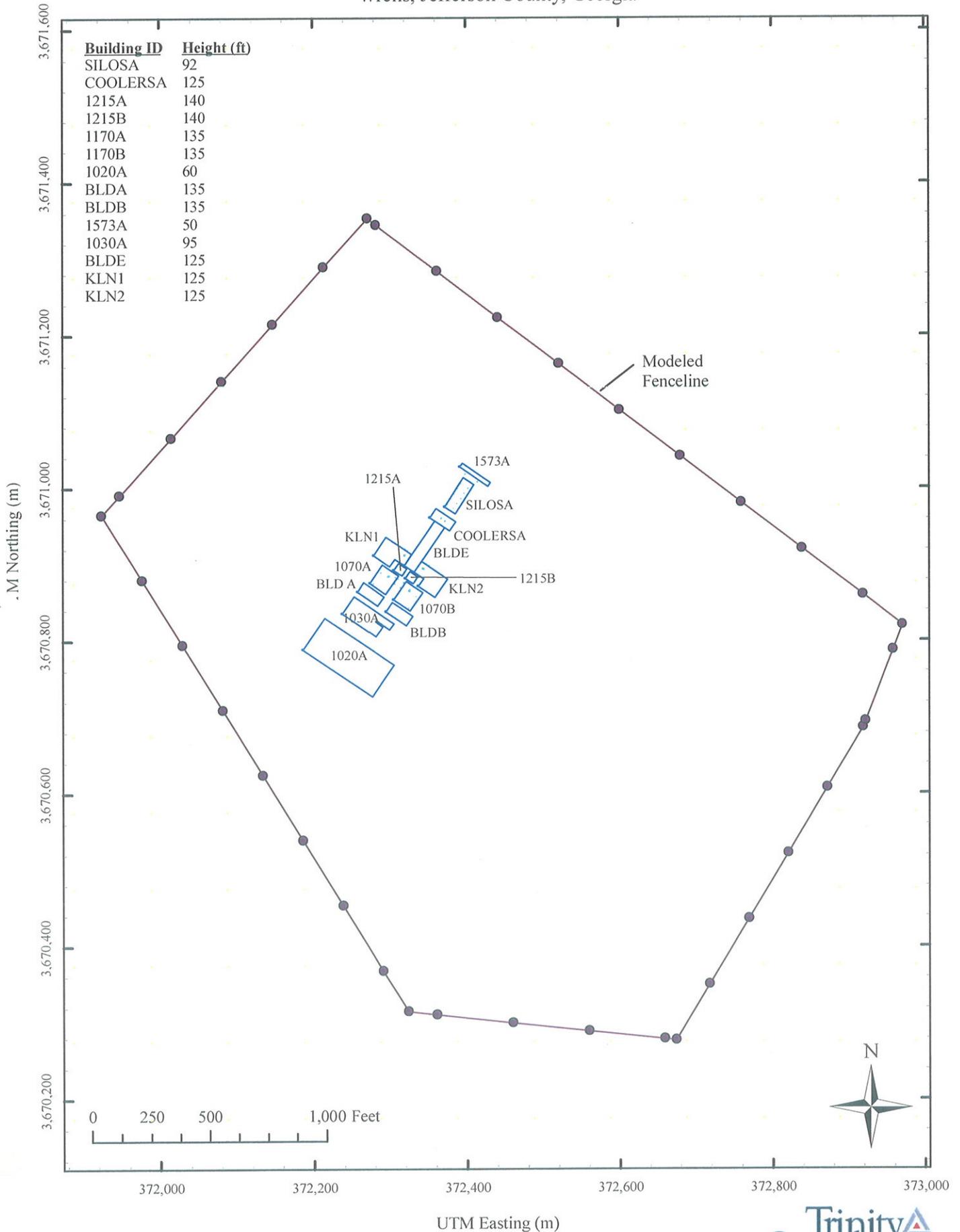


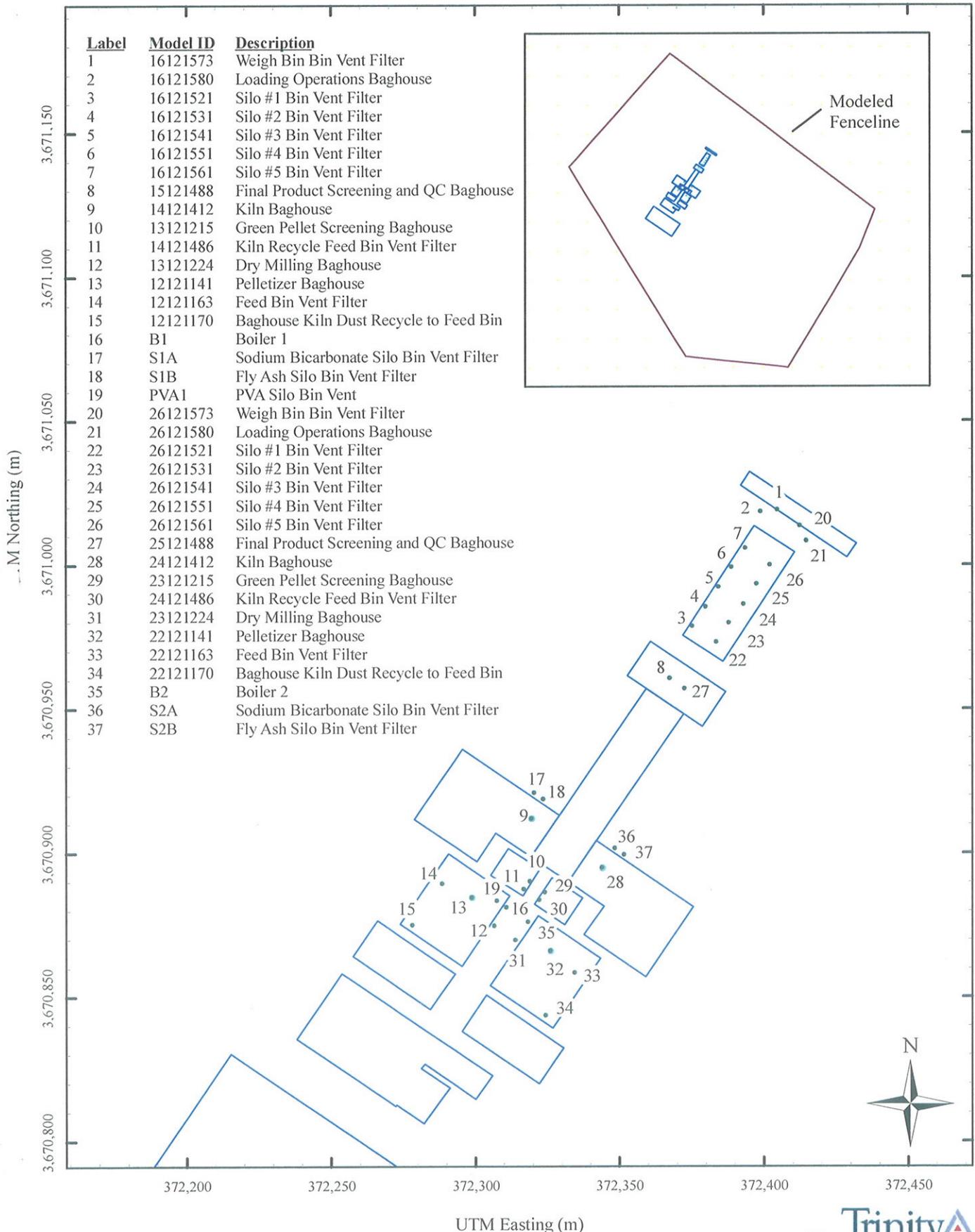
Attachment C – Figures A-3 and A-4

Figure A-3. Modeled Building Layout
 PyraMax Ceramics, LLC - Kings Mill Facility
 Wrens, Jefferson County, Georgia



Coordinates reflect UTM Zone 17, NAD83.

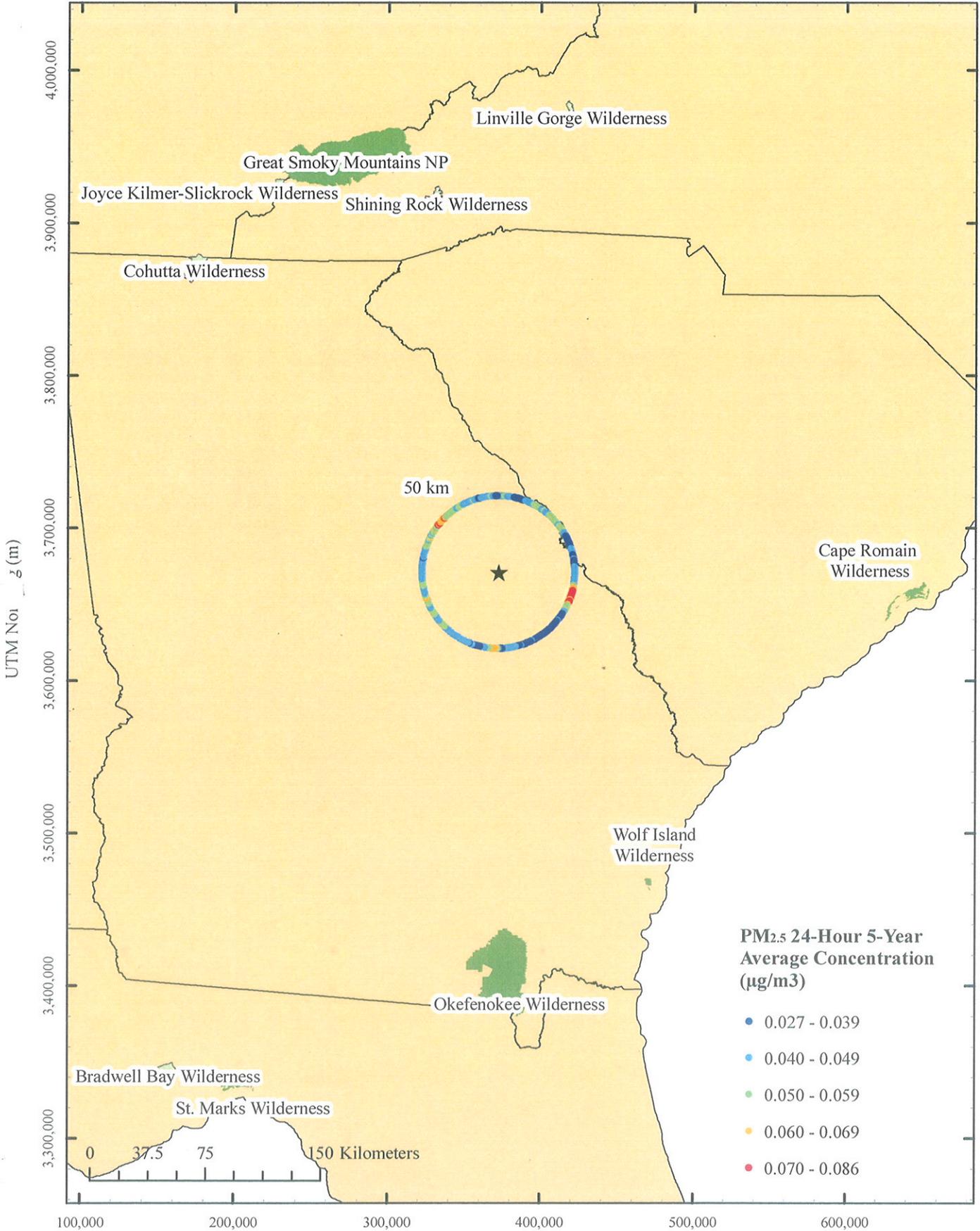
Figure A.4 - Modeled Source Layout
 PyraMax Ceramics, LLC - Kings Mill Facility
 Wrens, Jefferson County, Georgia



Coordinates reflect UTM Zone 17, NAD83.

Attachment D – Class I SIL Analysis Documentation (Including CD)

24-Hr PM_{2.5} Class I Significance Modeling
 PyraMax Ceramics, LLC
 Kings Mill Facility
 Wrens, Jefferson County, Georgia



Coordinates reflect UTM Zone 17, NAD83.
 24-Hour PM_{2.5} Class I SIL: 0.07 µg/m³

UTM Easting (m)

Attachment E -- Modeling Data Documentation

10. Volume II – Appendix D Inventory Tables

Please note that in Tables D-2 through D-18, although the table indicates NO_x Emissions, the emissions represented below are NO₂ Emissions.

Table D-2 and D-14. Modeling Data for Southern Natural Gas - Wrens

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	NO _x Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
C01S	SNGW01	368.33	3,679.75	144.80	2.47E+00	5.18	0.25	36.60	799.80
C02S	SNGW02	368.34	3,679.75	144.80	2.47E+00	5.18	0.25	36.60	799.80
C03S	SNGW03	368.35	3,679.76	144.80	5.00E+00	4.88	0.29	52.70	866.50
C05S	SNGW05	368.46	3,679.75	144.80	8.84E-01	11.28	1.07	12.80	732.00

Emissions in Table D-2/D-14 were obtained from the online Georgia Title V database where the annual tpy emission rates were converted to short term rates assuming the facility operates 8,760 hours per year. Stack parameters in Table D-2/D-14 were obtained from a prior modeling project that Trinity completed for Southern Natural Gas in 2001.

Table D-3 and D-15. Modeling Data for KaMin Wrens - Main

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	NO _x Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
202S	KMWM202S	369.06	3,682.52	137.46	1.44E-01	4.88	0.26	4.57	327.59
378S	KMWM378S	369.06	3,682.52	137.46	3.60E+00	29.57	1.83	10.06	386.48
431S	KMWM431S	369.06	3,682.52	137.46	1.66E+00	15.85	1.07	3.66	327.59
501S	KMWM501S	369.06	3,682.52	137.46	2.76E-01	11.58	0.61	0.91	327.59
52S	KMWM52S	369.06	3,682.52	137.46	1.85E+00	22.86	1.34	60.96	372.04
62S	KMWM62S	369.06	3,682.52	137.46	2.58E+00	22.86	1.43	63.09	372.04
GG1S	KMWMGG1S	369.06	3,682.52	137.46	2.33E+01	3.35	0.26	4.57	327.59

Emissions in Table D-3/D-15 were obtained from the KaMin Wrens – Main Title V renewal application. Trinity prepared the renewal application based on maximum equipment rating and fuel type. Stack parameters in Table D-3/D-15 were obtained from the 2008 National Emission Inventory Stack Data workbook. Please note that the emissions in the above table have been rectified per EPD Comment Letter, item #10. b. In addition, an explanation of the KMWMGG1S source was requested per EPD Comment Letter, item #10. c. The emission rate for this source was obtained from the Title V renewal application that Trinity prepared in 2009 for all Plant and Mine Generators.

Table D-4 and D-16. Modeling Data for Plant Washington

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
S1	PWS1	337.09	3,659.82	94.00	4.18E+01	137.16	9.14	18.55	333.00
S45	PWS45	337.41	3,659.77	94.00	2.42E+00	32.43	1.52	19.81	408.00

Emissions and stack parameters in Table D-4/D-16 were obtained from a recent PSD permit application submitted to EPD on January 17, 2008 from the report narrative, Tables 3-1 and 5-3.

Table D-5. Modeling Data for International Flavors and Fragrances

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
B01	IFFB01	410.51	3,688.70	55	2.52E-01	9.14	0.66	0.58	449.82
B02	IFFB02	410.51	3,688.70	55	5.11E-01	9.14	0.66	0.58	449.82
B03	IFFB03	410.51	3,688.70	55	5.11E-01	9.14	0.66	0.58	449.82

The emissions for all three sources in Table D-5 were obtained from a file review conducted at EPD by Trinity. The stack parameters for stack B01 were also obtained from this file review. However, due to lack of available data, stack parameters for stack B02 and B03 were assumed to be the same as B01 to provide data required for modeling.

Table D-6. Modeling Data for Augusta Newsprint Co.

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
S009	ANCS009	411.04	3,688.94	55.00	1.11E+01	42.67	2.90	11.83	338.71
S001	ANCS001	411.04	3,688.94	55.00	4.30E-01	36.88	2.13	14.19	588.15

Emissions in Table D-6 were obtained from the online Georgia Title V database application for Augusta Newsprint Co. The annual tpy emission rates were converted to short term rates based on 8,760 hours of operation annually. The stack parameters in Table D-6 were obtained from the 2008 National Emission Inventory Stack Data workbook.

Table D-7. Modeling Data for Olin Corporation Augusta Plant

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	NO _x Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
E05A	OCOE05A	411.64	3,689.88	52.00	2.11E-01	11.28	0.61	10.06	422.04
E06A	OCOE06A	411.64	3,689.88	52.00	2.11E-01	11.28	0.61	10.06	422.04

Emissions in Table D-7 were calculated using an AP-42 emission factor and a maximum heat input for each of the two boilers. The height of the stacks were obtained from the online Georgia Title V database application. However, no stack parameters were available on the 2008 National Emission Inventory Stack Data workbook, therefore, stack parameters were estimated based on previous experience with boilers of a similar size.

Table D-8. Modeling Data for West Fraser Augusta Mill

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	NO _x Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
KD01	WFLKD01	410.42	3,688.50	48.77	1.15E-01	8.99	0.53	5.18	394.26
KD02	WFLKD02	410.42	3,688.50	48.77	2.29E-01	9.14	0.53	5.18	394.26
KD03	WFLKD03	410.42	3,688.50	48.77	3.78E-01	9.14	0.53	5.18	394.26

Emissions in Table D-8 calculated as the maximum between 2008 National Emission Inventory workbook emissions, or the online Georgia Title V database emissions. Stack parameters in Table D-8 were obtained from the 2008 National Emission Inventory Stack Data workbook.

Table D-9. Modeling Data for Deerfield Tissues, LLC

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	NO _x Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
B02	DEERB02	411.06	3,687.06	44.20	2.22E-01	4.88	1.14	15.18	463.71

Emissions from Boiler 2 in Table D-9 were calculated based on the maximum heat input of the boiler and using AP-42 emission factors to determine the short-term emission rate. The stack parameters for Boiler 2 were assumed to be the same as Boiler 1, which was found during an EPD file review, due to lack of better data. Boiler 1 has been removed from the facility.

Table D-10. Modeling Data for International Paper - Augusta Mill

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
LK1	IPALK1	410.98	3,687.39	48.16	2.71E+00	61.57	1.73	4.88	349.26
LK2	IPALK2	410.98	3,687.39	48.16	4.88E+00	64.62	1.56	14.94	340.93
PB1	IPAPB1	410.98	3,687.39	48.16	2.65E+01	60.90	2.23	18.50	331.48
PB2	IPAPB2	410.98	3,687.39	48.16	2.90E+01	60.90	2.44	25.15	506.48
PB3	IPAPB3	410.98	3,687.39	48.16	1.69E+01	60.96	3.05	17.07	444.26
RB2	IPARB2	410.98	3,687.39	48.16	4.01E+00	60.96	2.44	24.38	428.71
RB3	IPARB3	410.98	3,687.39	48.16	1.89E+01	64.01	3.00	36.58	473.15
RLB	IPARLB	410.98	3,687.39	48.16	5.75E+00	36.58	1.52	12.92	477.59
ST2	IPAST2	410.98	3,687.39	48.16	7.36E-02	59.44	1.05	16.92	338.71
ST3	IPAST3	410.98	3,687.39	48.16	3.10E-01	64.01	1.83	6.10	347.04
PAPR	IPAPAPR	410.98	3,687.39	48.16	4.93E-01	17.74	1.04	8.42	497.59

Emissions in Table D-10 were determined as the maximum of the emissions reported in the 2005 National Emission Inventory workbook and the online Georgia Title V database Section E emissions. Stack parameters in Table D-10 were obtained from the 2008 National Emission Inventory Stack Data workbook, which is more recent than the 2005 National Emission Inventory workbook.

Table D-11. Modeling Data for PCS Nitrogen Fertilizer

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
ST11	PCSST11	413.51	3,700.70	37.80	1.62E+01	32.92	4.24	12.80	455.37
ST18	PCSST18	413.51	3,700.70	37.80	5.73E+01	41.91	0.98	31.70	309.26
ST19	PCSST19	413.51	3,700.70	37.80	1.64E+01	21.03	1.52	31.70	446.48
ST20	PCSST20	413.51	3,700.70	37.80	1.38E-02	3.66	0.30	0.61	294.26
ST21	PCSST21	413.51	3,700.70	37.80	9.16E-01	38.10	1.52	3.17	422.04
ST24	PCSST24	413.51	3,700.70	37.80	3.48E+00	31.70	1.52	1.58	438.71
ST36	PCSST36	413.51	3,700.70	37.80	3.22E-03	30.48	0.08	5.64	422.04

Emissions in Table D-11 were determined as the maximum of the emissions reported in the 2005 National Emission Inventory workbook and the online Georgia Title V database Section E emissions. Stack parameters in Table D-11 were obtained from the 2008 National Emission Inventory Stack Data workbook, which is more recent than the 2005 National Emission Inventory workbook.

Table D-12. Modeling Data for DSM Resins U.S. Inc. and DSM Chemicals North America, Inc.

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
F001	DSMRF001	413.70	3,701.99	39.62	9.98E-02	10.06	0.51	5.79	752.59
F002	DSMRF002	413.70	3,701.99	39.62	1.40E-01	10.06	0.76	5.79	752.59
S014	DSMCS014	413.73	3,702.06	39.62	2.13E+01	67.06	3.58	15.15	422.04
S029	DSMCS029	413.73	3,702.06	39.62	1.24E-01	10.97	0.46	8.84	588.71
S031	DSMCS031	413.73	3,702.06	39.62	3.34E-01	45.72	0.61	4.27	672.04
S002	DSMCS002	413.73	3,702.06	39.62	8.24E-01	24.38	1.07	7.32	449.82
S012	DSMCS012	413.73	3,702.06	39.62	3.34E-02	19.81	0.61	4.27	672.04
S017	DSMCS017	413.73	3,702.06	39.62	4.99E-02	23.01	0.66	4.88	672.04
S020	DSMCS020	413.73	3,702.06	39.62	5.61E+00	24.38	1.37	15.09	449.82
S07A	DSMCS07A	413.73	3,702.06	39.62	1.61E+00	49.38	0.82	15.85	656.48
S18A	DSMCS18A	413.73	3,702.06	39.62	2.30E+00	38.10	0.91	19.75	449.82

The emissions from stacks F001 and F002 in Table D-12 were calculated based on the maximum heat input rating of the furnace in conjunction with AP-42 emission factors. Emissions from the rest of the stacks in Table D-12 were determined as the maximum of the emissions reported in the 2005 National Emission Inventory workbook and the online Georgia Title V database Section E emissions. Stack parameters for stacks F001 and F002 were obtained from a file review conducted at EPD. Stack parameters for the rest of the stacks were obtained from the 2008 National Emission Inventory Stack Data workbook, which is more recent than the 2005 National Emission Inventory workbook. In addition, stack parameters for stack S031 were assumed to be the same as stack S012 due to lack of better available data.

Table D-17. Modeling Data for Continental Commercial Products Llc-Glit Div

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
ST2	CCPST2	371.89	3,675.46	124	7.12E-02	10.67	1.83	11.86	438.71
ST3	CCPST3	371.89	3,675.46	124	9.49E-02	10.67	1.83	11.86	438.71
ST4	CCPST4	371.89	3,675.46	124	4.75E-02	10.67	1.83	11.86	438.71
ST5	CCPST5	371.89	3,675.46	124	4.75E-02	10.67	1.83	11.86	438.71
ST6	CCPST6	371.89	3,675.46	124	9.88E-02	10.67	1.83	11.86	438.71
ST7	CCPST7	371.89	3,675.46	124	9.88E-02	10.67	1.83	11.86	438.71
ST1	CCPST1	371.89	3,675.46	124	1.09E-01	10.67	1.83	11.86	438.71
ST8	CCPST8	371.89	3,675.46	124	8.77E-02	10.67	1.83	11.86	438.71

Emissions and stack data in Table D-17 were obtained from a file review conducted at EPD for Continental Commercial Products.

Table D-18. Modeling Data for Mestek, Inc. (dba Air Balance, Inc.)

Stack ID	Model ID	UTM East	UTM North	Elevation	NO _x	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
EC1	MESEC1	369.62	3,673.97	121	7.59E-02	9.14	0.61	2.44	366.48

Emissions and stack data in Table D-18 were obtained from a file review conducted at EPD for Mestek, Inc.

Table D-21. Modeling Data for International Flavors and Fragrances

Stack ID	Model ID	UTM East	UTM North	Elevation	PM ₁₀ /PM _{2.5}	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
B01	IFFB01	410.51	3,688.70	55	2.39E-02	9.14	0.66	0.58	449.82
B02	IFFB02	410.51	3,688.70	55	2.79E-02	9.14	0.66	0.58	449.82
B03	IFFB03	410.51	3,688.70	55	2.79E-02	9.14	0.66	0.58	449.82

The emissions for all three sources in Table D-21 were obtained from a file review conducted at EPD by Trinity. The stack parameters for stack B01 were also obtained from this file review. However, due to lack of available data, stack parameters for stack B02 and B03 were assumed to be the same as B01 to provide data required for modeling.

Table D-22. Modeling Data for Augusta Newsprint Co.

Stack ID	Model ID	UTM East	UTM North	Elevation	PM ₁₀ /PM _{2.5}	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
S009	ANCS009	411.04	3,688.94	55	2.77E+00	42.67	2.90	11.83	338.71
S001	ANCS001	411.04	3,688.94	55	7.39E-02	36.88	2.13	14.19	588.15
PM1	ANCPM1	411.04	3,688.94	55	4.41E-01	32.61	1.52	15.24	310.93
PM2	ANCPM2	411.04	3,688.94	55	5.80E-01	25.91	1.52	15.24	310.93

Emissions in Table D-22 were obtained from the online Georgia Title V database application for Augusta Newsprint Co. The annual tpy emission rates were converted to short term rates based on 8,760 hours of operation annually. The stack parameters in Table D-22 were obtained from the 2008 National Emission Inventory Stack Data workbook.

Table D-23. Modeling Data for Olin Corporation Augusta Plant

Stack ID	Model ID	UTM East	UTM North	Elevation	PM ₁₀ /PM _{2.5}	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
E05A	OCOEF05A	411.64	3,689.88	52	2.00E-02	11.28	0.61	10.06	422.04
E06A	OCOEF06A	411.64	3,689.88	52	2.00E-02	11.28	0.61	10.06	422.04

Emissions in Table D-23 were calculated using an AP-42 emission factor and a maximum heat input for each of the two boilers. The height of the stacks were obtained from the online Georgia Title V database application. However, no stack parameters were available on the 2008 National Emission Inventory Stack Data workbook, therefore, stack parameters were estimated based on previous experience with boilers of a similar size.

Table D-24. Modeling Data for West Fraser Augusta Mill

Stack ID	Model ID	UTM East	UTM North	Elevation	PM ₁₀ /PM _{2.5}	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
KD01	WFLKD01	410.42	3,688.50	48.77	1.15E-01	8.99	0.53	5.18	394.26
KD02	WFLKD02	410.42	3,688.50	48.77	2.29E-01	9.14	0.53	5.18	394.26
KD03	WFLKD03	410.42	3,688.50	48.77	3.78E-01	9.14	0.53	5.18	394.26

Emissions in Table D-24 calculated as the maximum between 2008 National Emission Inventory workbook emissions, or the online Georgia Title V database emissions. Stack parameters in Table D-24 were obtained from the 2008 National Emission Inventory Stack Data workbook.

Table D-25. Modeling Data for Deerfield Tissues, LLC

Stack ID	Model ID	UTM East	UTM North	Elevation	PM ₁₀ /PM _{2.5}	Height	Diam.	Vel.	Temp.
		(NAD83 Zone 17) (km)	(NAD83 Zone 17) (km)		Emissions (g/s)				
B02	DEERB02	411.06	3,687.06	44.20	2.07E-02	4.88	1.14	15.18	463.71

Emissions from Boiler 2 in Table D-25 were calculated based on the maximum heat input of the boiler and using AP-42 emission factors to determine the short-term emission rate. The stack parameters for Boiler 2 were assumed to be the same as Boiler 1, which was found during an EPD file review, due to lack of better data. Boiler 1 has been removed from the facility.

Table D-26. Modeling Data for International Paper - Augusta Mill

Stack ID	Model ID	UTM East (NAD83 Zone 17) (km)	UTM North (NAD83 Zone 17) (km)	Elevation (m)	PM ₁₀ /PM _{2.5} Emissions (g/s)	Height (m)	Diam. (m)	Vel. (m/s)	Temp. (K)
LK1	IPALK1	410.98	3,687.39	48.16	2.94E+00	61.57	1.73	4.88	349.26
LK2	IPALK2	410.98	3,687.39	48.16	2.82E-01	64.62	1.56	14.94	340.93
PB1	IPAPB1	410.98	3,687.39	48.16	2.76E+01	60.90	2.23	18.50	331.48
PB2	IPAPB2	410.98	3,687.39	48.16	2.34E+01	60.90	2.44	25.15	506.48
PB3	IPAPB3	410.98	3,687.39	48.16	5.22E+00	60.96	3.05	17.07	444.26
RB2	IPARB2	410.98	3,687.39	48.16	4.53E+00	60.96	2.44	24.38	428.71
RB3	IPARB3	410.98	3,687.39	48.16	4.68E+00	64.01	3.00	36.58	473.15
RLB	IPARLB	410.98	3,687.39	48.16	1.95E-01	36.58	1.52	12.92	477.59
ST2	IPAST2	410.98	3,687.39	48.16	2.42E+00	59.44	1.05	16.92	338.71
ST3	IPAST3	410.98	3,687.39	48.16	2.83E+00	64.01	1.83	6.10	347.04
PAPR	IPAPAPR	410.98	3,687.39	48.16	9.90E-02	17.74	1.04	8.42	497.59

Emissions in Table D-26 were obtained from the online Georgia Title V database Section E emissions. Stack parameters in Table D-26 were obtained from the 2008 National Emission Inventory Stack Data workbook