000
HK1864596-003	Field Blank	11-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.

**APPENDIX 1****A1. SITE CONDITIONS AND OBSERVATION**

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	11-12-18	15:13 - 15:23	18.0	64.7	1017.6	3.0	321	NA	NA	No odour was smelled.	NA	Sunny

Note:

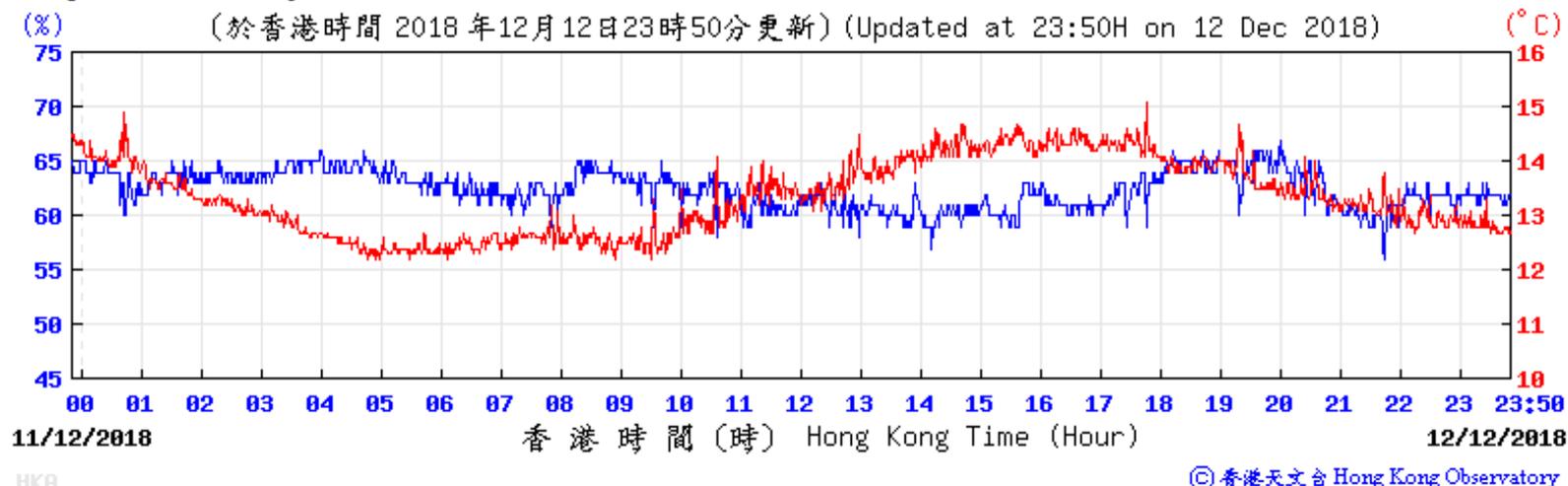
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



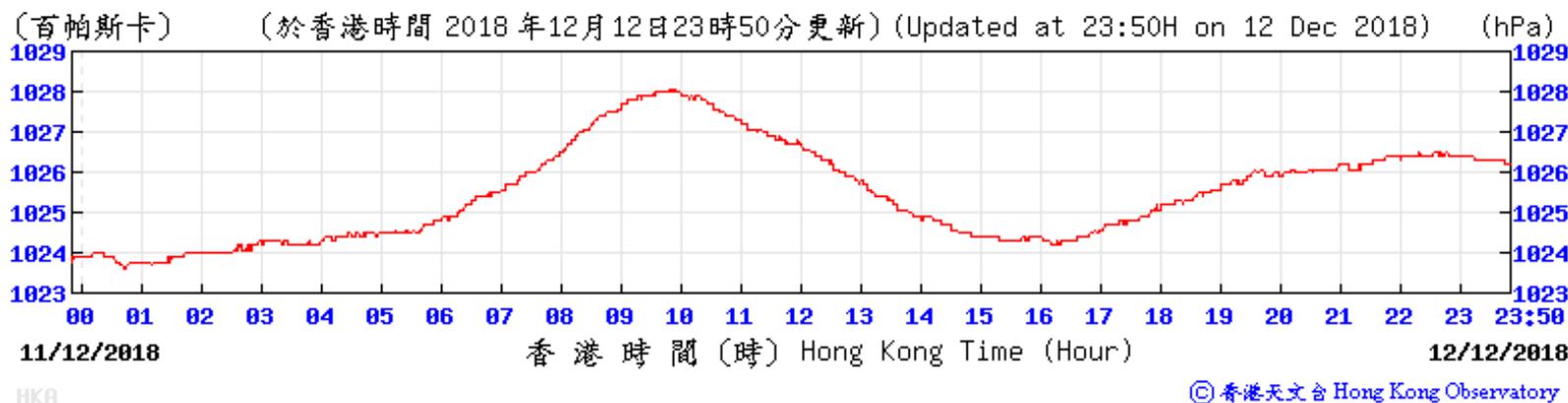
APPENDIX 2

A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

Temperature/Humidity:

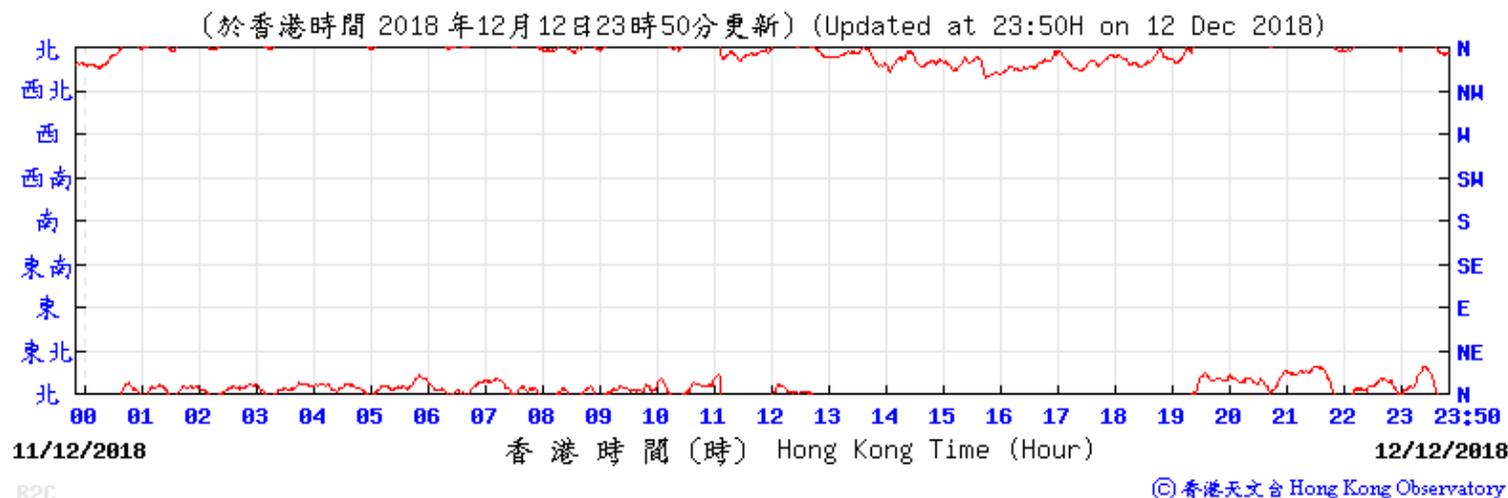


Pressure:

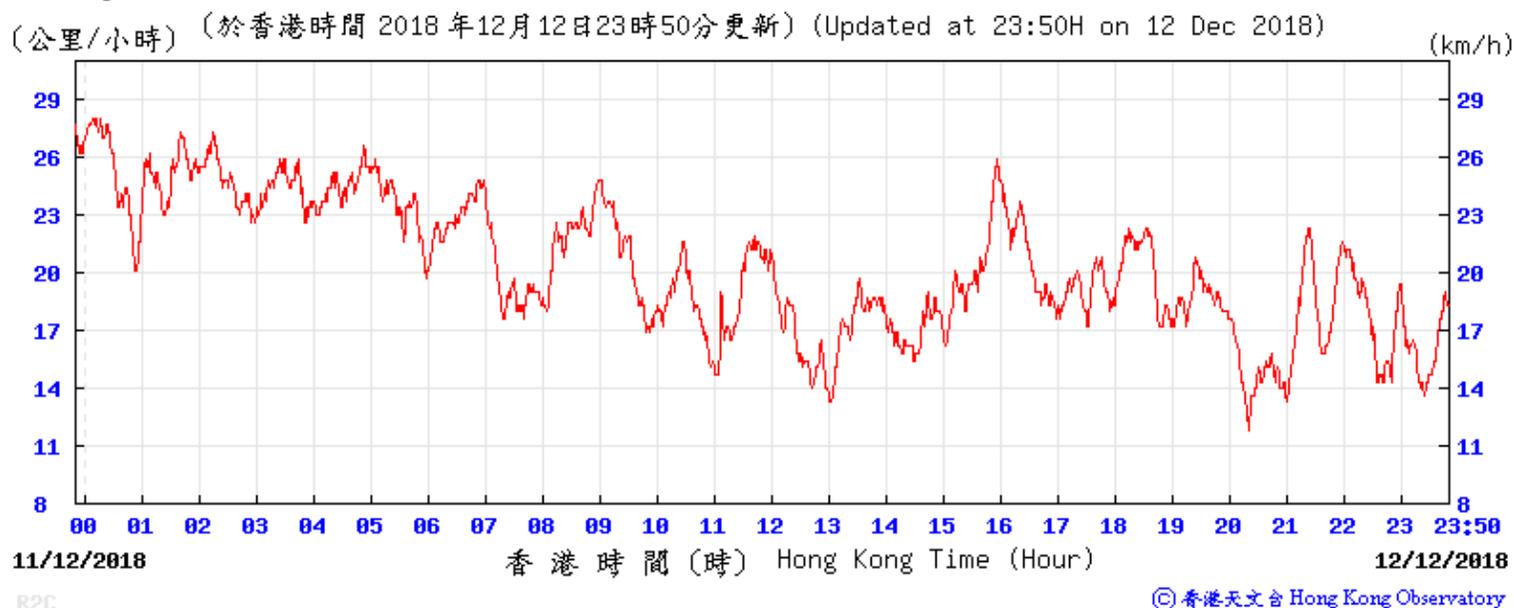




Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1864597
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	11 December 2018
		DATE OF ISSUE:	14 December 2018
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

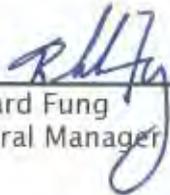
Air sample(s) were collected by ALS Technichem (HK) staff on 11th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition $1 \text{OU}_E/\text{m}^3$. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1 \text{OU}_E/\text{m}^3$ to $10^7 \text{OU}_E/\text{m}^3$.

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1864597-001	CAPC Unit (With AC Filter)	11-Dec-18	15:34 - 15:38	11	414	Decayed orange	1390.1	34,500,000
HK1864597-002	CAPC Unit (With AC Filter)	11-Dec-18	15:38 - 15:43	11	443	Decayed orange	1390.1	37,000,000
HK1864597-003	Field Blank	11-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	11-12-18	15:34 - 15:43	18.3	64.0	1017.6	2.5	281	NA	NA	No odour was smelled.	NA	Sunny

Note:

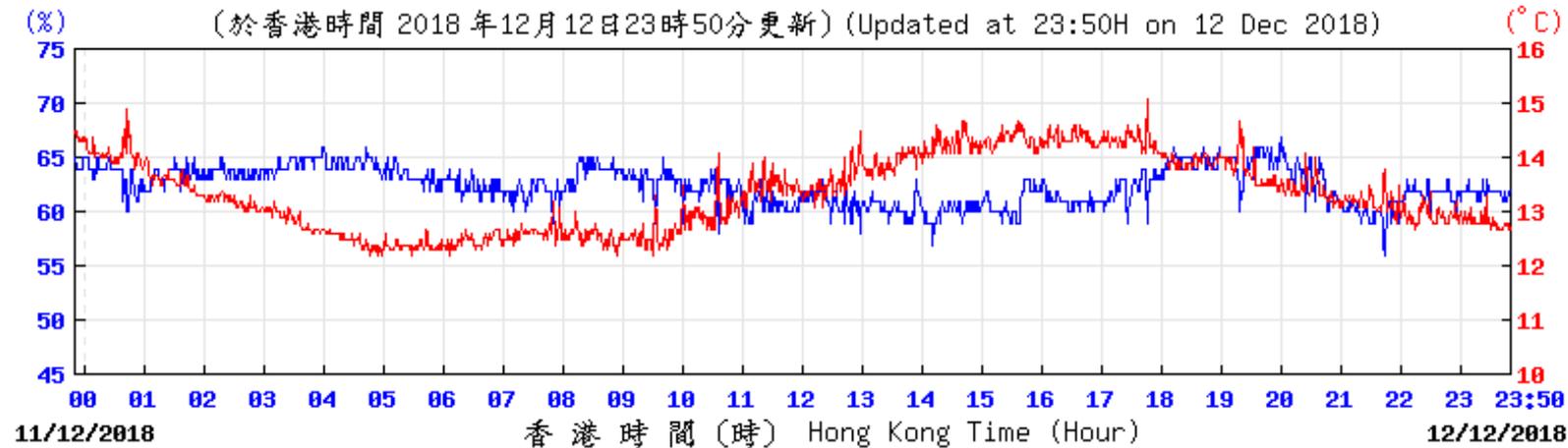
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



APPENDIX 2

A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

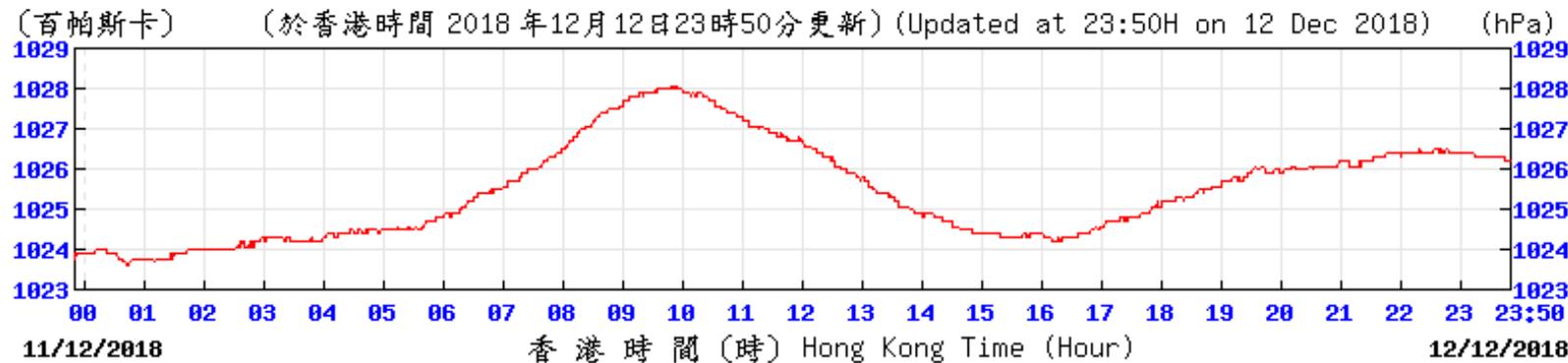
Temperature/Humidity:



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HKA

Pressure:

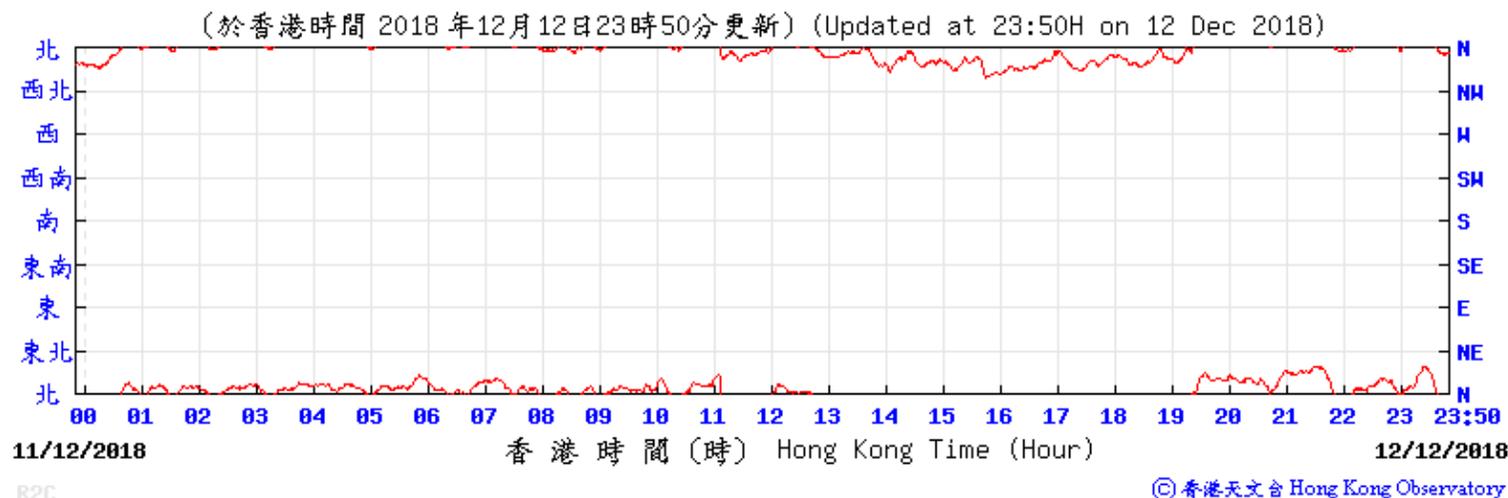


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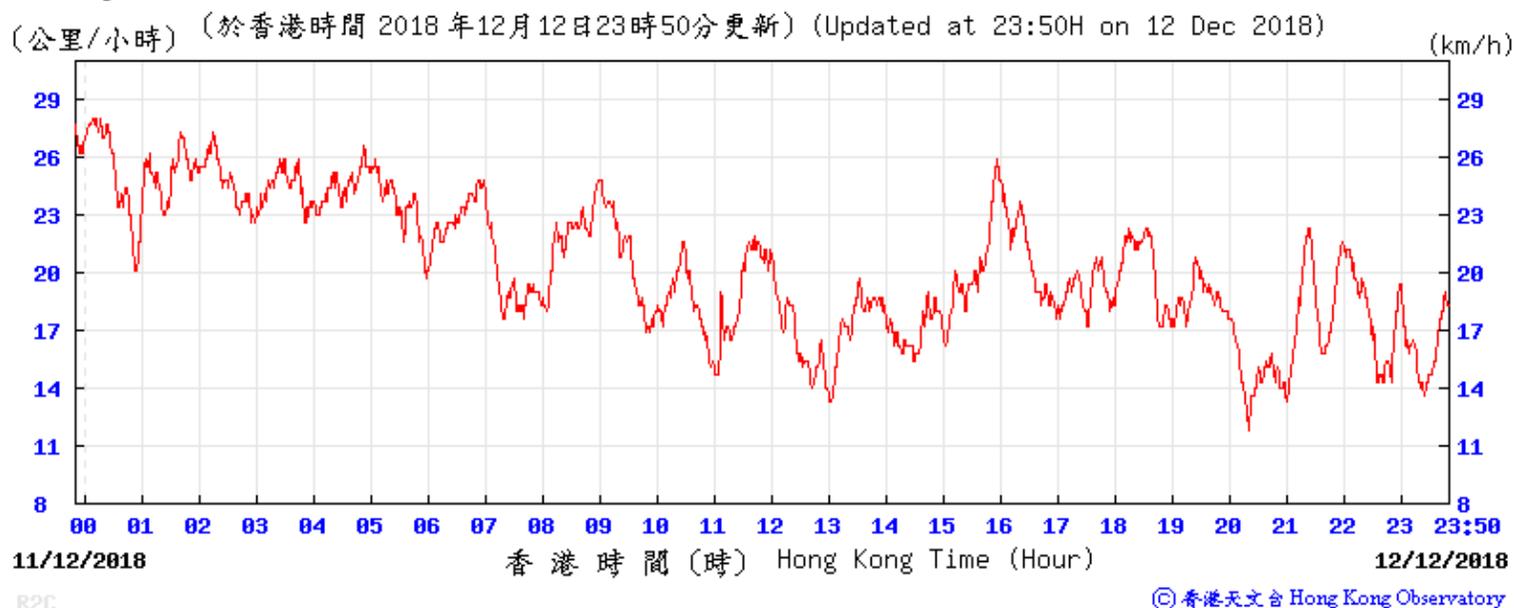
HKA



Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1866002
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	19 December 2018
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	DATE OF ISSUE:	2 January 2019
		SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 19th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition $1 \text{OU}_E/\text{m}^3$. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1 \text{OU}_E/\text{m}^3$ to $10^7 \text{OU}_E/\text{m}^3$.

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1866002-001	CAPC Unit (With AC Filter)	19-Dec-18	15:08 - 15:12	11	1164	Musty smell	1856.4	130,000,000
HK1866002-002	CAPC Unit (With AC Filter)	19-Dec-18	15:29 - 15:33	11	1016	Musty smell	1856.4	113,000,000
HK1866002-003	Field Blank	19-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	19-12-18	15:08 - 15:33	21.5	72.0	1014.9	3.6	335	Yes	Continuous	Bleaching with musty smell	From the Chimney	Cloudy

Note:

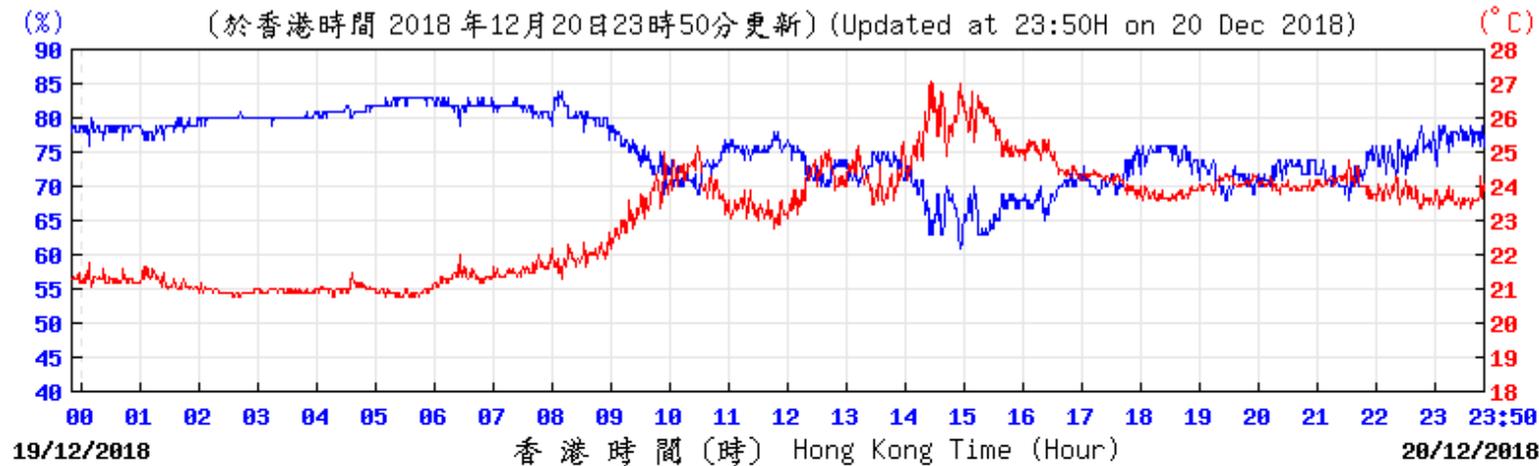
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



APPENDIX 2

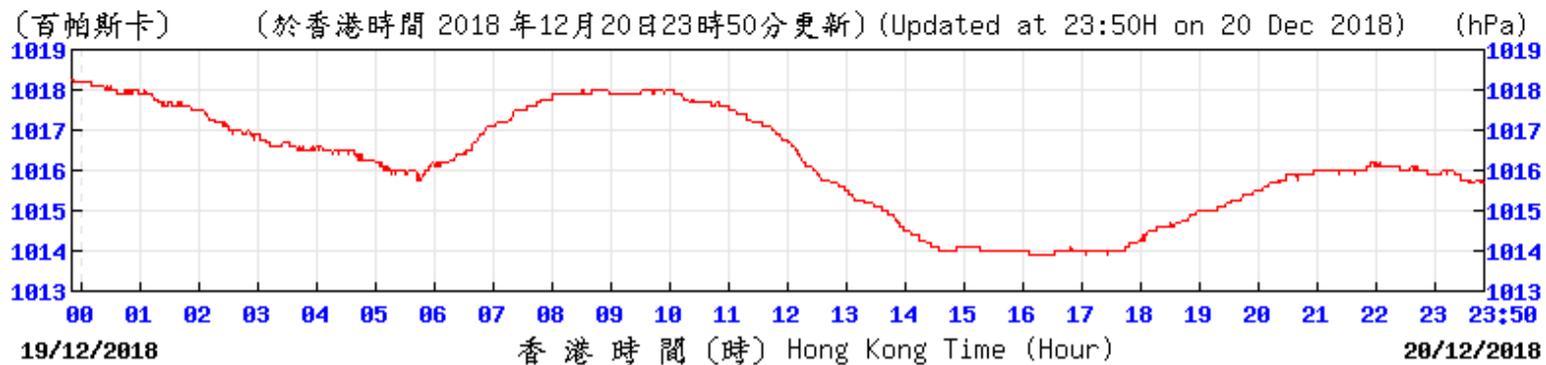
A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

Temperature/Humidity:



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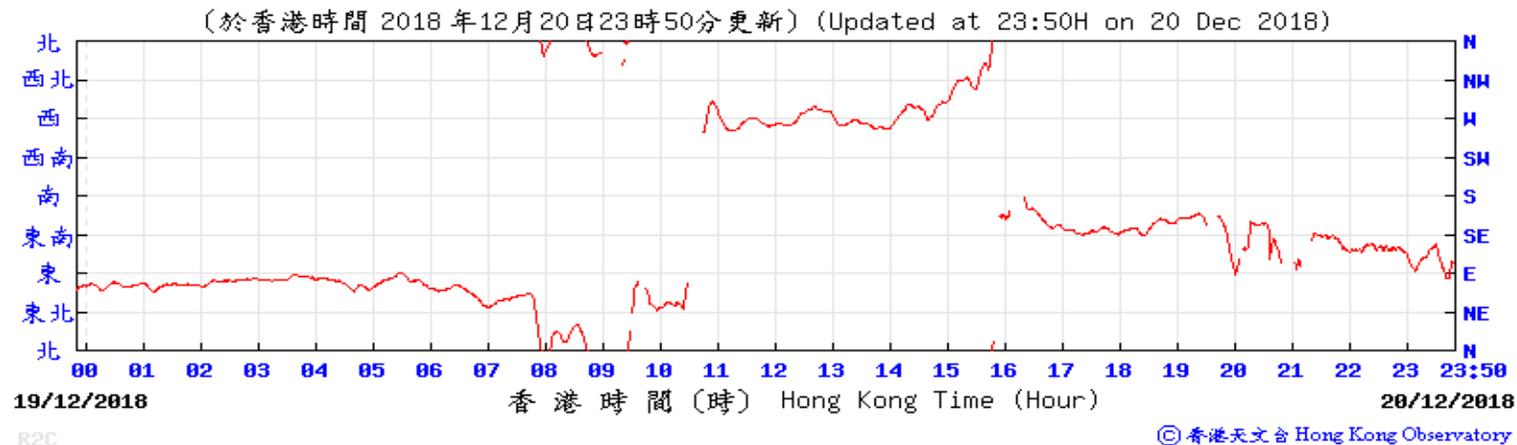
Pressure:



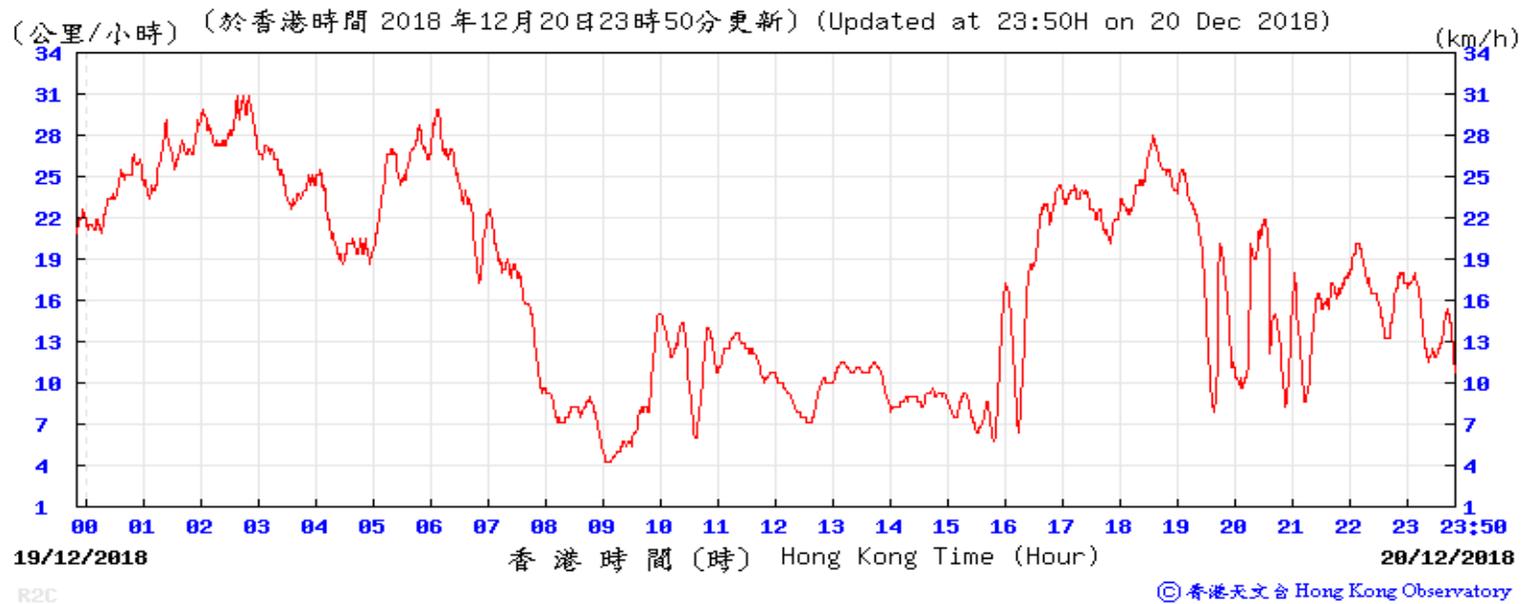
© 香港天文台 Hong Kong Observatory



Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1866/21
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	27 December 2018
		DATE OF ISSUE:	2 January 2019
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	5
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 27th December, 2018 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A3.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_e/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 OU_e/m^3 . The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 OU_e/m^3 to 10^7 OU_e/m^3 .

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****1. Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (OU _E /Nm ³)	Odour Concentration (OU _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (OU _E /hr)
HK1866721-001	CAPC Unit (with AC Filter)	27-Dec-18	14:07 - 14:10	11	1026	Bleach with minor garbage smell	1871.6	115,000,000
HK1866721-002	CAPC Unit (with AC Filter)	27-Dec-18	14:11 - 14:14	11	1026	Bleach with minor garbage smell	1871.6	115,000,000
HK1866721-003	CAPC Unit (Bypass AC Filter)	27-Dec-18	14:45 - 14:48	11	1087	Bleach smell	2003.6	131,000,000
HK1866721-004	CAPC Unit (Bypass AC Filter)	27-Dec-18	14:49 - 14:53	11	1087	Bleach smell	2003.6	131,000,000
HK1866721-005	Field Blank	27-Dec-18	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	27-12-18	14:07 - 14:53	23.3	68.8	1012.5	0.8	320	NA	NA	No odour was detected.	NA	Sunny

Note:

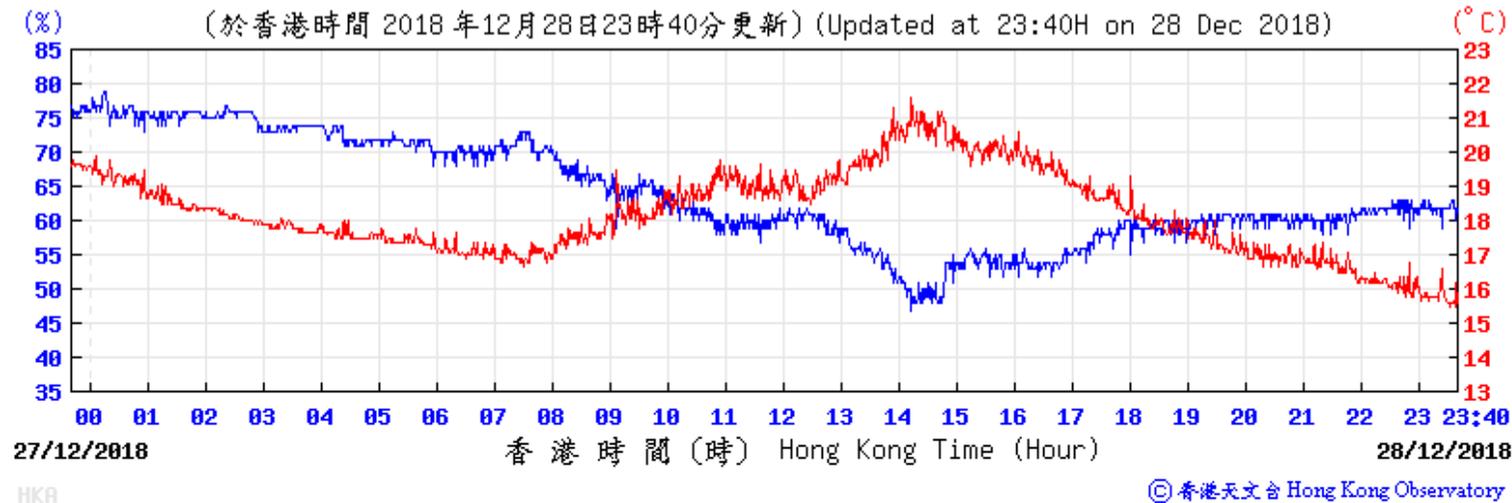
1. It was assumed that the exhaust of the CAPC Unit was from the odour source.



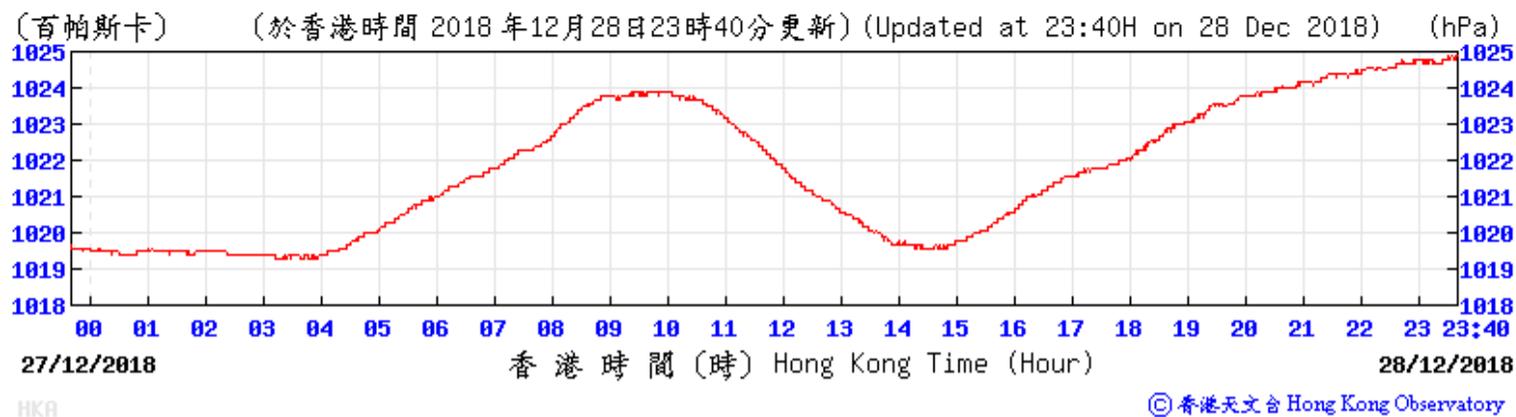
APPENDIX 2

A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION

Temperature/Humidity:

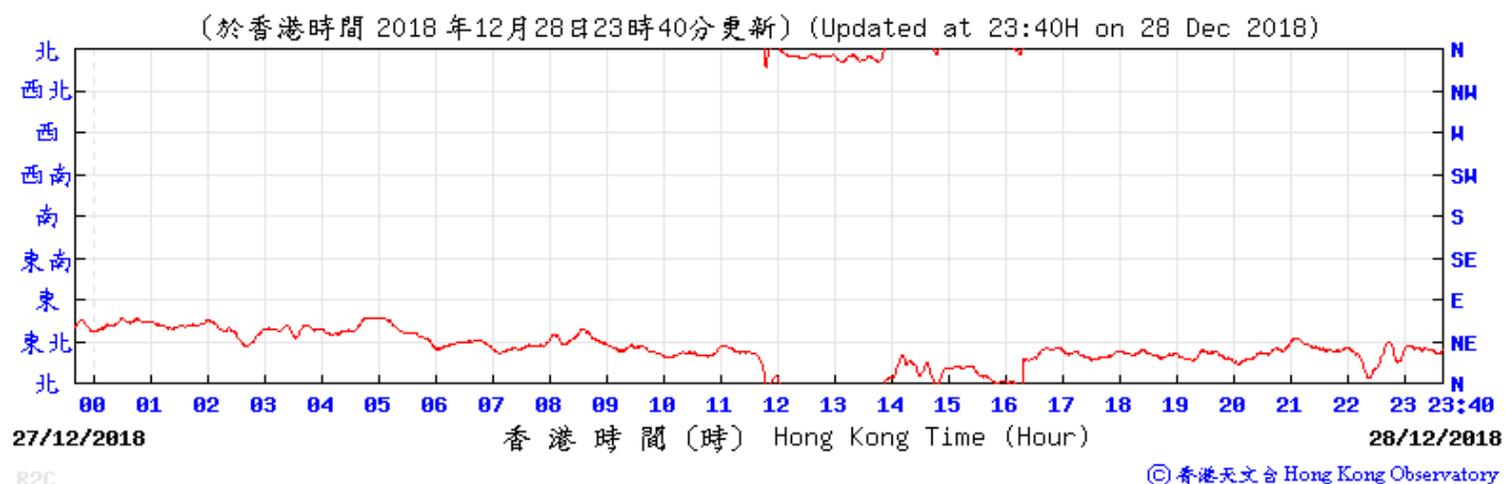


Pressure:

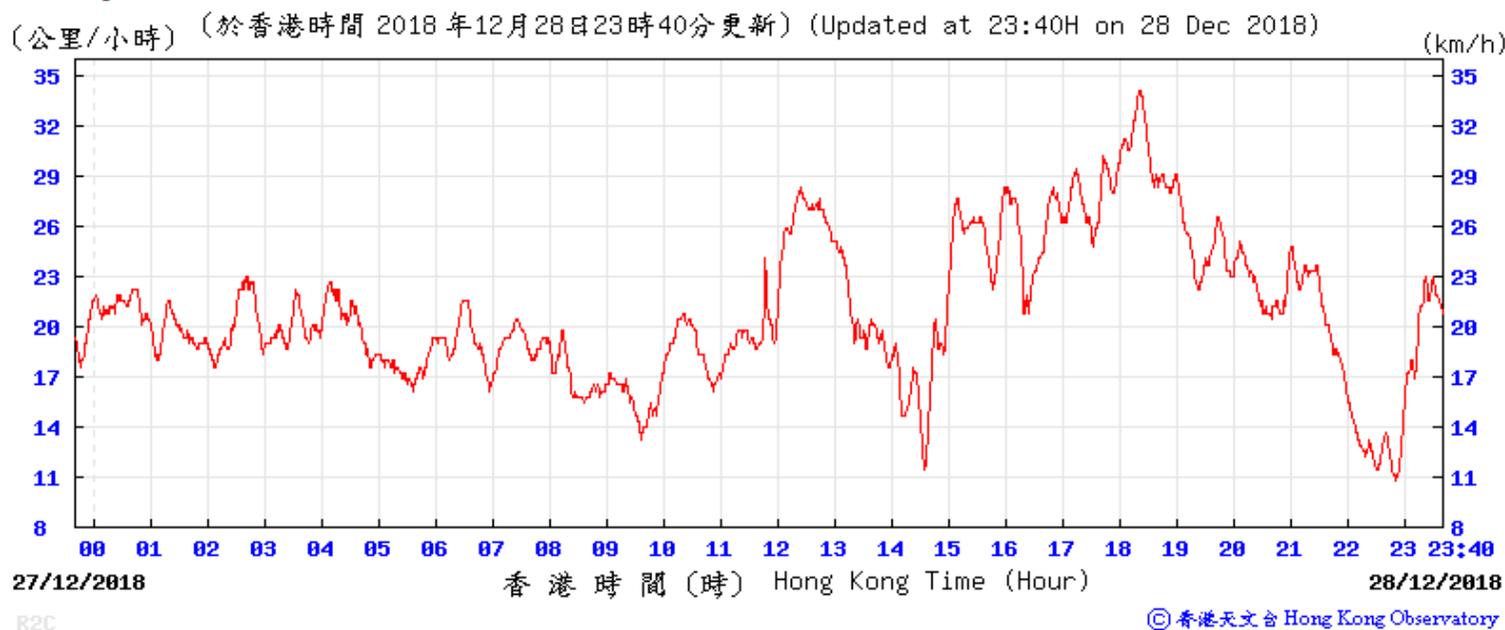




Wind Direction:



Wind Speed:



APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1902606
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	16 January 2019
		DATE OF ISSUE:	30 January 2019
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 16th January, 2019 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A2.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 OU_E/m^3 . The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 ou_E/m^3 to 10^7 ou_E/m^3 .

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (ou _E /Nm ³)	Odour Concentration (ou _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (ou _E /hr)
HK1902606-001	CAPC Unit (Low ORP)	16-Jan-19	13:42 - 13:45	11	444	Bleaching smell	2289.2	61,000,000
HK1902606-002	CAPC Unit (Low ORP)	16-Jan-19	13:48 - 13:52	11	476	Bleaching smell	2289.2	65,000,000
HK1902606-003	Field Blank	16-Jan-19	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	16-1-19	13:42 - 13:52	18.6	70.0	1017.9	2.2	324	NA	NA	No odour was smelled.	NA	Cloudy

Note:

1. It was assumed that the exhaust of the CAPC Unit was from the odour source.

APPENDIX 2

A2. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1902870
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	16 January 2019
		DATE OF ISSUE:	30 January 2019
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	--		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 16th January, 2019 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

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Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A2.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 OU_E/m^3 . The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from 10^1 ou_E/m^3 to 10^7 ou_E/m^3 .

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (ou _E /Nm ³)	Odour Concentration (ou _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (ou _E /hr)
HK1902870-001	CAPC Unit (High ORP)	16-Jan-19	15:54 - 15:57	11	546	Bleaching smell	2285.2	75,000,000
HK1902870-002	CAPC Unit (High ORP)	16-Jan-19	15:58 - 16:02	11	509	Bleaching smell	2285.2	70,000,000
HK1902870-003	Field Blank	16-Jan-19	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	16-1-19	15:54 - 16:02	17.8	63.9	1017.9	1.2	322	NA	NA	No odour was smelled.	NA	Cloudy

Note:

1. It was assumed that the exhaust of the CAPC Unit was from the odour source.

APPENDIX 2

A2. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1904547
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	29 January 2019
		DATE OF ISSUE:	13 February 2019
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 29th January, 2019 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A2.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition $1 OU_E/m^3$. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1 ou_E/m^3$ to $10^7 ou_E/m^3$.

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (ou _E /Nm ³)	Odour Concentration (ou _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (ou _E /hr)
HK1904547-001	CAPC	29-Jan-19	14:00 - 14:04	11	116	Garbage smell with minor fishy smell	2552.4	17,800,000
HK1904547-002	CAPC	29-Jan-19	14:04 - 14:08	11	93	Garbage smell with minor fishy smell	2552.4	14,200,000
HK1904547-003	Field Blank	29-Jan-19	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

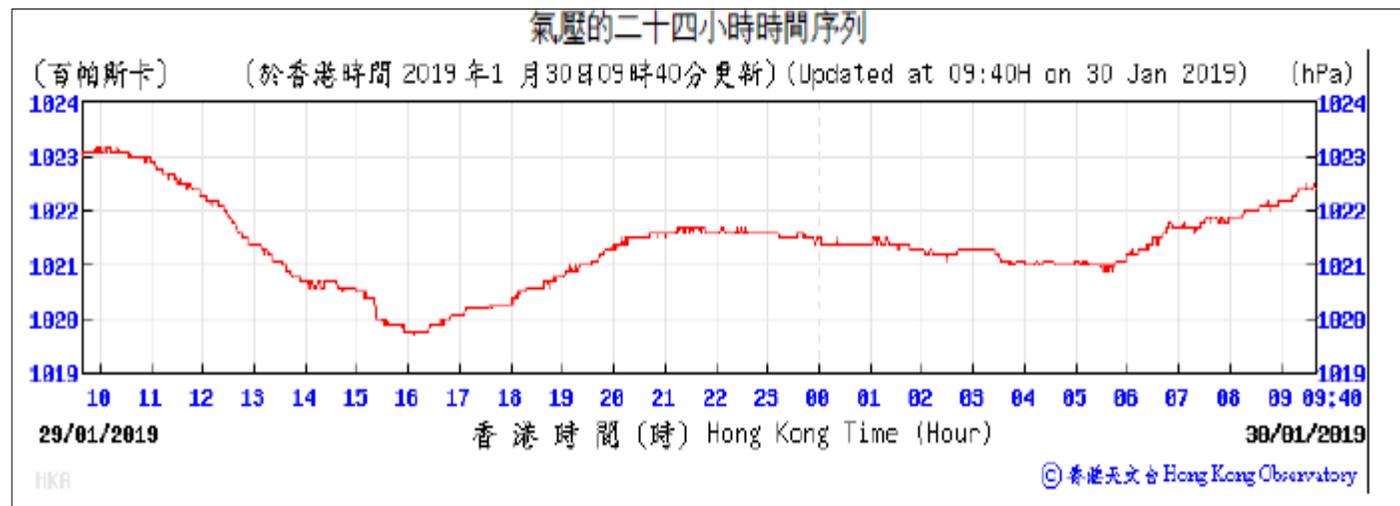
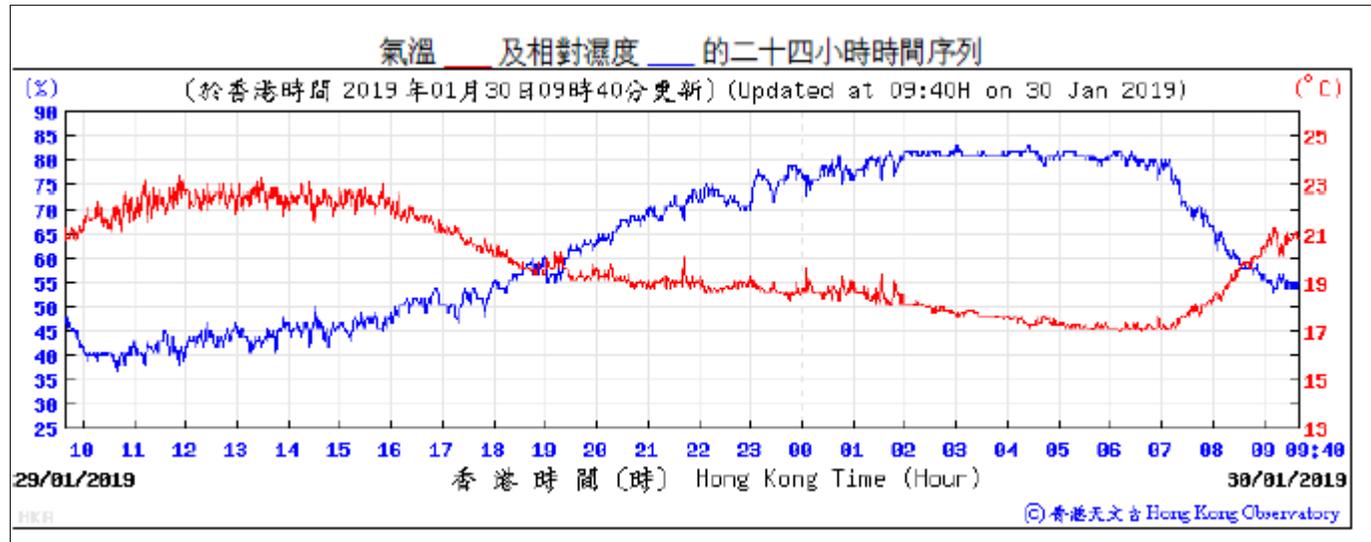
Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	29-1-19	14:00 - 14:08	19.8	65.5	1018.6	4.8	328	NA	NA	No odour was smelled.	NA	Sunny

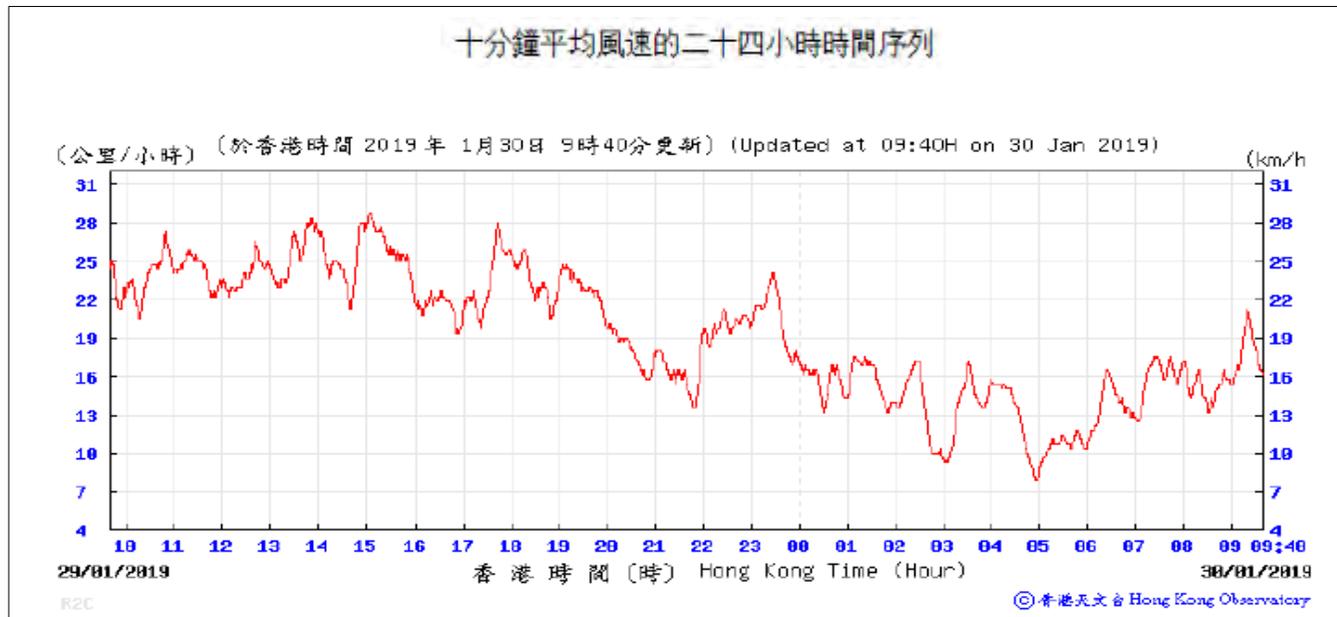
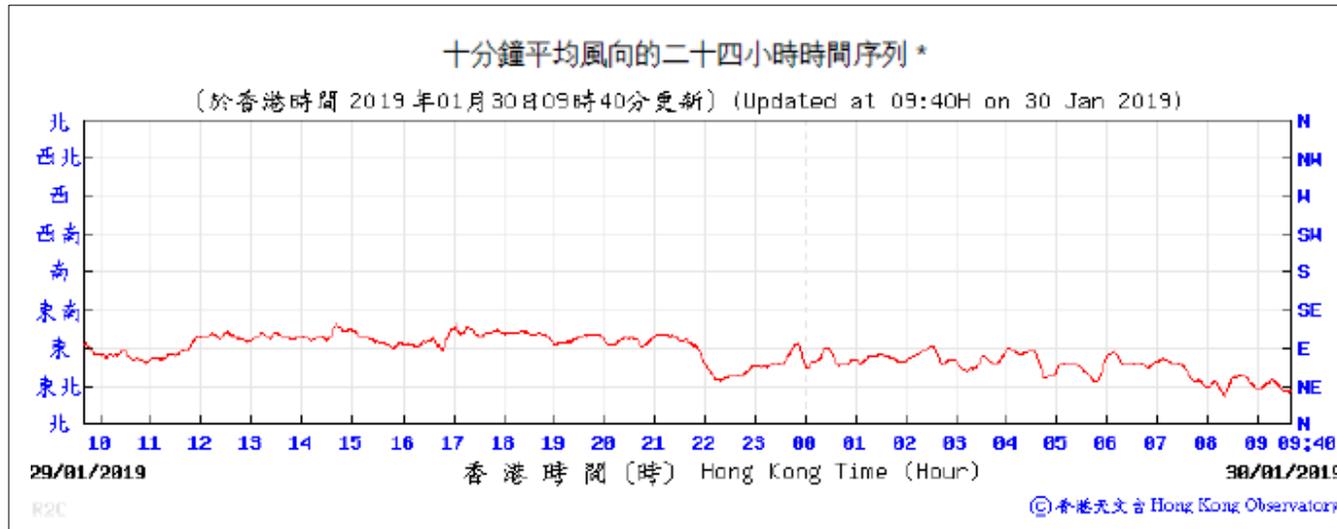
Note:

1. It was assumed that the exhaust of the CAPC Unit was from the odour source.

APPENDIX 2

A2. EXTRACT OF METEOROLOGICAL OBSERVATIONS FROM THE HONG KONG AIRPORT OBSERVATORY STATION





APPENDIX 3

A3. PHOTO OF THE SAMPLING LOCATION





CERTIFICATE OF ANALYSIS

CLIENT:	Oscar Bioenergy Joint Venture	WORK ORDER:	HK1904548
CONTACT:	Mr Edwin Wong	LABORATORY:	Hong Kong
ADDRESS:	No. 5, Sham Fung Road, Siu Ho Wan, North Lantau Island, NT, Hong Kong	SUB-BATCH:	0
		DATE RECEIVED:	29 January 2019
		DATE OF ISSUE:	13 February 2019
PROJECT:	Odour Monitoring for the Organic Resources Recovery Centre Phase 1 in Siu Ho Wan	SAMPLE TYPE:	Air
SITE:	Organic Resources Recovery Centre Phase 1 (ORRC1)	NO OF SAMPLES:	3
PO:	---		

COMMENTS

Air sample(s) were collected by ALS Technichem (HK) staff on 29th January, 2019 at the Organic Resources Recovery Centre Phase 1 (ORRC1) in Siu Ho Wan for Odour Monitoring.

The sample(s) were analysed and reported on an as received basis.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
General Manager - Hong Kong

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METHOD STATEMENT

A. Odour Concentration

1. Odour Sampling

Odour gas sample was collected by passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler and then drawn to vacuum. Approximately 60 litre of gas sample was collected into the sampling bag for testing.

The odour sample was collected at the Organic Recovery Resources Centre Phase 1 (ORRC1) and sampling location was shown in Appendix A2.

2. Olfactometry Testing

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: OU_E/m^3 . The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition $1 OU_E/m^3$. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1 ou_E/m^3$ to $10^7 ou_E/m^3$.

Olfactometry Testing was performed by using the Scentroid™ SS600 Olfactometer. The testing was performed by at least five qualified panellists who have been selected through an n-butanol screening test.

All testing finished within 24 hours after sample receipt.

**RESULT****Odour Concentration**

Sample ID	Location	Sampling Date	Sampling Time	LOR (ou _E /Nm ³)	Odour Concentration (ou _E /Nm ³)	Characteristics of the odour detected of the gas sample	Volumetric Flow Rate (Nm ³ /min)	Emission rate (ou _E /hr)
HK1904548-001	CAPC	29-Jan-19	15:03 - 15:07	11	93	Garbage smell with minor fishy smell	1961.5	10,900,000
HK1904548-002	CAPC	29-Jan-19	15:07 - 15:11	11	154	Garbage smell with minor fishy smell	1961.5	18,100,000
HK1904548-003	Field Blank	29-Jan-19	--	11	<11	--	--	--

Remark:

1. LOR denotes limit of reporting.
2. The collected sample volume of the gas bag is sufficient for olfactometry analysis.
3. Field Blank containing pure nitrogen gas was collected and filled by ALS staff.
4. The volumetric flow rate value for calculation of the emission rate was provided by the client.



APPENDIX 1

A1. SITE CONDITIONS AND OBSERVATION

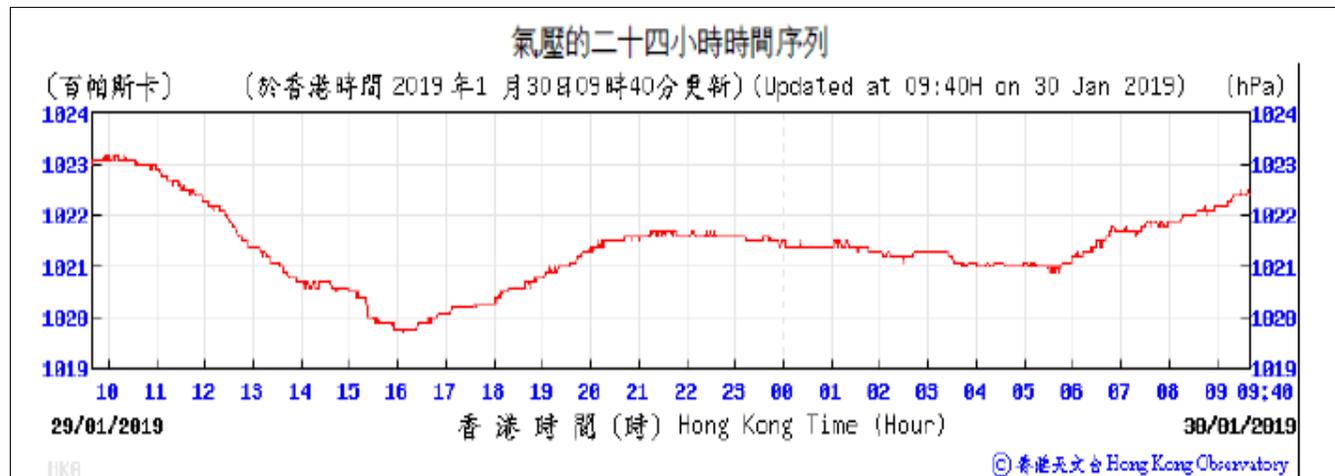
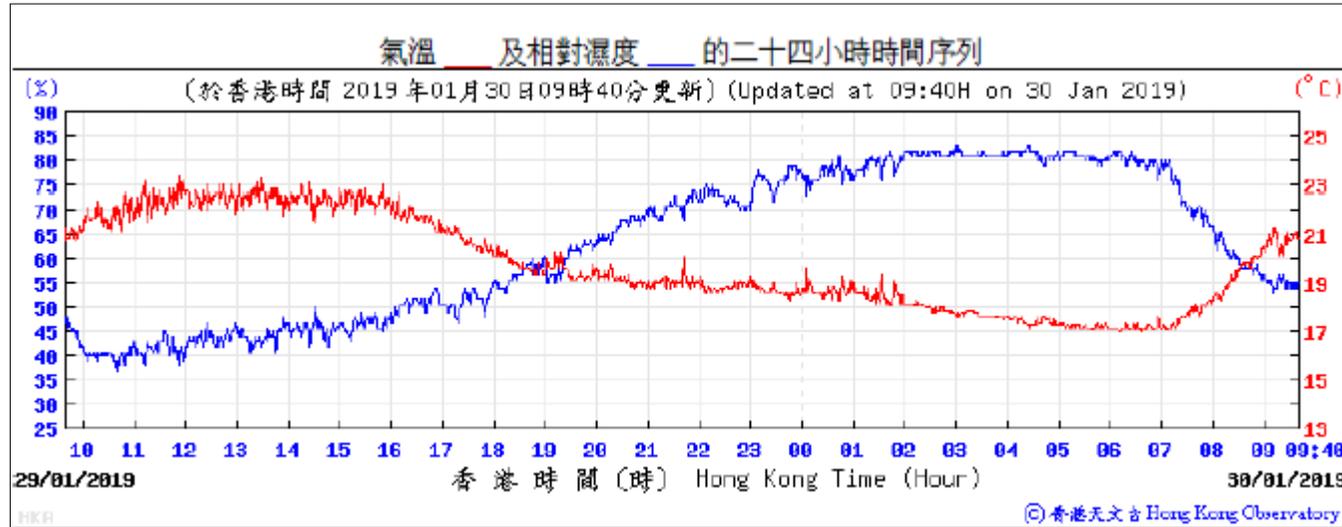
Location	Date	Time	Ambient Temperature (°C)	Relative Humidity (%)	Ambient Pressure (hPa)	Wind Speed (m/s)	Wind Direction (Degree)	Direction from Source ¹	Duration of Odour	On-Site Observation		Weather Condition
										Odour Nature	Possible Source	
CAPC Unit	29-1-19	15:03 - 15:11	19.9	66.5	1018.5	3.3	314	NA	NA	No odour was smelled.	NA	Sunny

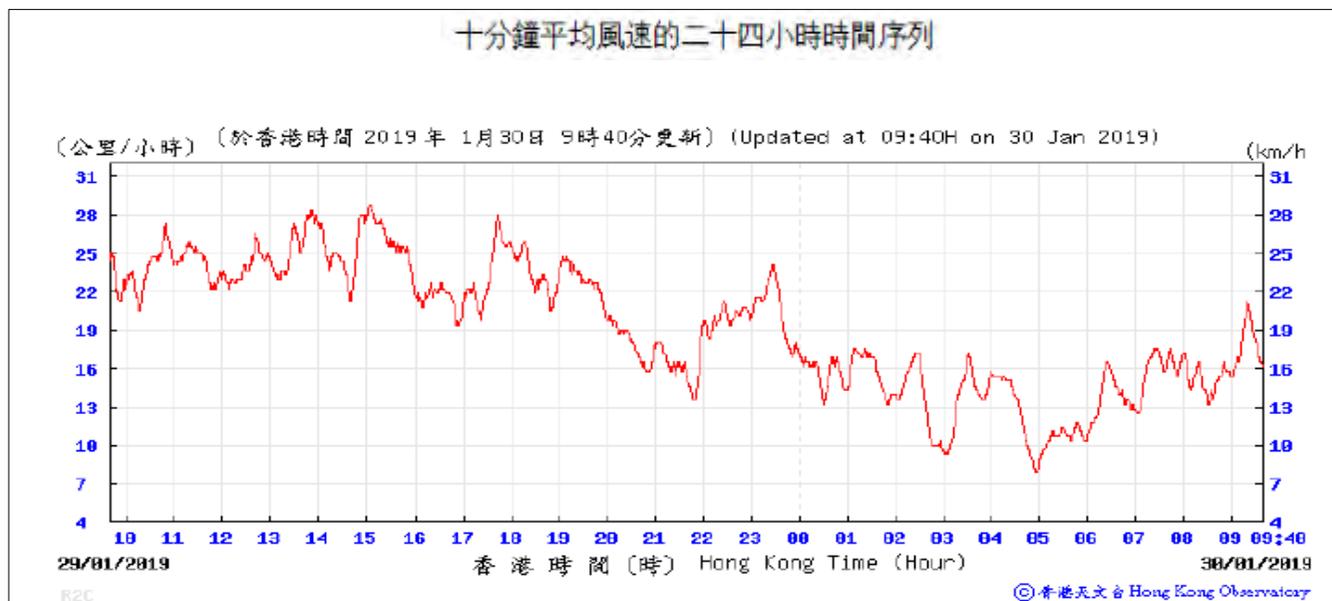
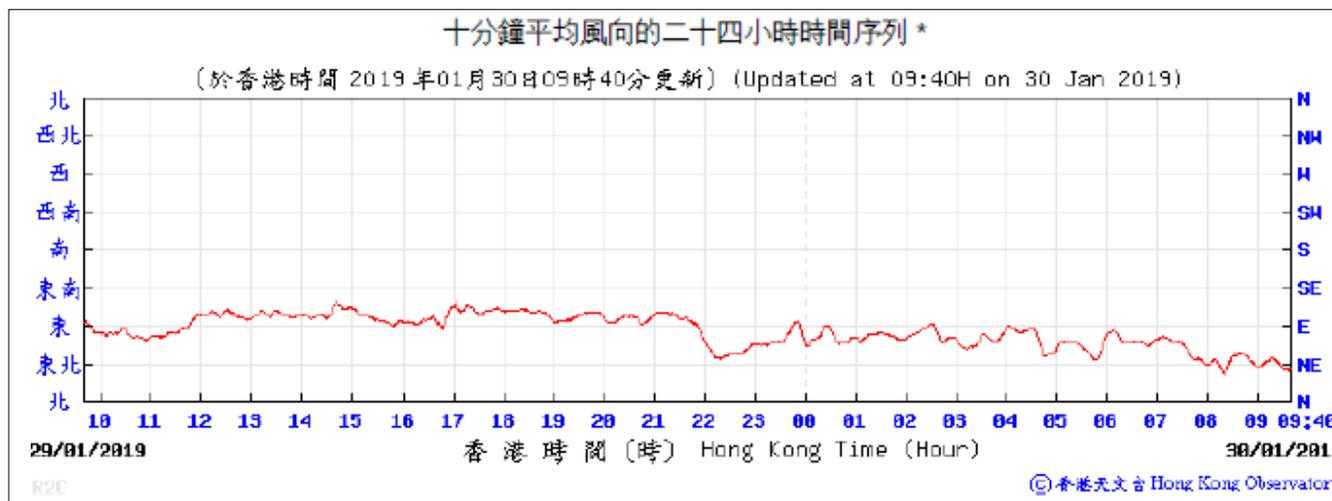
Note:

1. It was assumed that the exhaust of the CAPC Unit was from the odour source.

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Annex J4

Action and Limit Levels for Odour Nuisance

Odour Intensity Level

Level	Odour Intensity
0	Not detected. No odour perceived or an odour so weak that it cannot be easily
1	Slight identifiable odour, and slight chance to have odour
2	Moderate identifiable odour, and moderate chance to have odour
3	Strong identifiable, likely to have odour nuisance
4	Extreme severe odour, and unacceptable odour level

Action and Limit Levels for Odour Nuisance

Parameter	Action Level	Limit Level
Odour Nuisance (from odour patrol)	When one documented compliant is received ⁽¹⁾ , or Odour Intensity of 2 is measured from odour patrol.	Two or more documented complaints are received ⁽¹⁾ within a week; or Odour intensity of 3 or above is measured from odour patrol.

Note:

- (1) Once the compliant is received by the Project Proponent (EPD), the Project Proponent would investigate and verify the complaint whether it is related to the potential odour emission from the OWTF and its on-site wastewater treatment unit.

Event and Action Plan for Odour Monitoring

EVENT	ACTION	
	Person-in-charge of Odour	Project Proponent ⁽¹⁾
ACTION LEVEL		
Exceedance of action level (Odour Patrol)	<ol style="list-style-type: none"> 1. Identify source/reason of exceedance; 2. Repeat odour patrol to confirm finding. 	<ol style="list-style-type: none"> 1. Carry out investigation to identify the source/reason of exceedance. Investigation should be completed within 2 weeks; 2. Rectify any unacceptable practice; 3. Implement more mitigation measures if necessary; 4. Inform DSD or the operator of the Siu Ho Wan Sewage Treatment Works (SHWSTW) if exceedance is considered to be caused by the operation of the SHWSTW. 5. Inform North Lantau Refuse Transfer Station (NLTS) operator if exceedance is considered to be caused by the operation of NLTS.

EVENT	ACTION	
	Person-in-charge of Odour	Project Proponent ⁽¹⁾
Exceedance of action level (Odour Complaints)	<ol style="list-style-type: none"> 1. Identify source/reason of exceedance; 2. Carry out odour patrol to determinate odour intensity. 	<ol style="list-style-type: none"> 1. Carry out investigation and verify the complaint whether it is related to potential odour emission from the nearby SHWSTW; 2. Carry out investigation to identify the source/reason of exceedance. Investigation should be completed within 2 weeks; 3. Rectify any unacceptable practice; 4. Implement more mitigation measures if necessary; 5. Inform DSD or the operator of the SHWSTW if exceedance is considered to be caused by the operation of the SHWSTW.

EVENT	ACTION	
	Person-in-charge of Odour	Project Proponent ⁽¹⁾
LIMIT LEVEL		
Exceedance of Limit level	<ol style="list-style-type: none"> 1. Identify source/reason of exceedance; 2. Inform EPD; 3. Repeat odour patrol to confirm findings; 4. Increase odour patrol frequency to bi-weekly; 5. Assess effectiveness of remedial action and keep EPD informed of the results; 6. If exceedance stops, cease additional odour patrol. 	<ol style="list-style-type: none"> 1. Carry out investigation to identify the source/reason of exceedance. Investigation should be completed within 2 week; 2. Rectify any unacceptable practice; 3. Formulate remedial actions; 4. Ensure remedial actions properly implemented; 5. If exceedance continues, consider what more/enhanced mitigation measures should be implemented;

Note: ⁽¹⁾Project Proponent shall identify an implementation agent