Elf Farm Supplies Pty Ltd

Mushroom Substrate Plant – Modification to Approved Expansion

Odour Impact Assessment

Mulgrave, NSW

Second Amended Final Appendices

Elf Farm Supplies Pty Ltd

Mushroom Substrate Plant – Modification to Approved Expansion

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APPENDIX A:

ODOUR CONCENTRATION LABORATORY TESTING RESULTS

THE ODOUR UNIT PTY LTD

THE ODOUR UNIT

Aust. Technology Park
Locomotive Workshop
Bay 4 Suite 3011
2 Locomotive Street
Eveleigh NSW 2015

Phone: +61 2 9209 4420
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Email: info@odourunit.com.au
Internet: www.odourunit.com.au
ABN: 53 091 165 061

NATA
Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	Drum & Pump	Sampling Team	TOU (J. Schulz, M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	July 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	A. Schulz

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Thursday, 21 August 2014 Panel Roster Number: SYD20140813_069

J. Schulz
NSW Laboratory Coordinator

A. Schulz
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20140813_069

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate (ou.m^3/m^2/s)
2-1 Levelling (Tunnel 1)	SC14469	12/08/2014 1106hrs	13/08/2014 1128hrs	4	8	-	-	4,870	4,870	N/A
8-1 Tunnel Venting (Tunnel 17)	SC14471	12/08/2014 1119hrs	13/08/2014 1232hrs	4	8	-	-	2,900	2,900	N/A
2-2 Levelling (Tunnel 3)	SC14472	12/08/2014 1113hrs	13/08/2014 1442hrs	4	8	-	-	5,310	5,310	N/A

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20140813_069	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

Note This report shall not be reproduced, except in full, without written approval of The Odour Unit Pty Ltd. Any attachments to this Report are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd.

END OF DOCUMENT

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ABN: 53 091 165 061

NATA
Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	Drum & Pump	Sampling Team	TOU (J. Schulz, M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	July 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	A. Schulz

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Thursday, 21 August 2014

Panel Roster Number: SYD20140814_070

J. Schulz
NSW Laboratory Coordinator

A. Schulz
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20140814_070

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
7A-1 Spawn Run 1 (Tunnel 4)	SC14477	13/08/2014 0919hrs	14/08/2014 1040hrs	4	8	-	-	118	118	N/A
4-2 Pasteurisation (Tunnel 3)	SC14478	13/08/2014 0933hrs	14/08/2014 1110hrs	4	8	-	-	2,660	2,660	N/A
4-1 Pasteurisation (Tunnel 2)	SC14479	13/08/2014 0941hrs	14/08/2014 0941hrs	4	8	-	-	2,230	2,230	N/A
3-2 Warm-up Pasteurisation (Tunnel 10)	SC14480	13/08/2014 0954hrs	14/08/2014 1218hrs	4	8	-	-	2,440	2,440	N/A
3-1 Warm-up Pasteurisation (Tunnel 1)	SC14481	13/08/2014 1000hrs	14/08/2014 1248hrs	4	8	-	-	2,350	2,350	N/A

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20140814_070	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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NATA

Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	Drum & Pump	Sampling Team	TOU (J. Schulz, M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	July 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	A. Schulz

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Friday, 22 August 2014

Panel Roster Number: SYD20140815_071

J. Schulz
NSW Laboratory Coordinator

A. Schulz
Authorised Signatory

Odour Sample Measurement Results
Panel Roster Number: SYD20140815_071

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
5-1-1 Conditioning #1 (Tunnel 1)	SC14482	14/08/2014 1040hrs	15/08/2014 1033hrs	4	8	-	-	512	512	N/A
5-2-1 Conditioning #1 (Tunnel 3)	SC14483	14/08/2014 1013hrs	15/08/2014 1108hrs	4	8	-	-	431	431	N/A
7B-1 Spawn run 2 (Tunnel 8)	SC14484	14/08/2014 0950hrs	15/08/2014 1144hrs	4	8	-	-	152	152	N/A
5-1-2 Conditioning #2 (Tunnel 1)	SC14485	14/08/2014 0920hrs	15/08/2014 1244hrs	4	8	-	-	362	362	N/A
5-2-2 Conditioning #2 (Tunnel 3)	SC14486	14/08/2014 0934hrs	15/08/2014 1311hrs	4	8	-	-	304	304	N/A

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20140815_071	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	Drum & Pump	Sampling Team	TOU (J. Schulz, M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	July 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	A. Schulz

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Friday, 22 August 2014

Panel Roster Number: SYD20140817_072

J. Schulz
NSW Laboratory Coordinator

A. Schulz
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20140817_072

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
5-1-3 Conditioning #3 (Tunnel 1)	SC14487	16/08/2014 0852hrs	17/08/2014 1251hrs	4	8	-	-	99	99	N/A
5-2-3 Conditioning #3 (Tunnel 3)	SC14488	16/08/2014 0910hrs	17/08/2014 1317hrs	4	8	-	-	83	83	N/A
6-2 Cooldown Spawn (Tunnel 3)	SC14489	17/08/2014 0903hrs	17/08/2014 1343hrs	4	8	-	-	41	41	N/A
6-1 Cooldown Spawn (Tunnel 1)	SC14490	17/08/2014 0915hrs	17/08/2014 1413hrs	4	8	-	-	45	45	N/A

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1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20140815_071	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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NATA
Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	AS4323.3/4	Sampling Team	TOU (M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	October 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	D. Hepple

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Tuesday, 28 October 2014

Panel Roster Number: SYD20141028_092

J. Schulz
NSW Laboratory Coordinator

D. Hepple
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141028-092

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate (ou.m^3/m^2/s)
[redacted]										

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141028_092

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate (ou.m^3/m^2/s)
#9 – Bale Wetting Bed Area (Monday), Aerating	SC14648	27/10/2014 1402 hrs	28/10/2014 1419hrs	4	8	-	-	42,500	42,500	25.3
#10 – Bale Wetting Bed Area (Monday), Non-aerating	SC14649	27/10/2014 1443 hrs	28/10/2014 1452 hrs	4	8	-	-	39,000	39,000	23.9
[redacted]										

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20141028_092	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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THE ODOUR UNIT PTY LTD

THE ODOUR UNIT

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Bay 4 Suite 3011
2 Locomotive Street
Eveleigh NSW 2015

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Email: info@odourunit.com.au
Internet: www.odourunit.com.au
ABN: 53 091 165 061

NATA

Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	AS4323.3/4	Sampling Team	TOU (M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	October 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	D. Hepple

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Wednesday, 29 October 2014

Panel Roster Number: SYD20141029_093

J. Schulz
NSW Laboratory Coordinator

D. Hepple
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141029_093

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
#15 – Bale Wetting Area (Tuesday), Aerating, Saturated	SC14654	28/10/2014 1022 hrs	29/10/2014 1019 hrs	4	8	-	-	60,100	60,100	32.7
#16 – Bale Wetting Area (Tuesday), Non-aerating, Saturated	SC14655	28/10/2014 1058 hrs	29/10/2014 1046 hrs	4	8	-	-	77,900	77,900	39.9
[redacted]										

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141029_093

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
[redacted]										

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

1. The collection of Isolation Flux Hood (IFH) samples and the calculation of the Specific Odour Emission Rate (SOER).
2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20141029_093	50,000	$20 \leq \chi \leq 80$	861	58	Yes

Comments [redacted]

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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Internet: www.odourunit.com.au
ABN: 53 091 165 061

NATA

Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	AS4323.3/4	Sampling Team	TOU (M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	October 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	D. Hepple

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Thursday, 30 October 2014

Panel Roster Number: SYD20141030_094

J. Schulz
NSW Laboratory Coordinator

D. Hepple
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141030_094

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate (ou.m^3/m^2/s)
#24 - Stable Bedding Area, Non-aerating	SC14665	29/10/2014 0830 hrs	30/10/2014 1015 hrs	4	8	-	-	11,600	11,600	5.28
#25 - Broken Wetted Bales, Non-aerating	SC14666	29/10/2014 0858 hrs	30/10/2014 1043 hrs	4	8	-	-	13,800	13,800	9.31
#26 - Stable Bedding Area, Aerating	SC14667	29/10/2014 0938 hrs	30/10/2014 1108 hrs	4	8	-	-	16,400	16,400	6.33
#27 - Broken Wetted Bales, Aerating	SC14668	29/10/2014 1008 hrs	30/10/2014 1134 hrs	4	8	-	-	6,320	6,320	3.56
#28 - Freshly Made Brew Mix	SC14669	29/10/2014 1102 hrs	30/10/2014 1157 hrs	4	8	-	-	17,900	17,900	11.2
#29 –Water Recycle Pit (Wed), Aeration Offline	SC14670	29/10/2014 1115 hrs	30/10/2014 1257 hrs	4	8	-	-	156,000	156,000	98.8

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2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples.

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20141030_094	50,000	$20 \leq \chi \leq 80$	861	58	Yes

Comments [redacted]

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Internet: www.odourunit.com.au
ABN: 53 091 165 061

NATA
Accreditation Number: 14974

Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	AS4323.3/4	Sampling Team	TOU (M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	T.Schulz
Date of order	October 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	D. Hepple

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Friday, 31 October 2014 Panel Roster Number: SYD20141031_095

J. Schulz
NSW Laboratory Coordinator

D. Hepple
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141031_095

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate (ou.m^3/m^2/s)
#30 – Chicken Manure, Composite of Odd and Even	SC14672	30/10/2014 0826 hrs	31/10/2014 1020 hrs	4	8	-	-	7,510	7,510	5.28
[redacted]										
#37 – Stormwater Overflow Retention Dam	SC14679	31/10/2014 1210 hrs	3110/2014 1413 hrs	4	8	-	-	11,600	11,600	7.48

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

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Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20141031_095	50,000	$20 \leq \chi \leq 80$	1,024	49	Yes

Comments None.

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Odour Concentration Measurement Results

The measurement was commissioned by:

Organisation	Elf Farm Supplies Pty Ltd	Telephone	+61 2 4577 5000
Contact	Neil Cockerell	Facsimile	-
Sampling Site	Mulgrave, NSW	Email	manager@elffarm.com.au
Sampling Method	AS4323.3/4	Sampling Team	TOU (M. Assal)

Order details:

Order requested by	Neil Cockerell	Order accepted by	M.Assal
Date of order	October 2014	TOU Project #	N1952R
Order number	Refer to correspondence	Project Manager	M. Assal
Signed by	Refer to correspondence	Testing operator	A. Schulz

Investigated Item	Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an odour sample supplied in a sampling bag.
Identification	The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and whether further chemical analysis was required.
Method	The odour concentration measurements were performed using dynamic olfactometry according to the Australian Standard 'Determination of Odour Concentration by Dynamic Olfactometry AS/NZS4323.3:2001. NATA accredited for compliance with ISO/IEC 17025. Any deviation from the Australian standard is recorded in the 'Comments' section of this report.
Measuring Range	The measuring range of the olfactometer is $2^2 \leq \chi \leq 2^{18}$ ou. If the measuring range was insufficient the odour samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2^{17}. This is specifically mentioned with the results.
Environment	The measurements were performed in an air- and odour-conditioned room. The room temperature is maintained between 22°C and 25°C.
Measuring Dates	The date of each measurement is specified with the results.
Instrument Used	The olfactometer used during this testing session was: ODORMAT SERIES V05
Instrumental Precision	The precision of this instrument (expressed as repeatability) for a sensory calibration must be $r \leq 0.477$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $r = 0.2635$ (April 2014) Compliance – Yes
Instrumental Accuracy	The accuracy of this instrument for a sensory calibration must be $A \leq 0.217$ in accordance with the Australian Standard AS/NZS4323.3:2001. ODORMAT SERIES V05: $A = 0.1843$ (April 2014) Compliance – Yes
Lower Detection Limit (LDL)	The LDL for the olfactometer has been determined to be 16 ou (4 times the lowest dilution setting)
Traceability	The measurements have been performed using standards for which the traceability to the national standard has been demonstrated. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to primary standards of n-butanol in nitrogen.

Date: Monday, 24 November 2014

Panel Roster Number: SYD20141124_102

J. Schulz
NSW Laboratory Coordinator

D. Hepple
Authorised Signatory

THE ODOUR UNIT PTY LTD

Accreditation Number: 14974

Odour Sample Measurement Results
Panel Roster Number: SYD20141124_102

Sample Location	TOU Sample ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Nominal Sample Dilution	Actual Sample Dilution (Adjusted for Temperature)	Sample Odour Concentration (as received, in the bag) (ou)	Sample Odour Concentration (Final, allowing for dilution) (ou)	Specific Odour Emission Rate ($ou.m^3/m^2/s$)
Sample 3# - Bale wetting area (Sunday), Aerating	SC14723	23/11/2014 0855 hrs	24/11/2014 1159 hrs	4	8	-	-	2,900	2,900	1.80
Sample 4# - Bale wetting area (Sunday), Non-aerating	SC14724	23/11/2014 0939 hrs	24/11/2014 1230 hrs	4	8	-	-	2,900	2,900	1.80

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit Pty Ltd:

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2. Final results that have been modified by the dilution factors where parties other than The Odour Unit Pty Ltd. have performed the dilution of samples

Odour Panel Calibration Results

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS4323.3:2001 (Yes / No)
n-butanol	SYD20141124_102	50,000	$20 \leq \chi \leq 80$	861	58	Yes

Comments None.

Disclaimer Parties, other than TOU, responsible for collecting odour samples hereby certify that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit Pty Ltd for the purpose of odour testing. The collection of odour samples by parties other than The Odour Unit Pty Ltd relinquishes The Odour Unit Pty Ltd from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.

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Elf Farm Supplies Pty Ltd

Mushroom Substrate Plant – Modification to Approved Expansion

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APPENDIX B:

PDS CONSULTANCY METEOROLOGICAL DATASET REPORT

Three Dimensional (3D) Meteorological data file for CALPUFF

Mulgrave(NSW)-2008

This file was exclusively compiled for **The Odour Unit** Pty Ltd By pDs Consultancy Service.

pDs Consultancy
@1999-2014

Introduction

Non steady state PUFF model such as CALPUFF (Californian PUFF model) requires meteorological data, preferably hourly average for the entire modelling domain which is in question. Meteorological domain is usually bigger than the computational domain which is intended to use for dispersion modelling. There are several recommended options available to construct 3D meteorological data files. Selection of the suitable option is depending on the data availability.

Three modes available to run CALMET:

1. CALMET No-Observations (No-Obs) Mode. CALMET using gridded numerical model output (e.g., from the MM5, WRF, RAMS, RUC, or TAPM models). No surface, upper air or buoy observations are used in No-Obs mode.
2. CALMET Hybrid Mode. CALMET run using a combination of gridded numerical meteorological data supplemented by surface and optional overwater buoy data.
3. CALMET Observations-Only (Obs) Mode. - CALMET using observed surface and upper air data, plus optional buoy data.

pDs Consultancy has been engaged by **The Odour Unit(TOU)** to compile an 3D meteorological data file for a site at **Mulgrave** in New South Wales using site-specific meteorological data supplied by their client and other available

meteorological data obtain from Australian Bureau of Meteorology (BoM). The year 2008 was used on TOU's request.

CONSTRUCTION OF GEOPHYSICAL DATA FILE :

Topography and land used over the area were examined and topography data with 90m resolution was used (Source :SRTM3-Global data). Map showing topography in 3D was prepared and preliminary QA/QC was done comparing it with Google maps.

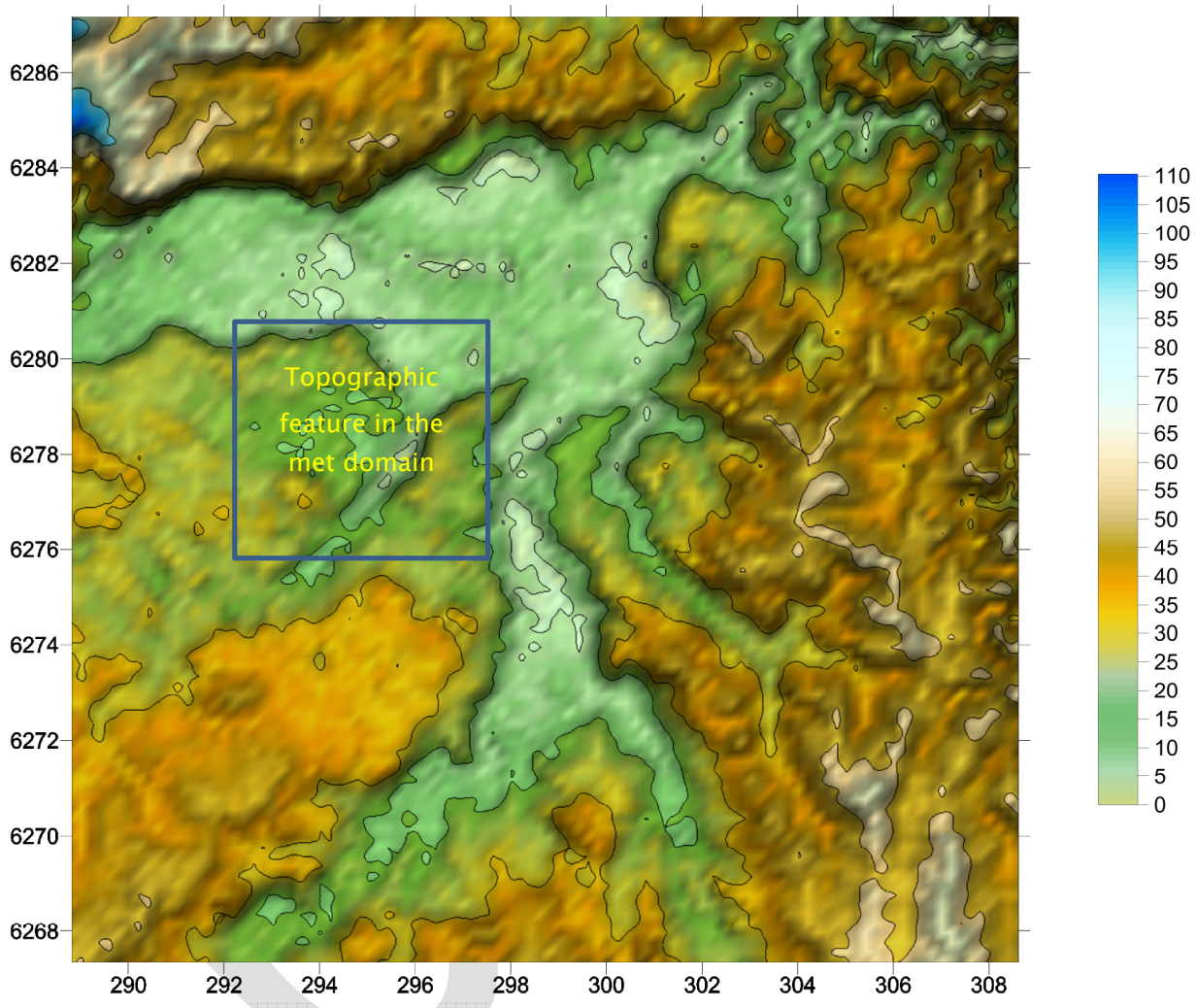


FIGURE 1: TOPOGRAPHY OVER THE METEOROLOGICAL DOMAIN

Global land cover data (Source :GLCC-Australia Pacific) with 900 m resolution was initially used and modified manually to match with real land-use over the area. Only three compatible land use categories were assigned (Built up, Range Land, Forest).

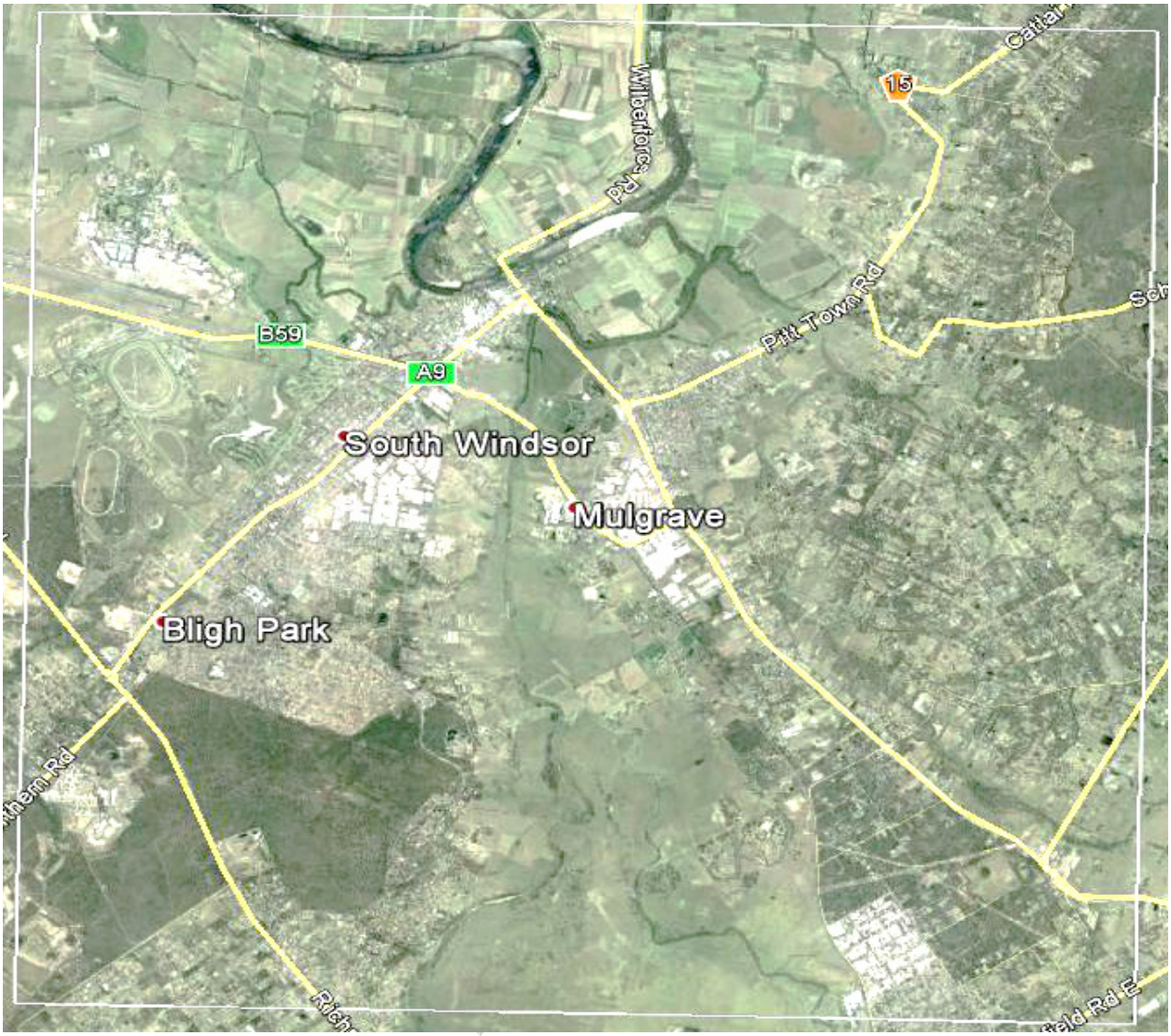


FIGURE 2: LAND USE OVER THE METEOROLOGICAL DOMAIN

Geophysical data file (GEO.Dat) was prepared based on above data sets (Topography and Land use) running TERREL for topography, CTGPROC for Land-use and MAKEGEO for final .geo file, pre-processors of CALPUFF modelling system.

In order to resolve near source terrain features, as well as to capture actual meteorological observations, 200 m grid resolution with 20KM by 20KM grid was used. The dominant scale of the terrain (TERRAD- radius of influence) was set to 1 KM.

INPUT METEOROLOGY

There were two meteorological data sources within the meteorological domain including the data at the site. Therefore we could use 'Hybrid" option available in CALMET-The meteorological module of CALPUFF modelling system.

CALMET was initialised with 3D data tile prepared running meteorological module of TAPM (CISIRO's **T**he **A**ir **P**ollution **M**odel). Topography with 90m resolution and land use with ~1 Km resolution were used to prepare 3KM resolution 3D data tile. This will help resolve topography for some extent even with the 3KM resolution met-tile used for initialisation.

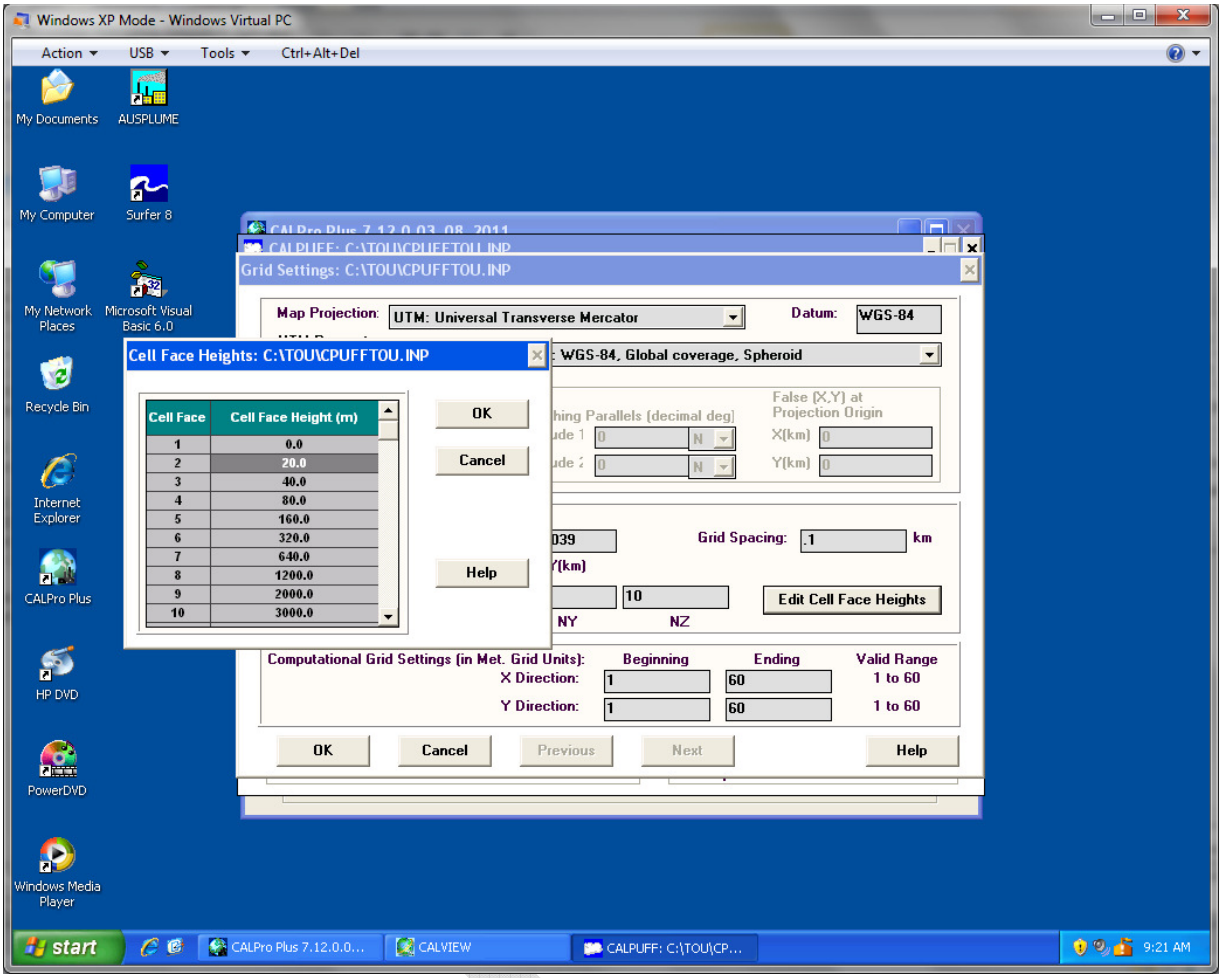
METEOROLOGICAL DOMAIN:

Meteorological domain was designed with 20 KM by 20 KM map extent with 200 m grid resolution in order to capture topography around the application site. Topographic features around the meteorological domain was captured in 3D meteorological data file which was used to initialise CALMET domain which is intended to use for near source modelling.

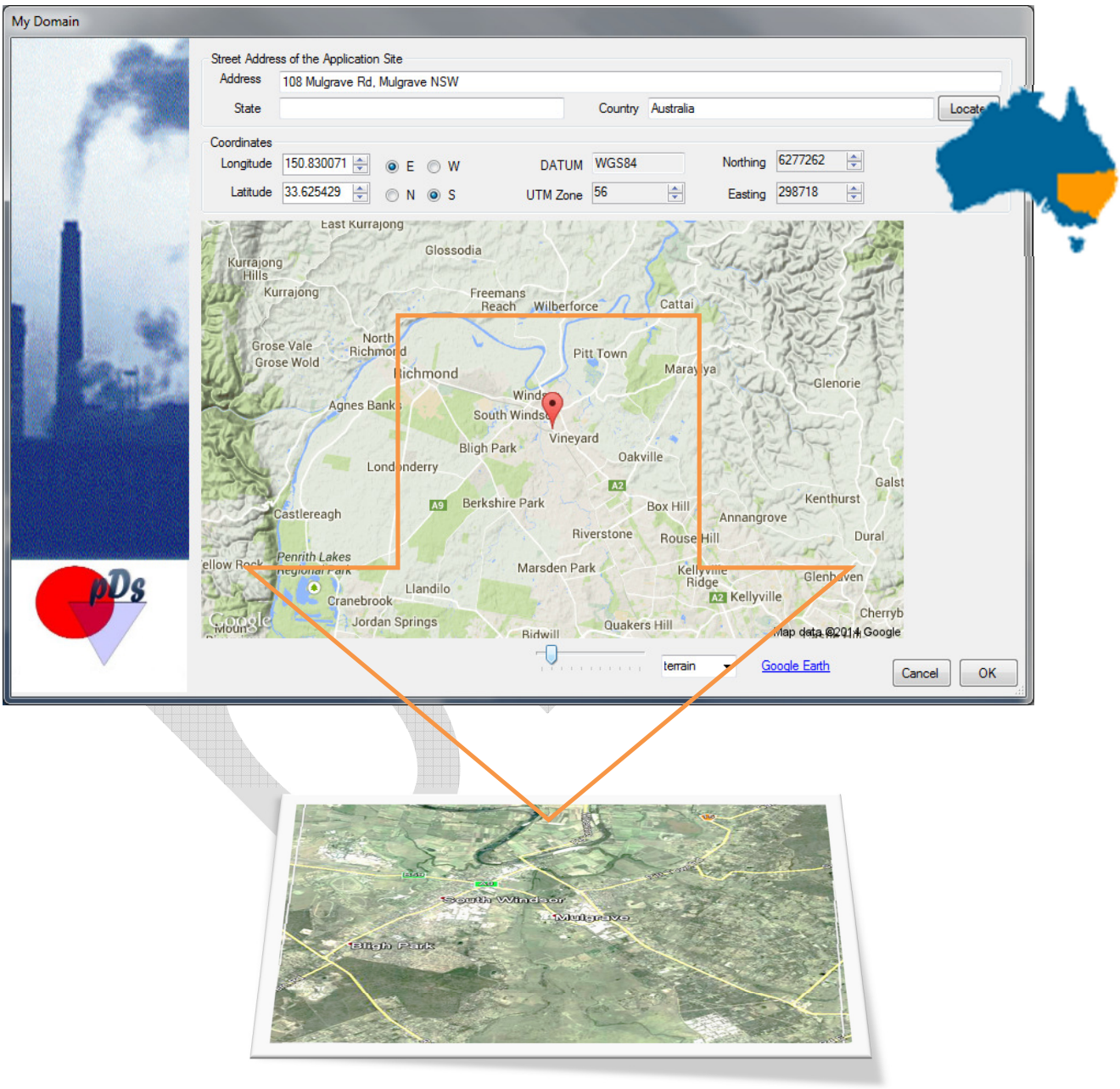
None of the observed data were biased in the modelling since there is not much confidence in the site-specific data. This helps CALMET's model physics to be dominant when deciding the flow pattern.

VERTICAL STRUCTURE

Eleven cell faeces were set up with 0,20,40,80,160,320……,4000m. Predictions were done at 10,30,60 etc..

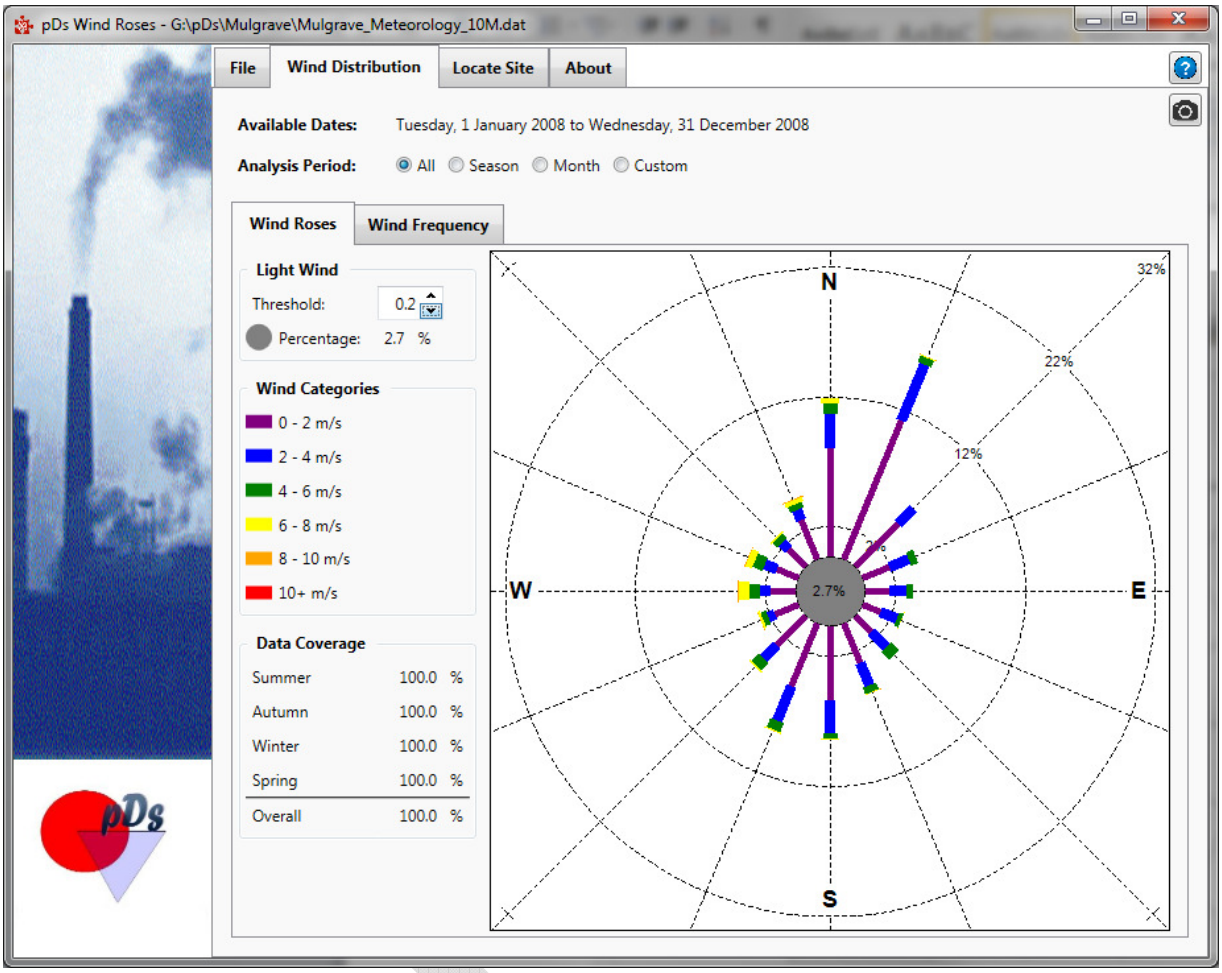


LOCATION: MULGRAVE, NSW

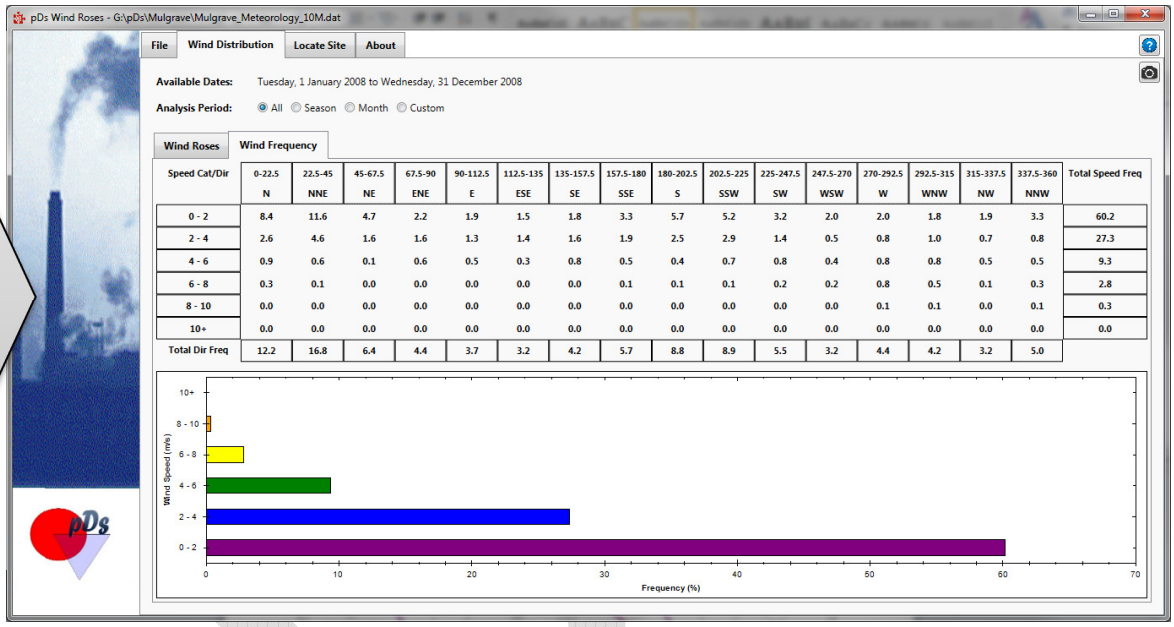


ANALYSIS OF THE SIMULATED DATA EXTRACTED FOR THE SITE IN QUESTION.

ANNUAL WINDROSES



Wind speed frequency

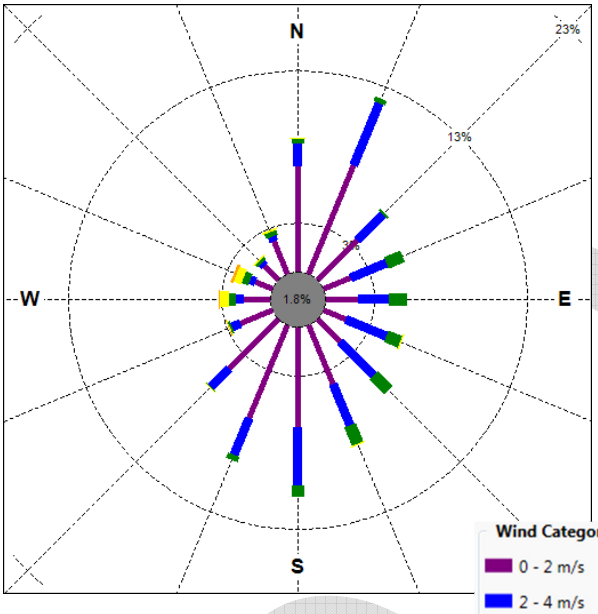


Speed Cat/Dir	0-22.5 N	22.5-45 NNE	45-67.5 NE	67.5-90 ENE	90-112.5 E	112.5-135 ESE	135-157.5 SE	157.5-180 SSE	180-202.5 S	202.5-225 SSW	225-247.5 SW	247.5-270 WSW	270-292.5 W	292.5-315 WNW	315-337.5 NW	337.5-360 NNW	Total Speed Freq
0 - 2	8.4	11.6	4.7	2.2	1.9	1.5	1.8	3.3	5.7	5.2	3.2	2.0	2.0	1.8	1.9	3.3	60.2
2 - 4	2.6	4.6	1.6	1.6	1.3	1.4	1.6	1.9	2.5	2.9	1.4	0.5	0.8	1.0	0.7	0.8	27.3
4 - 6	0.9	0.6	0.1	0.6	0.5	0.3	0.8	0.5	0.4	0.7	0.8	0.4	0.8	0.8	0.5	0.5	9.3
6 - 8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.8	0.5	0.1	0.3	2.8
8 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.3
10+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Dir Freq	12.2	16.8	6.4	4.4	3.7	3.2	4.2	5.7	8.8	8.9	5.5	3.2	4.4	4.2	3.2	5.0	

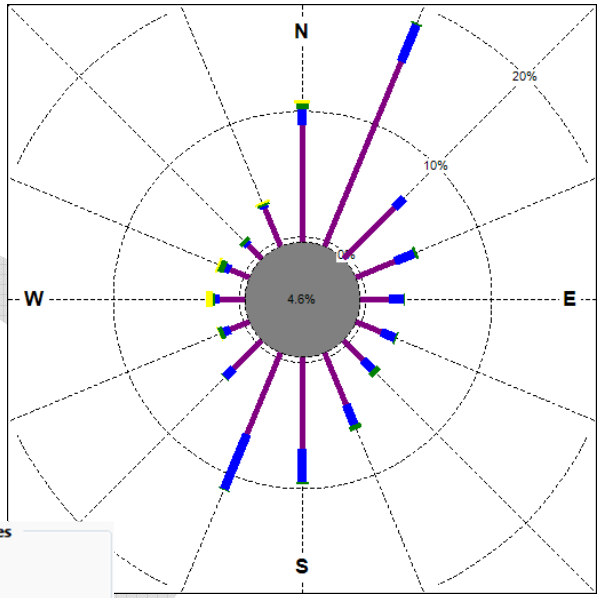
Wind Speed frequency is showing that the intended modelling area experiences more light winds.

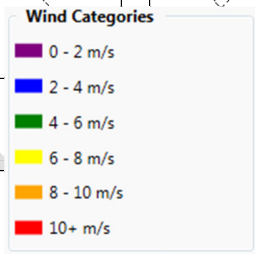
SEASONAL WINDROSES

Summer

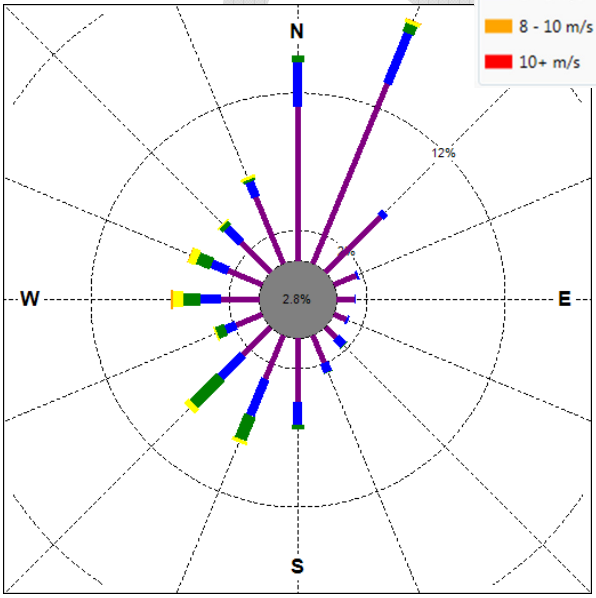


Autumn

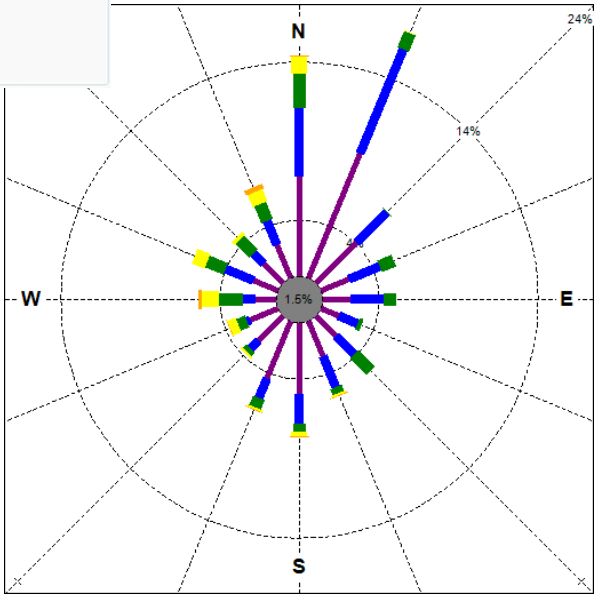




Winter

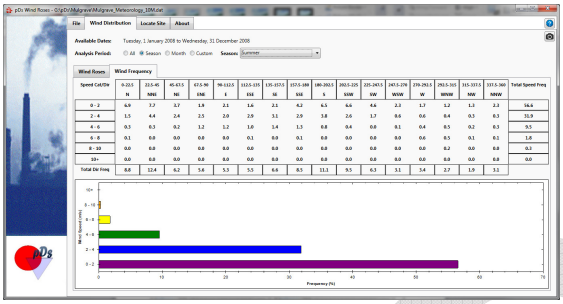


Spring

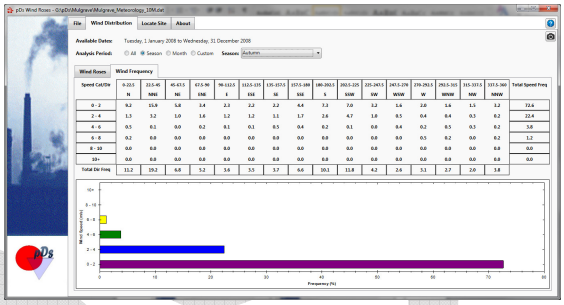


SEASONAL WIND SPEED FREQUENCY

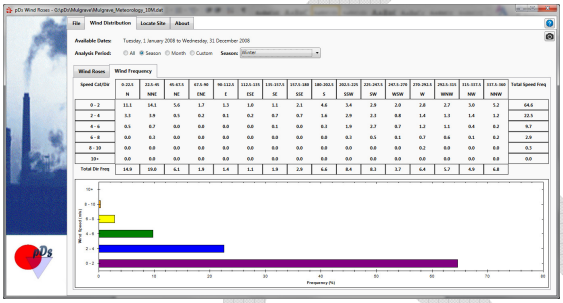
Summer



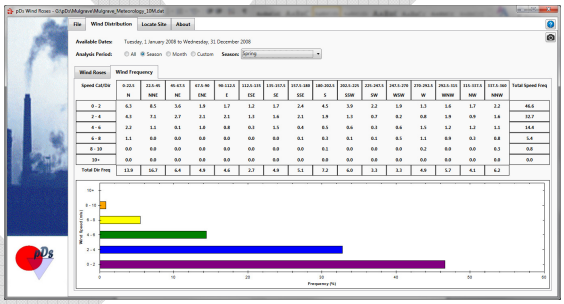
Autumn



Winter



Spring



DATA

Data Source

- Global Synoptic data for 2012 in .glo format, Source :CSIRO
- GLCC (Australia Pacific ~900m)
- Google Earth/Mapping
- SRTM3-gap filled

DISCLAIMER

Compilation of input meteorological data file for CALPUFF was done under the supervision of qualified and experienced meteorologists. Although all due care has been taken, we cannot give any warranty, nor accept any liability (except that required by law) in relation to the information given, its completeness or its applicability to a particular problem. These data and other material are supplied on the condition that you agree to indemnify us and hold us harmless from and against all liability, losses, claims, proceedings, damages, costs and expenses, directly or indirectly relating to, or arising from the use of or reliance on the data and material which we have supplied.

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Elf Farm Supplies Pty Ltd

Mushroom Substrate Plant – Modification to Approved Expansion

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APPENDIX C:

CALPUFF MODELLING INPUT PARAMETERS AND CONFIGURATIONS

Point Sources

Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Max Odour Emission Rate ($ou.m^3/s$)	Scaling Factors	Comments
P1 External Conveyor	P1Conv	298.439, 6277.241	6.50	12.2	1.84	1.00	307.15	37,100	2.3	VARIABLE - See 'P1 Ext Conveyor'!A1
Vent Tunnel 1	Vent01	298.470, 6277.372	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Vent Tunnel 2	Vent02	298.466, 6277.374	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Vent Tunnel 3	Vent03	298.462, 6277.375	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Vent Tunnel 4	Vent04	298.547, 6277.377	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Vent Tunnel 5	Vent05	298.453, 6277.379	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Vent Tunnel 6	Vent06	298.449, 6277.380	10.50	12.2	1.35	7.7	298.2	32,222	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 1	Exst01	298.454, 6277.338	10.50	12.2	1.35	1.5	318.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 2	Exst02	298.452, 6277.339	10.50	12.2	1.35	1.5	318.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 3	Exst03	298.446, 6277.341	10.50	12.2	1.35	1.6	319.7	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 4	Exst04	298.443, 6277.342	10.50	12.2	1.35	1.6	321.1	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 5	Exst05	298.437, 6277.345	10.50	12.2	1.35	1.7	322.2	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 6	Exst06	298.435, 6277.346	10.50	12.2	1.35	1.7	323.1	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 7	Exst07	298.429, 6277.348	10.50	12.2	1.35	1.2	323.8	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 8	Exst08	298.427, 6277.349	10.50	12.2	1.35	0.8	297.3	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 9	Exst09	298.421, 6277.351	10.50	12.2	1.35	0.8	297.3	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 10	Exst10	298.418, 6277.352	10.50	12.2	1.35	0.8	297.3	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 11	Exst11	298.412, 6277.355	10.50	12.2	1.35	0.8	297.3	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 12	Exst12	298.410, 6277.356	10.50	12.2	1.35	0.8	297.3	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 13	Exst13	298.404, 6277.358	10.50	12.2	1.35	1.1	296.1	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 14	Exst14	298.402, 6277.359	10.50	12.2	1.35	1.2	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 15	Exst15	298.396, 6277.362	10.50	12.2	1.35	1.2	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 16	Exst16	298.393, 6277.363	10.50	12.2	1.35	1.2	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 17	Exst17	298.387, 6277.365	10.50	12.2	1.35	1.2	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 18	Exst18	298.385, 6277.366	10.50	12.2	1.35	2.4	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 19	Exst19	298.379, 6277.368	10.50	12.2	1.35	2.4	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 20	Exst20	298.377, 6277.369	10.50	12.2	1.35	3.1	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 21	Exst21	298.371, 6277.372	10.50	12.2	1.35	3.1	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1
Exhaust Tunnel 22	Exst22	298.368, 6277.373	10.50	12.2	1.35	2.2	296.0	VARIABLE	2.3	See 'P2 P3 OER Calculations'!A1

Area Sources

Source Description	Source ID	Vertice coordinates (km)	Effective Height (m)	Base Elevation (m)	Initial Sigma Z (m)	Specific Odour Emission Rate ($ou.m^3/m^2.s$)	Area (m^2)	Odour Emission Rate ($ou.m^3/s$)	Scaling Factors	Comments
Leachate Aeration Pit	LAP	298.381, 6277.294 298.383, 6277.299 298.387, 6277.298 298.387, 6277.293	0.00	12.2	1.00	98.8	22	2,182	Stability Class Near-/Far-Field A - D = 2.5 / 2.3 E - F = 2.3 / 1.9	
Overflow Retention Dam	ORD	298.230, 6277.280 298.235, 6277.312 298.265, 6277.307 298.260, 6277.275	0.00	9.1	1.00	7.48	960	7,181	Stability Class Near-/Far-Field A - D = 2.5 / 2.3 E - F = 2.3 / 1.9	Interim mitigation measure is to take the dam offline (modelled as scenario 2C (near-field) & 2D (far-field)).

Volume Sources

Source Description	Source ID	Vertice coordinates (km)	Effective Height (m)	Base Elevation (m)	Initial Sigma Y (m)	Initial Sigma Z (m)	Odour Emission Rate ($ou.m^3.s$)	Scaling Factors	Peak Odour Emission Rate	Comments
Chicken Manure	CMan	298.398, 6277.215	3.25	12.2	6.39	1.63	2,420	2.3	5,566	Constant
Brew Mix	Brew	298.424, 6277.209	3.25	12.2	6.39	1.63	706	2.3	1,624	6AM TO 3PM
Bale Wetting Area	BWA	298.376, 6277.235	2.00	12.2	6.77	1.00	20,909	2.3	48,090	Worst-case 24 hr snapshot
Stable Bedding Area	SBA	298.384, 6277.286	2.00	12.2	2.81	1.00	575	2.3	1,322	Worst-case 24 hr snapshot
Pre-wet Building (98% containment)	PreWet	298.359, 6277.254	0.00	12.2	0.00	0.00	14,900	2.3		See variable calculation table. Worst case 24 hour period for area.
Phase 1 Hall (after)	P1Hall	298.410, 6277.268	4.75	12.2	0.00	0.00	5,920	2.3		VARIABLE - See 'P1 Hall'!A1
P2 Transfer Conveyor Fugitives	P2xfer	298.408, 6277.345	5.25	12.2	0.00	0.00	111	2.3	255	2% Fugitive Emission, remainder captured by tunnel#1 venting (4PM to 6PM only)

Point Sources

Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Max Odour Emission Rate (ou.m³/s)	Scaling Factors	Comments
Exhaust - Tunnel 01	Exst01	298.454, 6277.338	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 02	Exst02	298.452, 6277.339	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 03	Exst03	298.446, 6277.341	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 04	Exst04	298.443, 6277.342	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 05	Exst05	298.437, 6277.345	10.50	12.2	1.35	1.9	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 06	Exst06	298.435, 6277.346	10.50	12.2	1.35	1.9	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 07	Exst07	298.429, 6277.348	10.50	12.2	1.35	2.0	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 08	Exst08	298.427, 6277.349	10.50	12.2	1.35	2.0	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 09	Exst09	298.421, 6277.351	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 10	Exst10	298.418, 6277.352	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 11	Exst11	298.412, 6277.355	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 12	Exst12	298.410, 6277.356	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 13	Exst13	298.404, 6277.358	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 14	Exst14	298.402, 6277.359	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 15	Exst15	298.396, 6277.362	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 16	Exst16	298.393, 6277.363	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 17	Exst17	298.387, 6277.365	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 18	Exst18	298.385, 6277.366	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 19	Exst19	298.379, 6277.368	10.50	12.2	1.35	1.5	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 20	Exst20	298.377, 6277.369	10.50	12.2	1.35	1.5	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 21	Exst21	298.371, 6277.372	10.50	12.2	1.35	2.3	296.0	494	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 22	Exst22	298.368, 6277.373	10.50	12.2	1.35	2.3	296.0	494	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 23	Exst23	298.362, 6277.375	10.50	12.2	1.35	1.4	296.0	84	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 24	Exst24	298.36, 6277.376	10.50	12.2	1.35	0.0	296.0	0	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Empty Tunnel.
Exhaust - Tunnel 25	Exst25	298.354, 6277.379	10.50	12.2	1.35	0.0	296.0	0	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Empty Tunnel.
Exhaust - Tunnel 26	Exst26	298.416, 6277.553	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 27	Exst27	298.415, 6277.55	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 28	Exst28	298.413, 6277.544	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 29	Exst29	298.412, 6277.542	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 30	Exst30	298.409, 6277.536	10.50	12.2	1.35	2.8	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 31	Exst31	298.409, 6277.534	10.50	12.2	1.35	2.7	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 32	Exst32	298.406, 6277.528	10.50	12.2	1.35	2.6	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 33	Exst33	298.405, 6277.525	10.50	12.2	1.35	2.5	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 34	Exst34	298.403, 6277.519	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 35	Exst35	298.402, 6277.517	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 36	Exst36	298.399, 6277.511	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 37	Exst37	298.398, 6277.509	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 38	Exst38	298.396, 6277.503	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 39	Exst39	298.395, 6277.5	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 40	Exst40	298.393, 6277.494	10.50	12.2	1.35	1.6	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 41	Exst41	298.389, 6277.486	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 42	Exst42	298.388, 6277.484	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 43	Exst43	298.386, 6277.478	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 44	Exst44	298.385, 6277.475	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 45	Exst45	298.383, 6277.469	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 46	Exst46	298.382, 6277.467	10.50	12.2	1.35	2.8	296.0	618	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 47	Exst47	298.379, 6277.461	10.50	12.2	1.35	2.8	296.0	618	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 48	Exst48	298.378, 6277.459	10.50	12.2	1.35	4.0	296.0	263	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 49	Exst49	298.378, 6277.459	10.50	12.2	1.35	1.7	296.0	105	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 50	Exst50	298.376, 6277.453	10.50	12.2	1.35	1.7	296.0	105	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
New Biofilter Section 1	BF01	298.324,6277.223	2.00	12.2	0.00	0.045	313.2	10,620	2.3	
New Biofilter Section 2	BF02	298.305,6277.226	2.00	12.2	0.00	0.045	313.2	10,620	2.3	
New Biofilter Section 3	BF03	298.286,6277.229	2.00	12.2	0.00	0.045	313.2	10,620	2.3	Based upon total biofilter system capacity of 450,000 m3/h and 2,778 m2 surface area at a nominal 500 ou discharge concentration.
New Biofilter Section 4	BF04	298.267,6277.237	2.00	12.2	0.00	0.045	313.2	10,620	2.3	
New Biofilter Section 5	BF05	298.249,6277.246	2.00	12.2	0.00	0.045	313.2	63,722	2.3	
New Biofilter Section 6	BF06	298.231,6277.254	2.00	12.2	0.00	0.045	313.2	0	2.3	
								32,971		

Area Sources

Source Description	Source ID	Vertice coordinates (km)	Effective Height (m)	Base Elevation (m)	Initial Sigma Z (m)	Specific Odour Emission Rate (ou.m³/m².s)	Area (m²)	Odour Emission Rate (ou.m³/s)	Scaling Factors	Comments
Water Recycle Pit	LAP	298.381, 6277.294 298.383, 6277.299 298.387, 6277.298 298.387, 6277.293	0.00	12.2	1.00	98.8	22	2,182	Stability Class Near-/Far-Field A - D = 2.5 / 2.3 E - F = 2.3 / 1.9	

Volume Sources

Source Description	Source ID	Vertice coordinates (km)	Effective Height (m)	Base Elevation (m)	Initial Sigma Y (m)	Initial Sigma Z (m)	Odour Emission Rate (ou.m³.s)	Scaling Factors		Comments
Bale Wetting Area	BWA	298.376, 6277.235	2.00	12.2	6.77	1.00	20,909	2.3		Worst-case 24 hr snapshot.
Stable Bedding Area	SBA	298.384, 6277.286	2.00	12.2	2.81	1.00	575	2.3		

Point Sources										
Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Odour Emission Rate (ou.m^3/s)	Scaling Factors	Comments
New Biofilter Section 1	BF01	298.324,6277.223	2.00	12.2	24.28	0.039	313.2	9,028	2.3	Based upon total biofilter system capacity of 390,000 m3/h and 2,778 m2 surface area at a nominal 500 ou discharge concentration.
New Biofilter Section 2	BF02	298.305,6277.226	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 3	BF03	298.286,6277.229	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 4	BF04	298.267,6277.237	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 5	BF05	298.249,6277.246	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 6	BF06	298.231,6277.254	2.00	12.2	24.28	0.039	313.2	9,028	2.3	

Point Sources										
Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Odour Emission Rate (ou.m^3/s)	Scaling Factors	Comments
New Biofilter Section 1	BF01	298.324,6277.223	2.00	12.2	24.28	0.085	313.2	19,648	2.3	Based upon total biofilter system capacity of 848,800 m3/h and 2,778 m2 surface area at a nominal 500 ou discharge concentration.
New Biofilter Section 2	BF02	298.305,6277.226	2.00	12.2	24.28	0.085	313.2	19,648	2.3	
New Biofilter Section 3	BF03	298.286,6277.229	2.00	12.2	24.28	0.085	313.2	19,648	2.3	
New Biofilter Section 4	BF04	298.267,6277.237	2.00	12.2	24.28	0.085	313.2	19,648	2.3	
New Biofilter Section 5	BF05	298.249,6277.246	2.00	12.2	24.28	0.085	313.2	19,648	2.3	
New Biofilter Section 6	BF06	298.231,6277.254	2.00	12.2	24.28	0.085	313.2	19,648	2.3	

Point Sources										
Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Odour Emission Rate (ou.m^3/s)	Scaling Factors	Comments
New Biofilter Section 1	BF01	298.324,6277.223	2.00	12.2	24.28	0.039	313.2	9,028	2.3	Based upon total biofilter system capacity of 390,000 m3/h and 2,778 m2 surface area at a nominal 500 ou discharge concentration.
New Biofilter Section 2	BF02	298.305,6277.226	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 3	BF03	298.286,6277.229	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 4	BF04	298.267,6277.237	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 5	BF05	298.249,6277.246	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 6	BF06	298.231,6277.254	2.00	12.2	24.28	0.039	313.2	9,028	2.3	
New Biofilter Section 7	BF07	298.276,6277.371	2.00	12.2	59.47	0.046	313.2	10,620	2.3	Based upon total biofilter system capacity of 458,800 m3/h and 2,778 m2 surface area at a nominal 500 ou discharge concentration.
New Biofilter Section 8	BF08	298.279,6277.390	2.00	12.2	24.28	0.046	313.2	10,620	2.3	
New Biofilter Section 9	BF09	298.282,6277.409	2.00	12.2	24.28	0.046	313.2	10,620	2.3	
New Biofilter Section 10	BF10	298.285,6277.428	2.00	12.2	24.28	0.046	313.2	10,620	2.3	
New Biofilter Section 11	BF11	298.288,6277.447	2.00	12.2	24.28	0.046	313.2	10,620	2.3	
New Biofilter Section 12	BF12	298.291,6277.466	2.00	12.2	24.28	0.046	313.2	10,620	2.3	

Point Sources										
Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Max Odour Emission Rate ($ou.m^3/s$)	Scaling Factors	Comments
Exhaust - Tunnel 01	Exst01	298.454, 6277.338	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 02	Exst02	298.452, 6277.339	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 03	Exst03	298.446, 6277.341	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 04	Exst04	298.443, 6277.342	10.50	12.2	1.35	1.9	320.9	913	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 05	Exst05	298.437, 6277.345	10.50	12.2	1.35	1.9	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 06	Exst06	298.435, 6277.346	10.50	12.2	1.35	1.9	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 07	Exst07	298.429, 6277.348	10.50	12.2	1.35	2.0	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 08	Exst08	298.427, 6277.349	10.50	12.2	1.35	2.0	320.9	996	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 09	Exst09	298.421, 6277.351	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 10	Exst10	298.418, 6277.352	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 11	Exst11	298.412, 6277.355	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 12	Exst12	298.410, 6277.356	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 13	Exst13	298.404, 6277.358	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 14	Exst14	298.402, 6277.359	10.50	12.2	1.35	0.8	297.3	138	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 15	Exst15	298.396, 6277.362	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 16	Exst16	298.393, 6277.363	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 17	Exst17	298.387, 6277.365	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 18	Exst18	298.385, 6277.366	10.50	12.2	1.35	1.4	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 19	Exst19	298.379, 6277.368	10.50	12.2	1.35	1.5	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 20	Exst20	298.377, 6277.369	10.50	12.2	1.35	1.5	296.0	325	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 21	Exst21	298.371, 6277.372	10.50	12.2	1.35	2.3	296.0	494	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 22	Exst22	298.368, 6277.373	10.50	12.2	1.35	2.3	296.0	494	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 23	Exst23	298.362, 6277.375	10.50	12.2	1.35	1.4	296.0	84	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 24	Exst24	298.36, 6277.376	10.50	12.2	1.35	0.0	296.0	0	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Empty Tunnel.
Exhaust - Tunnel 25	Exst25	298.354, 6277.379	10.50	12.2	1.35	0.0	296.0	0	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Empty Tunnel.
Exhaust - Tunnel 26	Exst26	298.416, 6277.553	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 27	Exst27	298.415, 6277.55	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 28	Exst28	298.413, 6277.544	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Pasturisation > Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 29	Exst29	298.412, 6277.542	10.50	12.2	1.35	2.7	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.

Point Sources										
Source Description	Source ID	Vertice coordinates (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (K)	Max Odour Emission Rate ($ou.m^3/s$)	Scaling Factors	Comments
Exhaust - Tunnel 30	Exst30	298.409, 6277.536	10.50	12.2	1.35	2.8	320.8	2,497	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 31	Exst31	298.409, 6277.534	10.50	12.2	1.35	2.7	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 32	Exst32	298.406, 6277.528	10.50	12.2	1.35	2.6	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown (conditioning) > Conditioning 1 Phases.
Exhaust - Tunnel 33	Exst33	298.405, 6277.525	10.50	12.2	1.35	2.5	320.8	1,349	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Conditioning 1 Phase.
Exhaust - Tunnel 34	Exst34	298.403, 6277.519	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 35	Exst35	298.402, 6277.517	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 36	Exst36	298.399, 6277.511	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 37	Exst37	298.398, 6277.509	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 38	Exst38	298.396, 6277.503	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 39	Exst39	298.395, 6277.5	10.50	12.2	1.35	1.0	297.3	172	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 1 Phase.
Exhaust - Tunnel 40	Exst40	298.393, 6277.494	10.50	12.2	1.35	1.6	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 41	Exst41	298.389, 6277.486	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 42	Exst42	298.388, 6277.484	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 43	Exst43	298.386, 6277.478	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 44	Exst44	298.385, 6277.475	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 45	Exst45	298.383, 6277.469	10.50	12.2	1.35	1.7	296.0	369	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 46	Exst46	298.382, 6277.467	10.50	12.2	1.35	2.8	296.0	618	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 47	Exst47	298.379, 6277.461	10.50	12.2	1.35	2.8	296.0	618	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Spawn Run 2 Phase.
Exhaust - Tunnel 48	Exst48	298.378, 6277.459	10.50	12.2	1.35	4.0	296.0	263	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 49	Exst49	298.378, 6277.459	10.50	12.2	1.35	1.7	296.0	105	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.
Exhaust - Tunnel 50	Exst50	298.376, 6277.453	10.50	12.2	1.35	1.7	296.0	105	2.3	Worst-case 24 hour snapshot (Thu 8pm to Fri 8pm). Cooldown Shipout Phase.

Elf Farm Supplies Pty Ltd

Mushroom Substrate Plant – Modification to Approved Expansion

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APPENDIX D:

PHASE 2/3 ODOUR EMISSIONS TREND PROFILE WORKSHEET

Appendix D

Worksheet title: Phase 2/3 Odour emission trend profile for a single tunnel
Associated object ID: Figures 3.1 & 3.2

Cycle Time (hrs)	Fan inlet airflow (m^3/hr)	Fan inlet airflow (m^3/s)	Odour emission rate (ou.m^3/s)	Stage
2	40,000	11.1	32,200	Tunnel venting
4	9,600	2.7	13,600	Levelling
6	12,000	3.3	17,000	
8	8,400	2.3	11,900	
10	4,800	1.3	6,790	
12	2,400	0.7	3,390	
14	6,000	1.7	8,480	
16	8,400	2.3	11,900	
18	7,800	2.2	5,180	Warm-up Pasteurisation
20	2,600	0.7	1,730	
22	3,900	1.1	2,590	
24	2,600	0.7	1,730	
26	7,600	2.1	5,150	Pasteurisation
28	11,400	3.2	7,730	
30	7,600	2.1	5,150	
32	11,400	3.2	7,730	
34	6,800	1.9	888	Cool-down conditioning
36	11,900	3.3	1,550	
38	13,600	3.8	1,780	
40	15,300	4.3	2,000	
42	11,700	3.3	1,530	Conditioning 1
44	11,700	3.3	1,530	
46	11,700	3.3	1,530	
48	11,700	3.3	1,530	
50	9,900	2.8	1,290	
52	9,900	2.8	1,290	
54	9,900	2.8	1,290	
56	9,900	2.8	1,290	
58	9,900	2.8	1,290	
60	9,900	2.8	1,290	
62	9,900	2.8	1,290	
64	9,900	2.8	1,290	
66	9,900	2.8	1,290	
68	9,900	2.8	1,290	
70	9,900	2.8	1,290	
72	9,900	2.8	1,290	
74	9,900	2.8	1,290	
76	9,900	2.8	1,290	
78	9,900	2.8	1,290	
80	9,900	2.8	1,290	
82	10,800	3.0	1,410	
84	10,800	3.0	1,410	
86	10,800	3.0	1,410	
88	10,800	3.0	1,410	
90	12,600	3.5	1,650	Conditioning 2
92	12,600	3.5	1,650	
94	12,600	3.5	1,650	
96	12,600	3.5	1,650	
98	12,600	3.5	1,650	
100	12,600	3.5	1,650	
102	12,600	3.5	1,650	
104	12,600	3.5	1,650	
106	12,600	3.5	1,650	
108	12,600	3.5	1,650	
110	12,600	3.5	1,650	
112	12,600	3.5	1,650	
114	15,000	4.2	179	Cool-down spawn
116	18,000	5.0	215	
118	21,000	5.8	251	
120	5,500	1.5	66	
122	4,500	1.3	54	
124	3,500	1.0	42	
126	2,500	0.7	30	
128	1,500	0.4	18	
130	1,000	0.3	12	
132	1,000	0.3	33	
134	1,000	0.3	33	
136	1,000	0.3	33	
138	1,000	0.3	33	
140	1,000	0.3	33	
142	1,000	0.3	33	
144	1,000	0.3	33	
146	1,000	0.3	33	
148	4,200	1.2	138	Spawn Run 1
150	4,200	1.2	138	
152	4,200	1.2	138	
154	4,200	1.2	138	
156	4,200	1.2	138	
158	4,200	1.2	138	
160	4,200	1.2	138	
162	4,200	1.2	138	
164	4,200	1.2	138	
166	4,200	1.2	138	
168	4,200	1.2	138	
170	4,200	1.2	138	
172	4,200	1.2	138	
174	4,200	1.2	138	
176	4,200	1.2	138	
178	4,200	1.2	138	
180	4,200	1.2	138	
182	4,200	1.2	138	
184	4,200	1.2	138	
186	4,200	1.2	138	
188	4,200	1.2	138	
190	4,200	1.2	138	
192	4,200	1.2	138	
194	4,200	1.2	138	
196	4,200	1.2	138	
198	4,200	1.2	138	
200	4,200	1.2	138	
202	4,200	1.2	138	
204	4,200	1.2	138	
206	4,200	1.2	138	
208	4,200	1.2	138	
210	4,200	1.2	138	
212	4,200	1.2	138	
214	4,200	1.2	138	
216	4,200	1.2	138	
218	4,200	1.2	138	
220	4,200	1.2	138	
222	4,200	1.2	138	
224	4,200	1.2	138	
226	4,200	1.2	138	
228	4,200	1.2	138	
230	4,200	1.2	138	
232	4,200	1.2	138	
234	4,200	1.2	138	
236	4,200	1.2	138	
238	4,200	1.2	138	
240	4,200	1.2	138	
242	4,200	1.2	138	
244	4,200	1.2	138	
246	4,200	1.2	138	
248	4,200	1.2	138	
250	4,200	1.2	138	
252	4,200	1.2	138	
254	4,200	1.2	138	
256	4,200	1.2	138	
258	4,200	1.2	138	
260	4,200	1.2	138	
262	4,200	1.2	138	
264	4,200	1.2	138	
266	4,200	1.2	138	
268	4,200	1.2	138	
270	4,200	1.2	138	
272	4,200	1.2	138	
274	4,200	1.2	138	
276	4,200	1.2	138	
278	4,200	1.2	138	
280	4,200	1.2	138	
282	4,200	1.2	138	
284	4,200	1.2	138	
286	4,200	1.2	138	
288	4,200	1.2	138	
290	4,200	1.2	138	
292	4,200	1.2	138	
294	4,200	1.2	138	
296	4,200	1.2	138	
298	4,200	1.2	138	
300	4,200	1.2	138	
302	4,200	1.2	138	
304	4,200	1.2	138	
306	4,200	1.2	138	
308	4,200	1.2	138	
310	4,200	1.2	138	
312	4,200	1.2	138	
314	4,200	1.2	138	
316	4,800	1.3	157	
318	4,800	1.3	157	
320	4,800	1.3	157	
322	4,800	1.3	157	
324	4,800	1.3	157	
326	4,800	1.3	157	
328	4,800	1.3	157	
330	4,800	1.3	157	
332	4,800	1.3	157	
334	5,600	1.6	236	Spawn Run 2
336	5,600	1.6	236	
338	5,600	1.6	236	
340	5,600	1.6	236	
342	6,300	1.8	266	
344	6,300	1.8	266	
346	6,300	1.8	266	
348	6,300	1.8	266	
350	6,300	1.8	266	
352	6,300	1.8	266	
354	6,300	1.8	266	
356	6,300	1.8	266	
358	6,300	1.8	266	
360	6,300	1.8	266	
362	6,300	1.8	266	
364	6,300	1.8	266	
366	6,300	1.8	266	
368	6,300	1.8	266	
370	6,300	1.8	266	
372	6,300	1.8	266	
374	7,000	1.9	296	
376	7,000	1.9	296	
378	7,000	1.9	296	
380	7,000	1.9	296	
382	7,000	1.9	296	
384	7,000	1.9	296	
386	7,000	1.9	296	
388	7,000	1.9	296	
390	7,000	1.9	296	
392	7,000	1.9	296	
394	7,000	1.9	296	
396	7,000	1.9	296	
398	7,000	1.9	296	
400	7,000	1.9	296	
402	7,000	1.9	296	
404	7,000	1.9	296	
406	7,700	2.1	325	
408	7,700	2.1	325	
410	7,700	2.1	325	
412	7,700	2.1	325	
414	7,700	2.1	325	
416	7,700	2.1	325	
418	7,700	2.1	325	
420	7,700	2.1	325	
422	7,700	2.1	325	
424	7,700	2.1	325	
426	7,700	2.1	325	
428	7,700	2.1	325	
430	7,700	2.1	325	
432	7,700	2.1	325	
434	7,700	2.1	325	
436	7,700	2.1	325	
438	7,700	2.1	325	
440	7,700	2.1	325	
442	7,700	2.1	325	
444	7,700	2.1	325	
446	7,700	2.1	325	
448	7,700	2.1	325	
450	7,700	2.1	325	
452	7,700	2.1	325	
454	10,800	3.0	456	
456	10,800	3.0	456	
458	10,800	3.0	456	
460	10,800	3.0	456	
462	10,800	3.0	456	
464	10,800	3.0	456	
466	10,800	3.0	456	
468	10,800	3.0	456	
470	11,700	3.3	494	
472	11,700	3.3	494	
474	11,700	3.3	494	
476	11,700	3.3	494	
478	11,700	3.3	494	
480	11,700	3.3	494	
482	11,700	3.3	494	
484	11,700	3.3	494	
486	11,700	3.3	494	
488	11,700	3.3	494	
490	11,700	3.3	494	
492	11,700	3.3	494	
494	11,700	3.3	494	
496	11,700	3.3	494	
498	11,700	3.3	494	
500	11,700	3.3	494	
502	12,600	3.5	532	
504	12,600	3.5	532	
506	12,600	3.5	532	
508	12,600	3.5	532	
510	12,600	3.5	532	
512	12,600	3.5	532	
514	12,600	3.5	532	
516	12,600	3.5	532	
518	12,600	3.5	532	
520	12,600	3.5	532	
522	12,600	3.5	532	
524	12,600	3.5	532	
526	12,600	3.5	532	
528	12,600	3.5	532	
530	12,600	3.5	532	
532	12,600	3.5	532	
534	11,700	3.3	494	
536	11,700	3.3	494	
538	11,700	3.3	494	
540	11,700	3.3	494	
542	11,700	3.3	494	
544	11,700	3.3	494	
546	11,700	3.3	494	
548	11,700	3.3	494	
550	11,700	3.3	494	
552	11,700	3.3	494	
554	11,700	3.3	494	
556	11,700	3.3	494	
558	11,700	3.3	494	
560	11,700	3.3	494	
562	11,700	3.3	494	
564	11,700	3.3	494	
566	11,700	3.3	494	
568	11,700	3.3	494	
570	11,700	3.3	494	
572	11,700	3.3	494	
574	11,700	3.3	494	
576	11,700	3.3	494	
578	11,700	3.3	494	
580	11,700	3.3	494	
582	11,700	3.3	494	
584	11,700	3.3	494	
586	11,700	3.3	494	
588	11,700	3.3	494	
590	11,700	3.3	494	
592	11,700	3.3	494	
594	11,700	3.3	494	
596	11,700	3.3	494	
598	11,700	3.3	494	
600	11,700	3.3	494	
602	11,700	3.3	494	
604	11,700	3.3	494	
606	11,700	3.3	494	
608	11,700	3.3	494	
610	11,700	3.3	494	
612	11,700	3.3	494	
614	17,600	4.9	743	
616	17,600	4.9	743	
618	17,600	4.9	743	
620	17,600	4.9	743	
622	17,600	4.9	743	
624	17,600	4.9	743	
626	17,600	4.9	743	
628	15,000	4.2	633	
630	15,000	4.2	633	
632	15,000	4.2	633	
634	15,000	4.2	633	
636	15,000	4.2	633	
638	12,600	3.5	532	
640	12,600	3.5	532	
642	12,600	3.5	532	
644	12,600	3.5	532	
646	7,000	1.9	296	
648	7,000	1.9	296	
650	7,000	1.9	296	
652	7,000	1.9	296	

Mean odour concentration (ou)	Phase 2/3 Stage
2,900	Venting
5,090	Leveling
2,390	Warm-up Pasteurisation
2,440	Pasturisation
470	Cool-down (conditioning)
332	Conditioning #1
91	Conditioning #2
43	Cool-down spawn
118	Spawn Run 1
152	Spawn Run 2

90,000	Cycle Time	Tunnel Fill Venting	Levelling 0-2	Levelling 2-4	Levelling 4-6	Levelling 6-8	Levelling 8-10	Levelling 10-12	Levelling 12-14	Warm Up 0-2	Warm Up 2-4	Warm Up 4-6	Warm Up 6-8	Pasteurisation 0-2	Pasteurisation 2-4	Pasteurisation 4-6	Pasteurisation 6-8	Cooldown Conditioning 0-2	Cooldown Conditioning 2-4	Cooldown Conditioning 4-6	Cooldown Conditioning 6-8	Conditioning 1a	Conditioning 1b	Conditioning 1c	Conditioning 2	Cooldown Spawn a 0-2	Cooldown Spawn a 2-4	Cooldown Spawn a 4-6	Cooldown Spawn b 0-2	Cooldown Spawn b 2-4	Cooldown Spawn b 4-6	Cooldown Spawn b 6-8	Cooldown Spawn b 8-10	Cooldown Spawn b 10-32	Spawn Run 1a	Spawn Run 1b	Spawn Run 2a	Spawn Run 2b	Spawn Run 2c	Spawn Run 2d	Spawn Run 2e	Spawn Run 2f	Spawn Run 2g	Spawn Run 2h	Cooldown Shipout a	Cooldown Shipout b	Cooldown Shipout c	Cooldown Shipout d	Total Exhaust Air Volume	Number of Tunnels in Process
	+2 hrs	100% Fan	40% FAD, 60% Fan	50% FAD, 60% Fan	35% FAD, 60% Fan	20% FAD, 60% Fan	10% FAD, 60% Fan	25% FAD, 60% Fan	35% FAD, 60% Fan	30% FAD, 65% Fan	10% FAD, 65% Fan	15% FAD, 65% Fan	10% FAD, 65% Fan	20% FAD, 95% Fan	30% FAD, 95% Fan	20% FAD, 95% Fan	30% FAD, 95% Fan	20% FAD, 85% Fan	35% FAD, 85% Fan	40% FAD, 85% Fan	45% FAD, 85% Fan	45% FAD, 65% Fan	45% FAD, 55% Fan	45% FAD, 60% Fan	45% FAD, 70% Fan	50% FAD, 75% Fan	60% FAD, 75% Fan	70% FAD, 75% Fan	55% FAD, 25% Fan	45% FAD, 25% Fan	35% FAD, 25% Fan	25% FAD, 25% Fan	15% FAD, 25% Fan	10% FAD, 25% Fan	30% FAD, 35% Fan	30% FAD, 40% Fan	35% FAD, 40% Fan	35% FAD, 45% Fan	35% FAD, 50% Fan	35% FAD, 55% Fan	45% FAD, 60% Fan	45% FAD, 65% Fan	45% FAD, 70% Fan	45% FAD, 65% Fan	55% FAD, 80% Fan	50% FAD, 75% Fan	45% FAD, 70% Fan	35% FAD, 50% Fan	m3/hr	/50
Tuesday 4am - 6am	2	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,750	56,700	14,400	16,800	-	-	-	-	96,525	37,800	-	22,000	-	12,600	-	305,575	38
	4	40,000	9,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,500	56,700	15,600	22,400	-	-	-	-	84,825	50,400	-	22,000	-	12,600	-	321,625	39
	6	40,000	9,600	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,250	56,700	16,800	22,400	6,300	-	-	-	73,125	63,000	-	22,000	-	12,600	-	340,775	40
	8	40,000	9,600	12,000	8,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,000	56,700	18,000	22,400	12,600	-	-	-	73,125	63,000	-	22,000	-	-	7,000	349,825	41
	10	40,000	9,600	12,000	8,400	4,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,750	56,700	24,000	16,800	18,900	-	-	-	73,125	37,800	-	57,200	-	-	7,000	370,075	42
	12	40,000	9,600	12,000	8,400	4,800	2,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,500	56,700	30,000	11,200	25,200	-	-	-	73,125	37,800	-	57,200	-	-	7,000	377,925	43
Tuesday 4pm - 6pm	14	40,000	9,600	12,000	8,400	4,800	2,400	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,250	56,700	36,000	5,600	31,500	-	-	-	73,125	37,800	-	57,200	-	-	7,000	389,375	44
	16	40,000	9,600	12,000	8,400	4,800	2,400	6,000	8,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	36,000	-	37,800	-	-	-	73,125	37,800	-	35,200	18,750	-	-	386,975	43
	18	-	9,600	12,000	8,400	4,800	2,400	6,000	8,400	7,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	36,000	-	37,800	-	-	-	73,125	37,800	-	35,200	18,750	-	-	354,775	43
	20	-	-	12,000	8,400	4,800	2,400	6,000	8,400	7,800	2,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	36,000	-	37,800	-	-	-	73,125	37,800	-	35,200	18,750	-	-	347,775	43
	22	-	-	-	8,400	4,800	2,400	6,000	8,400	7,800	2,600	3,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	30,000	7,000	37,800	-	-	-	58,500	53,550	-	35,200	18,750	-	-	341,800	43
	24	-	-	-	-	4,800	2,400	6,000	8,400	7,800	2,600	3,900	2,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	24,000	14,000	37,800	-	-	-	43,875	69,300	-	35,200	-	15,750	-	335,125	43
Wednesday 4am - 6am	26	50,000	-	-	-	-	2,400	6,000	8,400	7,800	2,600	3,900	2,600	7,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	18,000	21,000	37,800	-	-	-	29,250	85,050	-	-	30,000	15,750	-	384,850	44
	28	50,000	12,000	-	-	-	-	6,000	8,400	7,800	2,600	3,900	2,600	7,600	11,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	12,000	28,000	37,800	-	-	-	14,625	100,800	-	-	30,000	15,750	-	407,975	45
	30	50,000	12,000	15,000	-	-	-	-	8,400	7,800	2,600	3,900	2,600	7,600	11,400	7,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	6,000	28,000	45,675	-	-	-	-	78,750	35,100	-	30,000	15,750	-	424,875	46
	32	50,000	12,000	15,000	10,500	-	-	-	-	7,800	2,600	3,900	2,600	7,600	11,400	7,600	11,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	28,000	53,550	-	-	-	-	78,750	35,100	-	30,000	-	8,750	433,250	47
	34	50,000	12,000	15,000	10,500	6,000	-	-	-	-	2,600	3,900	2,600	7,600	11,400	7,600	11,400	6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	21,000	61,425	-	-	-	-	47,250	23,400	61,600	-	25,200	8,750	452,725	48
	36	50,000	12,000	15,000	10,500	6,000	3,000	-	-	-	-	3,900	2,600	7,600	11,400	7,600	11,400	6,800	11,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	14,000	69,300	-	-	-	-	47,250	23,400	61,600	-	25,200	8,750	465,900	49
Wednesday 4pm - 6pm	38	50,000	12,000	15,000	10,500	6,000	3,000	7,500	-	-	-	-	2,600	7,600	11,400	7,600	11,400	6,800	11,900	13,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	7,000	70,875	7,000	-	-	-	47,250	23,400	61,600	-	25,200	8,750	484,675	50
	40	50,000	12,000	15,000	10,500	6,000	3,000	7,500	10,500	-	-	-	-	7,600	11,400	7,600	11,400	6,800	11,900	13,600	15,300	-	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	72,450	14,000	-	-	-	47,250	23,400	61,600	-	25,200	-	500,700	50
	42	-	12,000	15,000	10,500	6,000	3,000	7,500	10,500	9,750	-	-	-	-	11,400	7,600	11,400	6,800	11,900	13,600	15,300	11,700	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	66,150	21,000	-	-	-	47,250	23,400	61,600	-	-	14,000	454,050	50
	44	-	-	15,000	10,500	6,000	3,000	7,500	10,500	9,750	3,250	-	-	-	-	7,600	11,400	6,800	11,900	13,600	15,300	23,400	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	59,850	28,000	-	-	-	47,250	23,400	61,600	-	-	14,000	446,300	50
	46	-	-	-	10,500	6,000	3,000	7,500	10,500	9,750	3,250	4,875	-	-	-	-	11,400	6,800	11,900	13,600	15,300	35,100	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	53,550	35,000	-	-	-	47,250	23,400	61,600	-	-	14,000	440,975	50
	48	-	-	-	-	6,000	3,000	7,500	10,500	9,750	3,250	4,875	3,250	-	-	-	-	6,800	11,900	13,600	15,300	46,800	-	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	47,250	23,400	61,600	-	-	14,000	434,725	50
Thursday 4am - 6am	50	-	-	-	-	-	3,000	7,500	10,500	9,750	3,250	4,875	3,250	9,500	-	-	-	-	11,900	13,600	15,300	46,800	9,900	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	47,250	23,400	-	52,500	-	-	418,225	48
	52	-	-	-	-	-	-	7,500	10,500	9,750	3,250	4,875	3,250	9,500	14,250	-	-	-	-	13,600	15,300	46,800	19,800	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	47,250	23,400	-	52,500	-	-	427,475	48
	54	-	-	-	-	-	-	-	10,500	9,750	3,250	4,875	3,250	9,500	14,250	9,500	-	-	-	-	15,300	46,800	29,700	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	-	67,275	-	52,500	-	-	422,400	48
	56	-	-	-	-	-	-	-	-	9,750	3,250	4,875	3,250	9,500	14,250	9,500	14,250	-	-	-	-	46,800	39,600	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	-	67,275	-	52,500	-	-	420,750	48
	58	-	-	-	-	-	-	-	-	-	3,250	4,875	3,250	9,500	14,250	9,500	14,250	8,500	-	-	-	35,100	49,500	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	-	52,650	22,000	-	44,100	-	416,675	48
	60	-	-	-	-	-	-	-	-	-	-	4,875	3,250	9,500	14,250	9,500	14,250	8,500	14,875	-	-	23,400	59,400	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	47,250	42,000	-	-	-	-	52,650	22,000	-	44,100	-	426,500	48
Thursday 4pm - 6pm	62	-	-	-	-	-	-	-	-	-	-	-	3,250	9,500	14,250	9,500	14,250	8,500	14,875	17,000	-	11,700	69,300	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	39,375	50,750	-	-	-	-	52,650	22,000	-	44,100	-	437,700	48
	64	-	-	-	-	-	-	-	-	-	-	-	-	9,500	14,250	9,500	14,250	8,500	14,875	17,000	19,125	-	79,200	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	31,500	59,500	-	-	-	-	52,650	22,000	-	44,100	-	452,650	48
	66	-	-	-	-	-	-	-	-	-	-	-	-	-	14,250	9,500	14,250	8,500	14,875	17,000	19,125	14,625	79,200	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	23,625	68,250	-	-	-	-	52,650	22,000	-	-	24,500	439,050	48
	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,500	14,250	8,500	14,875	17,000	19,125	29,250	79,200	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	15,750	77,000	-	-	-	-	52,650	22,000	-	-	24,500	440,300	48
	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,250	8,500	14,875	17,000	19,125	43,875	79,200	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	7,875	78,750	7,700	-	-	-	52,650	22,000	-	-	24,500	447,000	48
	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,500	14,875	17,000	19,125	58,500	79,200	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	80,500	15,400	-	-	-	52,650	22,000	-	-	24,500	448,950	48
Friday 4am - 6am	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,875	17,000	19,125	58,500	91,575	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	73,500	23,100	-	-	-	52,650	-	18,750	-	-	425,775	45
	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000	19,125	58,500	103,950	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	66,500	30,800	-	-	-	52,650	-	18,750	-	-	423,975	45
	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,125	58,500	116,325	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	59,500	38,500	-	-	-	52,650	-	18,750	-	-	420,050	45
	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58,500	128,700	-	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	18,750	-	-	414,000	45
	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43,875	131,175	10,800	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	15,750	-	409,650	45
	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,250	133,650	21,600	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	15,750	-	408,300	45
Friday 4pm - 6pm	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,625	136,125	32,400	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	15,750	-	406,950	45
	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138,600	43,200	-	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	15,750	-	405,600	45
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	128,700	43,200	12,600	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	-	8,750	401,300	45
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118,800	43,200	25,200	-	-	-	-	-	-	-	-	-	56,700	-	-	-	52,500	46,200	-	-	-	52,650	-	-	-	8,750	404,000	45
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108,900	43,200	37,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	43,750	55,825	-	-	-	52,650	-	-	-	8,750	407,575	45
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99,000	43,200	50,400	-	-	-	-	-	-	-	-	-	56,700	-	-	-	35,000	65,450	-	-	-	52,650	-	-	-	8,750	411,150	45
Saturday 4am - 6am	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99,000	32,400	63,000	-	-	-	-	-	-	-	-	-	56,700	-	-	-	26,250	75,075	-	-	-	52,650	-	-	-	-	405,075	44
	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99,000	21,600	75,600	-	-	-	-	-	-	-	-	-	56,700	-	-	-	17,500	84,700	-	-	-	52,650	-	-	-	-	407,750	44
	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99,000	10,800	88,200	-	-	-	-	-	-	-	-	-	56,700	-	-	-	8,750	94,325	-	-	-	52,650	-	-	-	-	410,425	44
	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99,000	-	100,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	52,650	-	-	-	-	413,100	44
	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86,625	13,500	100,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	52,650	-	-	-	-	414,225	44
	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74,250	27,000	100,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	52,650	-	-	-	-	415,350	44
Saturday 4pm - 6pm	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61,875	40,500	100,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	29,250	35,200	-	-	-	428,275	44
	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49,500	54,000	100,800	-	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	29,250	35,200	-	-	-	429,400	44
	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37,125	54,000	103,950	15,000	-	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	29,250	35,200	-	-	-	435,175	44
	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,750	54,000	107,100	15,000	18,000	-	-	-	-	-	-	-	56,700	-	-	-	-	103,950	-	-	-	29,250	35,200	-	-	-	443,950	44
	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,375	54,000	110,250	15,000	18,000	21,000	-	-	-	-	-	-	56,700	-	-	-	-	96,250	10,800	-	-	29,250	35,200	-	-	-	458,825	44
	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54,000	113,400	15,000	18,000	21,000	5,500	-	-	-	-	-	56,700	-	-	-	-	88,550	21,600	-	-	29,250	35,200	-	-	-	458,200	44
Sunday 4am - 6am	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40,500	116,550	15,000	18,000	21,000	5,500	4,500	-	-	-	-	56,700	-	-	-	-	80,850	32,400	-	-	29,250	-	30,000	-	-	450,250	44
	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	119,700	15,000	18,000	21,000	5,500	4,500	3,500	-	-	-	56,700	-	-	-	-	73,150	43,200	-	-	29,250	-	30,000	-	-	446,500	44
	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,500	122,850	15,000	18,000	21,000	5,500	4,500	3,500	2,500	-	-	56,700	-	-	-	-	65,450	54,000	-	-	29,250	-	30,000	-	-	441,750	44
	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126,000	15,000	18,000	21,000	5,500	4,500	3,500	2,500	1,500	-	56,700	-	-	-	-	57,750	64,800	-	-	29,250	-	30,000	-	-	436,000	44
	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126,000	-	18,000	21,000	5,500	4,500	3,500	2,500	1,500	1,000	56,700	-	-	-	-	57,750	64,800	-	-	29,250	-	-	25,200	-	417,200	44
	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126,000	-	-	21,000	5,500	4,500	3,500	2,500	1,500	2,000	56,700	-	-	-	-	57,750	64,800	-	-	29,250	-	-	25,200	-	400,200	44
Sunday 4pm - 6pm	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126,000	-	-	-	5,500	4,500	3,500	2,500	1,500	3,000	56,700	-	-	-	-	57,750	54,000	11,700	-	-	44,000	-	25,200	-	395,850	44
	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126,000	-	-	-	-	4,500	3,500	2,500	1,500	4,000	56,700	-	-	-	-	57,750	43,200	23,400	-	-	44,000	-	25,200	-	392,250	44
	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110,250	18,750	-	-	-	-	3,500	2,500	1,500	5,000	56,700	-	-	-	-	57,750	32,400	35,100	-	-	44,000	-	-	14,000	381,450	44
	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94,500	18,750	22,500	-	-	-	-	2,500	1,500	6,000	56,700	-	-	-	-	57,750	21,600	46,800	-	-	44,000	-	-	14,000	386,600	44
	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78,750	18,750	22,500	26,250	-	-	-	-	1,500	7,000	56,700	-	-	-	-	48,125	24,300	58,500	-	-	44,000	-	-	14,000	400,375	44
	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63,000	18,750	22,500	26,250	6,875	-	-	-	-	8,000	56,700	-	-	-	-	38,500	27,000	58,500	-	-	61,600	-	-	14,000	401,675	44
Monday 4am - 6am	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,250	18,750	22,500	26,250	6,875	5,625	-	-	-	7,000	56,700	-	-	-	-	28,875	40,500	58,500	-	-	17,600	37,500	-	-	373,925	42
	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31,500	18,750	22,500	26,250	6,875	5,625	4,375	-	-	6,000	56,700	4,800	-	-	-	19,250	54,000	58,500	-	-	17,600	37,500	-	-	370,225	42
	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,750	18,750	22,500	26,250	6,875	5,625	4,375	3,125	-	5,000	56,700	9,600	-	-	-	9,625	67,500	58,500	-	-	17,600	37,500	-	-	365,275	42
	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,750	22,500	26,250	6,875	5,625	4,375	3,125	1,875	4,000	56,700	14,400	-	-	-	-	81,000	58,500	-	-	17,600	37,500	-	-	359,075	42
	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,500	26,250	6,875	5,625	4,375	3,125	1,875	4,250	56,700	19,200	-	-	-	-	81,000	58,500	-	-	17,600	-	31,500	-	339,375	42
	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,250	6,875	5,625	4,375	3,125	1,875	4,500	56,700	24,000	-	-	-	-	81,000	58,500	-	-	17,600	-	31,500	-	321,925	42
Monday 4pm - 6pm	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,875	5,625	4,375	3,125	1,875	4,750	56,700	28,800	-	-	-	-	67,500	73,125	-	-	17,600	-	31,500	-	301,850	42
	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,625	4,375	3,125	1,875	5,000	56,700	28,800	-	-	-	-	54,000	87,750	-	-	-	15,000	31,500	-	293,750	42
	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,375	3,125	1,875	6,250	56,700	28,800	-	-	-	-	40,500	102,375	-	-	-	15,000	-	17,500	276,500	42
	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,125	1,875	7,500	56,700	28,800	-	-	-	-	27,000	117,000	-	-	-	15,000	-	17,500	274,500	42
	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,875	8,750	56,700	24,000	5,600	-	-	-	13,500	119,925	12,600	-	-	15,000	-	17,500	275,450	42
	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000	56,700	19,200	11,200	-	-	-	-	108,225	25,200	-	22,000	-	12,600	17,500	282,625	42
Tuesday 4am - 6am		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		40

🟩 Contained discharge to biofilter

🟦 Worst case 24 hour snapshot

90,000

	Cycle Time	Tunnel Fill Venting	Levelling 0-2	Levelling 2-4	Levelling 4-6	Levelling 6-8	Levelling 8-10	Levelling 10-12	Levelling 12-14	Warm Up 0-2	Warm Up 2-4	Warm Up 4-6	Warm Up 6-8	Pasteurisation 0-2	Pasteurisation 2-4	Pasteurisation 4-6	Pasteurisation 6-8	Cooldown Conditioning 0-2	Cooldown Conditioning 2-4	Cooldown Conditioning 4-6	Cooldown Conditioning 6-8	Conditioning 1a	Conditioning 1b	Conditioning 1c	Conditioning 2	Cooldown Spawn a 0-2	Cooldown Spawn a 2-4	Cooldown Spawn a 4-6	Cooldown Spawn b 0-2	Cooldown Spawn b 2-4	Cooldown Spawn b 4-6	Cooldown Spawn b 6-8	Cooldown Spawn b 8-10	Cooldown Spawn b 10-32	Spawn Run 1a	Spawn Run 1b	Spawn Run 2a	Spawn Run 2b	Spawn Run 2c	Spawn Run 2d	Spawn Run 2e	Spawn Run 2f	Spawn Run 2g	Spawn Run 2h	Cooldown Shipout a	Cooldown Shipout b	Cooldown Shipout c	Cooldown Shipout d	Total OER	Number of Tunnels in Process	Running 24hr Avg OER
	+2 hrs	100% Fan	40% FAD, 60% Fan	50% FAD, 60% Fan	35% FAD, 60% Fan	20% FAD, 60% Fan	10% FAD, 60% Fan	25% FAD, 60% Fan	35% FAD, 60% Fan	30% FAD, 65% Fan	10% FAD, 65% Fan	15% FAD, 65% Fan	10% FAD, 65% Fan	20% FAD, 95% Fan	30% FAD, 95% Fan	20% FAD, 95% Fan	30% FAD, 95% Fan	20% FAD, 85% Fan	35% FAD, 85% Fan	40% FAD, 85% Fan	45% FAD, 85% Fan	45% FAD, 65% Fan	45% FAD, 55% Fan	45% FAD, 60% Fan	45% FAD, 70% Fan	50% FAD, 75% Fan	60% FAD, 75% Fan	70% FAD, 75% Fan	55% FAD, 25% Fan	45% FAD, 25% Fan	35% FAD, 25% Fan	25% FAD, 25% Fan	15% FAD, 25% Fan	10% FAD, 25% Fan	30% FAD, 35% Fan	30% FAD, 40% Fan	35% FAD, 40% Fan	35% FAD, 45% Fan	35% FAD, 50% Fan	35% FAD, 55% Fan	45% FAD, 60% Fan	45% FAD, 65% Fan	45% FAD, 70% Fan	45% FAD, 65% Fan	55% FAD, 80% Fan	50% FAD, 75% Fan	45% FAD, 70% Fan	35% FAD, 50% Fan	ou.m3/s	/50	ou.m3/s
Tuesday 4am - 6am	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105	1,859	472	709	-	-	-	-	4,076	1,596	-	263	-	151	-	9,229	38	9,663
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	1,859	511	946	-	-	-	-	3,582	2,128	-	263	-	151	-	9,528	39	9,614
	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	1,859	551	946	266	-	-	-	3,088	2,660	-	263	-	151	-	9,856	40	9,598
	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	1,859	590	946	532	-	-	-	3,088	2,660	-	263	-	-	84	10,080	41	9,605
	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	1,859	787	709	798	-	-	-	3,088	1,596	-	683	-	-	84	9,648	42	9,587
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	1,859	983	473	1,064	-	-	-	3,088	1,596	-	683	-	-	84	9,859	43	9,596
Tuesday 4pm - 6pm	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1,859	1,180	236	1,330	-	-	-	3,088	1,596	-	683	-	-	84	10,070	44	9,632
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	1,180	-	1,596	-	-	-	3,088	1,596	-	420	224	-	-	9,962	43	9,663
	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	1,180	-	1,596	-	-	-	3,088	1,596	-	420	224	-	-	9,962	43	9,709
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	1,180	-	1,596	-	-	-	3,088	1,596	-	420	224	-	-	9,962	43	9,755
	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	983	296	1,596	-	-	-	2,470	2,261	-	420	224	-	-	10,109	43	9,800
	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	787	591	1,596	-	-	-	1,853	2,926	-	420	-	188	-	10,219	43	9,874
Wednesday 4am - 6am	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	590	887	1,596	-	-	-	1,235	3,591	-	-	358	188	-	10,304	44	9,963
	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	393	1,182	1,596	-	-	-	618	4,256	-	-	358	188	-	10,450	45	10,040
	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	197	1,182	1,929	-	-	-	-	3,325	1,482	-	358	188	-	10,519	46	10,095
	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	1,182	2,261	-	-	-	-	3,325	1,482	-	358	-	105	10,572	47	10,136
	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	887	2,594	-	-	-	-	1,995	988	736	-	301	105	10,351	48	10,195
	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	591	2,926	-	-	-	-	1,995	988	736	-	301	105	11,941	49	10,369
Wednesday 4pm - 6pm	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	296	2,993	296	-	-	-	1,995	988	736	-	301	105	13,783	50	10,678
	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	1,998	-	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	3,059	591	-	-	-	1,995	988	736	-	301	-	15,743	50	11,160
	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	1,998	1,079	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	2,793	887	-	-	-	1,995	988	736	-	-	167	16,718	50	11,723
	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	1,998	2,158	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	2,527	1,182	-	-	-	1,995	988	736	-	-	167	17,826	50	12,378
	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	1,998	3,237	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	2,261	1,478	-	-	-	1,995	988	736	-	-	167	18,935	50	13,113
	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888	1,554	1,776	1,998	4,316	-	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	1,995	988	736	-	-	167	20,043	50	13,932
Thursday 4am - 6am	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,554	1,776	1,998	4,316	913	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	1,995	988	-	627	-	-	19,793	48	14,723
	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,776	1,998	4,316	1,826	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	1,995	988	-	627	-	-	19,152	48	15,448
	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,998	4,316	2,739	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	-	2,841	-	627	-	-	18,147	48	16,084
	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,316	3,652	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	-	2,841	-	627	-	-	17,062	48	16,624
	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	-	-	-	3,237	4,565	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	-	2,223	263	-	527	-	17,551	48	17,225
	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	-	-	2,158	5,478	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,995	1,773	-	-	-	-	2,223	263	-	527	-	19,327	48	17,840
Thursday 4pm - 6pm	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	-	1,079	6,391	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,663	2,143	-	-	-	-	2,223	263	-	527	-	21,417	48	18,476
	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	2,497	-	7,304	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	1,330	2,512	-	-	-	-	2,223	263	-	527	-	23,785	48	19,146
	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	2,497	1,349	7,304	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	998	2,882	-	-	-	-	2,223	263	-	-	293	24,937	48	19,831
	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	2,497	2,698	7,304	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	665	3,251	-	-	-	-	2,223	263	-	-	293	26,323	48	20,539
	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	2,497	4,046	7,304	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	333	3,325	325	-	-	-	2,223	263	-	-	293	27,738	48	21,273
	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,942	2,219	2,497	5,395	7,304	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	3,399	650	-	-	-	2,223	263	-	-	293	29,153	48	22,032
Friday 4am - 6am	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,942	2,219	2,497	5,395	8,445	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	3,103	975	-	-	-	2,223	-	224	-	-	28,883	45	22,790
	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,219	2,497	5,395	9,587	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,808	1,300	-	-	-	2,223	-	224	-	-	28,112	45	23,536
	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,497	5,395	10,728	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,512	1,626	-	-	-	2,223	-	224	-	-	27,063	45	24,279
	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,395	11,869	-	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	224	-	-	25,737	45	25,002
	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,046	12,097	996	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	188	-	25,576	45	25,671
	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,698	12,326	1,992	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	188	-	25,452	45	26,181
Friday 4pm - 6pm	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,349	12,554	2,988	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	188	-	25,327	45	26,507
	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,782	3,984	-	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	188	-	25,203	45	26,625
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,869	3,984	317	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	-	105	24,523	45	26,591
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,956	3,984	634	-	-	-	-	-	-	-	-	-	1,859	-	-	-	2,217	1,951	-	-	-	2,223	-	-	-	105	23,928	45	26,391
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,043	3,984	951	-	-	-	-	-	-	-	-	-	1,859	-	-	-	1,847	2,357	-	-	-	2,223	-	-	-	105	23,369	45	26,027
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,130	3,984	1,268	-	-	-	-	-	-	-	-	-	1,859	-	-	-	1,478	2,763	-	-	-	2,223	-	-	-	105	22,810	45	25,498
Saturday 4am - 6am	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,130	2,988	1,586	-	-	-	-	-	-	-	-	-	1,859	-	-	-	1,108	3,170	-	-	-	2,223	-	-	-	-	22,063	44	24,930
	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,130	1,992	1,903	-	-	-	-	-	-	-	-	-	1,859	-	-	-	739	3,576	-	-	-	2,223	-	-	-	-	21,421	44	24,373
	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,130	996	2,220	-	-	-	-	-	-	-	-	-	1,859	-	-	-	369	3,983	-	-	-	2,223	-	-	-	-	20,779	44	23,849
	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,130	-	2,537	-	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	2,223	-	-	-	-	20,137	44	23,382
	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,989	1,245	2,537	-	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	2,223	-	-	-	-	20,241	44	22,938
	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,848	2,490	2,537	-	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	2,223	-	-	-	-	20,345	44	22,512
Saturday 4pm - 6pm	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,706	3,735	2,537	-	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	1,235	420	-	-	-	19,881	44	22,058
	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,565	4,980	2,537	-	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	1,235	420	-	-	-	19,985	44	21,623
	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,424	4,980	2,616	179	-	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	1,235	420	-	-	-	19,102	44	21,172
	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,283	4,980	2,695	179	215	-	-	-	-	-	-	-	1,859	-	-	-	-	4,389	-	-	-	1,235	420	-	-	-	18,255	44	20,699
	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,141	4,980	2,775	179	215	251	-	-	-	-	-	-	1,859	-	-	-	-	4,064	456	-	-	1,235	420	-	-	-	17,575	44	20,216
	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,980	2,854	179	215	251	66	-	-	-	-	-	1,859	-	-	-	-	3,739	912	-	-	1,235	420	-	-	-	16,709	44	19,708
Sunday 4am - 6am	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,735	2,933	179	215	251	66	54	-	-	-	-	1,859	-	-	-	-	3,414	1,368	-	-	1,235	-	358	-	-	15,666	44	19,175
	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,490	3,012	179	215	251	66	54	42	-	-	-	1,859	-	-	-	-	3,089	1,824	-	-	1,235	-	358	-	-	14,673	44	18,612
	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,245	3,092	179	215	251	66	54	42	30	-	-	1,859	-	-	-	-	2,763	2,280	-	-	1,235	-	358	-	-	13,668	44	18,020
	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,171	179	215	251	66	54	42	30	18	-	1,859	-	-	-	-	2,438	2,736	-	-	1,235	-	358	-	-	12,651	44	17,396
	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,171	-	215	251	66	54	42	30	18	12	1,859	-	-	-	-	2,438	2,736	-	-	1,235	-	-	301	-	12,427	44	16,745
	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,171	-	-	251	66	54	42	30	18	24	1,859	-	-	-	-	2,438	2,736	-	-	1,235	-	-	301	-	12,224	44	16,068
Sunday 4pm - 6pm	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,171	-	-	-	66	54	42	30	18	36	1,859	-	-	-	-	2,438	2,280	494	-	-	526	-	301	-	11,313	44	15,354
	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,171	-	-	-	-	54	42	30	18	48	1,859	-	-	-	-	2,438	1,824	988	-	-	526	-	301	-	11,298	44	14,630
	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,775	224	-	-	-	-	42	30	18	60	1,859	-	-	-	-	2,438	1,368	1,482	-	-	526	-	-	167	10,988	44	13,954
	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,378	224	269	-	-	-	-	30	18	72	1,859	-	-	-	-	2,438	912	1,976	-	-	526	-	-	167	10,868	44	13,338
	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,982	224	269	314	-	-	-	-	18	84	1,859	-	-	-	-	2,032	1,026	2,470	-	-	526	-	-	167	10,969	44	12,788
	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,586	224	269	314	82	-	-	-	-	96	1,859	-	-	-	-	1,626	1,140	2,470	-	-	736	-	-	167	10,566	44	12,276
Monday 4am - 6am	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,189	224	269	314	82	67	-	-	-	84	1,859	-	-	-	-	1,219	1,710	2,470	-	-	210	448	-	-	10,144	42	11,816
	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	793	224	269	314	82	67	52	-	-	72	1,859	157	-	-	-	813	2,280	2,470	-	-	210	448	-	-	10,109	42	11,435
	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	396	224	269	314	82	67	52	37	-	60	1,859	315	-	-	-	406	2,850	2,470	-	-	210	448	-	-	10,059	42	11,135
	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	269	314	82	67	52	37	22	48	1,859	472	-	-	-	-	3,420	2,470	-	-	210	448	-	-	9,994	42	10,913
	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	269	314	82	67	52	37	22	51	1,859	629	-	-	-	-	3,420	2,470	-	-	210	-	376	-	9,859	42	10,699
	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	82	67	52	37	22	54	1,859	787	-	-	-	-	3,420	2,470	-	-	210	-	376	-	9,750	42	10,493
Monday 4pm - 6pm	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	67	52	37	22	57	1,859	944	-	-	-	-	2,850	3,088	-	-	210	-	376	-	9,644	42	10,354
	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	52	37	22	60	1,859	944	-	-	-	-	2,280	3,705	-	-	-	179	376	-	9,582	42	10,211
	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	37	22	75	1,859	944	-	-	-	-	1,710	4,323	-	-	-	179	-	209	9,410	42	10,080
	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	22	90	1,859	944	-	-	-	-	1,140	4,940	-	-	-	179	-	209	9,420	42	9,959
	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	105	1,859	787	236	-	-	-	570	5,064	532	-	-	179	-	209	9,562	42	9,842
	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	119	1,859	629	473	-	-	-	-	4,570	1,064	-	263	-	151	209	9,336	42	9,739
Tuesday 4am - 6am		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		40	

🟩 Contained discharge to biofilter

🟦 Worst case 24 hour snapshot

Tunnel discharges - Worst-case 24 hour snapshot of air flows (m^3/s)																										
Day	Hours	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL
Thu	21, 22	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	1.9	3.3	3.3	1.9	0.0	0.0	49.1
	23, 24	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	1.9	3.3	3.3	1.9	0.0	0.0	49.1
Fri	1, 2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	2.1	3.3	3.3	1.9	0.0	0.0	49.3
	3, 4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	2.1	2.1	3.3	3.3	1.9	0.0	0.0	49.5
	5, 6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	1.9	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	47.8
	7, 8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	47.9
	9, 10	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	1.9	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	48.1
	11, 12	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	48.3
	13, 14	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.0	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	48.6
	15, 16	2.8	2.8	2.8	2.8	2.8	2.8	3.0	3.0	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	48.8
	17, 18	2.8	2.8	2.8	2.8	2.8	3.0	3.0	3.0	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	49.1
	19, 20	2.8	2.8	2.8	2.8	3.0	3.0	3.0	3.0	1.2	1.2	1.2	1.2	1.2	1.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	3.3	0.0	0.0	0.0	49.3
Day	Hours	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
Thu	21, 22	4.0	2.6	4.0	2.4	4.1	4.7	5.3	4.1	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.4	2.4	2.4	4.1	4.1	6.1	2.4	2.4	TOTAL
	23, 24	2.6	4.0	2.4	4.1	4.7	5.3	4.1	4.1	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.4	2.4	2.4	2.4	4.1	4.1	6.1	2.4	2.4	73.2
Fri	1, 2	4.0	2.4	4.1	4.7	5.3	4.1	4.1	4.1	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.4	2.4	2.4	2.4	2.4	4.1	4.1	6.1	2.4	2.4	74.9
	3, 4	2.4	4.1	4.7	5.3	4.1	4.1	4.1	4.1	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	6.1	2.4	2.4	75.2
	5, 6	4.1	4.7	5.3	4.1	4.1	4.1	4.1	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	5.2	0.0	0.0	70.5
	7, 8	4.7	5.3	4.1	4.1	4.1	4.1	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	5.2	0.0	0.0	69.8
	9, 10	5.3	4.1	4.1	4.1	4.1	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	5.2	0.0	0.0	68.5
	11, 12	4.1	4.1	4.1	4.1	3.4	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	5.2	0.0	0.0	66.7
	13, 14	4.1	4.1	4.1	3.4	3.4	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	4.4	0.0	0.0	65.2
	15, 16	4.1	4.1	3.4	3.4	3.4	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	4.4	0.0	0.0	64.6
	17, 18	4.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	4.4	0.0	0.0	64.0
	19, 20	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	1.5	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4	2.4	4.1	4.1	4.4	0.0	0.0	63.3

ou		
	0	Pasturisation (contained)
	470	Cool-down (conditioning)
	332	Conditioning 1
	118	Spawn Run 1
	152	Spawn Run 2
	43	Cool-down (spawn/shipout)

Tunnel discharges - Worst-case 24 hour snapshot of odour emission rates (ou.m3/s)

Day	Hours	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Thu	21, 22	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	296	296	296	296	494	494	84	0	0
	23, 24	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	296	296	296	296	494	494	84	0	0
Fri	1, 2	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	296	296	296	325	494	494	84	0	0
	3, 4	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	296	296	325	325	494	494	84	0	0
	5, 6	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	296	325	325	325	494	494	0	0	0
	7, 8	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	296	325	325	325	325	494	494	0	0	0
	9, 10	913	913	913	913	913	913	913	913	138	138	138	138	138	138	296	325	325	325	325	325	494	494	0	0	0
	11, 12	913	913	913	913	913	913	913	913	138	138	138	138	138	138	325	325	325	325	325	325	494	494	0	0	0
	13, 14	913	913	913	913	913	913	913	996	138	138	138	138	138	138	325	325	325	325	325	325	494	494	0	0	0
	15, 16	913	913	913	913	913	913	996	996	138	138	138	138	138	138	325	325	325	325	325	325	494	494	0	0	0
	17, 18	913	913	913	913	913	996	996	996	138	138	138	138	138	138	325	325	325	325	325	325	494	494	0	0	0
	19, 20	913	913	913	913	996	996	996	996	138	138	138	138	138	138	325	325	325	325	325	325	494	494	0	0	0

Day	Hours	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Thu	21, 22	0	0	0	1,110	1,942	2,219	2,497	1,349	172	172	172	172	172	172	333	333	333	369	369	369	618	618	263	105	105
	23, 24	0	0	1,110	1,942	2,219	2,497	1,349	1,349	172	172	172	172	172	172	333	333	369	369	369	369	618	618	263	105	105
Fri	1, 2	0	1,110	1,942	2,219	2,497	1,349	1,349	1,349	172	172	172	172	172	172	333	369	369	369	369	369	618	618	263	105	105
	3, 4	1,110	1,942	2,219	2,497	1,349	1,349	1,349	1,349	172	172	172	172	172	172	369	369	369	369	369	369	618	618	263	105	105
	5, 6	1,942	2,219	2,497	1,349	1,349	1,349	1,349	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	224	0	0
	7, 8	2,219	2,497	1,349	1,349	1,349	1,349	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	224	0	0
	9, 10	2,497	1,349	1,349	1,349	1,349	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	224	0	0
	11, 12	1,349	1,349	1,349	1,349	1,141	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	224	0	0
	13, 14	1,349	1,349	1,349	1,141	1,141	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	188	0	0
	15, 16	1,349	1,349	1,141	1,141	1,141	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	188	0	0
	17, 18	1,349	1,141	1,141	1,141	1,141	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	188	0	0
	19, 20	1,141	1,141	1,141	1,141	1,141	1,141	1,141	1,141	172	172	172	172	172	172	369	369	369	369	369	369	618	618	188	0	0

ou	
0	Pasturisation (contained)
470	Cool-down (conditioning)
332	Conditioning 1
118	Spawn Run 1
152	Spawn Run 2
43	Cool-down (spawn/shipout)

Day	Hours	TOTAL
Thu	21, 22	24,937
	23, 24	26,323
Fri	1, 2	27,738
	3, 4	29,153
	5, 6	28,883
	7, 8	28,112
	9, 10	27,063
	11, 12	25,737
	13, 14	25,576
	15, 16	25,452
	17, 18	25,327
	19, 20	25,203