CLEANER AIR OREGON

Modeling Protocol and Risk Assessment Work Plan

Prepared for:

Columbia Steel Casting Co., Inc.

September 2021

SLR

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Prepared for:
Columbia Steel Casting Co., Inc.
10425 N Bloss Ave.
Portland, OR 97203

This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.

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ACRONYMS

ASOS	Automated Surface Observing System
BPIPPRM	Building Profile Input Program for PRIME
CAO	Cleaner Air Oregon
CSM	Conceptual Site Model
DEQ	Oregon Department of Environmental Quality
EPA	United States Environmental Protection Agency
GEP	Good Engineering Practice
KPDX	Portland International Airport
KSLE	McNary Field, Salem, OR
$\mu g/m^3$	micrograms per cubic meter
NAD83	North American Datum of 1983
NED	National Elevation Dataset
OAR	Oregon Administrative Rule
RAWP	Risk Assessment Work Plan
RAL	Risk Action Level
RBC	Risk-Based Concentration
REER	Risk-Equivalent Emission Rate
SLR	SLR International Corporation
TAC	toxic air contaminant
TEU	Toxic Emission Unit
UTM	Universal Transverse Mercator

1. INTRODUCTION

1.1 PURPOSE

Columbia Steel Casting Co., Inc. (Columbia Steel) operates a foundry at 10425 N Bloss Ave. in Portland, Oregon, operating under Air Contaminant Discharge Permit No. 26-1869-ST-01. On March 4, 2019, Columbia Steel was informed by the Oregon Department of Environmental Quality (DEQ) that the facility was being called in to the Cleaner Air Oregon (CAO) program administered by DEQ.

Columbia Steel has chosen to perform a Level 3 Risk Assessment as permitted under Oregon Administrative Rule (OAR) 340-245-0050(10) in order to comply with its obligations under the CAO program. SLR International Corporation (SLR) has been retained by Columbia Steel to perform the dispersion modeling and risk assessment.

As part of a Level 3 Risk Assessment, a dispersion modeling demonstration and risk assessment are required. This document serves as the modeling protocol and risk assessment work plan for the demonstration to be conducted as part of the Level 3 Risk Assessment.

The modeling analysis will be conducted to calculate the risk action levels attributable to operations at the facility and thereby determine additional requirements in relation to the action levels as outlined in OAR 340-245-8010 Table 1.

The purpose of this modeling protocol and work plan is to obtain approval from DEQ for the proposed modeling inputs and methodologies. Inputs and methodologies will follow DEQ and United States Environmental Protection Agency (EPA) modeling guidance as further described in this document.

1.2 FACILITY DESCRIPTION

Columbia Steel manufactures a wide variety of steel and iron parts for basic industry. Products include replacement parts for high-wear applications, such as those that take abuse from abrasion, impact, or heat in rock crushers, grinding mills, mine shovels and draglines, electric power plants, cement plants, and metal and waste recycling shredders.

Columbia Steel's facility is approximately 87 acres and is located near the St. Johns neighborhood and the Columbia Slough wetlands. The facility is located at Universal Transverse Mercator (UTM) coordinates of 521141 m Easting, 5049576 m Northing, in Zone 10, on the North American Datum of 1983 (NAD83). The facility elevation is about 11 m above sea level.

An overview of the facility, illustrating the location of the facility within the surrounding neighborhood, is shown in Figure 1. A figure limited to the immediate area surrounding the facility, showing the facility boundary in more detail, is shown in Figure 2.

2. SITE DESCRIPTION

2.1 TOXIC EMISSION UNITS AND STACK PARAMETERS

Toxic emission units (TEUs) present at Columbia Steel may be characterized into four categories: baghouses, roof vents, fugitives (e.g., chemical usage), and natural gas combustion. All TEUs operate during the facility's normal operations.

The risk assessment procedures in OAR 340-245-0050(5) require that the risk from toxic air contaminants emitted from natural gas combustion be calculated and reported in the risk assessment. However, the risk from natural gas combustion is reported separately from the risk from all other toxic air contaminant emissions. Additionally, the risk from toxic air contaminants emitted solely from the combustion of natural gas may be excluded from the total risk for the purposes of determining compliance with the risk action levels (RALs) and may be omitted from any requirements determined under a risk reduction plan if good air pollution control practices are followed. In accordance with these sections of the CAO regulations, the parameters and emission rates associated with the natural gas sources are included in this modeling protocol and work plan, and the TEUs combusting natural gas will be modeled. Their emission rates and stack parameters are therefore included below. However, the risk resulting from natural gas combustion will not be included in the total risk compared to the RALs nor included in any requirements under a risk reduction plan, should that be necessary.

2.1.1 POINT SOURCE RELEASES (BAGHOUSES AND ROOF VENTS)

There are currently 19 operating baghouses at the Columbia Steel facility, including one rotoclone control device. These TEUs will be modeled as point sources. Most of the baghouses exhaust vertically; however, baghouses 7 and 19 exhaust horizontally and will be modeled as point horizontal sources. The baghouses are assumed to exhaust at ambient temperature. Stack height and diameter parameters are based on information provided by Columbia Steel.

Emissions from units and activities inside Building 8 and Building 11 are exhausted through vents in each of the roofs of those two buildings. There are five active vents present in the roof of Building 8 and nine active vents present in the roof of Building 11. The vents are presumed to have a release height of one foot greater than the local roof height and to exhaust at ambient temperature. Stack diameters and exhaust velocities are based on information provided by Columbia Steel.

The source descriptions, model identifications, orientations, and stack parameters for the point sources that do not combust natural gas are shown in Table 1.

Table 1. Source IDs, Description, and Stack Parameters for Point Sources Excluding Natural Gas Emissions

Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)	Orientation	Stack Height (m)	Exhaust Temperature	Release Velocity (m/s)	Stack Diameter (m)
BH1	Baghouse 1	521153.0	5049643.5	11.3	Vertical	13.51	Ambient	18.047	1.168
BH2	Baghouse 2	521159.4	5049640.3	11.3	Vertical	14.94	Ambient	14.149	1.181
BH3	Baghouse 3	521166.3	5049428.1	11.5	Vertical	12.55	Ambient	13.340	1.219
BH4	Baghouse 4	521107.2	5049636.1	11.3	Vertical	9.70	Ambient	4.279	0.711
BH5	Baghouse 5	521168.5	5049420.0	11.5	Vertical	14.48	Ambient	12.461	1.067
BH6	Baghouse 6	521109.3	5049596.8	11.3	Vertical	12.80	Ambient	9.504	1.067
BH7	Baghouse 7	520850.3	5049822.3	9.1	Horizontal	8.79	Ambient	27.093	0.596
BH8	Baghouse 8	521111.4	5049680.7	10.8	Vertical	12.19	Ambient	17.701	1.372
BH9	Baghouse 9	521041.7	5049630.2	11.0	Vertical	12.19	Ambient	9.096	0.406
BH10	Baghouse 10	520856.1	5049820.1	9.1	Vertical	15.54	Ambient	7.568	1.016
BH15	Baghouse 15	521112.6	5049464.2	11.3	Vertical	8.76	Ambient	7.838	1.676
BH16	Baghouse 16	520735.6	5049852.2	9.1	Vertical	9.07	Ambient	6.686	0.782
BH17	Baghouse 17	521172.8	5049423.0	11.5	Vertical	14.48	Ambient	12.461	1.067
RC18	Rotoclone 18	521055.3	5049578.6	11.0	Vertical	5.36	Ambient	35.934	0.457
BH19	Baghouse 19	520733.4	5049845.7	9.1	Horizontal	10.77	Ambient	16.546	0.525
BH20	Baghouse 20	521028.2	5049595.7	12.2	Vertical	12.93	Ambient	8.845	0.864
BH22	Baghouse 22	521171.7	5049458.6	11.3	Vertical	8.33	Ambient	16.736	0.406
BH24	Baghouse 24	520738.1	5049858.1	9.1	Vertical	6.40	Ambient	6.613	0.660
BH26	Baghouse 26	521112.1	5049471.1	11.3	Vertical	8.79	Ambient	15.523	0.762
VENT11_1	Vent on Building 11 roof	521137.1	5049618.0	11.3	Vertical	14.15	Ambient	8.793	1.676
VENT11_2	Vent on Building 11 roof	521127.8	5049611.6	11.3	Vertical	12.68	Ambient	8.793	1.676

Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)	Orientation	Stack Height (m)	Exhaust Temperature	Release Velocity (m/s)	Stack Diameter (m)
VENT11_3	Vent on Building 11 roof	521121.1	5049581.6	11.3	Vertical	11.23	Ambient	8.793	1.676
VENT11_4	Vent on Building 11 roof	521140.6	5049576.1	11.3	Vertical	13.78	Ambient	8.793	1.676
VENT11_5	Vent on Building 11 roof	521138.5	5049551.8	11.3	Vertical	14.15	Ambient	8.793	1.676
VENT11_6	Vent on Building 11 roof	521138.2	5049521.1	11.3	Vertical	14.15	Ambient	8.793	1.676
VENT11_7	Vent on Building 11 roof	521137.6	5049490.6	11.3	Vertical	14.15	Ambient	8.793	1.676
VENT11_8	Vent on Building 11 roof	521121.9	5049471.7	11.3	Vertical	11.23	Ambient	8.793	1.676
VENT11_9	Vent on Building 11 roof	521138.1	5049453.8	11.3	Vertical	14.15	Ambient	8.793	1.676
VENT8_1	Vent on Building 8 roof	521039.9	5049552.0	12.2	Vertical	10.97	Ambient	7.161	0.762
VENT8_2	Vent on Building 8 roof	521046.4	5049560.9	12.2	Vertical	8.90	Ambient	7.161	0.762
VENT8_3	Vent on Building 8 roof	521040.2	5049565.6	12.2	Vertical	10.45	Ambient	7.161	0.762
VENT8_4	Vent on Building 8 roof	521046.4	5049565.5	12.2	Vertical	8.90	Ambient	7.161	0.762
VENT8_5	Vent on Building 8 roof	521046.4	5049571.1	12.2	Vertical	8.90	Ambient	7.161	0.762

2.1.2 FUGITIVE RELEASES

In addition to the stack emissions, there are emissions at Columbia Steel that are not associated with a point release. Activities generating these emissions include welding and the use of solvents, resins, coating, and other substances containing volatile organic compounds. These activities occur in Buildings 1, 5, 7, and 15.

Emissions associated with the use of these materials will be modeled as volume sources. The volume sources will be modeled with a horizontal dimension based on the equivalent diameter of the area of the building in which the fugitives are emitted. The initial horizontal dimension input into the model is this equivalent diameter divided by 4.3 as the TEUs are single volume sources. The initial vertical dimension input into the model is set equal to the building height, divided by 2.15, as appropriate for surface-based TEUs or elevated TEUs on or adjacent to a building. Release height of the fugitive TEUs will be set to one-half of the building height in which they are contained. For Building 7, some fugitive-producing materials are used only in the north half of the building while other substances are characterized as being used throughout the building, so two sources will be used to characterize the Building 7 fugitive emissions.

The source descriptions, model identifications, and volume parameters for the fugitive TEUs are shown in Table 2.

Table 2. Source IDs, Description, and Release Parameters for Volume Sources

Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
FUG01	Fugitives associated with activities in Building 1	520808.3	5049825.0	9.1	4.96	18.31	4.609
FUG05	Fugitives associated with activities in Building 5	521067.2	5049635.8	10.9	2.59	5.20	2.409
FUG07	Fugitives associated with activities throughout Building 7	521071.0	5049560.1	11.0	3.74	8.75	3.474
FUG07N	Fugitives associated with activities in north half of Building 7	521070.3	5049568.9	11.0	3.74	5.56	3.474
FUG15	Fugitives associated with activities in Building 15	521336.2	5049411.4	12.0	6.71	20.81	6.237

2.1.3 NATURAL GAS COMBUSTION UNITS

Columbia Steel also operates several sources that solely combust natural gas. Of these sources, some are ladle heaters that have no discrete effluent pathway, but instead exhaust into the interior of Building 11. Emissions from these units will be treated as a volume source based on the dimensions of Building 11.

The other natural gas combusting sources consist of ovens associated with their own stacks emitting to the atmosphere. These sources are represented as point sources in the modeling. Some ovens have two stacks; in these cases, the sources are modeled with two stacks, identified with "A" and "B" suffixes. Stack diameters, release heights, and exhaust temperatures are based on information provided by Columbia Steel. Exhaust velocities from these units were not able to be measured and therefore are based on engineering estimates.

The source descriptions, model identifications, orientations, and stack parameters for the sources that combust natural gas are shown in Table 3.

Table 3. Source IDs, Description, and Stack/Release Parameters for Natural Gas Combustion Units

Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)	Orientation	Stack Height (m)	Exhaust Temperature (K)	Release Velocity (m/s)	Stack Diameter (m)
OVEN102	Oven 102	521360.3	5049452.1	12.0	Vertical, Capped	14.68	305	11.64	1.463
OVEN1_A	Oven 1	521114.7	5049489.6	11.3	Vertical, Capped	10.95	305	11.64	0.610
OVEN1_B		521114.6	5049494.0	11.3	Vertical, Capped	10.95	305	11.64	0.610
OVEN2_A	Oven 2	521114.6	5049495.6	11.3	Vertical, Capped	11.41	478	11.64	0.610
OVEN2_B		521114.6	5049500.3	11.3	Vertical, Capped	11.41	478	11.64	0.610
OVEN3_A	Oven 3	521114.5	5049569.0	11.3	Vertical, Capped	11.00	361	11.64	0.610
OVEN3_B		521114.4	5049573.4	11.3	Vertical, Capped	11.00	361	11.64	0.610
OVEN4_A	Oven 4	521114.3	5049575.0	11.3	Vertical, Capped	11.28	375	11.64	0.508
OVEN4_B		521114.2	5049579.5	11.3	Vertical, Capped	11.28	375	11.64	0.508
OVEN5_A	Oven 5	521114.6	5049502.5	11.3	Vertical, Capped	11.38	344	11.64	0.610
OVEN5_B		521114.5	5049505.7	11.3	Vertical, Capped	11.38	344	11.64	0.610
OVEN6_A	Oven 6	521114.6	5049507.9	11.3	Vertical, Capped	11.38	344	11.64	0.610
OVEN6_B		521114.5	5049511.9	11.3	Vertical, Capped	11.38	344	11.64	0.610
OVEN10_A	Oven 10	520853.4	5049816.5	9.1	Vertical, Capped	12.60	333	11.64	0.508

Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)	Orientation	Stack Height (m)	Exhaust Temperature (K)	Release Velocity (m/s)	Stack Diameter (m)
OVEN10_B		520850.2	5049816.6	9.1	Vertical, Capped	12.60	333	11.64	0.508
OVEN12_A	Oven 12	520835.4	5049821.8	9.1	Vertical, Capped	12.60	333	11.64	0.508
OVEN12_B		520832.1	5049821.7	9.1	Vertical, Capped	12.60	333	11.64	0.508
OVEN13_A	Oven 13	520829.0	5049823.5	9.1	Vertical, Capped	12.60	503	11.64	0.508
OVEN13_B		520826.0	5049823.2	9.1	Vertical, Capped	12.60	503	11.64	0.508
OVEN14	Oven 14.5	520811.1	5049829.0	9.1	Vertical, Capped	11.87	333	11.64	0.076
OVEN18_A	Oven 18	520799.2	5049831.4	9.1	Vertical, Capped	12.40	366	11.64	0.406
OVEN18_B		520794.9	5049832.6	9.1	Vertical, Capped	12.40	366	11.64	0.406
OVEN20_A	Oven 20	520788.4	5049833.4	9.1	Vertical, Capped	12.04	333	11.64	0.406
OVEN20_B		520783.0	5049834.8	9.1	Vertical, Capped	12.04	333	11.64	0.406
OVEN21	Oven 21	520779.2	5049837.3	9.1	Vertical, Capped	11.94	503	11.64	0.559
CORE1	Core Oven 1	521062.2	5049629.0	10.9	Vertical, Capped	6.42	389	11.64	0.356
CORE2	Core Oven 2	521064.7	5049629.1	10.9	Vertical, Capped	6.42	389	11.64	0.356
CORE3	Core Oven 3	521068.9	5049629.0	10.9	Vertical, Capped	6.42	389	11.64	0.356
Model ID	Source Description	UTM Easting (m)	UTM Northing (m)	Base Elevation (m)		Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)	
LADLE1-3	Ladles in Building 11	521139.6	5049551.9	11.3		6.94	32.92	6.45	

Figure 3 is a map indicating the location of the emission points and fugitive sources at the facility that do not combust natural gas. Figure 4 is a map indicating the location of the natural gas combustion units.

2.2 EMISSION RATES

Emission rates for each TEU and toxic air contaminant (TAC) are shown in Appendix A: Emissions Rates and REER Calculations.

Emission rates shown in Appendix A for the acute represent maximum emissions from each TEU over a daily (i.e., 24-hour) period. Emission rates shown in Appendix A for chronic cancer and chronic non-cancer represent the maximum emissions from each TEU over an annual period. Conversions to the Risk-Equivalent Emission Rate (REER) are also shown for each TEU and TAC in Appendix A: Emissions Rates and REER Calculations.

The air toxics emission inventory submitted by Columbia Steel includes detailed information and calculations on how the emission rates were developed. Emission factor references are noted within the inventory forms. Throughputs are provided for 2020 actual operations, requested potential to emit (PTE), and capacity, which is based on the facility plant site emission limits (PSELs). Columbia Steel has presented a requested PTE that is less than the capacity for most TEUs. Emission rates are presented for both annual emissions (pounds per year) and daily emissions (pounds per 24-hours). Daily emissions were conservatively calculated by assuming the facility operates 260 days per year (i.e., 5 days per week) for most TEUs and activities.

2.3 BUILDING LOCATION AND HEIGHTS

The effects of plume downwash will be considered for all stationary point sources. Direction-specific building dimensions will be calculated using the current version of the EPA-approved Building Profile Input Program (BPIPPRM version 04274).

Figure 5 is a map indicating the buildings (20 in total) to be modeled in the downwash analysis. In addition, a review of the baghouses indicates that many baghouses have structures about them that may generate downwash. There are 14 of these structures. Therefore, 34 structures in total will be included in the downwash analysis.

Several buildings at Columbia Steel have slightly sloped roofs. Most of these buildings will be modeled as having a flat roof, with roof height equal to the actual peak height of the roof. The exceptions are Building 8 and Building 11, which as discussed in Section 2.1 have roof vents which serve as TEUs. These buildings will be modeled as having tiered roofs. In addition, Building 1 and Building 18 have more complex roof shapes so the modeling of those buildings will also incorporate different tiers.

A list of the structures, base elevations, and roof heights is presented in Table 4. Roof heights were provided by the facility.

Table 4. Base Elevations and Roof Heights of Structures Modeled for Downwash

Structure	Base Elevation (m)	Roof Height Above Ground (m)
Building 1	9.1	Tiers at 8.23, 9.91, 11.28 m

Structure	Base Elevation (m)	Roof Height Above Ground (m)
Building 2	9.6	10.36
Building 3	8.0	11.28
Building 4	11.1	8.53
Building 5	10.9	5.18
Building 6	11.0	6.86
Building 7	11.0	7.47
Building 8	12.2	Tiers ranging from 8.08 to 10.67 m
Building 9	11.3	9.45
Building 10	11.5	3.66
Building 11	11.3	Tiers ranging from 9.30 to 13.87 m
Building 13	11.7	6.91
Building 14	12.0	6.86
Building 15	12.0	13.41
Building 16	11.3	3.73
Building 17	11.7	6.10
Building 18	11.6	Tiers at 5.18, 6.40, 8.23, 11.58 m
Building 19	11.0	5.79
Building 20	11.0	5.49
Building 21	11.4	5.41
Baghouse 7 and 10 Structure	9.1	15.54
Baghouse 16, 19, 24 Structure	8.9	10.77
Baghouse 9 Structure	11.1	12.19
Baghouse 20 Structure	12.2	12.93
Baghouse 18 Structure	10.8	5.36
Baghouse 11, 12, 13 Structure	10.9	10.52
Baghouse 15 Structure	11.1	8.76
Baghouse 22 Structure	11.5	8.33
Baghouse 3, 5, 17 Structure	11.5	14.48
Baghouse 8 Structure	10.8	12.19
Baghouse 1 Structure	11.3	13.51
Baghouse 2 Structure	11.0	14.94
Baghouse 6 Structure	10.6	12.80
Baghouse 4 Structure	10.8	9.70

3. MODEL SELECTION AND INPUTS

3.1 MODEL SELECTION

SLR will use the latest version of the AERMOD modeling system, and its associated pre-processors, approved for regulatory use, to complete the modeling analysis. Currently, the specific models and versions are:

- AERMOD version 21112
- AERMET version 21112
- AERSURFACE version 20060
- AERMINUTE version 15272
- AERMAP version 18081
- BPIPPRM version 04274

AERMOD will be set to its default options except that the urban option will be invoked as discussed in 3.7.

3.2 UTM COORDINATE SYSTEM

The Portland metropolitan area is located in UTM Zone 10. All emission points, buildings, and receptor locations will be converted to UTM coordinates in Zone 10, NAD83.

3.3 METEOROLOGICAL DATA

The surface data to be used in the analysis will be five complete years of data collected at the Portland International Airport (call sign KPDX), located at 43.596°N, 122.609°W, which is approximately 9 km east of the project site. The meteorological sensors at KPDX are Automated Surface Observing System (ASOS)[1], which collects 1-minute data for use in the analysis. Upper air data from McNary Field in Salem, Oregon (call sign KSLE, 44.92°N, 123.02°W) will also be used, which is approximately 80 km south-southwest of the project site. The period of meteorological data to be used is January 1, 2015 to December 31, 2019.

Review of the data and topography at both the facility and KPDX indicates the KPDX data are temporally and spatially representative of the project location and areas of concern. The KPDX station is fewer than 10 km from the facility. Both the facility and KPDX are situated in the City of Portland and have similar land use profiles, with developed land to the south of both the facility and the airport while the Columbia River is the most prominent topographical feature to the north of both the facility and KPDX.

The most-recent version of AERMET will be used to process surface meteorological data from KPDX and upper-air data from KSLE. Additionally, AERMINUTE will be used to incorporate 1-minute surface wind data from KPDX when available.[2]

[1] https://www.faa.gov/air_traffic/weather/asos/?state=OR

[2] One-minute data at KPDX were not available for the months of April 2018 through July 2018, inclusive. As the use of AERSURFACE data is optional and the KPDX data were found to be temporally and spatially representative of the project area, the meteorological

ASOS stations do not collect atmospheric turbulence data. As a result, these data meet the criteria for the use of the ADJ_U* model option. The ADJ_U* option will be invoked in the meteorological data processing.

A topographic map with both the project site and the location of the ASOS instruments is provided in Figure 6. A windrose of the meteorological data is provided in Figure 7. AERMET inputs and data completeness information for the wind speed, wind direction, temperature, and cloud cover data for each quarter of the five-year period is shown in Appendix B. The minimum data capture using these datasets is 95%, exceeding the 90% requirement.

3.4 LAND COVER ANALYSIS

A land cover analysis will also be conducted to define the surface characteristics (surface albedo, Bowen ratio, and surface roughness length) for input into stage 3 of AERMET. The EPA-provided AERSURFACE program (version 20060) will be run with 2016 National Land Cover data and accompanying canopy data and impervious surface data to generate surface characteristics for the area surrounding the meteorological site. As the meteorological period of study runs for 2015 to 2019, and the data selected for the land cover analysis are from 2016, the chosen land use data will be representative of conditions existing during the study period.

AERSURFACE inputs are listed in Table 5 below. Selection of surface moisture conditions for each month is shown in Appendix B. Plots showing the land use around the facility and KPDX are presented in Figure 8 and Figure 9, respectively.

Table 5. AERSURFACE Parameters

Parameter	Value
Surface roughness study radius	1 km
Bowen ratio and albedo study region	10 km by 10 km
Vary roughness, albedo, Bowen ratio by radius?	Yes, 12 sectors, 30 degrees each in width
Seasonal resolution	Summer: June July, August Autumn: September, October, November Winter: December, January, February Spring: March, April, May
Continuous Snow Cover most of the winter?	No
Is the site near an airport?	Yes
Is the site in an arid region?	No
Surface Moisture	To be determined month by month. See Appendix B

data was processed using the 1-minute AERSURFACE data for the 56 months of the 60-month period where it was available. Meteorological data were processed without 1-minute AERSURFACE inputs for April 2018 through July 2018.

3.5 DOMAIN AND RECEPTOR GRIDS

3.5.1 RECEPTOR GRIDS

A nested Cartesian receptor grid will be generated and used to calculate risk factor scores resulting from emissions from Columbia Steel. Placement of the receptors will follow DEQ guidance[3]:

- 25 m receptor spacing along facility boundary and out to 200 m from facility
- 50 m receptor spacing from 200 to 1,000 m
- 100 m spacing from 1,000 to 2,000 m
- 200 m spacing from 2,000 to 5,000 m
- 500 m spacing from 5,000 to 10,000 m

The inner receptors (boundary, 25m gridded, and 50m gridded) are shown in Figure 10. The outer receptors (100m, 250m, and 500m gridded) are shown in Figure 11.

The area within 1 km of the facility boundary was reviewed for any sensitive receptors. Four sensitive receptors were identified:

- Veronica's Daycare, located at 7014 N Swift St,
- Christ Gospel Church, located at 6265 N Columbia Way,
- George Middle School, located at 10000 N Burr Ave, and
- Clarendon School, located at 9325 N Van Houten Ave.

Receptors will be placed at these four locations as discussed in the next section.

If modeling results obtained with the grid outlined above reveal the presence of any "hot spots", defined regions with a risk of greater than 0.5 outside of the continuous region of risk greater than 0.5, then an additional grid of receptors spaced every 25 m will be placed on the hotspot.

3.5.2 ASSIGNMENT OF RECEPTORS TO EXPOSURE LOCATION TYPES

An additional requirement of CAO modeling exercises is the assignment of receptors to exposure location types. The assignment is necessary as the risk scores calculated under CAO are dependent on the type of use present at a particular receptor. The four exposure types are residential, non-resident child, non-resident worker, and acute. The CAO rule defines chronic exposure locations as "an exposure location outside the boundary of a source being modeled for annual average concentrations of a toxic air contaminant" and an acute exposure location as "an exposure location outside the boundary of a source being modeled for daily average concentrations of a toxic air contaminant, and that is (a) a chronic exposure location, or (b) a location where people may spend several hours of one day."[4] Receptors that are assigned a chronic exposure scenario (non-resident child, non-resident worker, or residential) are also

[3] DEQ Air Quality Division Technical Services, "Recommended Procedures for Air Quality Dispersion Modeling", April 2020.
[4] OAR 340-245-0030(4) and (11).

treated as acute exposure locations; however, some acute exposure locations do not have a chronic exposure scenario.

Two zoning datasets were used to assign the exposure type:

1. State-level: the Oregon Administrative Boundary Standard zoning extension; and
2. City-level: the City of Portland zoning map.

In addition to these datasets, SLR also reviewed aerial imagery and publicly available maps to determine the location of schools, churches, daycares, and youth centers in the vicinity of the facility. SLR also reviewed maps from the Oregon Department of Transportation since the facility is adjacent to an active rail line. The processing steps for each of these evaluations is described in more detail below.

All receptors generated on the nested Cartesian grid described in 3.5.1 were assigned an exposure type as described below.

3.5.2.1 State-level Zoning Data

Since the coverage of the modeling domain extends beyond the data coverage of the City of Portland's zoning, the state-level database was used as the first step to assign exposure types to all receptors. The receptors were overlayed onto the state's zoning database in order to determine the exposure type for each receptor.

The state-level zones within the modeling domain, along with the assigned exposure type, are provided in Table 6. The assigned exposure types follow the Oregon DEQ's Cleaner Air Oregon State Zoning to Exposure Location Crosswalk guidance[5]. Review of this guidance indicates a single, recommended exposure type for all zoning categories except for the following that are within the modeling domain: Exclusive Farm Use 80 and Public and Semi-public Uses. For these two categories, it is recommended that additional information is reviewed in order to determine residence, worker locations, or schools and churches.

Table 6. Crosswalk of State-level Zoning to Assigned Exposure Type

orZCode	orZDesc	Assigned Exposure Type
HDR	High-density Res.	Residential
LDR	Low-density Res.	Residential
MDR	Medium-density Res.	Residential
MLDR	Medium Low-density Res.	Residential
MUREH	Mixed-Use Com. & Res. Extremely High	Residential
MURH	Mixed-Use Com. & Res. High	Residential
MURL	Mixed-Use Com. & Res. Low	Residential
MURM	Mixed-Use Com. & Res. Medium	Residential
MURMH	Mixed-Use Com. & Res. Med-high	Residential
MURVH	Mixed-Use Com. & Res. V.High	Residential

[5]https://www.oregon.gov/geo/standards/Zoning%20Extension%20to%20Administrative%20Boundaries%20Standard%20v1.0.pdf

orZCode	orZDesc	Assigned Exposure Type
RR1	Rural Residential 1 acre	Residential
RR10	Rural Residential 10 acres	Residential
VHDR	Very High-density Res.	Residential
VLDR	Very Low-density Res.	Residential
EFU80	Exclusive Farm Use 80	Residential
CC	Commercial - Central	Non-resident adult
CG	Commercial - General	Non-resident adult
CN	Commercial - Neighborhood	Non-resident adult
CO	Commercial - Office	Non-resident adult
IC	Industrial Campus	Non-resident adult
IH	Industrial - Heavy	Non-resident adult
IL	Industrial - Light	Non-resident adult
IO	Industrial Office	Non-resident adult
RC	Rural Commercial	Non-resident adult
PF	Public & semi-public Uses	Non-resident child
PF80	Prime Forest 80	Acute only
POS	Parks & Open Space	Acute only
n/a	State of Washington	Excluded

The state-level zoning, grouped into the four relevant exposure categories, within the modeling domain is provided in Figure 12. Review of Figure 12 indicates small areas of Public and Semi-public uses in the southwestern corner of the domain. Given their proximity to residential locations, these were assigned non-resident child exposure locations in an effort to be conservative.

Figure 12 also displays large areas of Exclusive Farm Use 80 in the northwestern quadrant of the modeling domain. Although much of this area consists of undeveloped land and fields, a few farmhouses appear to be present in the area. Therefore, this area was assigned a residential exposure location in an effort to be conservative.

All receptors that fall within the State of Washington were categorized as excluded.

3.5.2.2 City of Portland Zoning Data

A similar methodology was applied to the receptors that fell within the City of Portland zoning dataset. The descriptions of the zones were reviewed to generate a crosswalk between zoning type and exposure type as shown in Table 7. Generally, any category that could have residential buildings was assigned a residential exposure type. The city-level zoning, grouped into the four relevant exposure categories, within the modeling domain is provided in Figure 13.

For those receptors that fall within the extents of both zoning datasets, differences in zones between the two datasets were noted at some locations. The receptors with differences in the near vicinity of the

facility are illustrated in Figure 14. In Figure 14, the background zones are based on the state-level datasets with the color-coding of the receptors based on the City of Portland zoning. The differences in the colors denote the difference in zoning classification. The areas with differences are annotated. The City of Portland data was used in the assignment of exposure type for these receptors.

Table 7. Crosswalk of City of Portland Zoning to Assigned Exposure Type

ZONE	ZONE_DESC	Assigned Exposure Type
CM1	Commercial Mixed Use 1	Residential
CM2	Commercial Mixed Use 2	Residential
CM3	Commercial Mixed Use 3	Residential
CR	Commercial Residential	Residential
CX	Central Commercial	Residential
EX	Central Employment	Residential
IR	Institutional Residential	Residential
R1	Residential 1,000	Residential
R10	Residential 10,000	Residential
R2	Residential 2,000	Residential
R2.5	Residential 2,500	Residential
R20	Residential 20,000	Residential
R3	Residential 3,000	Residential
R5	Residential 5,000	Residential
R7	Residential 7,000	Residential
RF	Residential Farm / Forest	Residential
RH	High Density Residential	Residential
RM1	Residential Multi-Dwelling 1	Residential
RM2	Residential Multi-Dwelling 2	Residential
RM3	Residential Multi-Dwelling 3	Residential
RM4	Residential Multi-Dwelling 4	Residential
RMP	Residential Manufactured Dwelling Park	Residential
RX	Central Residential	Residential
CE	Commercial Employment	Non-resident adult
EG1	General Employment 1	Non-resident adult
EG2	General Employment 2	Non-resident adult
IG1	General Industrial 1	Non-resident adult
IG2	General Industrial 2	Non-resident adult
IH	Heavy Industrial	Non-resident adult
CI1	Campus Institutional 1	Non-resident child
CI2	Campus Institutional 2	Non-resident child

ZONE	ZONE_DESC	Assigned Exposure Type
MC	County Zoning - Multnomah	Acute only
OS	Open Space	Acute only
WC	County Zoning - Washington	Acute only

3.5.2.3 Analysis of Aerial Imagery and Public Information

In order to ensure the receptors in the vicinity of the facility were properly classified, additional analyses of aerial imagery and public data information were also undertaken. This involved reviewing available information to determine the location of nearby schools, daycares, youth clinics, and churches where children may assemble on a regular basis. This information is provided in Figure 15, where receptors that fall within these areas were classified as non-resident child. An additional receptor was also placed at the following locations:

- Veronica's Daycare, located at 7014 N Swift St.;
- Christ Gospel Church, located at 6265 N Columbia Way;
- George Middle School, located at 10000 N Burr Ave.; and
- Clarendon School, located at 9325 N Van Houten Ave.

3.5.2.4 Receptor Exclusion

The area immediately to the south and southeast of the facility is bounded by N Junction St and a rail line. DEQ guidance notes, "There may be places where it is not appropriate for risk to be evaluated for any of the exposure location types. This includes roadways and railroads." It is not expected that people would spend several hours of a day along either N Junction St or the rail line so as to meet the definition of an acute exposure location. Therefore, receptors falling into these locations, as shown in Figure 16, will not be considered exposure locations.

Note that there is a rail yard to the southwest of the facility. In contrast to the rail line, where activity is expected to be the transient passage of trains, activity in the rail yard is expected to include maintenance, assembly, and disassembly of trains such that workers may be spending several hours each day in the area. Therefore, the rail yard to the southwest of the facility will be treated as a potential exposure location.

3.5.2.5 Final Assigned Exposure Type

As detailed above, the assignment of exposure types for each receptor is a multistep process. This process included:

- Initially assign exposure type based on state-level zoning data for all receptors.
- For those receptors that fall within the City of Portland zoning layer, reassign exposure type based on City of Portland data.
- Review aerial imagery and public information to reassign select receptors that fall within the footprint of schools, daycares, youth clinics, and churches. Note that four additional discrete receptors were placed at the aforementioned sensitive receptors.

- Reassign receptors located on the rail line adjacent to the facility so that risk is not calculated.

Color-symbolized illustrations of the final exposure types with varying resolutions and backgrounds are provided in Figure 17 through Figure 20.

3.5.3 TERRAIN PROCESSING

In order to obtain the elevations and scale heights of the receptors, AERMAP (version 18081) will be used. Terrain data obtained from the National Elevation Dataset (NED) will be used as the input. The NED data will be at a 1/3 arcsecond resolution, which translates into a resolution of approximately 10 meter spacing for the terrain.

3.6 DOWNWASH

The effects of plume downwash will be considered for all point sources. Direction-specific building dimensions will be calculated using the current version of the EPA-approved Building Profile Input Program (BPIPPRM, version 04274). The site layout, dimensions, and heights to be used are obtained from building drawings and are discussed in Section 2.3.

The BPIP program also calculates the Good Engineering Practice (GEP) stack height; however, the GEP height is defined as the greater of 65 m or H + 1.5 L, where H is the height of the significant nearby structure and L the lesser of the projected height or width of the nearby structure. Since all point source TEUs at Columbia Steel are less than 65 m in height, the stack heights used at Columbia Steel satisfy GEP requirements.

3.7 URBAN/RURAL DETERMINATION

Columbia Steel is situated within the city of Portland, in a strip of industrial land running northwest-southeast along a rail line. A residential neighborhood is located to the immediate south, with the Smith and Bybee wetlands to the immediate north.

The standard method by which to choose whether the urban option should be invoked is to perform an Auer analysis to determine whether 50 percent or greater of land use categories within 3 km of the facility fall into urban categories. However, the *AERMOD Implementation Guide* (EPA 2019) recognizes that "there may be sources located within an urban area but located close enough to a body of water or to other non-urban land use categories to result in a predominately rural land use classification within 3 kilometers of the source following that procedure. Users are therefore cautioned against applying the Land Use Procedure on a source-by-source basis but should also consider the potential for urban heat island influences across the full modeling domain."

Columbia Steel is located within the Portland urbanized area, but the presence of the Smith and Bybee wetlands to its immediate north would result in a rural classification if performing a strict Auer analysis with a 3 km radius. However, consideration of the larger modeling domain indicates land use within the

domain is predominantly urban, with heat island influences expected across the domain. Therefore, the urban option will be invoked for the modeling.

Columbia Steel is located in the Portland–Vancouver–Hillsboro, OR–WA Metropolitan Statistical Area, which has a population of approximately 2.5 million people as of 2019. The population of Portland itself is estimated to be 654,741 as of July 1, 2019.[6] The population value of 650,000 (two significant figures) will be used as input to AERMOD for the variable, P, in equation one (1) of the AERMOD Implementation Guide (EPA, 2019).

[6] https://www2.census.gov/programs-surveys/popest/tables/2010-2019/cities/totals/SUB-IP-EST2019-ANNRES-41.xlsx

4. RISK ASSESSMENT WORK PLAN

4.1 INTRODUCTION

A Level 3 Risk Assessment will be performed to estimate excess cancer risks and non-cancer health effects due to facility TAC emissions. This Risk Assessment Work Plan (RAWP) provides the information listed in Section 3.2 of the guidance document "Recommended Procedures for Toxic Air Contaminant Health Risk Assessments" (July 2020).

4.2 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) includes information regarding emitted facility TACs, a toxicity and exposure pathway assessment for emitted TACs, and exposure locations.

4.2.1 TOXIC AIR CONTAMINANT EMISSIONS

A listing of Facility TEUs that do not combust natural gas is provided in Section 2.1.1 and Section 2.1.2. TEUs that combust only natural gas are described in Section 2.1.3. The list of TACs emitted from the facility are provided in Table 8. Individual TAC emission rates from each TEU are provided in Appendix A for TEUs not combusting natural gas, as well as for sources combusting natural gas.

4.2.2 EXPOSURE LOCATIONS

Under the CAO program, chronic exposure will be evaluated at residential, non-residential adult (worker), and non-residential child (schools and daycare facilities) locations. Acute exposure will be evaluated at locations outside the facility boundary including areas where people may spend several hours in one day as well as all chronic exposure locations. Sensitive population exposure will also be assessed.

Details regarding the various exposure locations identified from available land use zoning data are provided in Section 3.5.

4.3 TOXICITY ASSESSMENT

The emission inventory described in Appendix A indicates that 74 TACs are emitted from the facility. The potential human health risks associated with these TACs will be evaluated in the risk assessment.

The toxicity potential risk associated with hypothetical exposures to each TAC are assessed in a screening-level risk assessment using the Risk-Based Concentrations (RBC) provided in OAR 340-245-8040 Table 4. The RBCs account for both the inhalation and non-inhalation pathways, as applicable to each TAC, as well as early-life exposure adjustment factors. Table 8 lists the RBCs for each emitted TAC.

Table 8. RBCs for Each Emitted TAC

CAS No. or DEQ ID	TAC	Non cancer TBACT RAL	Residential Chronic		Non-Residential Chronic				Acute
			Cancer RBC	Non-cancer RBC	Child Cancer RBC	Child Non-cancer RBC	Worker Cancer RBC	Worker Non-cancer RBC	Non-cancer RBC
			(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
95-63-6	1,2,4-trimethylbenzene	HI3		60		260		260	
106-99-0	1,3-Butadiene	HI3	0.033	2.0	0.86	8.8	0.40	8.8	660
78-93-3	2-Butanone (Methyl ethyl ketone)	HI3		5,000		22,000		22,000	5,000
91-57-6	2-Methyl naphthalene	--	--	--	--	--	--	--	--
56-49-5	3-Methylcholanthrene	--	--	--	--	--	--	--	--
57-97-6	7,12-Dimethylbenz[a]anthracene	--	--	--	--	--	--	--	--
83-32-9	Acenaphthene	--	--	--	--	--	--	--	--
208-96-8	Acenaphthylene	--	--	--	--	--	--	--	--
75-07-0	Acetaldehyde	HI3	0.45	140	12	620	5.5	620	470
67-64-1	Acetone	HI3		31,000		140,000		140,000	62,000
107-02-8	Acrolein	HI5		0.35		1.5		1.5	6.9
7429-90-5	Aluminum and compounds	HI5		5.0		22		22	
7664-41-7	Ammonia	HI3		500		2,200		2,200	1,200
120-12-7	Anthracene	--	--	--	--	--	--	--	--
7440-36-0	Antimony and compounds	HI3		0.30		1.3		1.3	1
7440-38-2	Arsenic and compounds	HI3	2.4E-05	0.00017	0.0013	0.0024	0.00062	0.0024	0.20
7440-39-3	Barium and compounds	--	--	--	--	--	--	--	--
56-55-3	Benz[a]anthracene		0.00021		0.0078		0.015		
71-43-2	Benzene	HI3	0.13	3.0	3.3	13	1.5	13	29
50-32-8	Benzo[a]pyrene	HI3	4.3E-05	0.0020	0.0016	0.0088	0.0030	0.0088	0.0020
205-99-2	Benzo[b]fluoranthene		5.3E-05		0.0020		0.0038		

CAS No. or DEQ ID	TAC	Non cancer TBACT RAL	Residential Chronic		Non-Residential Chronic				Acute
			Cancer RBC	Non-cancer RBC	Child Cancer RBC	Child Non-cancer RBC	Worker Cancer RBC	Worker Non-cancer RBC	Non-cancer RBC
			(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
191-24-2	Benzo[g,h,i]perylene		0.0047		0.17		0.34		
207-08-9	Benzo[k]fluoranthene		0.0014		0.052		0.10		
7440-41-7	Beryllium and compounds	HI3	0.00042	0.0070	0.011	0.031	0.0050	0.031	0.020
85-68-7	Butyl benzyl phthalate	--	--	--	--	--	--	--	--
7440-43-9	Cadmium and compounds	HI3	0.00056	0.0050	0.014	0.037	0.0067	0.037	0.030
75-15-0	Carbon Disulfide	HI3		800		3,500		3,500	6,200
74-87-3	Chloromethane (Methyl chloride)	HI3		90		400		400	1,000
18540-29-9	Chromium VI, chromate, and dichromate particulate	HI3	3.1E-05	0.083	0.00052	0.88	0.0010	0.88	0.30
218-01-9	Chrysene		0.00043		0.016		0.030		
7440-48-4	Cobalt and compounds	HI3		0.10		0.44		0.44	
7440-50-8	Copper and Compounds	HI3							100
74-90-8	Cyanide, Hydrogen	HI3		0.80		3.5		3.5	340
110-82-7	Cyclohexane	HI3		6,000		26,000		26,000	
226-36-8	Dibenz[a,h]acridine	--	--	--	--	--	--	--	--
84-74-2	Dibutyl phthalate	--	--	--	--	--	--	--	--
75-09-2	Dichloromethane (Methylene chloride)	HI3	59	600	620	2,600	1,200	2,600	2,100
111-77-3	Diethylene glycol monomethyl ether	--	--	--	--	--	--	--	--
100-41-4	Ethyl benzene	HI3	0.40	260	10	1,100	4.8	1,100	22,000

CAS No. or DEQ ID	TAC	Non cancer TBACT RAL	Residential Chronic		Non-Residential Chronic				Acute
			Cancer RBC	Non-cancer RBC	Child Cancer RBC	Child Non-cancer RBC	Worker Cancer RBC	Worker Non-cancer RBC	Non-cancer RBC
			(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
111-76-2	Ethylene glycol monobutyl ether	HI3		82		360		360	29,000
206-44-0	Fluoranthene		0.00053		0.020		0.038		
86-73-7	Fluorene	--	--	--	--	--	--	--	--
50-00-0	Formaldehyde	HI3	0.17	9.0	4.3	40	2.0	40	49
110-54-3	Hexane	HI3		700		3,100		3,100	
7783-06-4	Hydrogen Sulfide	HI3		2.0		8.8		8.8	98
193-39-5	Indeno[1,2,3-cd]pyrene		0.00061		0.022		0.043		
67-63-0	Isopropyl alcohol	HI3		200		880		880	3,200
7439-92-1	Lead and compounds	HI3		0.15		0.66		0.66	0.15
7439-96-5	Manganese and compounds	HI3		0.090		0.40		0.40	0.30
7439-97-6	Mercury and compounds	HI3		0.077		0.63		0.63	0.60
101-68-8	Methylene diphenyl diisocyanate (MDI)	HI3		0.080		0.35		0.35	12
1313-27-5	Molybdenum trioxide	--	--	--	--	--	--	--	--
91-20-3	Naphthalene	HI3	0.029	3.7	0.76	16	0.35	16	200
71-36-3	n-Butyl alcohol	--	--	--	--	--	--	--	--
7440-02-0	Nickel and compounds	--	--	--	--	--	--	--	--
365	Nickel compounds, insoluble	HI3	0.0038	0.014	0.10	0.062	0.046	0.062	0.20
85-01-8	Phenanthrene	--	--	--	--	--	--	--	--
108-95-2	Phenol	HI3		200		880		880	5,800
504	Phosphorus and compounds	--	--	--	--	--	--	--	--
115-07-1	Propylene	HI5		3,000		13,000		13,000	

CAS No. or DEQ ID	TAC	Non cancer TBACT RAL	Residential Chronic		Non-Residential Chronic				Acute
			Cancer RBC	Non-cancer RBC	Child Cancer RBC	Child Non-cancer RBC	Worker Cancer RBC	Worker Non-cancer RBC	Non-cancer RBC
			(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
108-65-6	Propylene glycol monomethyl ether acetate	--	--	--	--	--	--	--	--
129-00-0	Pyrene	--	--	--	--	--	--	--	--
78-92-2	sec-Butyl alcohol	HI3		30,000		130,000		130,000	
7782-49-2	Selenium and compounds	HI3							2.0
7631-86-9	Silica, crystalline (respirable)	HI5		3.0		13		13	
7440-22-4	Silver and compounds	--	--	--	--	--	--	--	--
100-42-5	Styrene	HI3		1,000		4,400		4,400	21,000
7440-28-0	Thallium and compounds	--	--	--	--	--	--	--	--
108-88-3	Toluene	HI3		5,000		22,000		22,000	7,500
26471-62-5	Toluene diisocyanates (2,4- and 2,6-)	HI3	0.091	0.021	2.4	0.092	1.1	0.092	0.071
78-40-0	Triethyl phosphate	--	--	--	--	--	--	--	--
7440-62-2	Vanadium (fume or dust)	HI3		0.10		0.44		0.44	0.80
1330-20-7	Xylene (mixture), including m-xylene, o-xylene, p-xylene	HI3		220		970		970	8,700
7440-66-6	Zinc and compounds	--	--	--	--	--	--	--	--

4.4 EXPOSURE ASSESSMENT

The exposure assessment estimates the potential public exposure to emitted facility TACs by using an air quality dispersion model to determine how and where the emissions disperse in the atmosphere and what the estimated ground level concentrations are within the surrounding community. Details regarding the exposure assessment methodology (i.e., dispersion modeling) are presented in Section 2 and Section 3.

4.5 RISK CHARACTERIZATION

SLR proposes to use the REER approach for risk characterization, as allowed by DEQ guidance ("Recommended Procedures for Toxic Air Contaminant Health Risk Assessments") Section 3.1.3, Approach C. Under the REER approach, each TAC emission rate described in Section 2.2 is normalized to risk by dividing the emission rate by the appropriate RBC for each exposure type. The calculated REERs are then summed for each TEU for input to the AERMOD dispersion model as the "emission rate" in the SRCPARAM cards for each TEU. The AERMOD output is thus equivalent to units of risk thereby significantly reducing or even eliminating post-processing calculations that other approaches require to calculate risks from standard AERMOD output. The DEQ considers the REER method mathematically equivalent to performing separate risk calculations after modeling as described in "Recommended Procedures for Toxic Air Contaminant Health Risk Assessments", Section 3.1.3, Approaches A and B.

For each TAC, there are up to seven RBCs, accounting for the different exposure scenarios under Cleaner Air Oregon (acute, chronic non-cancer residential, chronic cancer residential, chronic non-cancer non-resident child, chronic cancer non-resident child, chronic non-cancer non-resident worker, chronic cancer non-resident worker). Conversions of TAC emissions to REERs for each of the seven exposure scenarios are provided in Appendix A. For each of the seven exposure scenarios, AERMOD will be run using the appropriate REERs and the receptors assigned to each exposure scenario.

For the non-cancer risks, certain TACs fall into two classes of Hazard Index, with some TACs falling into the Hazard Index 3 (HI3) category and other TACs falling into the Hazard Index 5 (HI5) category as described in OAR 340-245-8010 Table 1. Review of the TACs emitted by the facility in Tables A-1 through A-7 indicates that, of the 40 TACs emitted by the facility's non-natural gas TEUs that have RBCs, only three (acrolein, aluminum and compounds, and respirable silica) are HI5 TACs. Review of the emission rates of these TACs and their RBCs versus other TACs in the inventory indicate that these three TACs are not expected to be major contributors to the facility's risk. Therefore, for conservatism and simplicity, all TACs will be treated as though they are HI3 TACs, and calculated acute and chronic non-cancer risks will be compared to the RALs defined for facilities emitting HI3 TACs.

As discussed in Section 2, the facility includes several sources which combust only natural gas. REER calculations for these sources are also included in Appendix A. These sources will be modeled separately, and the risk attributable to these sources will be included in the modeling report. However, the risk attributable to these sources will not be included in the reported risk for comparison to the Risk Action Levels. In addition, should a Risk Reduction Plan be necessary, the risk contributions from the sources emitting only natural gas will not be included in the Risk Reduction Plan analysis.

4.6 UNCERTAINTY EVALUATION

The results of the risk assessment will be based on a number of assumptions, many of which are required to be used by the DEQ. With few exceptions, when substantial uncertainty is associated with a variable used in modeling or risk estimation, conservative (e.g., health-protective) assumptions will be used. This practice of bias will cause risks to be overestimated, and the degree to which risks are overestimated is unknown. Because facilities subject to the CAO program are required to make assumptions according to

the same guidelines, the risk results are at best useful as a yardstick for comparing relative risk from one facility to another. Because of the great deal of uncertainty in many important assumptions, the results are not accurate for predicting actual risk in absolute numbers and should not be used as such. Risk estimates generated under the CAO program should not be interpreted as the expected rates of disease in the exposed population but rather as estimates of potential for disease, based on current scientific knowledge and assumptions incorporated into all elements of a risk assessment.

Some of the important sources of uncertainty include: 1) extrapolation of toxicity data in animals to humans, 2) uncertainty in the estimation of emissions, 3) uncertainty in the air dispersion model, and 4) uncertainty in the exposure estimates. In addition to uncertainty, there is a natural range or variability in measured parameters defining the exposure scenario.

5. REFERENCES

State of Oregon Department of Environmental Quality. Recommended Procedures for Air Quality Dispersion Modeling. April 2020.

-----. Recommended Procedures for Toxic Air Contaminant Health Risk Assessments. July 2020.

U.S. Environmental Protection Agency (USEPA). AERMOD Implementation Guide. August 2019 (EPA-454/B-19-035).

U.S. Environmental Protection Agency (USEPA). Guideline on Air Quality Models. January 2017. 40 CFR 51 Appendix W.

6. LIMITATIONS

The services described in this work product were performed in accordance with generally accepted professional consulting principles and practices. No other representations or warranties, expressed or implied, are made. These services were performed consistent with our agreement with our client. This work product is intended solely for the use and information of our client unless otherwise noted. Any reliance on this work product by a third party is at such party's sole risk.

This work product presents professional opinions and findings of a scientific and technical nature. The work product shall not be construed to offer legal opinion or representations as to the requirements of, nor the compliance with, environmental laws rules, regulations, or policies of federal, state or local governmental agencies.

7. FIGURES

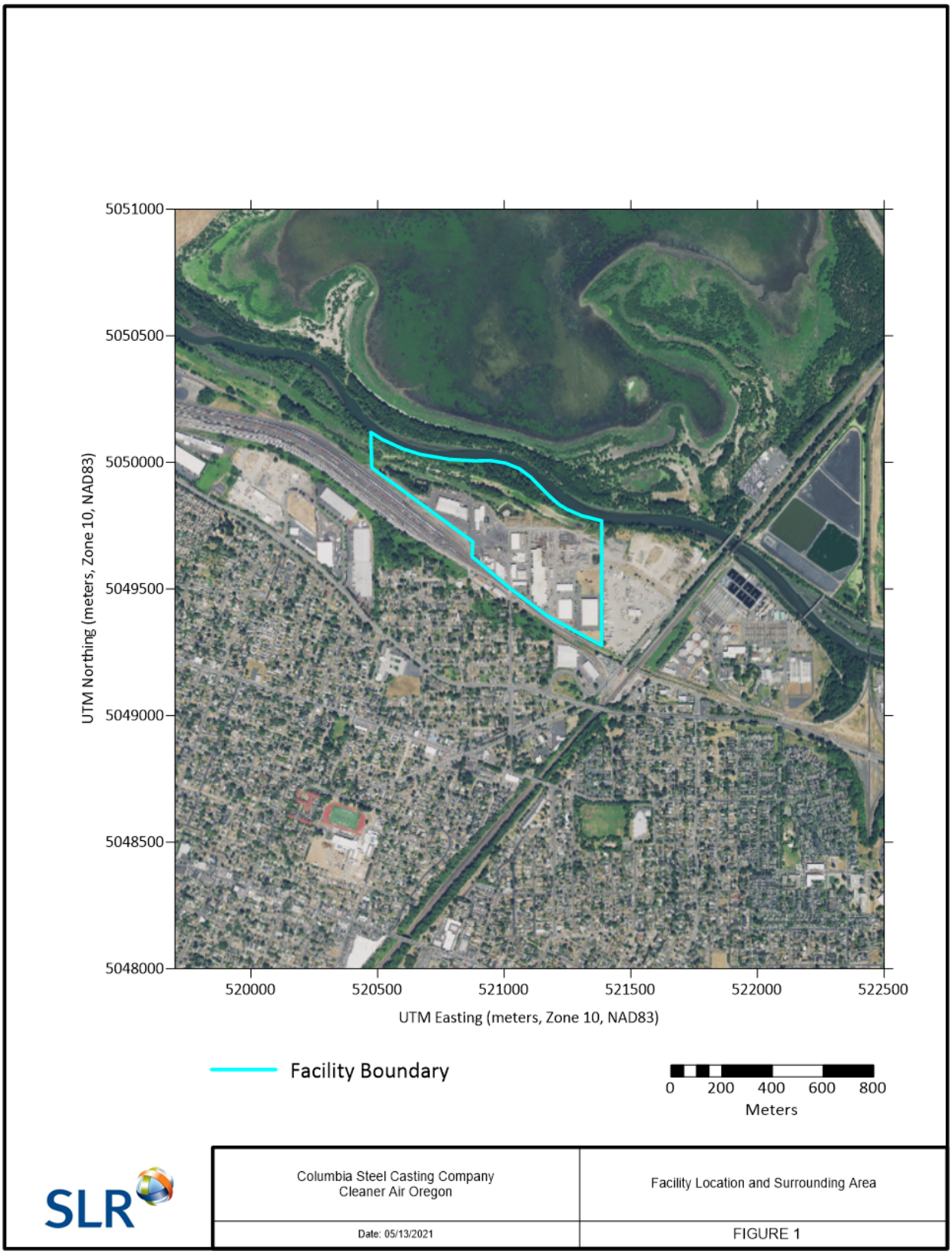


Figure 1. Facility Location and Surrounding Area

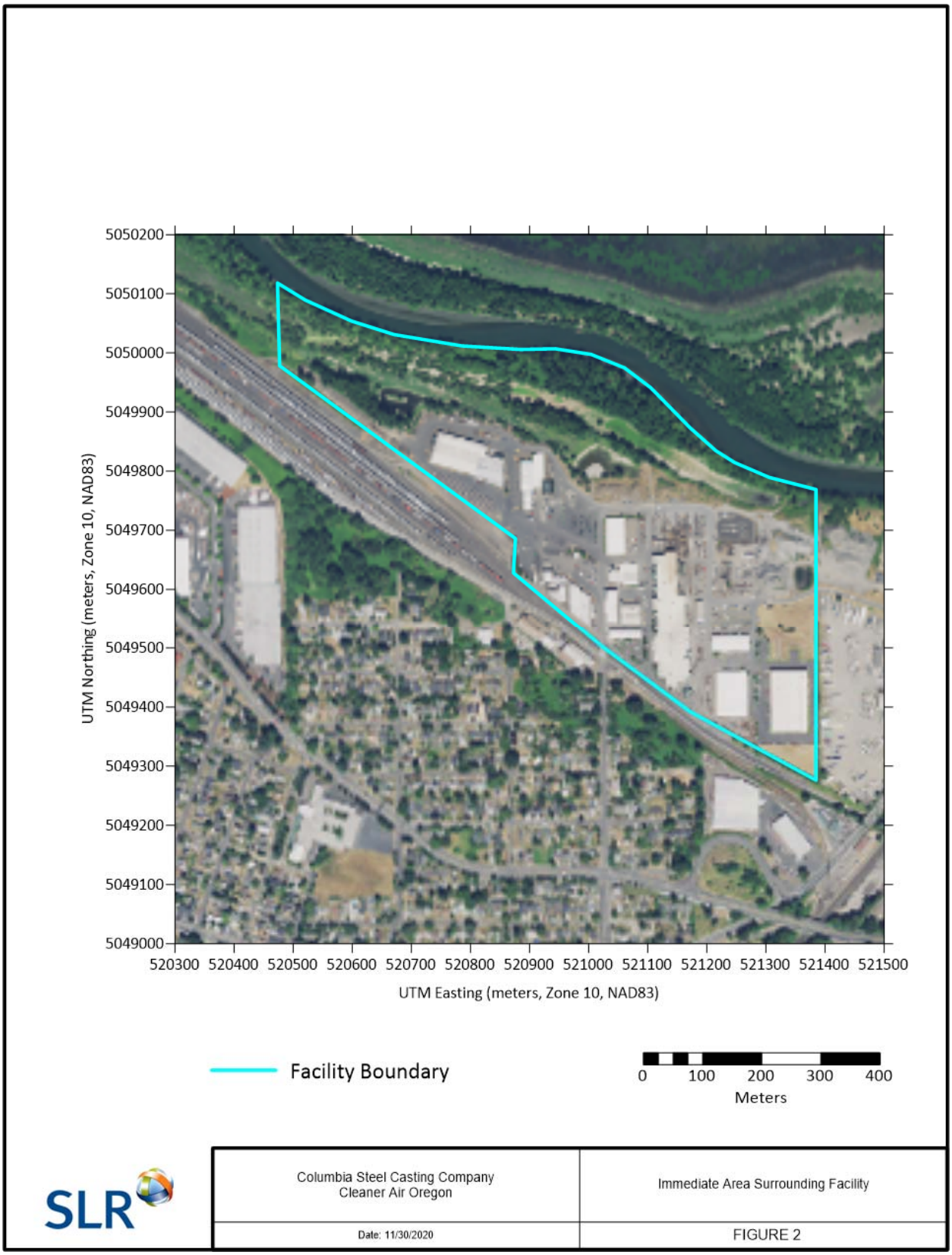
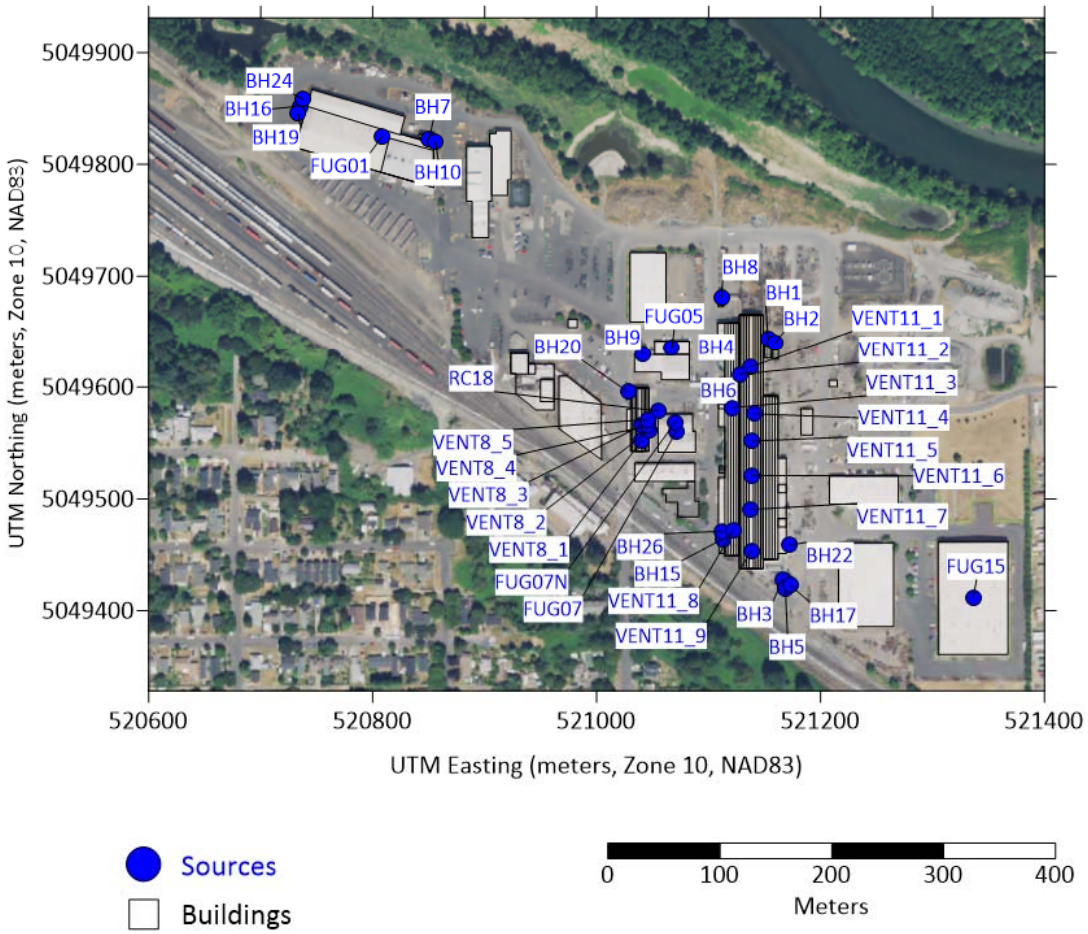
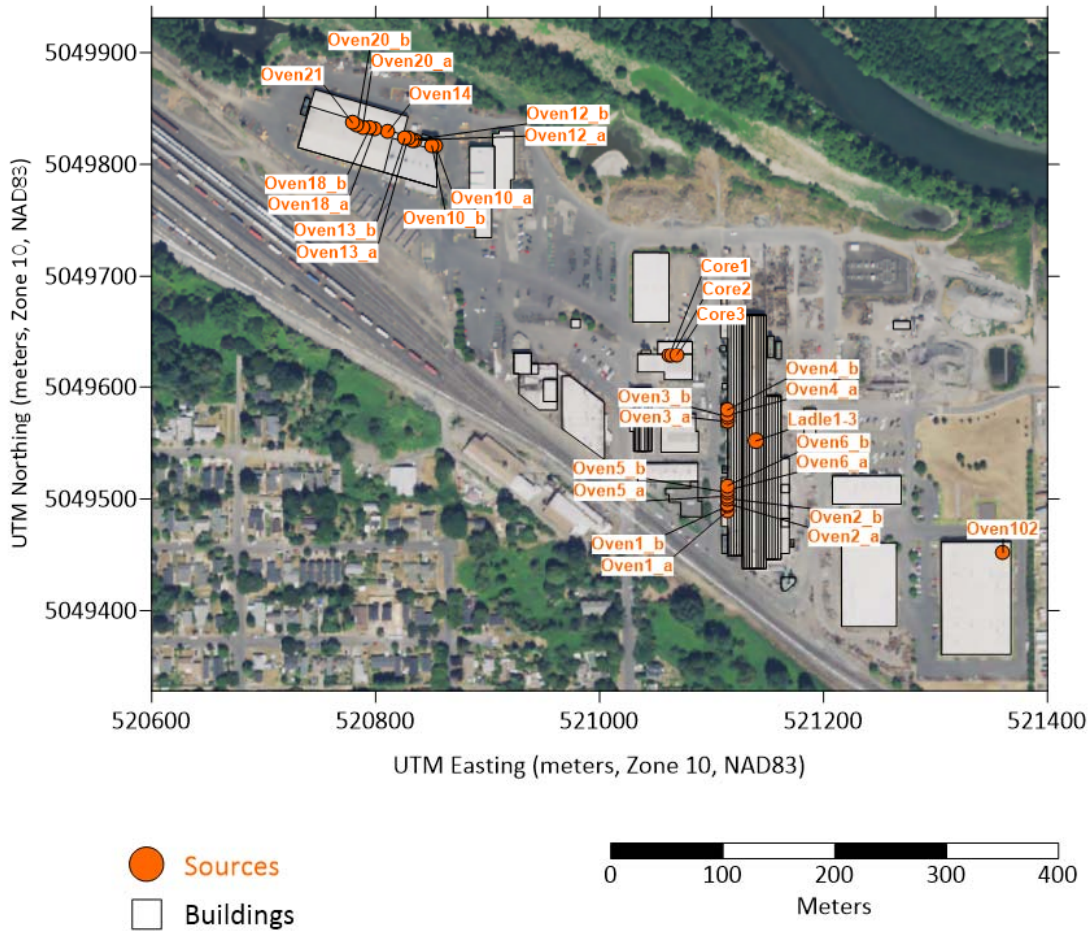


Figure 2. Immediate Area Surrounding Facility



Columbia Steel Casting Company Cleaner Air Oregon	Location of Toxic Emission Units Excluding Sources Combusting Natural Gas
Date: 04/26/2021	FIGURE 3

Figure 3. Location of Toxic Emission Units Excluding Sources Combusting Natural Gas



Sources

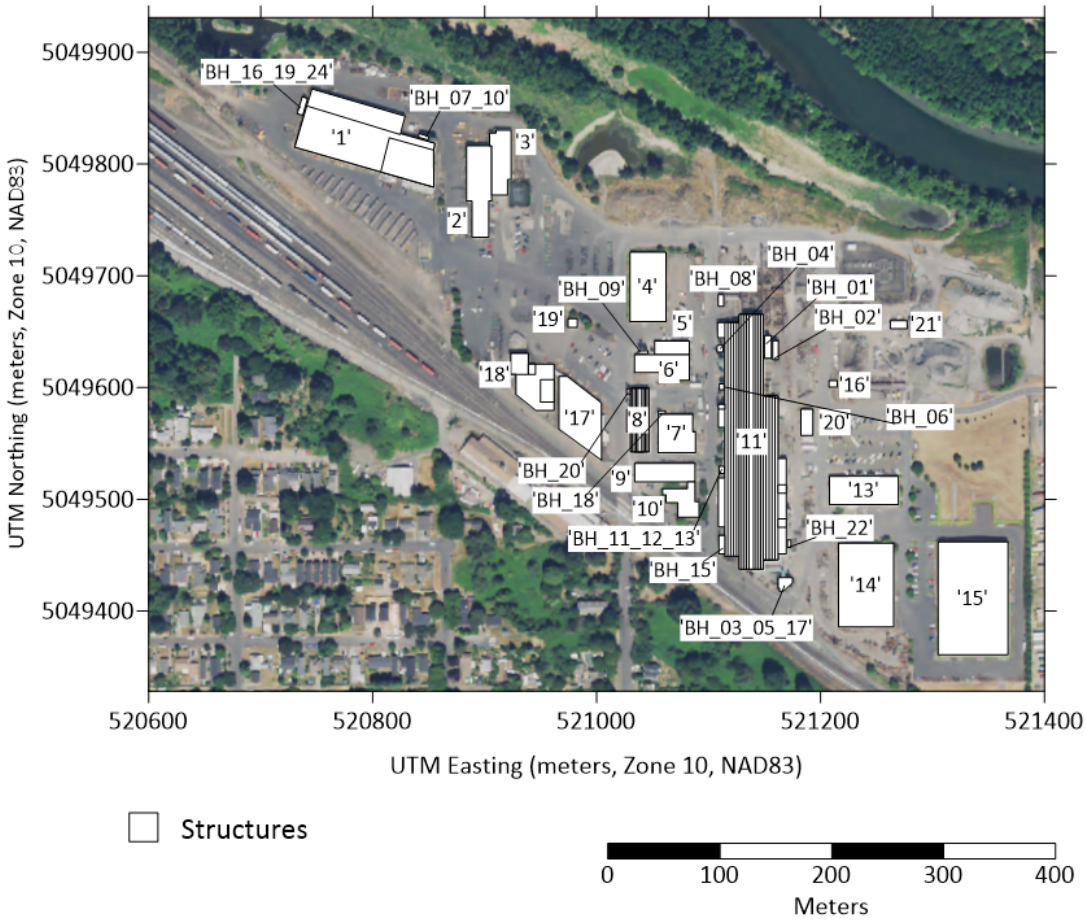
Buildings

0 100 200 300 400

Meters

Columbia Steel Casting Company Cleaner Air Oregon	Location of Toxic Emission Units Combusting Natural Gas
Date: 05/06/2021	FIGURE 4

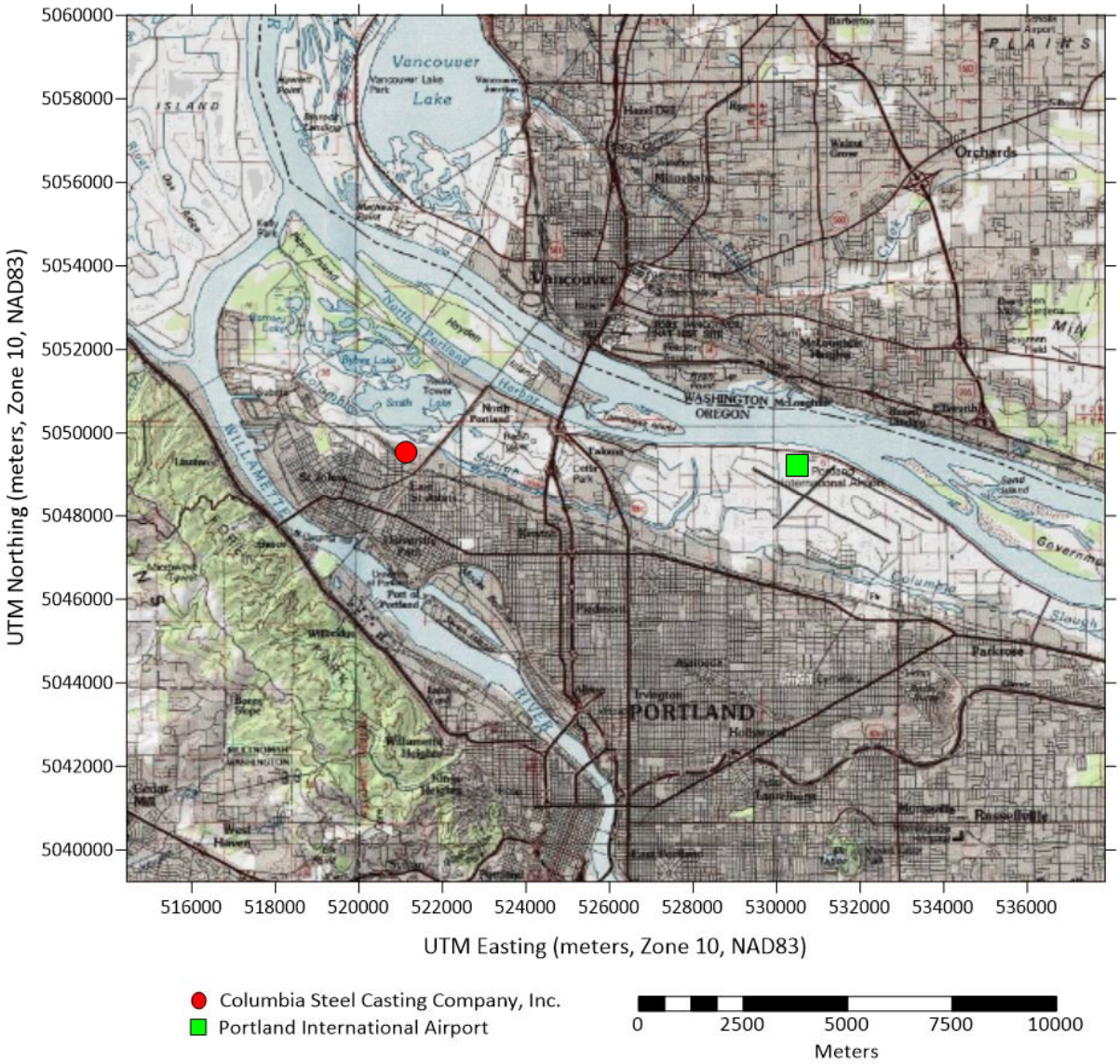
Figure 4. Location of Toxic Emission Units Combusting Natural Gas



Note: Structures marked solely with a number are buildings.
Structures whose identification begins with "BH" are housings surrounding baghouses.

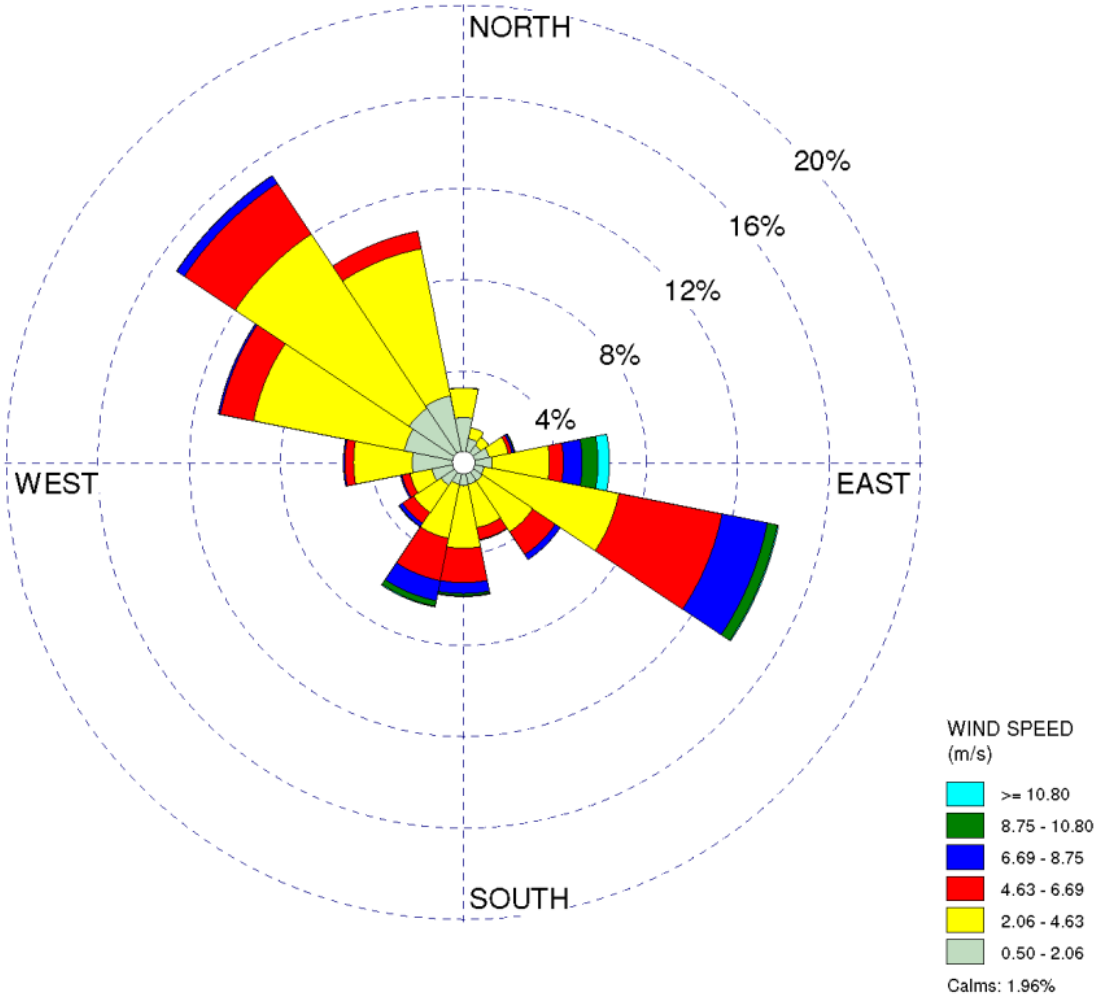
Columbia Steel Casting Company Cleaner Air Oregon	Location of Structures Included in Downwash
Date: 04/26/2021	FIGURE 5

Figure 5. Location of Structures Included in Downwash



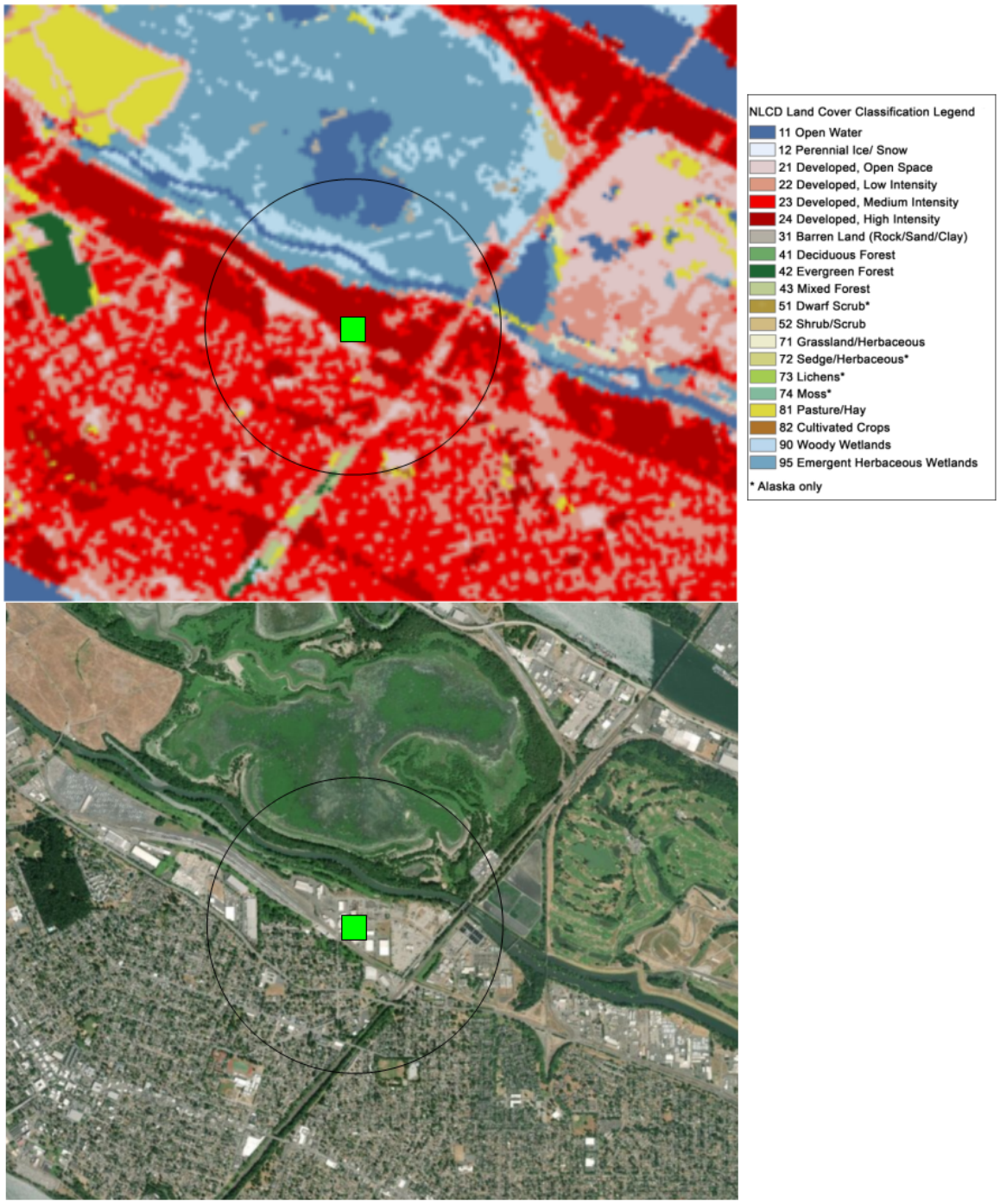
Columbia Steel Casting Company Cleaner Air Oregon	Facility and NWS Station Location
Date: 05/13/2021	FIGURE 6

Figure 6. Facility and NWS Station Location



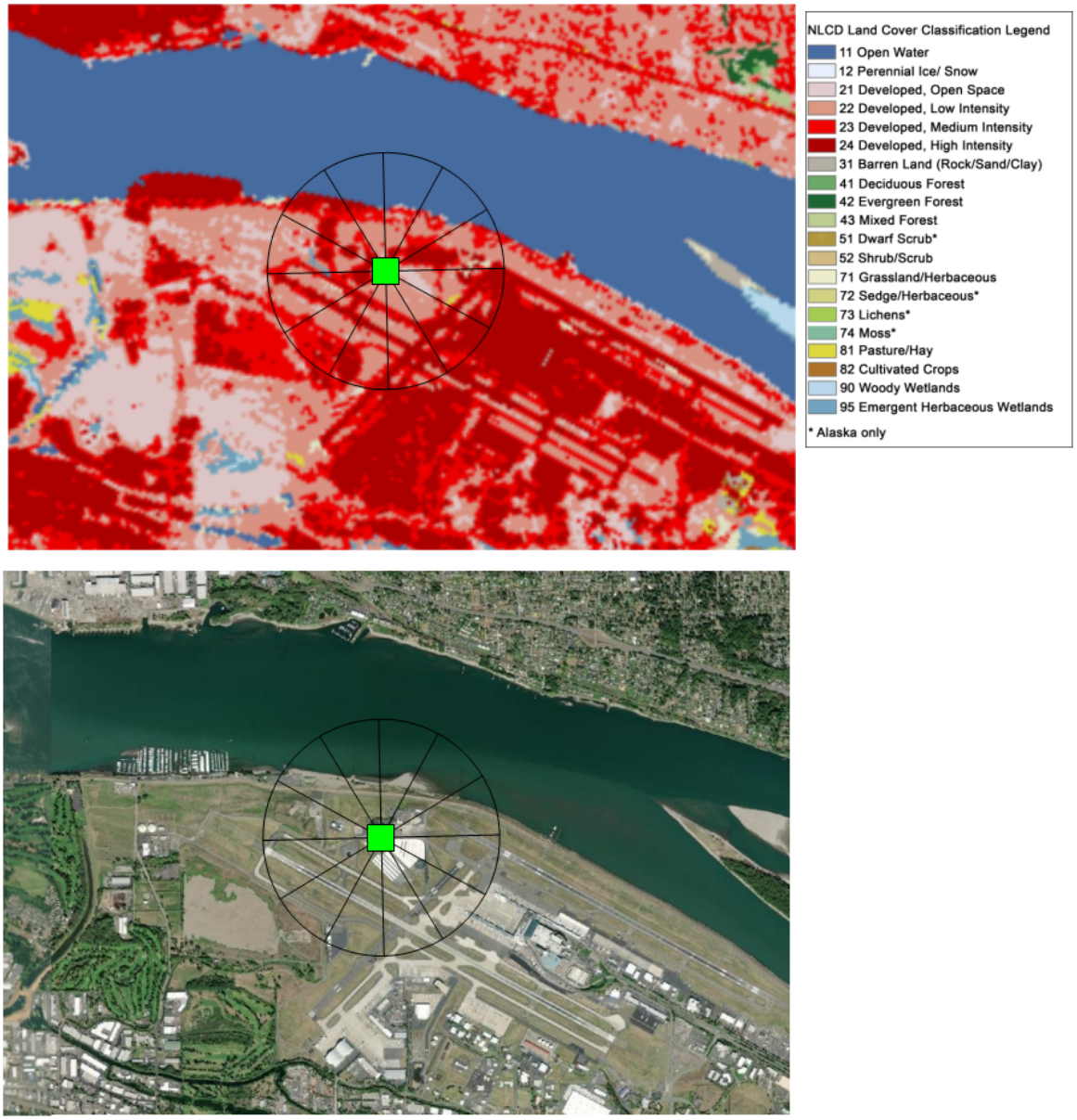
Columbia Steel Casting Company Cleaner Air Oregon	KPDX Wind Rose 2015-2019 Data
Date: 04/26/2021	FIGURE 7

Figure 7. KPDX Wind Rose



Columbia Steel Casting Company Cleaner Air Oregon	NLCD Surrounding Facility
Date: 05/11/2021	FIGURE 8

Figure 8. NLCD Surrounding Facility



Columbia Steel Casting Company Cleaner Air Oregon	NLCD Surrounding KPDX
Date: 05/11/2021	FIGURE 9

Figure 9. NLCD Surrounding KPDX

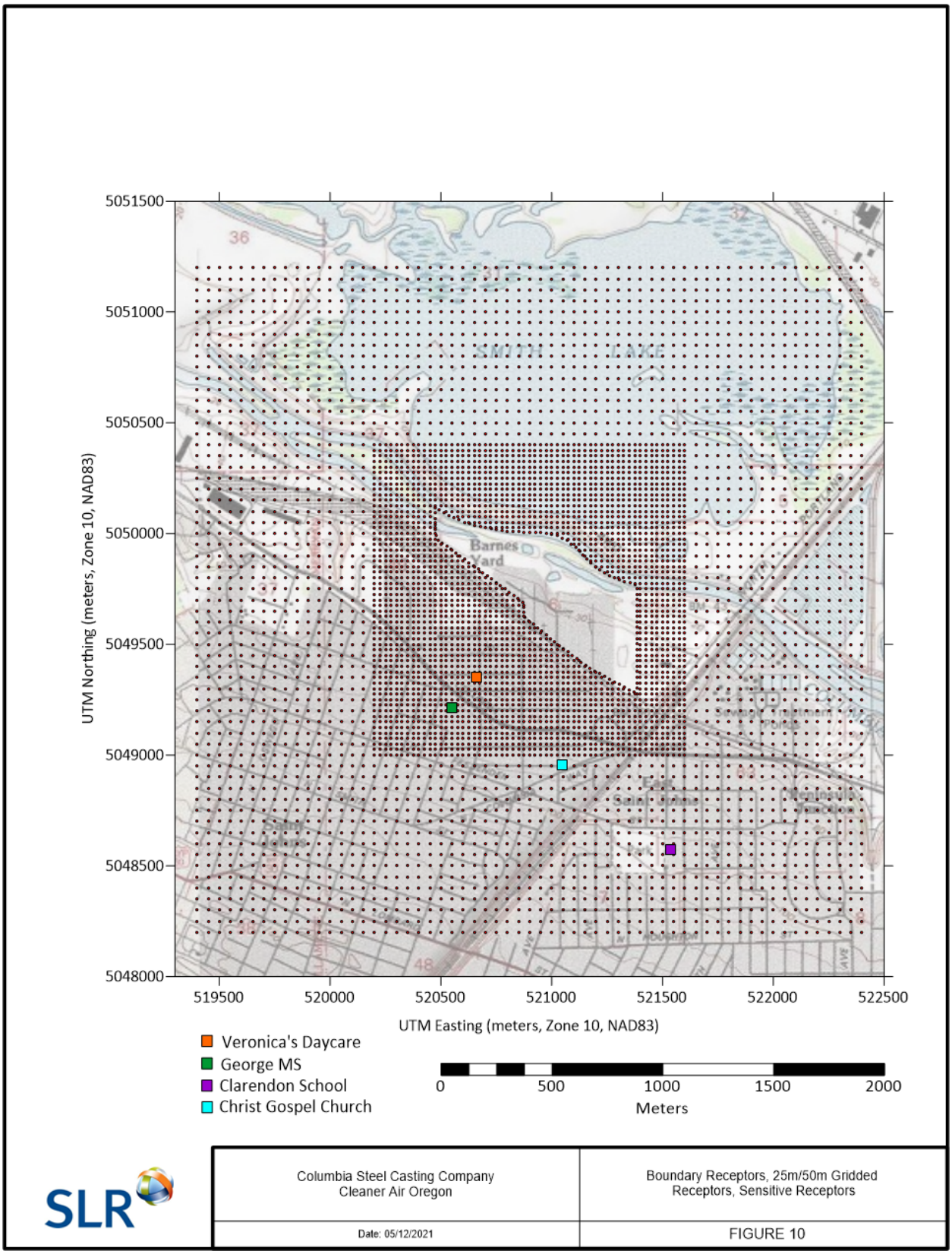
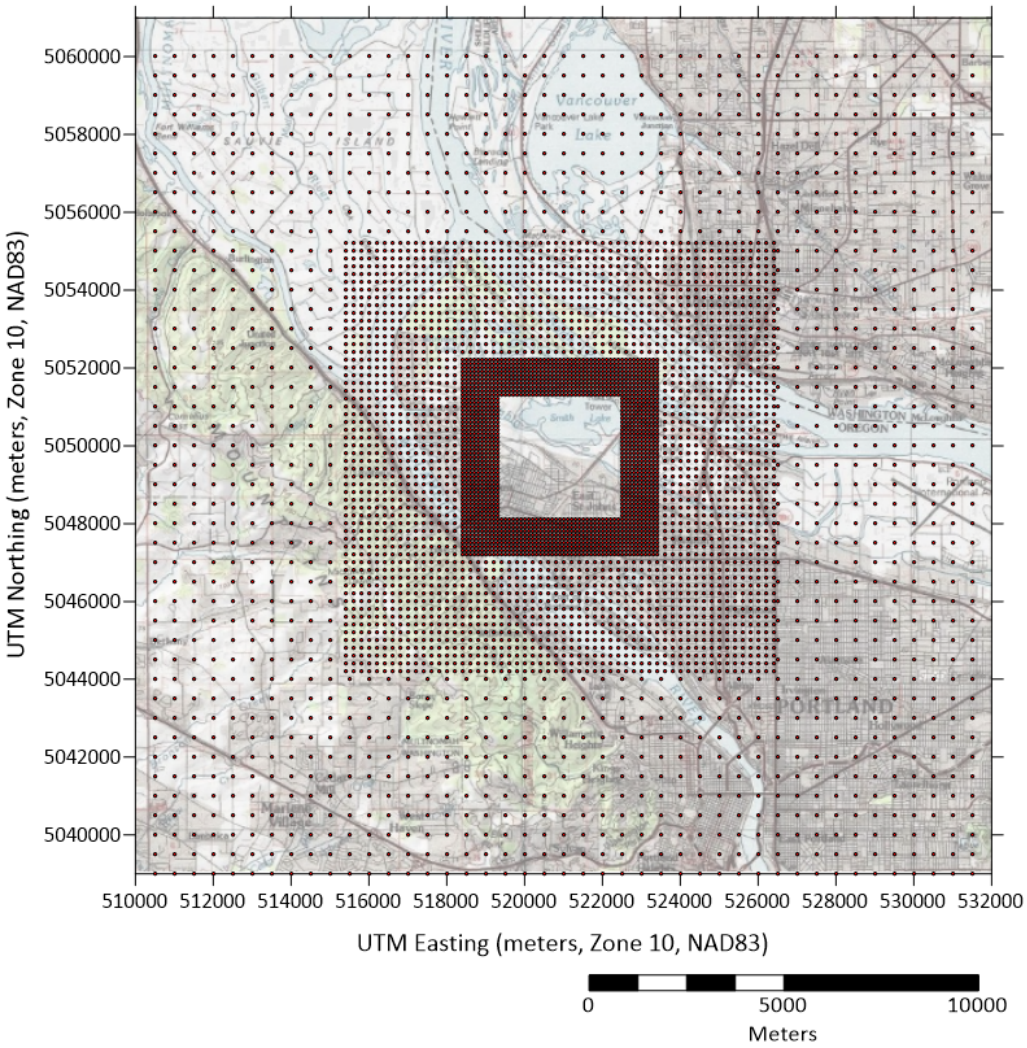


Figure 10. Facility Boundary, 25m, 50m, and Sensitive Receptors



Columbia Steel Casting Company Cleaner Air Oregon	100m, 200m, 500m Receptor Grids
Date: 04/28/2021	FIGURE 11

Figure 11. 100m, 200m, and 500m Receptor Grids

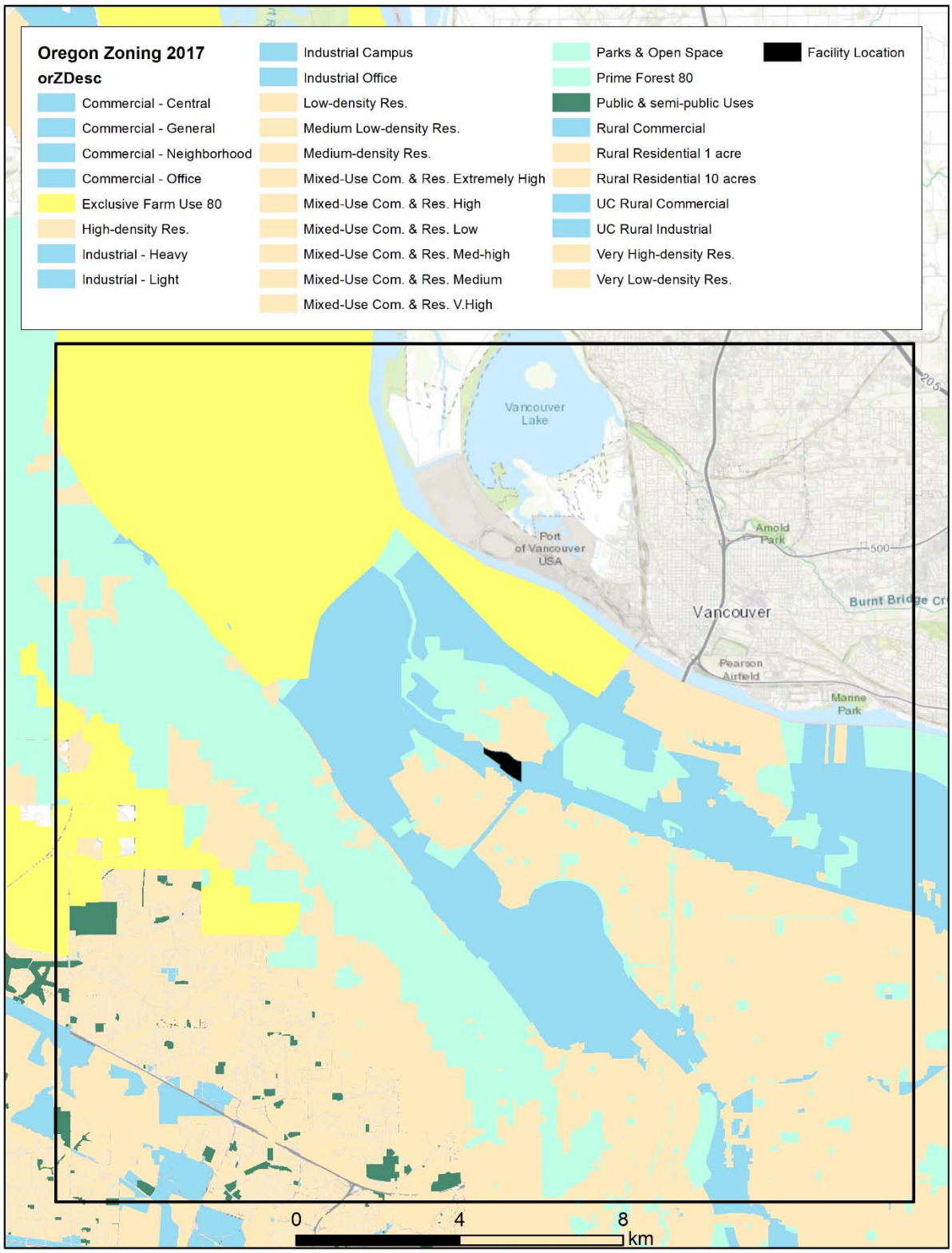


Figure 12. State-level Zoning Categories in Modeling Domain

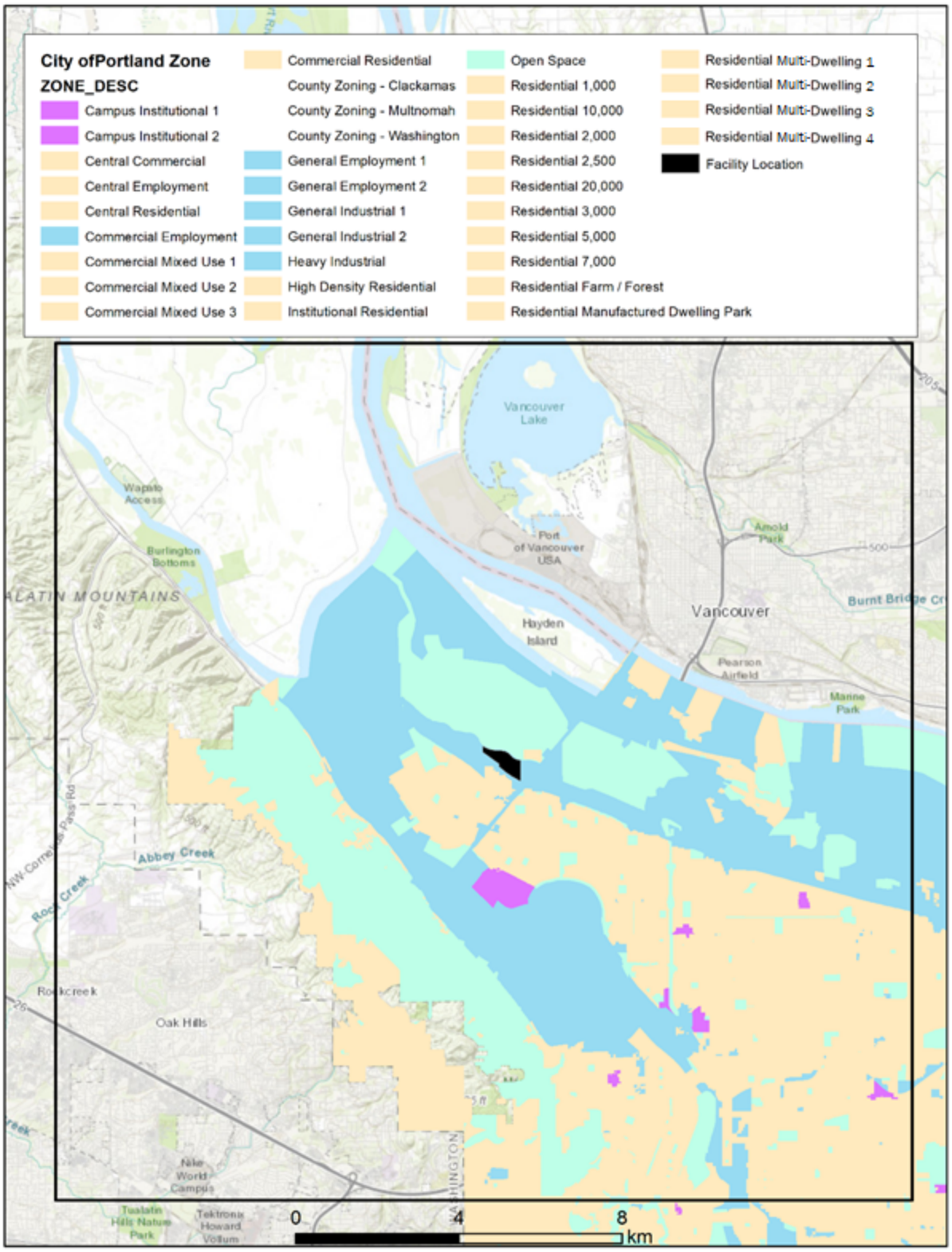


Figure 13. City-level Zoning Categories in Modeling Domain

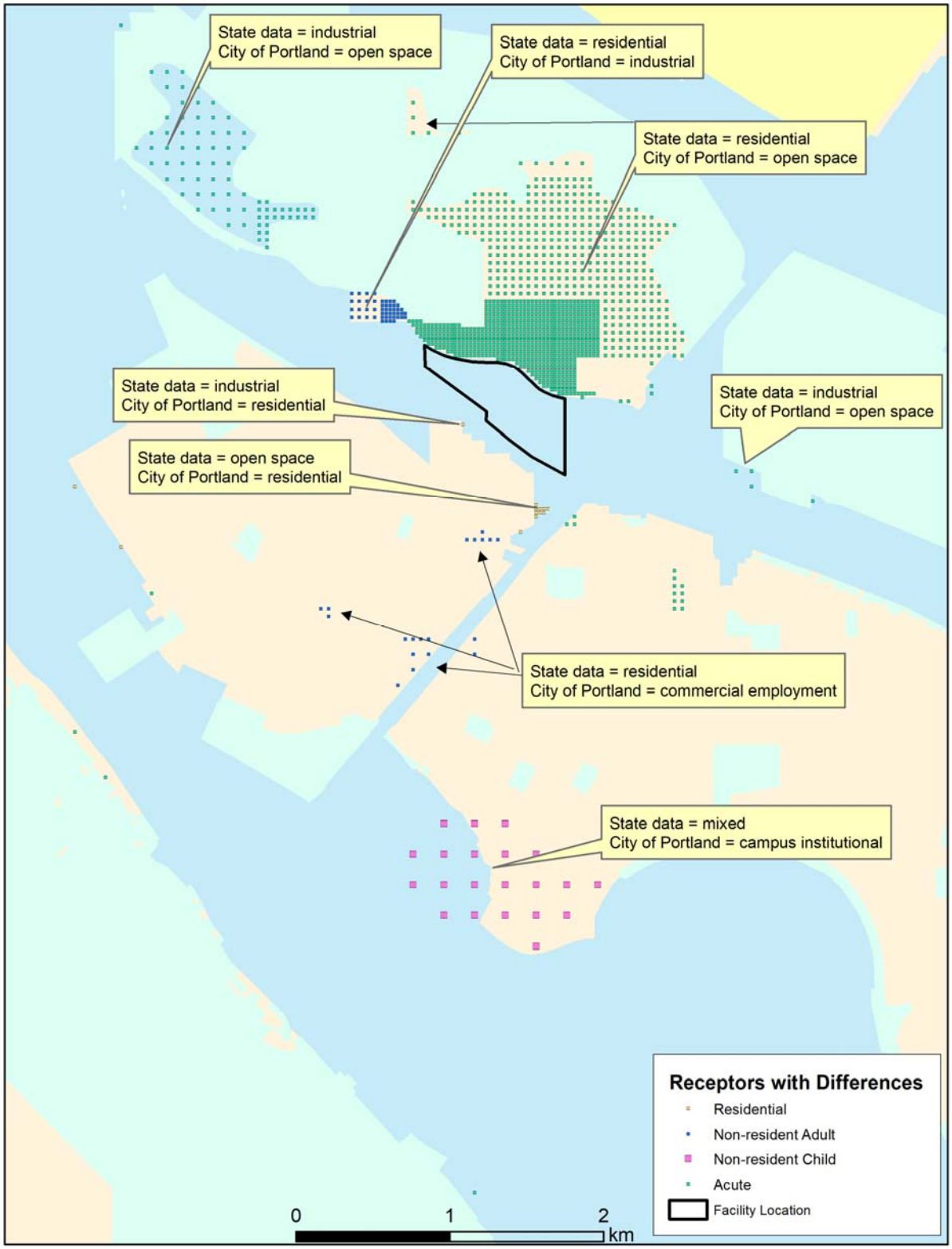


Figure 14. Differences between State- and City-level Zoning

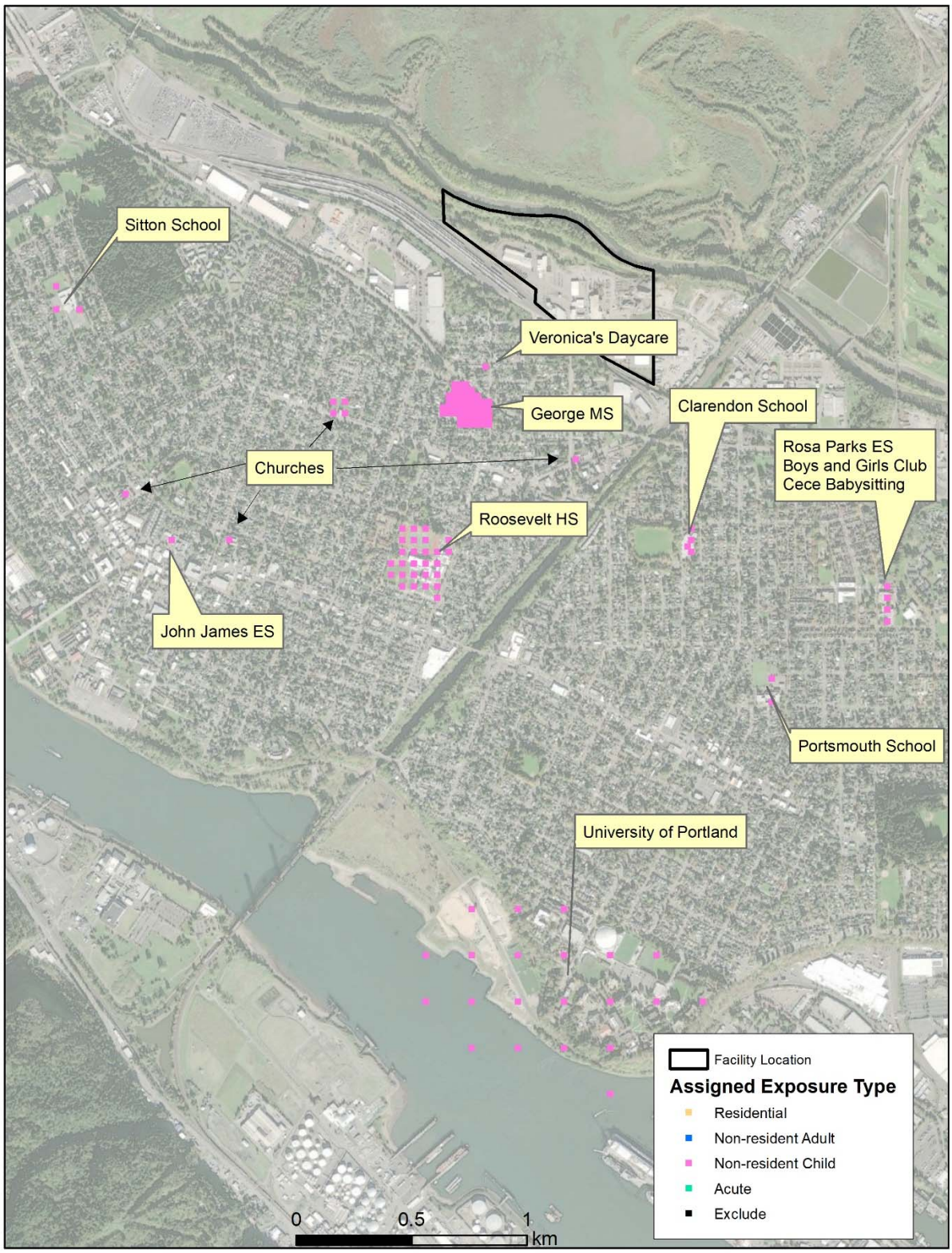


Figure 15. Analysis of Nearby Sensitive Receptors

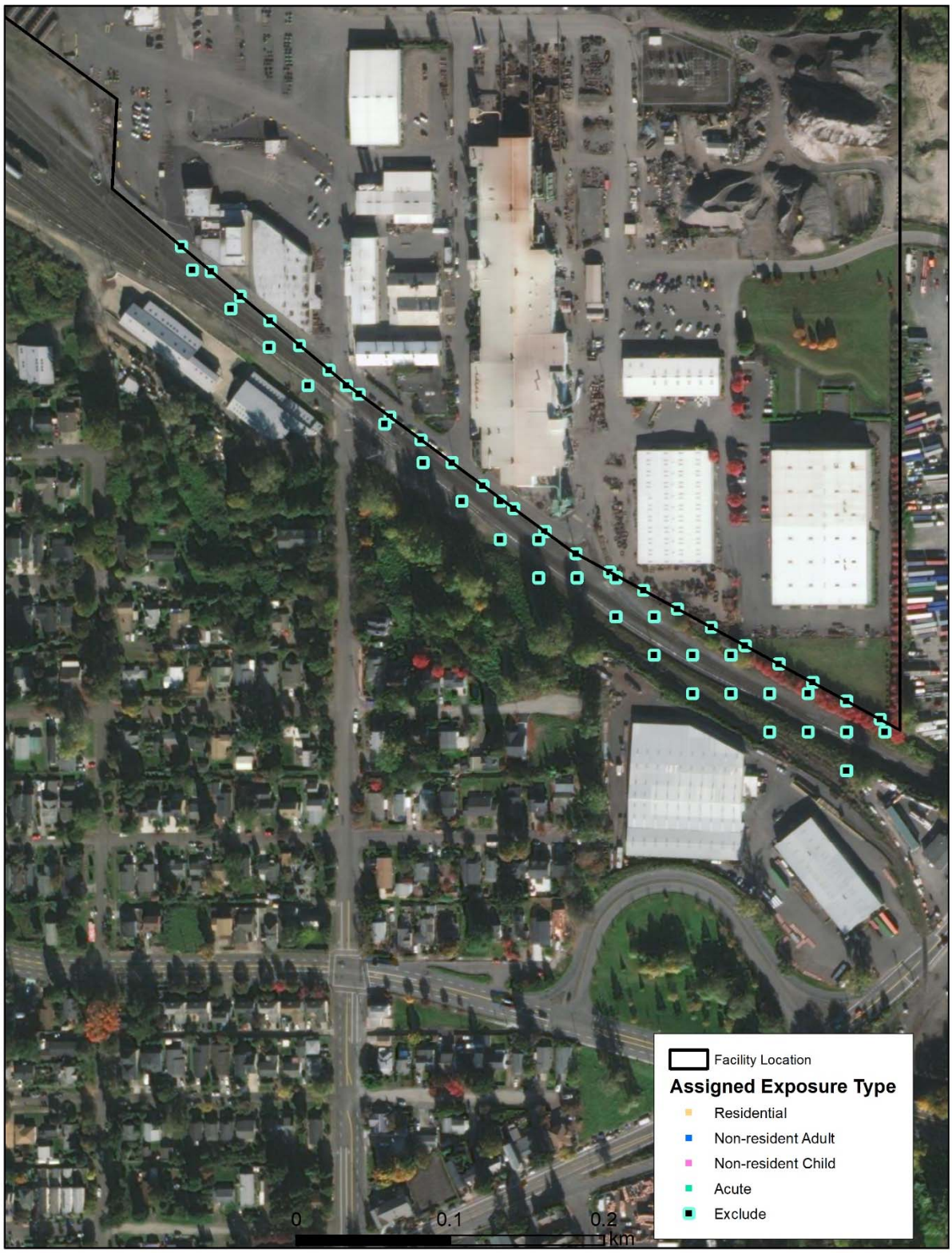


Figure 16. Excluded Receptors

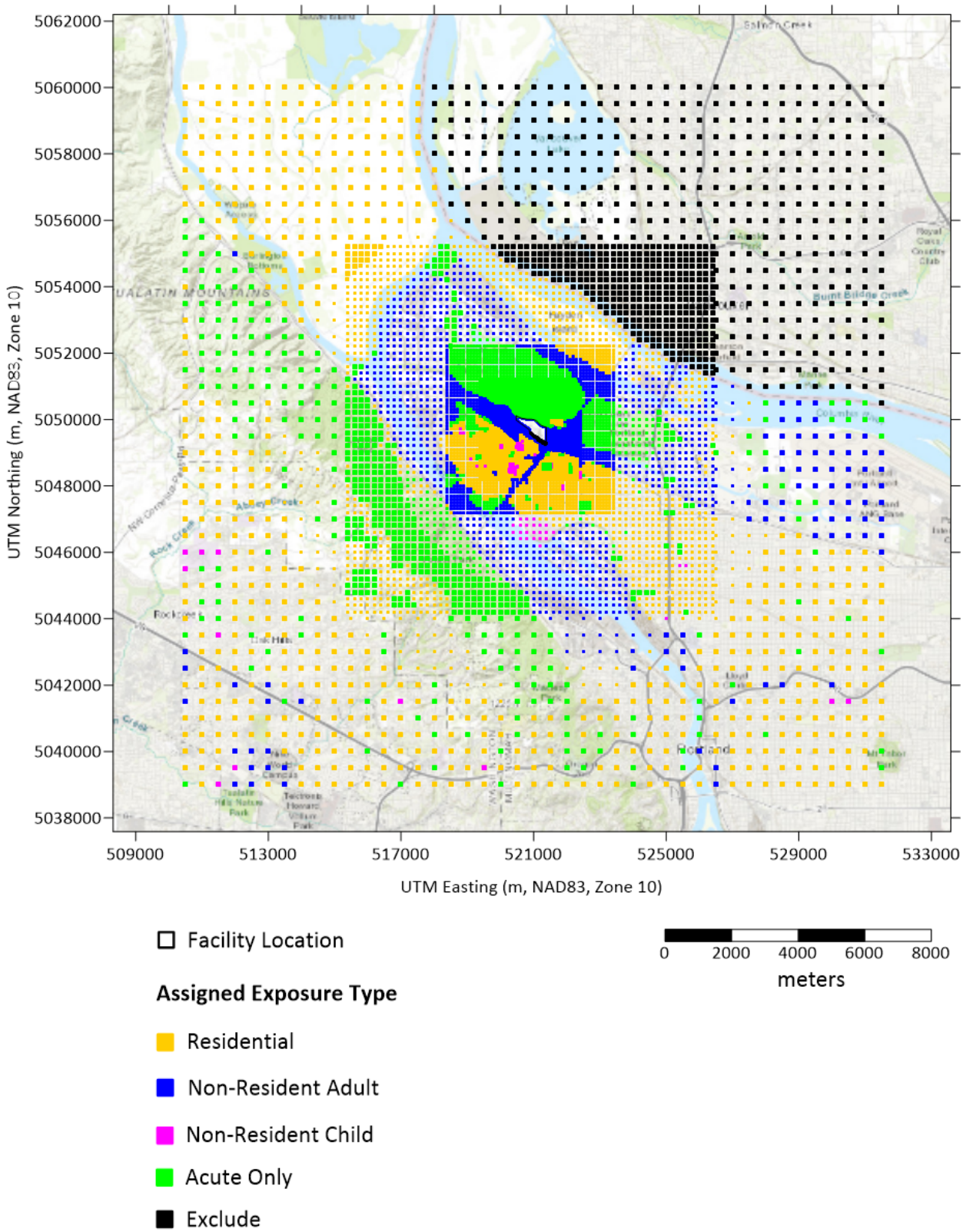


Figure 17. Final Exposure Type by Receptor

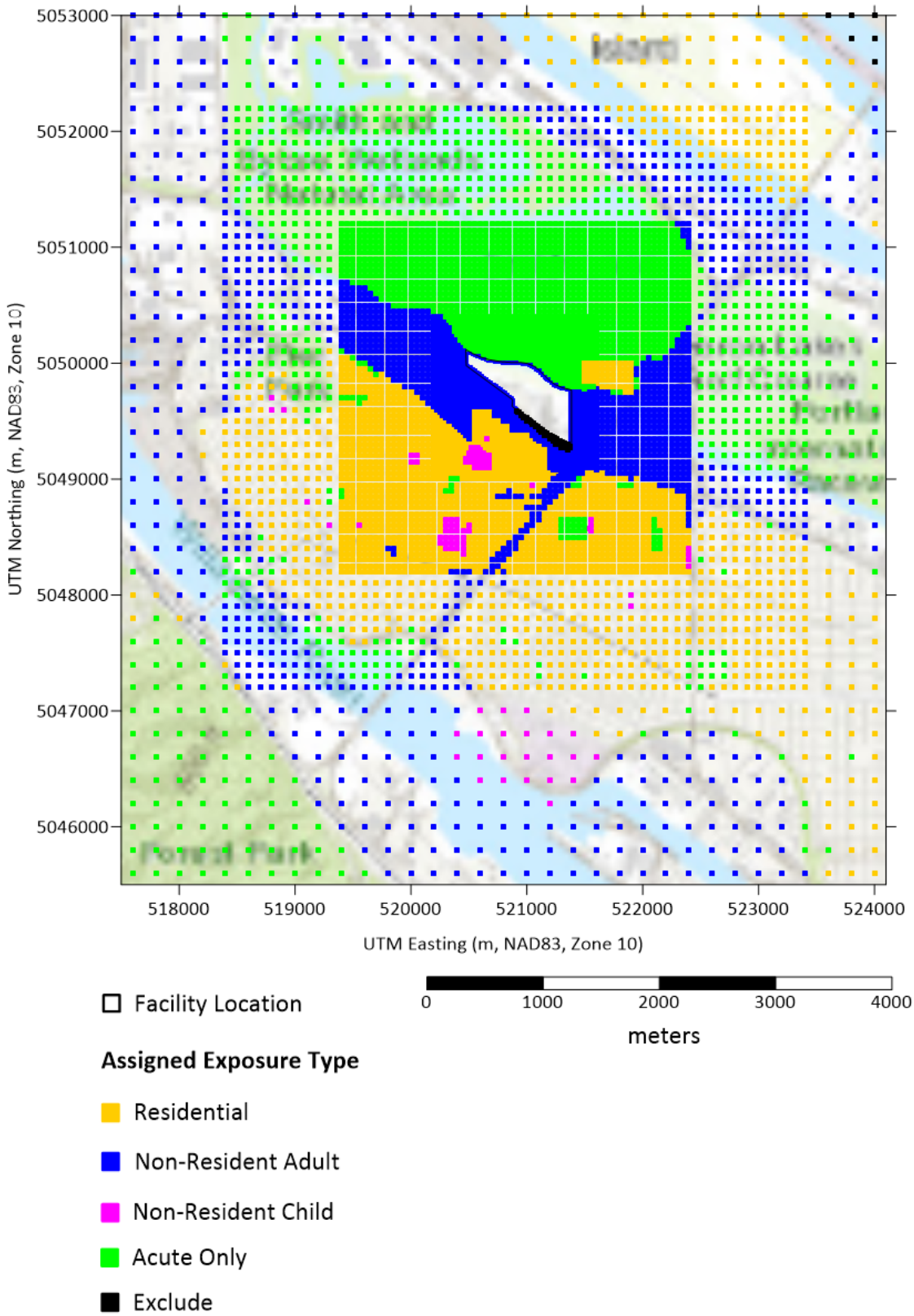


Figure 18. Final Exposure Type of Inner Grid

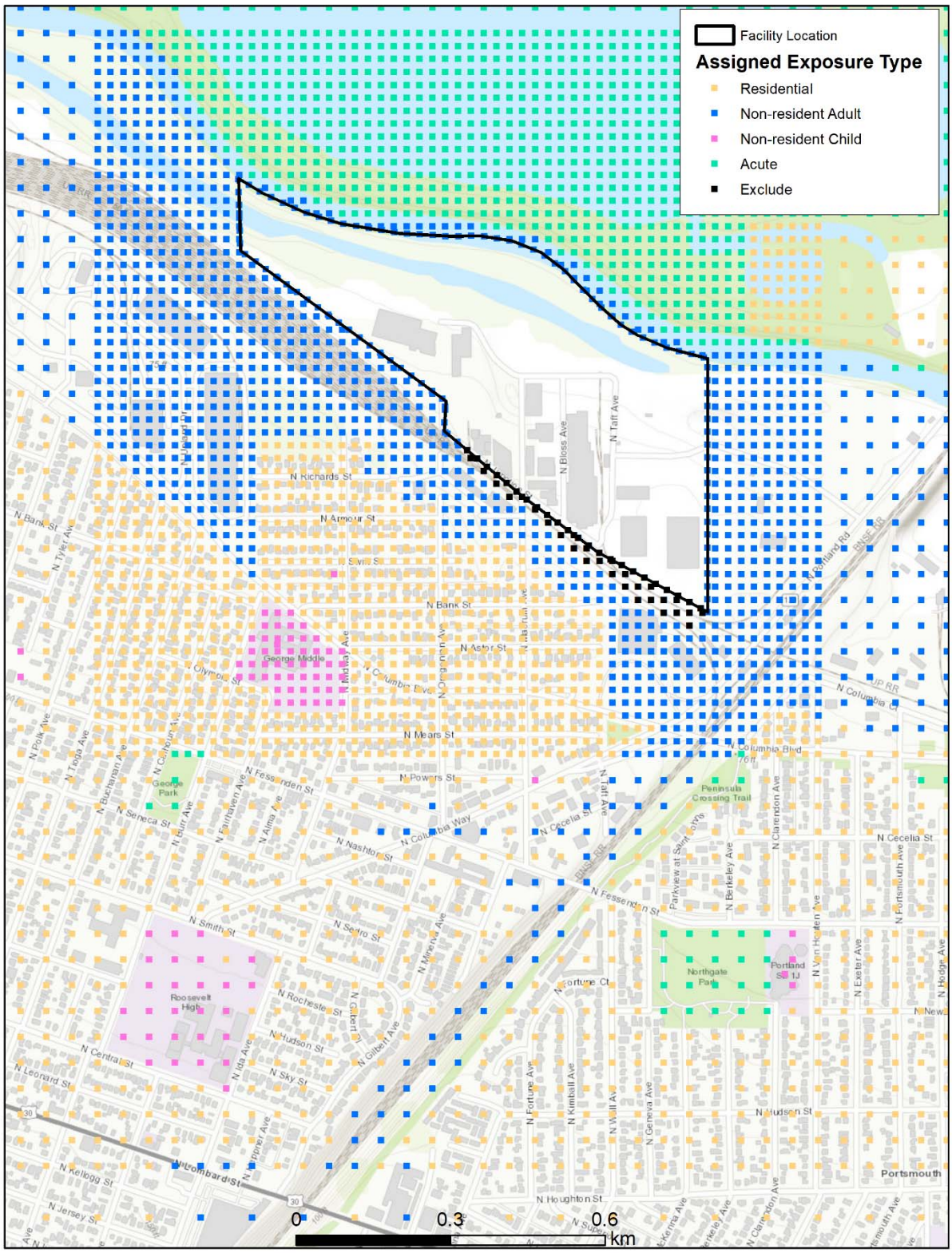


Figure 19. Final Exposure Type Within 1 km (topo)

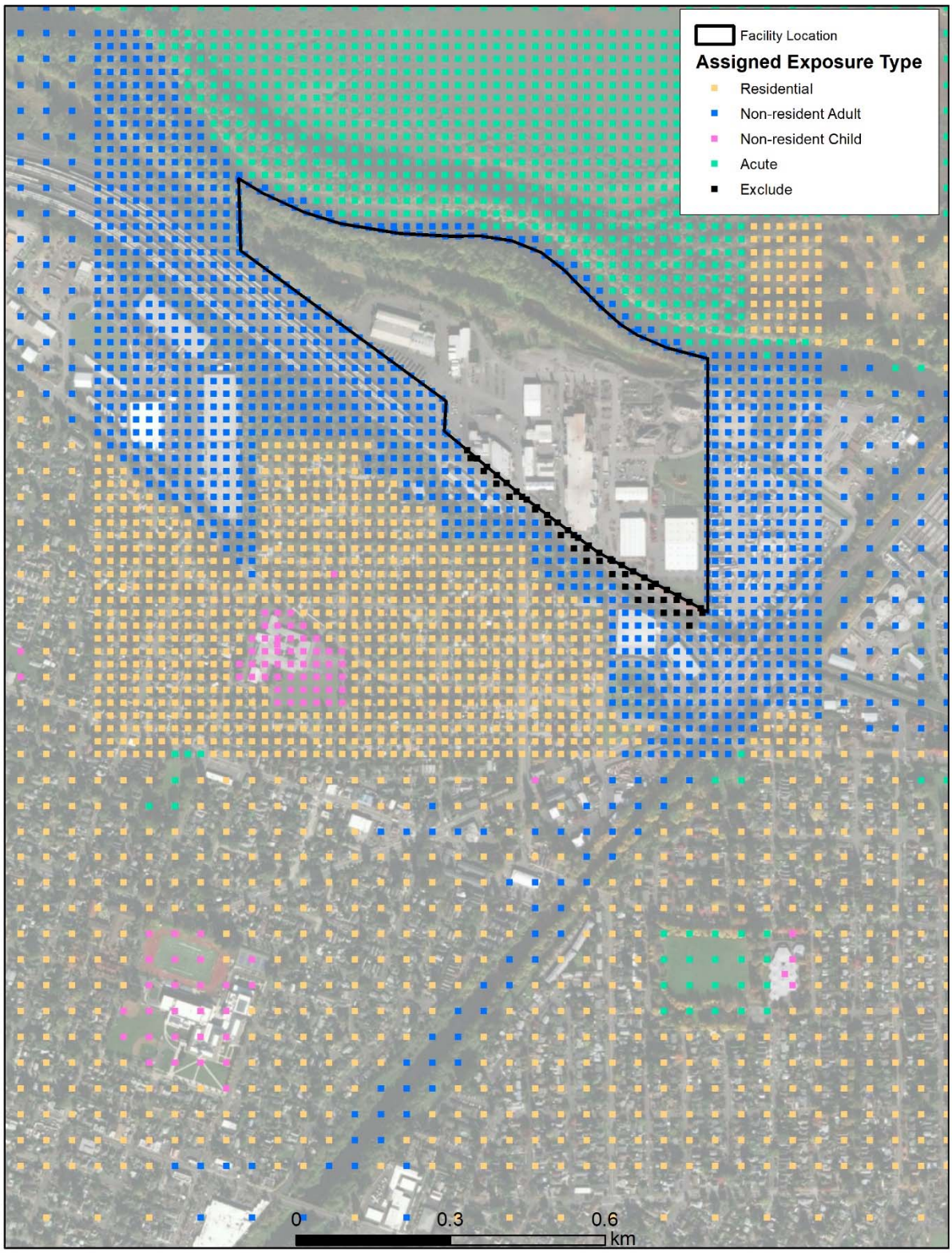


Figure 20. Final Exposure Type Within 1 km (aerial)

APPENDIX A

EMISSION RATES AND REER CALCULATIONS

Modeling Protocol and Risk Assessment Work Plan

Columbia Steel Casting Co., Inc.
10425 N Bloss Ave.
Portland, OR 97203

September 2021

Table A-1. Emission Rates and REER Calculations - Acute Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (mixture, including m-xylene, o-xylene, p-xylene	18540-29-9	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether	Xylene, mixed isomers	Chromium VI, chromate and dichromate particulate	Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,2,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.200	22000.000	21000.000	12.000	660.000	0.900	7500.000	5800.000	0.000	0.000	29000.000	8700.000	0.300	0.071	49.000	62000.000	29.000	0.000	0.150	0.300	0.600	1.000	0.200	0.020	0.030	0.000	100.000	0.000	1000.000	340.000	470.000	2100.000	6200.000	0.000	1200.000	2.000	96.000	0.000	5000.000	200.000	0.000	3200.000
BH2	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000								0.000							
BH2	REER	(g/s)/(µg/m³)	2.719E-04	4.034E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.133E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.053E-06	2.569E-04	6.400E-08	7.315E-07	2.842E-06	0.000E+00	1.931E-06	0.000E+00	3.616E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.288E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH1	REER	(g/s)/(µg/m³)	5.356E-04	1.020E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.071E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.338E-06	5.020E-04	1.397E-08	7.500E-07	5.320E-06	1.952E-06	5.200E-07	0.000E+00	5.629E-06	5.016E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/day		0.001	0.003	0.001		0.005	0.005	0.034	0.044	0.004			0.013	0.000		0.020	0.007	0.332	0.000	0.001	0.003	0.130		0.000						0.001	0.003	0.029		0.001	0.001		0.000	0.032		0.001	0.001		29.952
Vent8_1	REER	(g/s)/(µg/m³)	3.828E-02	2.306E-05	2.674E-10	1.867E-10	0.000E+00	4.344E-08	3.470E-06	6.595E-08	4.024E-08	0.000E+00	0.000E+00	0.000E+00	1.994E-08	1.646E-07	0.000E+00	2.970E-06	6.044E-10	6.006E-05	0.000E+00	9.448E-05	3.401E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.025E-08	7.334E-09	4.501E-07	0.000E+00	1.207E-08	7.496E-10	0.000E+00	2.708E-08	0.000E+00	1.719E-06	0.000E+00	7.262E-10	2.138E-08	0.000E+00	3.422E-02
Vent8_2	Emission Rate	lb/day		0.001	0.003	0.001		0.005	0.005	0.034	0.044	0.004			0.013	0.000		0.020	0.007	0.332	0.000	0.001	0.003	0.130		0.000						0.001	0.003	0.029		0.001	0.001		0.000	0.032		0.001	0.001		29.952
Vent8_2	REER	(g/s)/(µg/m³)	1.242E-03	2.269E-05	2.674E-10	1.867E-10	0.000E+00	4.344E-08	3.470E-06	6.595E-08	4.024E-08	0.000E+00	0.000E+00	0.000E+00	1.994E-08	1.828E-08	0.000E+00	2.970E-06	6.044E-10	6.006E-05	0.000E+00	2.638E-05	1.083E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.025E-08	7.334E-09	4.501E-07	0.000E+00	1.207E-08	7.496E-10	0.000E+00	2.708E-08	0.000E+00	1.719E-06	0.000E+00	7.262E-10	2.138E-08	0.000E+00	3.422E-02
Vent8_3	Emission Rate	lb/day		0.001	0.003	0.001		0.005	0.005	0.034	0.044	0.004			0.013	0.000		0.020	0.007	0.332	0.000	0.001	0.003	0.130		0.000						0.001	0.003	0.029		0.001	0.001		0.000	0.032		0.001	0.001		29.952
Vent8_3	REER	(g/s)/(µg/m³)	1.242E-03	2.269E-05	2.674E-10	1.867E-10	0.000E+00	4.344E-08	3.470E-06	6.595E-08	4.024E-08	0.000E+00	0.000E+00	0.000E+00	1.994E-08	1.828E-08	0.000E+00	2.970E-06	6.044E-10	6.006E-05	0.000E+00	2.638E-05	1.083E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.025E-08	7.334E-09	4.501E-07	0.000E+00	1.207E-08	7.496E-10	0.000E+00	2.708E-08	0.000E+00	1.719E-06	0.000E+00	7.262E-10	2.138E-08	0.000E+00	3.422E-02
Vent8_4	Emission Rate	lb/day		0.001	0.003	0.001		0.005	0.005	0.034	0.044	0.004			0.013	0.000		0.020	0.007	0.332	0.000	0.001	0.003	0.130		0.000						0.001	0.003	0.029		0.001	0.001		0.000	0.032		0.001	0.001		29.952
Vent8_4	REER	(g/s)/(µg/m³)	1.242E-03	2.269E-05	2.674E-10	1.867E-10	0.000E+00	4.344E-08	3.470E-06	6.595E-08	4.024E-08	0.000E+00	0.000E+00	0.000E+00	1.994E-08	1.828E-08	0.000E+00	2.970E-06	6.044E-10	6.006E-05	0.000E+00	2.638E-05	1.083E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.025E-08	7.334E-09	4.501E-07	0.000E+00	1.207E-08	7.496E-10	0.000E+00	2.708E-08	0.000E+00	1.719E-06	0.000E+00	7.262E-10	2.138E-08	0.000E+00	3.422E-02
Vent8_5	Emission Rate	lb/day		0.001	0.003	0.001		0.005	0.005	0.034	0.044	0.004			0.013	0.000		0.020	0.007	0.332	0.000	0.001	0.003	0.130		0.000						0.001	0.003	0.029		0.001	0.001		0.000	0.032		0.001	0.001		29.952
Vent8_5	REER	(g/s)/(µg/m³)	1.242E-03	2.269E-05	2.674E-10	1.867E-10	0.000E+00	4.344E-08	3.470E-06	6.595E-08	4.024E-08	0.000E+00	0.000E+00	0.000E+00	1.994E-08	1.828E-08	0.000E+00	2.970E-06	6.044E-10	6.006E-05	0.000E+00	2.638E-05	1.083E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.025E-08	7.334E-09	4.501E-07	0.000E+00	1.207E-08	7.496E-10	0.000E+00	2.708E-08	0.000E+00	1.719E-06	0.000E+00	7.262E-10	2.138E-08	0.000E+00	3.422E-02
Vent11_1	Emission Rate	lb/day		0.007												0.000					0.000	0.020	3.127																							
Vent11_1	REER	(g/s)/(µg/m³)	6.006E-02	1.745E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.479E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.645E-04	6.690E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/day		0.001												0.000					0.000	0.023	3.623																							
Vent11_2	REER	(g/s)/(µg/m³)	6.006E-02	1.745E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.479E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.645E-04	6.690E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/day		0.011												0.001					0.000	0.005	0.773																							
Vent11_3	REER	(g/s)/(µg/m³)	1.401E-02	2.848E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.400E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.893E-04	1.352E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/day		0.011	0.030	0.000		0.033	0.005	0.452	0.005	0.040			0.130	0.001		0.060	0.044	1.127	0.000	0.005	0.773									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.011		29.952
Vent11_4	REER	(g/s)/(µg/m³)	1.427E-02	2.848E-04	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	1.400E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	1.893E-04	1.352E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
Vent11_5	Emission Rate	lb/day		0.011	0.030	0.000		0.033	0.005	0.452	0.005	0.040			0.130	0.001		0.060	0.044	1.127	0.000	0.005	0.773									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.011		29.952
Vent11_5	REER	(g/s)/(µg/m³)	2.518E-02	5.000E-04	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	2.466E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	5.942E-04	2.353E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
Vent11_6	Emission Rate	lb/day		0.034	0.030	0.000		0.034	0.005	0.452	0.005	0.040			0.130	0.000		0.060	0.044	1.127	0.000	0.009	0.000									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.017		29.952
Vent11_6	REER	(g/s)/(µg/m³)	1.652E-02	9.034E-04	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	4.535E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	2.993E-04	1.590E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
Vent11_7	Emission Rate	lb/day		0.034	0.030	0.000		0.034	0.005	0.452	0.005	0.040			0.130	0.000		0.060	0.044	1.127	0.000	0.009	0.000									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.017		29.952
Vent11_7	REER	(g/s)/(µg/m³)	1.652E-02	9.034E-04	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	4.535E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	2.993E-04	1.590E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
Vent11_8	Emission Rate	lb/day		0.034	0.030	0.000		0.034	0.005	0.452	0.005	0.040			0.130	0.000		0.060	0.044	1.127	0.000	0.009	0.000									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.017		29.952
Vent11_8	REER	(g/s)/(µg/m³)	1.384E-02	1.799E-03	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	3.543E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	1.526E-04	1.163E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
Vent11_9	Emission Rate	lb/day		0.011	0.030	0.000		0.033	0.005	0.452	0.005	0.040			0.130	0.000		0.060	0.044	1.127	0.000	0.009	0.437									0.000	0.009	0.030		0.178	0.020	0.003		0.000	0.031		0.004	0.017		29.952
Vent11_9	REER	(g/s)/(µg/m³)	8.473E-03	2.099E-04	4.733E-09	1.159E-09	0.000E+00	2.698E-07	3.762E-06	3.162E-07	5.917E-08	0.000E+00	0.000E+00	0.000E+00	7.743E-08	3.651E-06	0.000E+00	6.441E-06	3.752E-09	2.040E-04	0.000E+00	2.087E-04	7.646E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.957E-06	4.553E-09	4.572E-07	1.985E-06	7.492E-09	4.653E-10	0.000E+00	2.790E-08	0.000E+00	1.738E-06	0.000E+00	4.508E-09	4.558E-07	0.000E+00	3.422E-02
BH3	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH3	REER	(g/s)/(µg/m³)	2.702E-04	1.345E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.700E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.436E-06	1.338E-04	0.000E+00	5.255E-08	1.951E-07	0.000E+00	0.000E+00	0.000E+00	1.787E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.141E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH5	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH5	REER	(g/s)/(µg/m³)	2.775E-04	1.381E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.935E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.475E-06	1.374E-04	0.000E+00	5.397E-08	2.014E-07	0.000E+00	0.000E+00	0.000E+00	1.815E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.361E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH17	Emission Rate	lb/day		0.001												0.000					0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH17	REER	(g/s)/(µg/m³)	7.302E-05	3.634E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.461E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.881E-07	3.615E-05	0.000E+00	1.420E-08	5.300E-08	0.000E+00	0.000E+00	0.000E+00	4.776E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.200E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH6	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH6	REER	(g/s)/(µg/m³)	7.515E-06	3.741E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.680E-09	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.995E-08	3.721E-06	0.000E+00	1.462E-10	5.456E-09	0.000E+00	0.000E+00	0.000E+00	4.916E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.265E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH8	Emission Rate	lb/day		0.001												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH8	REER	(g/s)/(µg/m³)	8.365E-05	4.163E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.547E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.446E-07	4.141E-05	0.000E+00	1.627E-09	6.071E-08	0.000E+00	0.000E+00	0.000E+00	5.471E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.521E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH9	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH9	REER	(g/s)/(µg/m³)	1.692E-05	8.422E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.729E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.993E-07	8.377E-05	0.000E+00	3.292E-10	1.228E-08	0.000E+00	0.000E+00	0.000E+00	1.107E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.090E-10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH4	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH4	REER	(g/s)/(µg/m³)	1.343E-04	6.683E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.372E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.136E-07	6.648E-05	0.000E+00	2.612E-09	9.746E-08	0.000E+00	0.000E+00	0.000E+00	8.783E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.040E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH22	Emission Rate	lb/day		0.003												0.000					0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH22	REER	(g/s)/(µg/m³)	1.321E-04	6.574E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.349E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.019E-07	6.539E-05	0.000E+00	2.569E-09	9.588E-08	0.000E+00	0.000E+00	0.000E+00	8.639E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.980E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH20	Emission Rate	lb/day		0.000												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH20	REER	(g/s)/(µg/m³)	6.913E-07	3.441E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.063E-10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.674E-09	3.423E-07	0.000E+00	1.345E-11	5.018E-10	0.000E+00	0.000E+00	0.000E+00	4.522E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.083E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH26	Emission Rate	lb/day		0.001												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								0.000							
BH26	REER	(g/s)/(µg/m³)	1.932E-04	3.922E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.607E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.462E-07	1.539E-04	0.000E+00	6.000E-09	9.286E-08	0.000E+00	0.000E+00	0.000E+00	9.000E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH15	Emission Rate	lb/day		0.000												0.000

Table A-2. Emission Rates and REER Calculations - Resident Chronic Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (mixture, including m-xylene, o-xylene, p-xylene	18540-29-9
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether	Chromium VI, chromate and dichromate particulate	
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.004	0.400	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BH2	Emission Rate	lb/yr		0.040												0.003
BH2	REER	(g/s)/(µg/m³)	1.707E-02	1.512E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.808E-04
BH1	Emission Rate	lb/yr		0.232												0.032
BH1	REER	(g/s)/(µg/m³)	4.671E-02	7.228E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.428E-03
Vent8_1	Emission Rate	lb/yr		0.220	0.250	0.190		1.421	1.189	24.474	11.500	0.930			0.530	0.003
Vent8_1	REER	(g/s)/(µg/m³)	1.209E-02	8.644E-04	1.047E-05	0.000E+00	0.000E+00	6.192E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.135E-03
Vent8_2	Emission Rate	lb/yr		0.220	0.250	0.190		1.421	1.189	24.474	11.500	0.930			0.530	0.003
Vent8_2	REER	(g/s)/(µg/m³)	1.107E-02	8.508E-04	1.047E-05	0.000E+00	0.000E+00	6.192E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.260E-04
Vent8_3	Emission Rate	lb/yr		0.220	0.250	0.190		1.421	1.189	24.474	11.500	0.930			0.530	0.003
Vent8_3	REER	(g/s)/(µg/m³)	1.107E-02	8.508E-04	1.047E-05	0.000E+00	0.000E+00	6.192E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.260E-04
Vent8_4	Emission Rate	lb/yr		0.220	0.250	0.190		1.421	1.189	24.474	11.500	0.930			0.530	0.003
Vent8_4	REER	(g/s)/(µg/m³)	1.107E-02	8.508E-04	1.047E-05	0.000E+00	0.000E+00	6.192E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.260E-04
Vent8_5	Emission Rate	lb/yr		0.220	0.250	0.190		1.421	1.189	24.474	11.500	0.930			0.530	0.003
Vent8_5	REER	(g/s)/(µg/m³)	1.107E-02	8.508E-04	1.047E-05	0.000E+00	0.000E+00	6.192E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.260E-04
Vent11_1	Emission Rate	lb/yr		1.728												0.022
Vent11_1	REER	(g/s)/(µg/m³)	1.667E-02	6.541E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.013E-02
Vent11_2	Emission Rate	lb/yr		1.728												0.022
Vent11_2	REER	(g/s)/(µg/m³)	1.667E-02	6.541E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.013E-02
Vent11_3	Emission Rate	lb/yr		2.013												0.260
Vent11_3	REER	(g/s)/(µg/m³)	1.970E-02	1.055E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.686E-03
Vent11_4	Emission Rate	lb/yr		2.013	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.260
Vent11_4	REER	(g/s)/(µg/m³)	1.491E-02	1.055E-02	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.696E-02
Vent11_5	Emission Rate	lb/yr		6.537	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.054
Vent11_5	REER	(g/s)/(µg/m³)	3.465E-01	2.474E-03	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.802E-03
Vent11_6	Emission Rate	lb/yr		6.540	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.057
Vent11_6	REER	(g/s)/(µg/m³)	1.066E-01	3.367E-02	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.126E-02
Vent11_7	Emission Rate	lb/yr		8.540	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.057
Vent11_7	REER	(g/s)/(µg/m³)	1.066E-01	3.367E-02	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.126E-02
Vent11_8	Emission Rate	lb/yr		17.040	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.057
Vent11_8	REER	(g/s)/(µg/m³)	1.333E-01	6.743E-02	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.443E-02
Vent11_9	Emission Rate	lb/yr		2.560	5.157	1.200		0.013	1.286	117.660	16.990	10.531			33.362	0.054
Vent11_9	REER	(g/s)/(µg/m³)	7.707E-02	1.121E-02	1.054E-04	0.000E+00	0.000E+00	3.844E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.517E-02
BH3	Emission Rate	lb/yr		1.152												0.004
BH3	REER	(g/s)/(µg/m³)	8.108E-03	5.041E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.903E-03
BH5	Emission Rate	lb/yr		1.368												0.004
BH5	REER	(g/s)/(µg/m³)	8.327E-03	5.178E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.954E-03
BH17	Emission Rate	lb/yr		0.360												0.003
BH17	REER	(g/s)/(µg/m³)	2.191E-03	1.363E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.143E-04
BH6	Emission Rate	lb/yr		0.037												0.000
BH6	REER	(g/s)/(µg/m³)	2.256E-04	1.403E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.294E-05
BH8	Emission Rate	lb/yr		0.410												0.003
BH8	REER	(g/s)/(µg/m³)	2.519E-03	1.561E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.892E-04
BH9	Emission Rate	lb/yr		0.083												0.000
BH9	REER	(g/s)/(µg/m³)	5.079E-04	3.158E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.192E-04
BH4	Emission Rate	lb/yr		0.054												0.000
BH4	REER	(g/s)/(µg/m³)	4.030E-03	2.506E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.458E-04
BH22	Emission Rate	lb/yr		0.051												0.000
BH22	REER	(g/s)/(µg/m³)	3.964E-03	2.465E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.303E-04
BH20	Emission Rate	lb/yr		0.004												0.000
BH20	REER	(g/s)/(µg/m³)	2.075E-05	1.290E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.869E-06
BH26	Emission Rate	lb/yr		0.380												0.000
BH26	REER	(g/s)/(µg/m³)	2.047E-03	1.470E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.548E-05
BH15	Emission Rate	lb/yr		0.180												0.000
BH15	REER	(g/s)/(µg/m³)	1.138E-02	4.031E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.359E-03
BH7	Emission Rate	lb/yr														0.011
BH7	REER	(g/s)/(µg/m³)	6.394E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.003E-03
BH24	Emission Rate	lb/yr														0.000
BH24	REER	(g/s)/(µg/m³)	3.837E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.002E-02
BH16	Emission Rate	lb/yr														0.001
BH16	REER	(g/s)/(µg/m³)	6.394E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.003E-04
BH13	Emission Rate	lb/yr														0.000
BH13	REER	(g/s)/(µg/m³)	4.196E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.283E-05
BH10	Emission Rate	lb/yr														0.000
BH10	REER	(g/s)/(µg/m³)	4.982E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.705E-03
RC18	Emission Rate	lb/yr														0.000
RC18	REER	(g/s)/(µg/m³)	1.308E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.679E-05
Fug01	Emission Rate	lb/yr		0.000										1670.760		
Fug01	REER	(g/s)/(µg/m³)	1.682E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug05	Emission Rate	lb/yr				76.770			22.980	1.280	65.242	1356.174	89.473	33.250		56.880
Fug05	REER	(g/s)/(µg/m³)	2.565E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.749E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug07	Emission Rate	lb/yr			0.124	118.163	89.273						0.840			76.553
Fug07	REER	(g/s)/(µg/m³)	4.465E-06	0.000E+00	4.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug07N	Emission Rate	lb/yr			12.023				6.600				18.150	34.100		0.203
Fug07N	REER	(g/s)/(µg/m³)	5.214E-04	0.000E+00	4.565E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.675E-05
Fug15	Emission Rate	lb/yr		0.000												
Fug15	REER	(g/s)/(µg/m³)	1.728E-07	1.728E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TEU	Parameter	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2
		Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)
Exposure Scenario-specific RBC	(µg/m³)	0.091	0.170	0.000	0.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BH2	Emission Rate					2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.170	0.000
BH2	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.687E-02	0.000E+00	7.331E-05	0.000E+00	0.000E+00	1.687E-02	0.000E+00	7.331E-05	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate					0.131	0.012	2.271	0.000	0.000	0.013	0.000	0.000	0.000	0.270	0.020
BH1	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.163E-02	6.655E-05	1.087E-05	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate		7.297	1.850	86.261	0.037	0.791	59.528				0.000			0.270	0.363
Vent8_1	REER	0.000E+00	6.997E-04	0.000E+00	9.544E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_2	Emission Rate		7.297	1.850	86.261	0.037	0.190	16.934				0.000			0.270	0.363
Vent8_2	REER	0.000E+00	6.997E-04	0.000E+00	9.544E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_3	Emission Rate		7.297	1.850	86.261	0.037	0.190	16.934				0.000			0.270	0.363
Vent8_3	REER	0.000E+00	6.997E-04	0.000E+00	9.544E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_4	Emission Rate		7.297	1.850	86.261	0.037	0.190	16.934				0.000			0.270	0.363
Vent8_4	REER	0.000E+00	6.997E-04	0.000E+00	9.544E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_5	Emission Rate		7.297	1.850	86.261	0.037	0.190	16.934				0.000			0.270	0.363
Vent8_5	REER	0.000E+00	6.997E-04	0.000E+00	9.544E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_1	Emission Rate					7.394	7.314	993.537				0.000			0.073	
Vent11_1	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate					7.394	7.314	993.537				0.000			0.073	
Vent11_2	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate					7.394	1.407	200.531				0.000			0.073	
Vent11_3	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate		15.630	11.520	293.928	2.394	1.407	200.531				0.000			0.073	2.255
Vent11_4	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_5	Emission Rate		15.630	11.520	293.928	2.394	1.157	249.615				0.000			0.073	2.255
Vent11_5	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_6	Emission Rate		15.630	11.520	293.928	2.394	2.224	223.783				0.000			0.073	2.255
Vent11_6	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_7	Emission Rate		15.630	11.520	293.928	2.394	2.224	223.783				0.000			0.073	2.255
Vent11_7	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_8	Emission Rate		15.630	11.520	293.928	2.394	1.123	0.000				0.000			0.073	2.255
Vent11_8	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_9	Emission Rate		15.630	11.520	293.928	2.394	1.399	113.122				0.000			0.073	2.255
Vent11_9	REER	0.000E+00	1.322E-03	0.000E+00	3.242E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH3	Emission Rate					0.013	0.002	1.087	0.000	0.000	0.002	0.000	0.000		0.000	
BH3	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.164E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH5	Emission Rate					0.013	2.041	0.000	0.000	0.002	0.000	0.000			0.000	
BH5	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.195E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH17	Emission Rate					0.000	0.037	0.000	0.000	0.000	0.000	0.000			0.000	
BH17	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.146E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH6	Emission Rate					0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.000		0.000	
BH6	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.239E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH8	Emission Rate					0.000	0.061	0.416	0.000	0.000	0.000	0.000			0.000	
BH8	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.604E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH9	Emission Rate					0.000	0.124	0.000	0.000	0.000	0.000	0.000			0.000	
BH9	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.291E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH4	Emission Rate					0.000	0.003	0.000	0.000	0.000	0.000	0.000			0.000	
BH4	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.785E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH22	Emission Rate					0.000	0.071	0.000	0.000	0.000	0.003	0.000	0.000		0.000	
BH22	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.691E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH20	Emission Rate					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	
BH20	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.979E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH26	Emission Rate					0.000	2.298	0.000	0.000	0.000	0.003	0.000	0.000		0.000	
BH26	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.513E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH15	Emission Rate					0.000	5.629	0.000	0.000	0.000	0.000	0.000			0.000	
BH15	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.616E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH7	Emission Rate					0.001			0.000		0.002	0.000				
BH7	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.392E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH24	Emission Rate					0.000	0.014	0.000			0.000					
BH24	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.345E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH16	Emission Rate					0.000	0.000	0.000			0.000					
BH16	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.392E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH13	Emission Rate					0.000	0.000	0.000			0.000					
BH13	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.132E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH10	Emission Rate					0.003			0.000		0.003		0.000			
BH10	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.197E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RC18	Emission Rate					0.000			0.000		0.000					
RC18	REER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.002E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug01	Emission Rate					0.000		0.015						0.000	0.000	0.000
Fug01

Table A-3. Emission Rates and REER Calculations - Resident Chronic Non-Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (mixture, including m-xylene, o-xylene, p-xylene	18540-29-9
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether	Xylene (mixture), including m-xylene, o-xylene, p-xylene	Chromium VI, chromite and chromate particulate
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.014	260.000	1000.000	0.000	2.000	0.350	5000.000	200.000	700.000	6000.000	82.000	220.000	0.003
BH2	Emission Rate	lb/yr		0.040												0.003
BH2	REER	(g/s)/(µg/m³)	4.165E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.916E-07
BH1	Emission Rate	lb/yr		9.281												0.031
BH1	REER	(g/s)/(µg/m³)	5.077E-03	1.969E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.332E-05
Vent8_1	Emission Rate	lb/yr		0.228	0.293	0.194		1.643	1.189	24.474	11.500	0.939			8.530	0.003
Vent8_1	REER	(g/s)/(µg/m³)	9.489E-02	2.346E-04	1.651E-05	2.793E-05	0.000E+00	1.022E-05	4.872E-05	7.040E-06	8.314E-07	1.929E-06	0.000E+00	0.000E+00	5.616E-07	4.238E-07
Vent8_2	Emission Rate	lb/yr		0.228	0.293	0.194		1.643	1.189	24.474	11.500	0.939			8.530	0.003
Vent8_2	REER	(g/s)/(µg/m³)	3.934E-03	2.309E-04	1.651E-05	2.793E-05	0.000E+00	1.022E-05	4.872E-05	7.040E-06	8.314E-07	1.929E-06	0.000E+00	0.000E+00	5.616E-07	4.205E-06
Vent8_3	Emission Rate	lb/yr		0.228	0.293	0.194		1.643	1.189	24.474	11.500	0.939			8.530	0.003
Vent8_3	REER	(g/s)/(µg/m³)	3.934E-03	2.309E-04	1.651E-05	2.793E-05	0.000E+00	1.022E-05	4.872E-05	7.040E-06	8.314E-07	1.929E-06	0.000E+00	0.000E+00	5.616E-07	4.205E-06
Vent8_4	Emission Rate	lb/yr		0.228	0.293	0.194		1.643	1.189	24.474	11.500	0.939			8.530	0.003
Vent8_4	REER	(g/s)/(µg/m³)	3.934E-03	2.309E-04	1.651E-05	2.793E-05	0.000E+00	1.022E-05	4.872E-05	7.040E-06	8.314E-07	1.929E-06	0.000E+00	0.000E+00	5.616E-07	4.205E-06
Vent8_5	Emission Rate	lb/yr		0.228	0.293	0.194		1.643	1.189	24.474	11.500	0.939			8.530	0.003
Vent8_5	REER	(g/s)/(µg/m³)	3.934E-03	2.309E-04	1.651E-05	2.793E-05	0.000E+00	1.022E-05	4.872E-05	7.040E-06	8.314E-07	1.929E-06	0.000E+00	0.000E+00	5.616E-07	4.205E-06
Vent11_1	Emission Rate	lb/yr		1.726												0.022
Vent11_1	REER	(g/s)/(µg/m³)	1.613E-01	1.775E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.784E-06
Vent11_2	Emission Rate	lb/yr		1.726												0.022
Vent11_2	REER	(g/s)/(µg/m³)	1.613E-01	1.775E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.784E-06
Vent11_3	Emission Rate	lb/yr		2.813												0.200
Vent11_3	REER	(g/s)/(µg/m³)	3.519E-02	2.890E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.621E-05
Vent11_4	Emission Rate	lb/yr		2.813	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.200
Vent11_4	REER	(g/s)/(µg/m³)	3.735E-02	2.890E-03	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	3.621E-05
Vent11_5	Emission Rate	lb/yr		6.537	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.054
Vent11_5	REER	(g/s)/(µg/m³)	6.537E-02	6.716E-03	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	1.047E-04
Vent11_6	Emission Rate	lb/yr		9.948	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.054
Vent11_6	REER	(g/s)/(µg/m³)	4.735E-02	9.193E-03	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	1.168E-05
Vent11_7	Emission Rate	lb/yr		9.948	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.054
Vent11_7	REER	(g/s)/(µg/m³)	4.735E-02	9.193E-03	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	1.168E-05
Vent11_8	Emission Rate	lb/yr		17.034	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.054
Vent11_8	REER	(g/s)/(µg/m³)	4.022E-02	1.839E-02	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	9.123E-06
Vent11_9	Emission Rate	lb/yr		2.960	5.157	1.200		0.819	1.288	117.660	16.990	10.515			33.362	0.054
Vent11_9	REER	(g/s)/(µg/m³)	2.350E-02	3.041E-03	2.853E-07	1.734E-08	0.000E+00	6.342E-05	5.283E-05	3.379E-07	1.222E-06	2.161E-07	0.000E+00	0.000E+00	2.181E-06	9.481E-06
BH3	Emission Rate	lb/yr		1.152												0.004
BH3	REER	(g/s)/(µg/m³)	1.852E-03	1.368E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.107E-07
BH5	Emission Rate	lb/yr		1.368												0.004
BH5	REER	(g/s)/(µg/m³)	1.902E-03	1.405E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.299E-07
BH17	Emission Rate	lb/yr		0.360												0.003
BH17	REER	(g/s)/(µg/m³)	5.005E-04	3.698E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.921E-07
BH6	Emission Rate	lb/yr		0.037												0.000
BH6	REER	(g/s)/(µg/m³)	5.153E-05	3.807E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.977E-08
BH8	Emission Rate	lb/yr		5.418												0.040
BH8	REER	(g/s)/(µg/m³)	5.734E-04	4.237E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.201E-07
BH9	Emission Rate	lb/yr		0.083												0.000
BH9	REER	(g/s)/(µg/m³)	1.160E-04	8.571E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.452E-08
BH4	Emission Rate	lb/yr		6.051												0.000
BH4	REER	(g/s)/(µg/m³)	9.205E-04	6.891E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.532E-07
BH22	Emission Rate	lb/yr		0.053												0.000
BH22	REER	(g/s)/(µg/m³)	9.054E-04	6.685E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.475E-07
BH20	Emission Rate	lb/yr		0.004												0.000
BH20	REER	(g/s)/(µg/m³)	4.739E-06	3.501E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.819E-10
BH26	Emission Rate	lb/yr		0.380												0.000
BH26	REER	(g/s)/(µg/m³)	8.423E-04	3.991E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.517E-08
BH15	Emission Rate	lb/yr		1.196												0.000
BH15	REER	(g/s)/(µg/m³)	2.372E-03	1.096E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.876E-07
BH7	Emission Rate	lb/yr		0.000												0.011
BH7	REER	(g/s)/(µg/m³)	1.985E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.868E-06
BH24	Emission Rate	lb/yr		0.000												0.000
BH24	REER	(g/s)/(µg/m³)	1.191E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.121E-05
BH16	Emission Rate	lb/yr		0.000												0.001
BH16	REER	(g/s)/(µg/m³)	1.985E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.868E-07
BH13	Emission Rate	lb/yr		0.000												0.000
BH13	REER	(g/s)/(µg/m³)	1.302E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.226E-08
BH10	Emission Rate	lb/yr		0.000												0.000
BH10	REER	(g/s)/(µg/m³)	3.115E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.010E-06
BC18	Emission Rate	lb/yr		0.000												0.000
BC18	REER	(g/s)/(µg/m³)	4.202E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.031E-09
Fug01	Emission Rate	lb/yr		0.000										1670.760		
Fug01	REER	(g/s)/(µg/m³)	3.015E-04	4.566E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.931E-04	0.000E+00	0.000E+00
Fug05	Emission Rate	lb/yr					76.773		22.980		1.280	65.242	1356.174	89.473	33.250	56.600
Fug05	REER	(g/s)/(µg/m³)	1.526E-03	0.000E+00	0.000E+00	1.104E-06	0.000E+00	1.609E-03	5.283E-05	1.677E-07	1.084E-04	1.838E-06	7.971E-05	0.000E+00	3.720E-06	0.000E+00
Fug07	Emission Rate	lb/yr			0.124	118.163	69.273					0.840			76.553	
Fug07	REER	(g/s)/(µg/m³)	7.247E-03	0.000E+00	6.979E-06	1.585E-06	7.240E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.726E-06	0.000E+00	0.000E+00	5.005E-06	0.000E+00
Fug07N	Emission Rate	lb/yr			12.303					6.600				18.150	34.100	
Fug07N	REER	(g/s)/(µg/m³)	2.521E-04	0.000E+00	7.143E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.752E-06	0.000E+00	0.000E+00	0.000E+00	1.789E-06	2.222E-06	0.000E+00
Fug15	Emission Rate	lb/yr		0.000												
Fug15	REER	(g/s)/(µg/m³)	1.188E-06	4.660E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TEU	Parameter	Units	All Compounds	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
				Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,3,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.021	9.000	31000.000	3.000	5.000	0.150	0.090	0.077	0.300	0.030	0.000	0.007	0.095	0.100	0.100	90.000	0.800	140.000	600.000	800.000	7.000	500.000	0.000	2.000	30000.000	5000.000	3.700	60.000	200.000
BH2	Emission Rate	lb/yr						2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.179	0.000								0.120							
BH2	REER	(g/s)/(µg/m³)	4.165E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.344E-06	1.463E-06	6.147E-04	3.552E-07	1.737E-06	2.381E-03	0.000E+00	8.211E-06	2.545E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/yr						0.131	0.012	2.273	0.000	0.018	0.013	0.000	0.002	0.240	0.270	0.020								0.000							
BH1	REER	(g/s)/(µg/m³)	5.077E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.425E-06	1.660E-06	1.194E-03	7.750E-05	1.795E-05	4.465E-03	3.993E-06	2.122E-05	4.415E-07	0.000E+00	2.858E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/yr				7.207	1.850	50.523											0.273	0.363	7.580	1.250	0.239		1.609	0.342			0.180	0.213		5423.232
Vent8_1	REER	(g/s)/(µg/m³)	9.489E-02	5.995E-05	0.000E+00	1.152E-05	6.610E-10	4.136E-04	1.670E-07	6.725E-05	8.075E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-05	5.895E-08	1.363E-04	0.000E+00	3.009E-08	4.138E-08	0.000E+00	4.629E-08	0.000E+00	5.999E-05	0.000E+00	5.172E-10	8.238E-07	0.000E+00	3.900E-04
Vent8_2	Emission Rate	lb/yr				7.207	1.850	50.523											0.273	0.363	7.580	1.250	0.239		1.609	0.342			0.180	0.213		5423.232
Vent8_2	REER	(g/s)/(µg/m³)	3.934E-03	5.995E-05	0.000E+00	1.152E-05	6.610E-10	4.136E-04	1.670E-07	6.725E-05	8.075E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-05	5.895E-08	1.363E-04	0.000E+00	3.009E-08	4.138E-08	0.000E+00	4.629E-08	0.000E+00	5.999E-05	0.000E+00	5.172E-10	8.238E-07	0.000E+00	3.900E-04
Vent8_3	Emission Rate	lb/yr				7.207	1.850	50.523											0.273	0.363	7.580	1.250	0.239		1.609	0.342			0.180	0.213		5423.232
Vent8_3	REER	(g/s)/(µg/m³)	3.934E-03	5.995E-05	0.000E+00	1.152E-05	6.610E-10	4.136E-04	1.670E-07	6.725E-05	8.075E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-05	5.895E-08	1.363E-04	0.000E+00	3.009E-08	4.138E-08	0.000E+00	4.629E-08	0.000E+00	5.999E-05	0.000E+00	5.172E-10	8.238E-07	0.000E+00	3.900E-04
Vent8_4	Emission Rate	lb/yr				7.207	1.850	50.523											0.273	0.363	7.580	1.250	0.239		1.609	0.342			0.180	0.213		5423.232
Vent8_4	REER	(g/s)/(µg/m³)	3.934E-03	5.995E-05	0.000E+00	1.152E-05	6.610E-10	4.136E-04	1.670E-07	6.725E-05	8.075E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-05	5.895E-08	1.363E-04	0.000E+00	3.009E-08	4.138E-08	0.000E+00	4.629E-08	0.000E+00	5.999E-05	0.000E+00	5.172E-10	8.238E-07	0.000E+00	3.900E-04
Vent8_5	Emission Rate	lb/yr				7.207	1.850	50.523											0.273	0.363	7.580	1.250	0.239		1.609	0.342			0.180	0.213		5423.232
Vent8_5	REER	(g/s)/(µg/m³)	3.934E-03	5.995E-05	0.000E+00	1.152E-05	6.610E-10	4.136E-04	1.670E-07	6.725E-05	8.075E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-05	5.895E-08	1.363E-04	0.000E+00	3.009E-08	4.138E-08	0.000E+00	4.629E-08	0.000E+00	5.999E-05	0.000E+00	5.172E-10	8.238E-07	0.000E+00	3.900E-04
Vent11_1	Emission Rate	lb/yr						7.394	7.314	993.537																							
Vent11_1	REER	(g/s)/(µg/m³)	1.613E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.888E-06	7.013E-04	1.508E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/yr						7.394	7.314	993.537									0.073														
Vent11_2	REER	(g/s)/(µg/m³)	1.613E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.888E-06	7.013E-04	1.508E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/yr						7.394	1.487	200.931									0.073														
Vent11_3	REER	(g/s)/(µg/m³)	3.519E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.888E-06	1.348E-04	3.211E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/yr						7.394	1.487	200.931									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_4	REER	(g/s)/(µg/m³)	3.735E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	1.348E-04	3.211E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
Vent11_5	Emission Rate	lb/yr						7.394	1.487	200.931									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_5	REER	(g/s)/(µg/m³)	6.537E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	4.945E-04	1.507E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
Vent11_6	Emission Rate	lb/yr						7.394	2.224	223.783									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_6	REER	(g/s)/(µg/m³)	4.735E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	2.132E-04	3.575E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
Vent11_7	Emission Rate	lb/yr						7.394	2.224	223.783									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_7	REER	(g/s)/(µg/m³)	4.735E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	2.132E-04	3.575E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
Vent11_8	Emission Rate	lb/yr						7.394	1.123	113.192									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_8	REER	(g/s)/(µg/m³)	4.022E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	1.083E-04	2.762E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
Vent11_9	Emission Rate	lb/yr						7.394	1.990	113.192									0.073	2.255	7.580	46.214	7.792	1.429	1.058		8.411		1.116	4.516		5423.232
Vent11_9	REER	(g/s)/(µg/m³)	2.350E-02	0.000E+00	2.498E-05	5.345E-09	1.405E-03	6.888E-06	1.314E-04	1.815E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.115E-05	3.664E-07	1.384E-04	4.748E-06	1.868E-07	2.569E-08	0.000E+00	4.769E-08	0.000E+00	6.049E-05	0.000E+00	1.211E-09	1.755E-05	0.000E+00	3.900E-04
BH3	Emission Rate	lb/yr						0.011	1.002	0.000			0.002		0.000																		
BH3	REER	(g/s)/(µg/m³)	1.852E-03	0.000E+00	0.000E+00	0.000E+00	0.000E

Table A-4. Emission Rates and REER Calculations - Non-Resident Child Chronic Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (mixture, including m-xylene, o-xylene, p-xylene	18540-29-9	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether		Chromium VI, chromite and dichromate particulate	Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,2,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	n/a	9.100	10.000	0.000	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	2.400	4.300	0.000	3.300	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011	0.014	0.000	0.000	0.000	0.000	12.000	629.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BH2	Emission Rate	lb/yr		0.040												0.003					2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.170	0.000								0.120						
BH2	REER	(g/s)/(µg/m³)	3.666E-04	5.747E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.655E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.114E-04	0.000E+00	2.932E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/yr		0.031												0.013					0.131	0.012	2.271	0.000	0.001	0.053	0.000	0.243	0.000	0.270	0.420								0.000						
BH1	REER	(g/s)/(µg/m³)	1.466E-03	2.747E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.511E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.830E-04	2.541E-05	7.947E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/yr		0.220	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002		7.287	1.850	86.261	0.037	0.191	16.934			0.000						0.275	0.363	7.580		1.250	0.239		1.609		8.347		0.189	0.213		5423.232
Vent8_1	REER	(g/s)/(µg/m³)	5.288E-04	3.285E-05	4.190E-07	0.000E+00	0.000E+00	2.376E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.764E-05	0.000E+00	2.411E-05	0.000E+00	3.760E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.912E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.907E-05	0.000E+00	0.000E+00
Vent8_2	Emission Rate	lb/yr		0.220	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002		7.287	1.850	86.261	0.037	0.191	16.934			0.000						0.275	0.363	7.580		1.250	0.239		1.609		8.347		0.189	0.213		5423.232
Vent8_2	REER	(g/s)/(µg/m³)	4.601E-04	3.223E-05	4.190E-07	0.000E+00	0.000E+00	2.376E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.518E-05	0.000E+00	2.411E-05	0.000E+00	3.760E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.912E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.907E-05	0.000E+00	0.000E+00
Vent8_3	Emission Rate	lb/yr		0.220	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002		7.287	1.850	86.261	0.037	0.191	16.934			0.000						0.275	0.363	7.580		1.250	0.239		1.609		8.347		0.189	0.213		5423.232
Vent8_3	REER	(g/s)/(µg/m³)	4.601E-04	3.223E-05	4.190E-07	0.000E+00	0.000E+00	2.376E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.518E-05	0.000E+00	2.411E-05	0.000E+00	3.760E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.912E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.907E-05	0.000E+00	0.000E+00
Vent8_4	Emission Rate	lb/yr		0.220	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002		7.287	1.850	86.261	0.037	0.191	16.934			0.000						0.275	0.363	7.580		1.250	0.239		1.609		8.347		0.189	0.213		5423.232
Vent8_4	REER	(g/s)/(µg/m³)	4.601E-04	3.223E-05	4.190E-07	0.000E+00	0.000E+00	2.376E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.518E-05	0.000E+00	2.411E-05	0.000E+00	3.760E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.912E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.907E-05	0.000E+00	0.000E+00
Vent8_5	Emission Rate	lb/yr		0.220	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002		7.287	1.850	86.261	0.037	0.191	16.934			0.000						0.275	0.363	7.580		1.250	0.239		1.609		8.347		0.189	0.213		5423.232
Vent8_5	REER	(g/s)/(µg/m³)	4.601E-04	3.223E-05	4.190E-07	0.000E+00	0.000E+00	2.376E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.518E-05	0.000E+00	2.411E-05	0.000E+00	3.760E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.912E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.907E-05	0.000E+00	0.000E+00
Vent11_1	Emission Rate	lb/yr		1.726												0.022					2.394	7.314	993.537			0.000						0.073														
Vent11_1	REER	(g/s)/(µg/m³)	8.525E-04	2.455E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.939E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/yr		1.726												0.022					2.394	7.314	993.537			0.000						0.073														
Vent11_2	REER	(g/s)/(µg/m³)	8.525E-04	2.455E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.939E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/yr		2.013												0.200					2.394	1.407	200.531			0.000						0.073														
Vent11_3	REER	(g/s)/(µg/m³)	6.185E-03	4.046E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.288E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/yr		2.013	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.200		15.630	11.520	293.926	2.394	1.407	200.531			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_4	REER	(g/s)/(µg/m³)	7.818E-03	4.046E-04	4.410E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.780E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
Vent11_5	Emission Rate	lb/yr		6.537	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.054		15.630	11.520	293.926	2.394	1.157	249.615			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_5	REER	(g/s)/(µg/m³)	3.932E-03	7.418E-05	4.410E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.671E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
Vent11_6	Emission Rate	lb/yr		6.540	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.057		15.630	11.520	293.926	2.394	2.224	223.783			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_6	REER	(g/s)/(µg/m³)	4.778E-03	1.267E-03	7.418E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.864E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
Vent11_7	Emission Rate	lb/yr		8.540	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.057		15.630	11.520	293.926	2.394	2.224	223.783			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_7	REER	(g/s)/(µg/m³)	4.778E-03	1.267E-03	7.418E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.864E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
Vent11_8	Emission Rate	lb/yr		17.014	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.057		15.630	11.520	293.926	2.394	1.123	223.783			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_8	REER	(g/s)/(µg/m³)	5.644E-03	2.563E-03	7.418E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.456E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
Vent11_9	Emission Rate	lb/yr		2.960	5.157	1.200		0.819	1.280	117.660	10.990	10.531			33.362	0.054		15.630	11.520	293.926	2.394	1.990	113.122			0.000						0.073	2.255	7.690	46.214	7.792	1.629		1.658		8.411		1.110	4.516		5423.232
Vent11_9	REER	(g/s)/(µg/m³)	3.552E-03	4.258E-04	7.418E-06	0.000E+00	0.000E+00	1.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.501E-03	0.000E+00	5.222E-05	0.000E+00	1.277E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.539E-05	1.888E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.544E-05	0.000E+00	0.000E+00
BH3	Emission Rate	lb/yr		1.152												0.004					0.011	1.087	0.000	0.000	0.000	0.002	0.000	0.000		0.000									0.001						
BH3	REER	(g/s)/(µg/m³)	3.265E-04	1.916E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.134E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.149E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH5	Emission Rate	lb/yr		1.360												0.004					0.011	2.041	0.000	0.000	0.000	0.002	0.000	0.000		0.000									0.001						
BH5	REER	(g/s)/(µg/m³)	3.353E-04	1.917E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.165E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.207E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH17	Emission Rate	lb/yr		9.360												0.003					0.003	0.003	0.037	0.000	0.000	0.000	0.000	0.000		0.000									0.000						
BH17	REER	(g/s)/(µg/m³)	8.824E-05	5.178E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.066E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.808E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH6	Emission Rate	lb/yr		0.037												0.000					0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.000		0.000									0.000						
BH6	REER	(g/s)/(µg/m³)	9.084E-06	5.330E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.156E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.979E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH8	Emission Rate	lb/yr		5.410												0.003					0.003	0.416	0.000	0.000	0.000	0.001	0.000	0.000		0.000									0.000						
BH8	REER	(g/s)/(µg/m³)	1.051E-03	5.931E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.512E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.654E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH9	Emission Rate	lb/yr		0.003												0.000					0.003	0.124	0.000	0.000	0.000	0.000	0.000	0.000		0.000									0.000						
BH9	REER	(g/s)/(µg/m³)	2.045E-05	1.206E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.105E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.349E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH4	Emission Rate	lb/yr		0.053												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000									0.000						
BH4	REER	(g/s)/(µg/m³)	1.623E-04	9.521E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.638E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.068E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH22	Emission Rate	lb/yr		0.053												0.002					0.005	0.971	0.000	0.000	0.000	0.003	0.000	0.000		0.043									0.000						
BH22	REER	(g/s)/(µg/m³)	1.596E-04	9.365E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.549E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.051E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH20	Emission Rate	lb/yr		0.200												0.000					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000									0.000						
BH20	REER	(g/s)/(µg/m³)	8.355E-07	4.902E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.903E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.499E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH26	Emission Rate	lb/yr		0.380												0.000					0.000	2.250	0.000	0.000	0.000	0.003	0.000	0.000		0.000									0.000						
BH26	REER	(g/s)/(µg/m³)	6.757E-05	3.587E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.519E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.018E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A-5. Emission Rates and REER Calculations - Non-Resident Child Chronic Non-Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (Xylene, including m-xylene, o-xylene, p-xylene	18540-29-9
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether		Chromium VI, chromate and dichromate particulate
	Exposure Scenario-specific RBC	(µg/m³)	n/a	9.062	1100.000	4400.000	0.350	0.800	1.500	22000.000	880.000	3100.000	26000.000	360.000	970.000	0.800
BH2	Emission Rate	lb/yr		0.040												0.003
BH2	REER	(g/s)/(µg/m³)	3.202E-04	9.272E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.751E-08
BH1	Emission Rate	lb/yr		9.192												0.031
BH1	REER	(g/s)/(µg/m³)	6.333E-04	4.439E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.929E-07
Vent8_1	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_1	REER	(g/s)/(µg/m³)	2.146E-02	5.298E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	3.997E-08
Vent8_2	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_2	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_3	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_3	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_4	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_4	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_5	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_5	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent11_1	Emission Rate	lb/yr		1.728												0.022
Vent11_1	REER	(g/s)/(µg/m³)	3.631E-02	4.009E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.569E-07
Vent11_2	Emission Rate	lb/yr		1.728												0.022
Vent11_2	REER	(g/s)/(µg/m³)	3.631E-02	4.009E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.569E-07
Vent11_3	Emission Rate	lb/yr		2.013												0.260
Vent11_3	REER	(g/s)/(µg/m³)	7.916E-03	6.526E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.416E-06
Vent11_4	Emission Rate	lb/yr		2.013	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.260
Vent11_4	REER	(g/s)/(µg/m³)	8.413E-03	6.526E-04	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	3.416E-06
Vent11_5	Emission Rate	lb/yr		6.513	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.054
Vent11_5	REER	(g/s)/(µg/m³)	1.471E-02	1.516E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	9.874E-06
Vent11_6	Emission Rate	lb/yr		6.948	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.057
Vent11_6	REER	(g/s)/(µg/m³)	1.067E-02	2.076E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	1.181E-05
Vent11_7	Emission Rate	lb/yr		9.948	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.057
Vent11_7	REER	(g/s)/(µg/m³)	1.067E-02	2.076E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	1.181E-05
Vent11_8	Emission Rate	lb/yr		17.010	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.200
Vent11_8	REER	(g/s)/(µg/m³)	1.087E-02	4.133E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	8.604E-07
Vent11_9	Emission Rate	lb/yr		2.960	5.157	1.200		0.013	1.288	117.666	16.990	10.531			33.362	0.054
Vent11_9	REER	(g/s)/(µg/m³)	5.317E-03	6.050E-04	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.223E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	8.867E-07
BH3	Emission Rate	lb/yr		1.152												0.004
BH3	REER	(g/s)/(µg/m³)	3.924E-04	3.090E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.703E-08
BH5	Emission Rate	lb/yr		1.368												0.004
BH5	REER	(g/s)/(µg/m³)	4.936E-04	3.173E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.855E-08
BH17	Emission Rate	lb/yr		9.360												0.003
BH17	REER	(g/s)/(µg/m³)	1.060E-04	8.351E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.812E-08
BH6	Emission Rate	lb/yr		0.037												0.000
BH6	REER	(g/s)/(µg/m³)	1.092E-05	8.197E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.865E-09
BH8	Emission Rate	lb/yr		0.410												0.000
BH8	REER	(g/s)/(µg/m³)	1.215E-04	9.567E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.075E-08
BH9	Emission Rate	lb/yr		0.003												0.000
BH9	REER	(g/s)/(µg/m³)	2.458E-05	1.935E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.199E-09
BH4	Emission Rate	lb/yr		0.053												0.000
BH4	REER	(g/s)/(µg/m³)	1.950E-04	1.536E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.322E-08
BH22	Emission Rate	lb/yr		0.053												0.002
BH22	REER	(g/s)/(µg/m³)	1.918E-04	1.511E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.277E-08
BH20	Emission Rate	lb/yr		0.004												0.000
BH20	REER	(g/s)/(µg/m³)	1.004E-06	7.906E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.715E-10
BH26	Emission Rate	lb/yr		0.380												0.000
BH26	REER	(g/s)/(µg/m³)	1.778E-04	9.012E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.977E-10
BH15	Emission Rate	lb/yr		2.100												0.000
BH15	REER	(g/s)/(µg/m³)	2.245E-04	2.478E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.788E-09
BH7	Emission Rate	lb/yr		0.000												0.011
BH7	REER	(g/s)/(µg/m³)	1.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.762E-07
BH24	Emission Rate	lb/yr		0.000												0.000
BH24	REER	(g/s)/(µg/m³)	8.474E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.057E-08
BH16	Emission Rate	lb/yr		0.000												0.000
BH16	REER	(g/s)/(µg/m³)	1.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.762E-07
BH13	Emission Rate	lb/yr		0.000												0.000
BH13	REER	(g/s)/(µg/m³)	9.268E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.157E-07
BH10	Emission Rate	lb/yr		0.000												0.000
BH10	REER	(g/s)/(µg/m³)	2.214E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.530E-08
RC18	Emission Rate	lb/yr		0.000												0.000
RC18	REER	(g/s)/(µg/m³)	3.047E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.802E-10
Fug01	Emission Rate	lb/yr		0.000										1670.760		
Fug01	REER	(g/s)/(µg/m³)	6.867E-05	1.031E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.675E-05	0.000E+00	0.000E+00
Fug05	Emission Rate	lb/yr		0.000			76.773		22.980	1.280	65.242	1356.174	89.473	33.250	56.880	
Fug05	REER	(g/s)/(µg/m³)	3.491E-04	0.000E+00	0.000E+00	2.510E-07	0.000E+00	3.656E-05	1.233E-05	4.265E-08	2.282E-05	4.151E-07	1.839E-05	0.000E+00	8.437E-07	0.000E+00
Fug07	Emission Rate	lb/yr			0.124	118.163	89.273						0.840		76.553	
Fug07	REER	(g/s)/(µg/m³)	1.056E-03	0.000E+00	1.624E-08	5.681E-07	1.655E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.897E-06	0.000E+00	0.000E+00	1.135E-06	0.000E+00
Fug07N	Emission Rate	lb/yr			12.023					6.000				18.150	34.100	
Fug07N	REER	(g/s)/(µg/m³)	5.763E-05	0.000E+00	1.030E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.982E-06	0.000E+00	0.000E+00	0.000E+00	4.055E-07	5.055E-07	0.000E+00
Fug15	Emission Rate	lb/yr		0.000												
Fug15	REER	(g/s)/(µg/m³)	2.057E-07	1.050E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TEU	Parameter	Units	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
			Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,2,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	0.092	48.000	140000.000	13.000	22.000	0.660	0.490	0.630	1.300	0.002	0.031	0.037	0.440	0.090	0.440	400.000	3.500	620.000	2600.000	3500.000	13.000	2200.000	0.800	0.800	130000.000	22000.000	16.000	260.000	880.000
BH2	Emission Rate	lb/yr					2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.179	0.000									0.126						
BH2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.642E-06	2.324E-07	1.383E-06	4.342E-08	4.008E-07	1.687E-04	0.000E+00	1.110E-06	5.784E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/yr					7.191	0.017	7.273	0.000	0.007	0.053	0.000	0.243	0.000	0.275	0.020									0.000						
BH1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.784E-07	3.785E-07	2.656E-04	9.479E-10	4.141E-07	3.163E-04	0.016E-07	3.007E-07	1.458E-07	0.000E+00	6.496E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/yr					0.037	0.190	10.024								0.275	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.432E-08	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_2	Emission Rate	lb/yr					0.037	0.190	10.024								0.275	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.432E-08	4.271E-05	5.787E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_3	Emission Rate	lb/yr					0.037	0.190	10.024								0.275	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.432E-08	4.271E-05	5.787E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_4	Emission Rate	lb/yr					0.037	0.190	10.024								0.275	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_4	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.432E-08	4.271E-05	5.787E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_5	Emission Rate	lb/yr					0.037	0.190	10.024								0.275	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_5	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.432E-08	4.271E-05	5.787E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent11_1	Emission Rate	lb/yr					7.394	7.314	993.937								0.073														
Vent11_1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	1.594E-04	3.574E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/yr					7.394	7.314	993.937								0.073														
Vent11_2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	1.594E-04	3.574E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/yr					7.394	1.407	200.931								0.073														
Vent11_3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	3.066E-05	7.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/yr					7.394	1.407	200.931								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_4	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	3.066E-05	7.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_5	Emission Rate	lb/yr					7.394	1.407	200.931								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_5	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	1.124E-04	1.257E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_6	Emission Rate	lb/yr					7.394	2.224	223.703								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_6	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	4.846E-05	8.04E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_7	Emission Rate	lb/yr					7.394	2.224	223.703								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_7	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	4.846E-05	8.04E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_8	Emission Rate	lb/yr					7.394	1.123	0.000								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_8	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	2.461E-05	6.21E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_9	Emission Rate	lb/yr					7.394	1.990	113.192								0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.516		5423.232
Vent11_9	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.565E-06	4.350E-05	4.085E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-06	0.108E-08	3.163E-05	1.072E-06	4.318E-05	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
BH3	Emission Rate	lb/yr					0.011	1.087	0.000			0.002	0.000	0.000			0.003									0.001						
BH3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.325E-07	7.145E-05	0.000E+00	2.888E-08	1.164E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.

Table A-6. Emission Rates and REER Calculations - Non-Resident Worker Chronic Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (mixture, including m-xylene, o-xylene, p-xylene	18540-29-9
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether		Chromium VI, chromate and dichromate particulate
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.040	4.000	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
BH2	Emission Rate	lb/yr		0.040												0.003
BH2	REER	(g/s)/(µg/m³)	0.958E-04	1.245E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.621E-05
BH1	Emission Rate	lb/yr		9.231												0.031
BH1	REER	(g/s)/(µg/m³)	1.734E-03	5.971E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.420E-04
Vent8_1	Emission Rate	lb/yr		0.225	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002
Vent8_1	REER	(g/s)/(µg/m³)	1.046E-02	7.141E-05	0.722E-07	0.000E+00	0.000E+00	5.108E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.517E-05
Vent8_2	Emission Rate	lb/yr		0.225	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002
Vent8_2	REER	(g/s)/(µg/m³)	1.014E-02	7.028E-05	0.722E-07	0.000E+00	0.000E+00	5.108E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.505E-05
Vent8_3	Emission Rate	lb/yr		0.225	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002
Vent8_3	REER	(g/s)/(µg/m³)	1.014E-02	7.028E-05	0.722E-07	0.000E+00	0.000E+00	5.108E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.505E-05
Vent8_4	Emission Rate	lb/yr		0.225	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002
Vent8_4	REER	(g/s)/(µg/m³)	1.014E-02	7.028E-05	0.722E-07	0.000E+00	0.000E+00	5.108E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.505E-05
Vent8_5	Emission Rate	lb/yr		0.225	0.293	0.194		1.421	1.189	24.474	11.560	0.939			0.550	0.002
Vent8_5	REER	(g/s)/(µg/m³)	1.014E-02	7.028E-05	0.722E-07	0.000E+00	0.000E+00	5.108E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.505E-05
Vent11_1	Emission Rate	lb/yr		1.728												0.022
Vent11_1	REER	(g/s)/(µg/m³)	8.544E-04	5.403E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.141E-04
Vent11_2	Emission Rate	lb/yr		1.728												0.022
Vent11_2	REER	(g/s)/(µg/m³)	8.544E-04	5.403E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.141E-04
Vent11_3	Emission Rate	lb/yr		2.013												0.260
Vent11_3	REER	(g/s)/(µg/m³)	3.885E-03	8.706E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.406E-03
Vent11_4	Emission Rate	lb/yr		2.013	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.260
Vent11_4	REER	(g/s)/(µg/m³)	7.446E-03	8.706E-04	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.406E-03
Vent11_5	Emission Rate	lb/yr		6.537	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.054
Vent11_5	REER	(g/s)/(µg/m³)	1.429E-02	2.044E-03	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.669E-03
Vent11_6	Emission Rate	lb/yr		9.948	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.007
Vent11_6	REER	(g/s)/(µg/m³)	7.328E-03	2.798E-03	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.691E-04
Vent11_7	Emission Rate	lb/yr		9.948	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.007
Vent11_7	REER	(g/s)/(µg/m³)	7.328E-03	2.798E-03	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.691E-04
Vent11_8	Emission Rate	lb/yr		17.010	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.007
Vent11_8	REER	(g/s)/(µg/m³)	9.889E-03	5.571E-03	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.572E-04
Vent11_9	Emission Rate	lb/yr		2.960	5.157	1.200		0.819	1.286	117.660	16.990	10.531			33.362	0.054
Vent11_9	REER	(g/s)/(µg/m³)	5.267E-03	9.257E-04	1.545E-05	0.000E+00	0.000E+00	3.171E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.802E-04
BH3	Emission Rate	lb/yr		1.332												0.004
BH3	REER	(g/s)/(µg/m³)	5.205E-04	4.165E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.890E-05
BH5	Emission Rate	lb/yr		1.360												0.004
BH5	REER	(g/s)/(µg/m³)	5.346E-04	4.277E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.958E-05
BH17	Emission Rate	lb/yr		0.360												0.001
BH17	REER	(g/s)/(µg/m³)	1.407E-04	1.126E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.594E-05
BH6	Emission Rate	lb/yr		0.037												0.000
BH6	REER	(g/s)/(µg/m³)	1.445E-05	1.155E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.641E-06
BH8	Emission Rate	lb/yr		0.419												0.000
BH8	REER	(g/s)/(µg/m³)	1.612E-04	1.289E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.826E-05
BH9	Emission Rate	lb/yr		0.003												0.000
BH9	REER	(g/s)/(µg/m³)	3.260E-05	2.608E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.695E-06
BH4	Emission Rate	lb/yr		0.053												0.000
BH4	REER	(g/s)/(µg/m³)	2.587E-04	2.070E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.932E-05
BH22	Emission Rate	lb/yr		0.053												0.000
BH22	REER	(g/s)/(µg/m³)	2.545E-04	2.036E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.884E-05
BH20	Emission Rate	lb/yr		0.004												0.000
BH20	REER	(g/s)/(µg/m³)	1.332E-06	1.066E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.509E-07
BH26	Emission Rate	lb/yr		0.380												0.000
BH26	REER	(g/s)/(µg/m³)	1.436E-04	1.215E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.890E-07
BH15	Emission Rate	lb/yr		3.196												0.011
BH15	REER	(g/s)/(µg/m³)	4.476E-04	3.330E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.213E-06
BH7	Emission Rate	lb/yr		0.011												0.000
BH7	REER	(g/s)/(µg/m³)	2.989E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.551E-06
BH24	Emission Rate	lb/yr		0.000												0.000
BH24	REER	(g/s)/(µg/m³)	1.254E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.305E-04
BH16	Emission Rate	lb/yr		0.001												0.000
BH16	REER	(g/s)/(µg/m³)	2.989E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.551E-06
BH13	Emission Rate	lb/yr		0.000												0.000
BH13	REER	(g/s)/(µg/m³)	1.371E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.018E-06
BH10	Emission Rate	lb/yr		0.000												0.000
BH10	REER	(g/s)/(µg/m³)	1.689E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.300E-05
BC18	Emission Rate	lb/yr		0.000												0.000
BC18	REER	(g/s)/(µg/m³)	4.508E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.346E-07
Fug01	Emission Rate	lb/yr		0.000										1670.760		
Fug01	REER	(g/s)/(µg/m³)	1.390E-07	1.390E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug05	Emission Rate	lb/yr					76.773		22.980		7.280	65.242	3356.174	89.473	33.250	
Fug05	REER	(g/s)/(µg/m³)	2.175E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.643E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug07	Emission Rate	lb/yr			0.124	118.163	89.273					0.840			76.553	
Fug07	REER	(g/s)/(µg/m³)	3.721E-07	0.000E+00	3.721E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Fug07N	Emission Rate	lb/yr			12.023					6.000				18.150	34.100	
Fug07N	REER	(g/s)/(µg/m³)	4.342E-06	0.000E+00	3.372E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.695E-06
Fug15	Emission Rate	lb/yr		0.000												
Fug15	REER	(g/s)/(µg/m³)	1.427E-08	1.427E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TEU	Parameter	Units	All Compounds	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-32-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
				Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,2,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	n/a	1.100	2.000	0.000	1.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.500	1200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.350	0.000	0.000
BH2	Emission Rate	lb/yr						2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.170	0.000								0.120						
BH2	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.127E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/yr						0.131	0.012	2.271	0.000	0.003	0.013	0.000	0.240	0.000	0.270	0.420								0.000						
BH1	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.122E-03	5.590E-06	1.661E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/yr						0.037	0.781	50.528				0.000				0.275	0.363	7.580		1.250	0.230		1.609		0.342		0.180	0.213		5423.232
Vent8_1	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.504E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.781E-05	0.000E+00	0.000E+00
Vent8_2	Emission Rate	lb/yr						0.037	0.194	16.934				0.000				0.275	0.363	7.580		1.250	0.230		1.609		0.342		0.180	0.213		5423.232
Vent8_2	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.504E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.781E-05	0.000E+00	0.000E+00
Vent8_3	Emission Rate	lb/yr						0.037	0.194	16.934				0.000				0.275	0.363	7.580		1.250	0.230		1.609		0.342		0.180	0.213		5423.232
Vent8_3	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.504E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.781E-05	0.000E+00	0.000E+00
Vent8_4	Emission Rate	lb/yr						0.037	0.194	16.934				0.000				0.275	0.363	7.580		1.250	0.230		1.609		0.342		0.180	0.213		5423.232
Vent8_4	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.504E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.781E-05	0.000E+00	0.000E+00
Vent8_5	Emission Rate	lb/yr						0.037	0.194	16.934				0.000				0.275	0.363	7.580		1.250	0.230		1.609		0.342		0.180	0.213		5423.232
Vent8_5	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.504E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.781E-05	0.000E+00	0.000E+00
Vent11_1	Emission Rate	lb/yr						7.394	7.314	993.537				0.000				0.073														
Vent11_1	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/yr						7.394	7.314	993.537				0.000				0.073														
Vent11_2	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/yr						7.394	1.407	200.531				0.000				0.073														
Vent11_3	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	1.407	200.531					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_4	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.955E-04	0.000E+00	0.000E+00
Vent11_5	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	1.157	249.615					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_5	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.655E-04	0.000E+00	0.000E+00
Vent11_6	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	2.224	223.783					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_6	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.955E-04	0.000E+00	0.000E+00
Vent11_7	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	2.224	223.783					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_7	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.955E-04	0.000E+00	0.000E+00
Vent11_8	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	1.123	0.000					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_8	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.955E-04	0.000E+00	0.000E+00
Vent11_9	Emission Rate	lb/yr		15.630	11.520	293.926	2.394	1.399	113.122					0.000				0.073	2.255	7.680	46.214	7.792	1.629		1.658		0.411		1.110	4.516		5423.232
Vent11_9	REER	(g/s)/(µg/m³)		1.124E-03	0.000E+00	2.810E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-04	3.339E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.655E-04	0.000E+00	0.000E+00
BH3	Emission Rate	lb/yr						0.011	1.087	0.000	0.000	0.000	0.002	0.000	0.000		0.000															
BH3	REER	(g/s)/(µg/m³)		0.000E+00	0.000E+00	0.000E+

Table A-7. Emission Rates and REER Calculations - Non-Resident Worker Chronic Non-Cancer Exposure Scenario - Sources Not Combusting Natural Gas

TEU	Parameter	Units	All Compounds	365	100-41-4	100-42-5	101-68-8	106-99-0	107-02-8	108-88-3	108-95-2	110-54-3	110-82-7	111-76-2	1330-20-7 (Xylene, mixture, including m-xylene, o-xylene, p-xylene	18540-29-9
				Nickel compounds, insoluble	Ethyl benzene	Styrene	Methylene diphenyl diisocyanate (MDI)	1,3-Butadiene	Acrolein	Toluene	Phenol	Hexane	Cyclohexane	Ethylene glycol monobutyl ether		Chromium VI, chromate and dichromate particulate
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.062	1100.000	4400.000	0.350	0.800	1.500	22000.000	880.000	3100.000	26000.000	360.000	970.000	0.800
BH2	Emission Rate	lb/yr		0.040												0.003
BH2	REER	(g/s)/(µg/m³)	3.202E-04	9.272E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.751E-08
BH1	Emission Rate	lb/yr		9.192												0.031
BH1	REER	(g/s)/(µg/m³)	6.333E-04	4.439E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.929E-07
Vent8_1	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_1	REER	(g/s)/(µg/m³)	2.146E-02	5.298E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	3.997E-08
Vent8_2	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_2	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_3	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_3	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_4	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_4	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent8_5	Emission Rate	lb/yr		0.228	0.293	0.194		1.421	1.189	24.474	11.560	0.930			0.930	0.003
Vent8_5	REER	(g/s)/(µg/m³)	8.897E-04	5.214E-05	3.000E-05	6.348E-10	0.000E+00	2.322E-05	1.137E-05	1.600E-08	1.809E-07	4.355E-05	0.000E+00	0.000E+00	1.274E-07	4.438E-08
Vent11_1	Emission Rate	lb/yr		1.728												0.022
Vent11_1	REER	(g/s)/(µg/m³)	3.631E-02	4.009E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.569E-07
Vent11_2	Emission Rate	lb/yr		1.728												0.022
Vent11_2	REER	(g/s)/(µg/m³)	3.631E-02	4.009E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.569E-07
Vent11_3	Emission Rate	lb/yr		2.013												0.260
Vent11_3	REER	(g/s)/(µg/m³)	7.916E-03	6.526E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.416E-06
Vent11_4	Emission Rate	lb/yr		2.013	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.260
Vent11_4	REER	(g/s)/(µg/m³)	8.413E-03	6.526E-04	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	3.416E-06
Vent11_5	Emission Rate	lb/yr		6.513	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.054
Vent11_5	REER	(g/s)/(µg/m³)	1.471E-02	1.516E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	9.874E-06
Vent11_6	Emission Rate	lb/yr		6.948	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.057
Vent11_6	REER	(g/s)/(µg/m³)	1.067E-02	2.076E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	1.181E-05
Vent11_7	Emission Rate	lb/yr		9.948	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.057
Vent11_7	REER	(g/s)/(µg/m³)	1.067E-02	2.076E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	1.181E-05
Vent11_8	Emission Rate	lb/yr		17.010	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.200
Vent11_8	REER	(g/s)/(µg/m³)	1.087E-02	4.133E-03	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	6.604E-07
Vent11_9	Emission Rate	lb/yr		2.960	5.157	1.200		0.013	1.288	117.660	10.990	10.531			33.362	0.054
Vent11_9	REER	(g/s)/(µg/m³)	5.317E-03	6.050E-04	6.743E-10	3.941E-09	0.000E+00	1.441E-05	1.233E-05	7.680E-08	2.778E-07	4.879E-05	0.000E+00	0.000E+00	4.947E-07	8.867E-07
BH3	Emission Rate	lb/yr		1.152												0.004
BH3	REER	(g/s)/(µg/m³)	3.924E-04	3.090E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.703E-08
BH5	Emission Rate	lb/yr		1.368												0.004
BH5	REER	(g/s)/(µg/m³)	4.036E-04	3.173E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.885E-08
BH17	Emission Rate	lb/yr		9.360												0.005
BH17	REER	(g/s)/(µg/m³)	1.060E-04	8.351E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.812E-08
BH6	Emission Rate	lb/yr		0.037												0.000
BH6	REER	(g/s)/(µg/m³)	1.092E-05	8.597E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.865E-09
BH8	Emission Rate	lb/yr		0.410												0.000
BH8	REER	(g/s)/(µg/m³)	1.215E-04	9.567E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.075E-08
BH9	Emission Rate	lb/yr		0.003												0.000
BH9	REER	(g/s)/(µg/m³)	2.458E-05	1.935E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.199E-09
BH4	Emission Rate	lb/yr		0.053												0.000
BH4	REER	(g/s)/(µg/m³)	1.950E-04	1.536E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.322E-08
BH22	Emission Rate	lb/yr		0.053												0.002
BH22	REER	(g/s)/(µg/m³)	1.918E-04	1.511E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.277E-08
BH20	Emission Rate	lb/yr		0.000												0.000
BH20	REER	(g/s)/(µg/m³)	1.004E-06	7.906E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.715E-10
BH26	Emission Rate	lb/yr		0.380												0.000
BH26	REER	(g/s)/(µg/m³)	1.778E-04	9.012E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.977E-10
BH15	Emission Rate	lb/yr		2.100												0.000
BH15	REER	(g/s)/(µg/m³)	2.245E-04	2.478E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.788E-09
BH7	Emission Rate	lb/yr		0.000												0.011
BH7	REER	(g/s)/(µg/m³)	1.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.762E-07
BH24	Emission Rate	lb/yr		0.000												0.000
BH24	REER	(g/s)/(µg/m³)	8.474E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.057E-08
BH16	Emission Rate	lb/yr		0.000												0.001
BH16	REER	(g/s)/(µg/m³)	1.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.762E-07
BH13	Emission Rate	lb/yr		0.000												0.000
BH13	REER	(g/s)/(µg/m³)	9.268E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.157E-07
BH10	Emission Rate	lb/yr		0.000												0.000
BH10	REER	(g/s)/(µg/m³)	2.214E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.530E-08
RC18	Emission Rate	lb/yr		0.000												0.000
RC18	REER	(g/s)/(µg/m³)	3.047E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.802E-10
Fug01	Emission Rate	lb/yr		0.000										1670.760		
Fug01	REER	(g/s)/(µg/m³)	6.867E-05	1.031E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.675E-05	0.000E+00	0.000E+00
Fug05	Emission Rate	lb/yr					76.773		22.980	1.280	65.242	1356.174	89.473	33.250	56.880	
Fug05	REER	(g/s)/(µg/m³)	3.491E-04	0.000E+00	0.000E+00	2.510E-07	0.000E+00	3.656E-05	1.233E-05	4.265E-08	2.282E-05	4.151E-07	1.839E-05	0.000E+00	8.437E-07	0.000E+00
Fug07	Emission Rate	lb/yr			0.124	118.163	89.273					0.840			76.553	
Fug07	REER	(g/s)/(µg/m³)	1.056E-03	0.000E+00	1.624E-08	3.601E-07	1.655E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.897E-05	0.000E+00	0.000E+00	1.135E-06	0.000E+00
Fug07N	Emission Rate	lb/yr			12.023					6.600				18.150	34.100	
Fug07N	REER	(g/s)/(µg/m³)	5.763E-05	0.000E+00	1.030E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.982E-06	0.000E+00	0.000E+00	0.000E+00	4.055E-07	5.055E-07	0.000E+00
Fug15	Emission Rate	lb/yr		0.000												
Fug15	REER	(g/s)/(µg/m³)	2.057E-07	1.050E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TEU	Parameter	Units	26471-62-5	50-00-0	67-64-1	71-43-2	7429-90-5	7439-92-1	7439-96-5	7439-97-6	7440-36-0	7440-38-2	7440-41-7	7440-43-9	7440-48-4	7440-50-8	7440-62-2	74-87-3	74-90-8	75-07-0	75-09-2	75-15-0	7631-86-9	7664-41-7	7782-49-2	7783-06-4	78-92-2	78-93-3	91-20-3	95-63-6	67-63-0
			Toluene diisocyanates (2,4- and 2,6-)	Formaldehyde	Acetone	Benzene	Aluminum and compounds	Lead and compounds	Manganese and compounds	Mercury and compounds	Antimony and compounds	Arsenic and compounds	Beryllium and compounds	Cadmium and compounds	Cobalt and compounds	Copper and compounds	Vanadium (fume or dust)	Chloromethane (Methyl chloride)	Cyanide, Hydrogen	Acetaldehyde	Dichloromethane (Methylene chloride)	Carbon disulfide	Silica, crystalline (respirable)	Ammonia	Selenium and compounds	Hydrogen sulfide	sec-Butyl alcohol	2-Butanone (Methyl ethyl ketone)	Naphthalene	1,2,4-Trimethylbenzene	Isopropyl alcohol
	Exposure Scenario-specific RBC	(µg/m³)	0.092	40.000	140000.000	13.000	22.000	0.660	0.400	0.030	1.300	0.002	0.031	0.037	0.440	0.000	0.440	400.000	3.500	620.000	2600.000	3500.000	13.000	2200.000	0.800	0.800	130000.000	22000.000	16.000	260.000	880.000
BH2	Emission Rate	lb/yr					2.200	0.015	3.847	0.002	0.030	0.020	0.000	0.003	0.010	0.179	0.000									0.126						
BH2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	2.324E-07	1.383E-04	4.342E-08	4.008E-07	1.687E-04	0.000E+00	1.342E-05	0.000E+00	1.115E-06	5.784E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BH1	Emission Rate	lb/yr					7.191	0.017	7.273	0.000	0.007	0.053	0.000	0.243	0.000	0.270	0.320									0.000						
BH1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	3.705E-07	2.609E-04	9.016E-07	3.007E-07	1.450E-07	0.000E+00	1.163E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.496E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent8_1	Emission Rate	lb/yr					0.037	0.190	50.526								0.273	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	5.787E-08	4.492E-05	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_2	Emission Rate	lb/yr					0.037	0.190	16.084								0.273	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	5.787E-08	4.492E-05	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_3	Emission Rate	lb/yr					0.037	0.190	16.084								0.273	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	5.787E-08	4.492E-05	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_4	Emission Rate	lb/yr					0.037	0.190	16.084								0.273	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_4	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	5.787E-08	4.492E-05	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent8_5	Emission Rate	lb/yr					0.037	0.190	16.084								0.273	0.363	7.580		1.250	0.230		1.600		0.342		0.180	0.213		5423.232
Vent8_5	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	5.787E-08	4.492E-05	1.528E-05	1.817E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.030E-08	1.300E-08	3.115E-05	0.000E+00	6.543E-05	9.459E-10	0.000E+00	1.052E-08	0.000E+00	1.363E-05	0.000E+00	1.176E-10	1.993E-07	0.000E+00	8.864E-05
Vent11_1	Emission Rate	lb/yr					7.394	7.314	993.937								0.073														
Vent11_1	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	3.574E-02	1.565E-05	1.559E-04	3.574E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_2	Emission Rate	lb/yr					7.394	7.314	993.937								0.073														
Vent11_2	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	3.574E-02	1.565E-05	1.559E-04	3.574E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_3	Emission Rate	lb/yr					7.394	1.407	200.931								0.073														
Vent11_3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	7.225E-03	1.565E-05	3.000E-05	7.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Vent11_4	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	1.407	200.931									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_4	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	3.065E-05	7.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_5	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	1.157	200.931									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_5	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	1.124E-04	7.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_6	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	2.222	223.783									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_6	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	4.846E-05	8.044E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_7	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	2.222	223.783									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_7	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	4.846E-05	8.044E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_8	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	1.123	200.931									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_8	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	2.461E-05	6.214E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
Vent11_9	Emission Rate	lb/yr	15.630	11.520	293.926	2.394	1.990	113.192									0.073	2.255	7.680	46.214	7.792	1.429		1.050		0.411		1.110	4.514		5423.232
Vent11_9	REER	(g/s)/(µg/m³)	15.630	1.184E-09	3.242E-04	1.565E-08	4.350E-05	4.885E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.535E-08	0.108E-08	3.163E-05	1.072E-08	4.318E-08	5.872E-10	0.000E+00	1.084E-08	0.000E+00	1.376E-05	0.000E+00	7.209E-10	4.958E-06	0.000E+00	8.864E-05
BH3	Emission Rate	lb/yr					0.011	1.087	0.000			0.002	0.000	0.000												0.000					
BH3	REER	(g/s)/(µg/m³)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.325E-07	7.145E-05	0.000E+00	0.000E+00	0.000E+00	1.164E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A-8. Emission Rates and REER Calculations - Acute Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m^3)	n/a	470.000	6.900	1200.000	0.200	29.000	0.020	0.030	0.300	0.000	100.000	22000.000	49.000	0.000	0.150	0.300	0.600	0.200	0.000	0.002	200.000	2.000	7500.000	0.800	8700.000
OVEN102	Emission Rate	lb/day		0.002	0.002	10.702	0.000	0.003	0.000	0.001	0.001	0.000	0.001	0.004	0.007	0.003	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.016	0.001	0.012
OVEN102	REER	(g/s)/(µg/m^3)	2.429E-04	2.059E-08	1.221E-06	4.682E-05	3.121E-06	6.243E-07	1.873E-06	1.145E-04	1.457E-05	0.000E+00	2.653E-08	9.790E-10	7.835E-07	0.000E+00	1.040E-05	3.954E-06	1.353E-06	3.278E-05	0.000E+00	1.873E-06	4.682E-09	3.746E-08	1.103E-08	8.974E-06	7.068E-09
OVEN1_A	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN1_A	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN1_B	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN1_B	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN2_A	Emission Rate	lb/day		0.001	0.001	3.567	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.005
OVEN2_A	REER	(g/s)/(µg/m^3)	8.115E-05	9.519E-09	4.071E-07	1.561E-05	1.040E-06	2.870E-07	6.243E-07	3.815E-05	4.856E-06	0.000E+00	8.844E-09	4.493E-10	3.610E-07	0.000E+00	3.468E-06	1.318E-06	4.509E-07	1.093E-05	0.000E+00	6.243E-07	1.561E-09	1.249E-08	5.078E-09	2.991E-06	3.253E-09
OVEN2_B	Emission Rate	lb/day		0.001	0.001	3.567	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.005
OVEN2_B	REER	(g/s)/(µg/m^3)	8.115E-05	9.519E-09	4.071E-07	1.561E-05	1.040E-06	2.870E-07	6.243E-07	3.815E-05	4.856E-06	0.000E+00	8.844E-09	4.493E-10	3.610E-07	0.000E+00	3.468E-06	1.318E-06	4.509E-07	1.093E-05	0.000E+00	6.243E-07	1.561E-09	1.249E-08	5.078E-09	2.991E-06	3.253E-09
OVEN3_A	Emission Rate	lb/day		0.001	0.000	2.676	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN3_A	REER	(g/s)/(µg/m^3)	6.086E-05	7.139E-09	3.054E-07	1.171E-05	7.804E-07	2.153E-07	4.682E-07	2.861E-05	3.642E-06	0.000E+00	6.633E-09	3.370E-10	2.707E-07	0.000E+00	2.601E-06	9.885E-07	3.382E-07	8.194E-06	0.000E+00	4.682E-07	1.171E-09	9.364E-09	3.808E-09	2.244E-06	2.440E-09
OVEN3_B	Emission Rate	lb/day		0.001	0.000	2.676	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN3_B	REER	(g/s)/(µg/m^3)	6.086E-05	7.139E-09	3.054E-07	1.171E-05	7.804E-07	2.153E-07	4.682E-07	2.861E-05	3.642E-06	0.000E+00	6.633E-09	3.370E-10	2.707E-07	0.000E+00	2.601E-06	9.885E-07	3.382E-07	8.194E-06	0.000E+00	4.682E-07	1.171E-09	9.364E-09	3.808E-09	2.244E-06	2.440E-09
OVEN4_A	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN4_A	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN4_B	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN4_B	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN5_A	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN5_A	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN5_B	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN5_B	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN6_A	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN6_A	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN6_B	Emission Rate	lb/day		0.001	0.000	2.378	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.004
OVEN6_B	REER	(g/s)/(µg/m^3)	5.410E-05	6.346E-09	2.714E-07	1.040E-05	6.937E-07	1.914E-07	4.162E-07	2.543E-05	3.237E-06	0.000E+00	5.896E-09	2.995E-10	2.407E-07	0.000E+00	2.312E-06	8.786E-07	3.006E-07	7.283E-06	0.000E+00	4.162E-07	1.040E-09	8.324E-09	3.385E-09	1.994E-06	2.169E-09
OVEN10_A	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN10_A	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN10_B	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN10_B	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN12_A	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN12_A	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN12_B	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN12_B	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN13_A	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN13_A	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN13_B	Emission Rate	lb/day		0.000	0.000	1.784	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003
OVEN13_B	REER	(g/s)/(µg/m^3)	4.058E-05	4.760E-09	2.036E-07	7.804E-06	5.202E-07	1.435E-07	3.121E-07	1.908E-05	2.428E-06	0.000E+00	4.422E-09	2.246E-10	1.805E-07	0.000E+00	1.734E-06	6.590E-07	2.254E-07	5.463E-06	0.000E+00	3.121E-07	7.804E-10	6.243E-09	2.539E-09	1.496E-06	1.626E-09
OVEN14	Emission Rate	lb/day		0.000	0.000	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OVEN14	REER	(g/s)/(µg/m^3)	4.734E-06	5.553E-10	2.375E-08	9.104E-07	6.069E-08	1.674E-08	3.642E-08	2.225E-06	2.832E-07	0.000E+00	5.159E-10	2.621E-11	2.106E-08	0.000E+00	2.023E-07	7.688E-08	2.630E-08	6.373E-07	0.000E+00	3.642E-08	9.104E-11	7.283E-10	2.962E-10	1.745E-07	1.898E-10
OVEN18_A	Emission Rate	lb/day		0.000	0.000	0.357	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
OVEN18_A	REER	(g/s)/(µg/m^3)	8.115E-06	9.519E-10	4.071E-08	1.561E-06	1.040E-07	2.870E-08	6.243E-08	3.815E-06	4.856E-07	0.000E+00	8.844E-10	4.493E-11	3.610E-08	0.000E+00	3.468E-07	1.318E-07	4.509E-08	1.093E-06	0.000E+00	6.243E-08	1.561E-10	1.249E-09	5.078E-10	2.991E-07	3.253E-10
OVEN18_B	Emission Rate	lb/day		0.000	0.000	0.357	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
OVEN18_B	REER	(g/s)/(µg/m^3)	8.115E-06	9.519E-10	4.071E-08	1.561E-06	1.040E-07	2.870E-08	6.243E-08	3.815E-06	4.856E-07	0.000E+00	8.844E-10	4.493E-11	3.610E-08	0.000E+00	3.468E-07	1.318E-07	4.509E-08	1.093E-06	0.000E+00	6.243E-08	1.561E-10	1.249E-09	5.078E-10	2.991E-07	3.253E-10
OVEN20_A	Emission Rate	lb/day		0.001	0.001	3.567	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.005
OVEN20_A	REER	(g/s)/(µg/m^3)	8.115E-05	9.519E-09	4.071E-07	1.561E-05	1.040E-06	2.870E-07	6.243E-07	3.815E-05	4.856E-06	0.000E+00	8.844E-09	4.493E-10	3.610E-07	0.000E+00	3.468E-06	1.318E-06	4.509E-07	1.093E-05	0.000E+00	6.243E-07	1.561E-09	1.249E-08	5.078E-09	2.991E-06	3.253E-09
OVEN20_B	Emission Rate	lb/day		0.001	0.001	3.567	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.005
OVEN20_B	REER	(g/s)/(µg/m^3)	8.115E-05	9.519E-09	4.071E-07	1.561E-05	1.040E-06	2.870E-07	6.243E-07	3.815E-05	4.856E-06	0.000E+00	8.844E-09	4.493E-10	3.610E-07	0.000E+00	3.468E-06	1.318E-06	4.509E-07	1.093E-05	0.000E+00	6.243E-07	1.561E-09	1.249E-08	5.078E-09	2.991E-06	3.253E-09
OVEN21	Emission Rate	lb/day		0.001	0.001	3.567	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.005
OVEN21	REER	(g/s)/(µg/m^3)	8.115E-05	9.519E-09	4.071E-07	1.561E-05	1.040E-06	2.870E-07	6.243E-07	3.815E-05	4.856E-06	0.000E+00	8.844E-09	4.493E-10	3.610E-07	0.000E+00	3.468E-06	1.318E-06	4.509E-07	1.093E-05	0.000E+00	6.243E-07	1.561E-09	1.249E-08	5.078E-09	2.991E-06	3.253E-09
CORE1	Emission Rate	lb/day		0.000	0.000	0.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
CORE1	REER	(g/s)/(µg/m^3)	6.763E-06	7.933E-10	3.393E-08	1.301E-06	8.671E-08	2.392E-08	5.202E-08	3.179E-06	4.046E-07	0.000E+00	7.370E-10	3.744E-11	3.008E-08	0.000E+00	2.890E-07	1.098E-07	3.757E-08	9.104E-07	0.000E+00	5.202E-08	1.301E-10	1.040E-09	4.231E-10	2.493E-07	2.711E-10
CORE2	Emission Rate	lb/day		0.000	0.000	0.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
CORE2	REER	(g/s)/(µg/m^3)	6.763E-06	7.933E-10	3.393E-08	1.301E-06	8.671E-08	2.392E-08	5.202E-08	3.179E-06	4.046E-07	0.000E+00	7.370E-10	3.744E-11	3.008E-08	0.000E+00	2.890E-07	1.098E-07	3.757E-08	9.104E-07	0.000E+00	5.202E-08	1.301E-10	1.040E-09	4.231E-10	2.493E-07	2.711E-10
CORE3	Emission Rate	lb/day		0.000	0.000	0.446	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
CORE3	REER	(g/s)/(µg/m^3)	1.014E-05	1.190E-09	5.089E-08	1.951E-06	1.301E-07	3.588E-08	7.804E-08	4.769E-06	6.069E-07	0.000E+00	1.106E-09	5.616E-11	4.512E-08	0.000E+00	4.335E-07	1.647E-07	5.636E-08	1.366E-06	0.000E+00	7.804E-08	1.951E-10	1.561E-09	6.347E-10	3.739E-07	4.066E-10
LADLE1-3	Emission Rate	lb/day		0.000	0.000	1.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002
LADLE1-3	REER	(g/s)/(µg/m^3)	2.435E-05	2.856E-09	1.221E-07	4.682E-06	3.121E-07	8.611E-08	1.873E-07	1.145E-05	1.457E-06	0.000E+00	2.653E-09	1.348E-10	1.083E-07	0.000E+00	1.040E-06	3.954E-07	1.353E-07	3.278E-06	0.000E+00	1.873E-07	4.682E-10	3.746E-09	1.523E-09	8.974E-07	9.759E-10

Table A-9. Emission Rates and REER Calculations - Resident Chronic Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	0.450	0.000	0.000	0.000	0.130	0.000	0.001	0.000	0.000	0.000	0.400	0.170	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.029	0.000	0.000	0.000	0.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	1.302E-01	1.532E-05	0.000E+00	0.000E+00	1.853E-02	9.920E-05	6.353E-05	4.368E-03	1.004E-01	0.000E+00	0.000E+00	3.836E-05	1.609E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.229E-03	5.171E-03	6.205E-05	2.300E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	4.343E-02	7.082E-06	0.000E+00	0.000E+00	6.176E-03	4.561E-05	2.118E-05	1.456E-03	3.347E-02	0.000E+00	0.000E+00	1.760E-05	7.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-04	1.724E-03	2.068E-05	7.667E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	4.343E-02	7.082E-06	0.000E+00	0.000E+00	6.176E-03	4.561E-05	2.118E-05	1.456E-03	3.347E-02	0.000E+00	0.000E+00	1.760E-05	7.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-04	1.724E-03	2.068E-05	7.667E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	3.257E-02	5.312E-06	0.000E+00	0.000E+00	4.632E-03	3.421E-05	1.588E-05	1.092E-03	2.510E-02	0.000E+00	0.000E+00	1.320E-05	5.559E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.072E-04	1.293E-03	1.551E-05	5.750E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	3.257E-02	5.312E-06	0.000E+00	0.000E+00	4.632E-03	3.421E-05	1.588E-05	1.092E-03	2.510E-02	0.000E+00	0.000E+00	1.320E-05	5.559E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.072E-04	1.293E-03	1.551E-05	5.750E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	2.895E-02	4.721E-06	0.000E+00	0.000E+00	4.118E-03	3.041E-05	1.412E-05	9.706E-04	2.231E-02	0.000E+00	0.000E+00	1.174E-05	4.941E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.731E-04	1.149E-03	1.379E-05	5.111E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	2.172E-02	3.541E-06	0.000E+00	0.000E+00	3.088E-03	2.281E-05	1.059E-05	7.279E-04	1.674E-02	0.000E+00	0.000E+00	8.801E-06	3.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-04	8.618E-04	1.034E-05	3.834E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	2.533E-03	4.131E-07	0.000E+00	0.000E+00	3.603E-04	2.661E-06	1.235E-06	8.493E-05	1.953E-03	0.000E+00	0.000E+00	1.027E-06	4.323E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.389E-05	1.005E-04	1.207E-06	4.473E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	4.343E-03	7.082E-07	0.000E+00	0.000E+00	6.176E-04	4.561E-06	2.118E-06	1.456E-04	3.347E-03	0.000E+00	0.000E+00	1.760E-06	7.412E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-05	1.724E-04	2.068E-06	7.667E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	4.343E-03	7.082E-07	0.000E+00	0.000E+00	6.176E-04	4.561E-06	2.118E-06	1.456E-04	3.347E-03	0.000E+00	0.000E+00	1.760E-06	7.412E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-05	1.724E-04	2.068E-06	7.667E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	4.343E-02	7.082E-06	0.000E+00	0.000E+00	6.176E-03	4.561E-05	2.118E-05	1.456E-03	3.347E-02	0.000E+00	0.000E+00	1.760E-05	7.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-04	1.724E-03	2.068E-05	7.667E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	4.343E-02	7.082E-06	0.000E+00	0.000E+00	6.176E-03	4.561E-05	2.118E-05	1.456E-03	3.347E-02	0.000E+00	0.000E+00	1.760E-05	7.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-04	1.724E-03	2.068E-05	7.667E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	4.343E-02	7.082E-06	0.000E+00	0.000E+00	6.176E-03	4.561E-05	2.118E-05	1.456E-03	3.347E-02	0.000E+00	0.000E+00	1.760E-05	7.412E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.096E-04	1.724E-03	2.068E-05	7.667E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	3.619E-03	5.902E-07	0.000E+00	0.000E+00	5.147E-04	3.801E-06	1.765E-06	1.213E-04	2.789E-03	0.000E+00	0.000E+00	1.467E-06	6.176E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.413E-05	1.436E-04	1.724E-06	6.389E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	3.619E-03	5.902E-07	0.000E+00	0.000E+00	5.147E-04	3.801E-06	1.765E-06	1.213E-04	2.789E-03	0.000E+00	0.000E+00	1.467E-06	6.176E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.413E-05	1.436E-04	1.724E-06	6.389E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	5.429E-03	8.853E-07	0.000E+00	0.000E+00	7.720E-04	5.701E-06	2.647E-06	1.820E-04	4.184E-03	0.000E+00	0.000E+00	2.200E-06	9.265E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.120E-05	2.155E-04	2.585E-06	9.584E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	1.303E-02	2.125E-06	0.000E+00	0.000E+00	1.853E-03	1.368E-05	6.353E-06	4.368E-04	1.004E-02	0.000E+00	0.000E+00	5.281E-06	2.223E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.229E-04	5.171E-04	6.205E-06	2.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A-10. Emission Rates and REER Calculations - Resident Chronic Non-Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	140.000	0.350	500.000	0.000	3.000	0.007	0.005	0.083	0.100	0.000	260.000	9.000	700.000	0.150	0.090	0.077	0.014	0.000	0.002	3.700	0.000	5000.000	0.100	220.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	3.664E-03	4.923E-08	1.715E-05	8.005E-05	2.616E-03	4.299E-06	3.812E-06	4.892E-04	3.750E-05	1.868E-06	0.000E+00	5.901E-08	3.039E-06	1.461E-08	7.412E-06	9.388E-06	7.508E-06	3.335E-04	0.000E+00	1.334E-06	1.803E-07	0.000E+00	1.178E-08	5.114E-05	1.991E-07
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	1.222E-03	2.276E-08	5.718E-06	2.668E-05	8.720E-04	1.976E-06	1.271E-06	1.631E-04	1.250E-05	6.226E-07	0.000E+00	2.708E-08	1.400E-06	6.670E-09	2.471E-06	3.129E-06	2.503E-06	1.112E-04	0.000E+00	4.447E-07	6.009E-08	0.000E+00	5.425E-09	1.705E-05	9.163E-08
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	1.222E-03	2.276E-08	5.718E-06	2.668E-05	8.720E-04	1.976E-06	1.271E-06	1.631E-04	1.250E-05	6.226E-07	0.000E+00	2.708E-08	1.400E-06	6.670E-09	2.471E-06	3.129E-06	2.503E-06	1.112E-04	0.000E+00	4.447E-07	6.009E-08	0.000E+00	5.425E-09	1.705E-05	9.163E-08
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	9.166E-04	1.707E-08	4.288E-06	2.001E-05	6.540E-04	1.482E-06	9.529E-07	1.223E-04	9.376E-06	4.669E-07	0.000E+00	2.031E-08	1.050E-06	5.003E-09	1.853E-06	2.347E-06	1.877E-06	8.338E-05	0.000E+00	3.335E-07	4.507E-08	0.000E+00	4.069E-09	1.279E-05	6.873E-08
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	9.166E-04	1.707E-08	4.288E-06	2.001E-05	6.540E-04	1.482E-06	9.529E-07	1.223E-04	9.376E-06	4.669E-07	0.000E+00	2.031E-08	1.050E-06	5.003E-09	1.853E-06	2.347E-06	1.877E-06	8.338E-05	0.000E+00	3.335E-07	4.507E-08	0.000E+00	4.069E-09	1.279E-05	6.873E-08
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	8.148E-04	1.518E-08	3.812E-06	1.779E-05	5.813E-04	1.318E-06	8.470E-07	1.087E-04	8.334E-06	4.151E-07	0.000E+00	1.805E-08	9.333E-07	4.447E-09	1.647E-06	2.086E-06	1.668E-06	7.412E-05	0.000E+00	2.965E-07	4.006E-08	0.000E+00	3.617E-09	1.136E-05	6.109E-08
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	6.111E-04	1.138E-08	2.859E-06	1.334E-05	4.360E-04	9.882E-07	6.353E-07	8.153E-05	6.251E-06	3.113E-07	0.000E+00	1.354E-08	7.000E-07	3.335E-09	1.235E-06	1.565E-06	1.251E-06	5.559E-05	0.000E+00	2.223E-07	3.005E-08	0.000E+00	2.713E-09	8.523E-06	4.582E-08
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	7.129E-05	1.328E-09	3.335E-07	1.556E-06	5.086E-05	1.153E-07	7.412E-08	9.512E-06	7.293E-07	3.632E-08	0.000E+00	1.580E-09	8.167E-08	3.891E-10	1.441E-07	1.825E-07	1.460E-07	6.485E-06	0.000E+00	2.594E-08	3.506E-09	0.000E+00	3.165E-10	9.944E-07	5.345E-09
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	1.222E-04	2.276E-09	5.718E-07	2.668E-06	8.720E-05	1.976E-07	1.271E-07	1.631E-05	1.250E-06	6.226E-08	0.000E+00	2.708E-09	1.400E-07	6.670E-10	2.471E-07	3.129E-07	2.503E-07	1.112E-05	0.000E+00	4.447E-08	6.009E-09	0.000E+00	5.425E-10	1.705E-06	9.163E-09
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	1.222E-04	2.276E-09	5.718E-07	2.668E-06	8.720E-05	1.976E-07	1.271E-07	1.631E-05	1.250E-06	6.226E-08	0.000E+00	2.708E-09	1.400E-07	6.670E-10	2.471E-07	3.129E-07	2.503E-07	1.112E-05	0.000E+00	4.447E-08	6.009E-09	0.000E+00	5.425E-10	1.705E-06	9.163E-09
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	1.222E-03	2.276E-08	5.718E-06	2.668E-05	8.720E-04	1.976E-06	1.271E-06	1.631E-04	1.250E-05	6.226E-07	0.000E+00	2.708E-08	1.400E-06	6.670E-09	2.471E-06	3.129E-06	2.503E-06	1.112E-04	0.000E+00	4.447E-07	6.009E-08	0.000E+00	5.425E-09	1.705E-05	9.163E-08
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	1.222E-03	2.276E-08	5.718E-06	2.668E-05	8.720E-04	1.976E-06	1.271E-06	1.631E-04	1.250E-05	6.226E-07	0.000E+00	2.708E-08	1.400E-06	6.670E-09	2.471E-06	3.129E-06	2.503E-06	1.112E-04	0.000E+00	4.447E-07	6.009E-08	0.000E+00	5.425E-09	1.705E-05	9.163E-08
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	1.222E-03	2.276E-08	5.718E-06	2.668E-05	8.720E-04	1.976E-06	1.271E-06	1.631E-04	1.250E-05	6.226E-07	0.000E+00	2.708E-08	1.400E-06	6.670E-09	2.471E-06	3.129E-06	2.503E-06	1.112E-04	0.000E+00	4.447E-07	6.009E-08	0.000E+00	5.425E-09	1.705E-05	9.163E-08
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	1.018E-04	1.897E-09	4.765E-07	2.223E-06	7.266E-05	1.647E-07	1.059E-07	1.359E-05	1.042E-06	5.188E-08	0.000E+00	2.257E-09	1.167E-07	5.559E-10	2.059E-07	2.608E-07	2.086E-07	9.265E-06	0.000E+00	3.706E-08	5.008E-09	0.000E+00	4.521E-10	1.421E-06	7.636E-09
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	1.018E-04	1.897E-09	4.765E-07	2.223E-06	7.266E-05	1.647E-07	1.059E-07	1.359E-05	1.042E-06	5.188E-08	0.000E+00	2.257E-09	1.167E-07	5.559E-10	2.059E-07	2.608E-07	2.086E-07	9.265E-06	0.000E+00	3.706E-08	5.008E-09	0.000E+00	4.521E-10	1.421E-06	7.636E-09
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	1.528E-04	2.846E-09	7.147E-07	3.335E-06	1.090E-04	2.471E-07	1.588E-07	2.038E-05	1.563E-06	7.782E-08	0.000E+00	3.385E-09	1.750E-07	8.338E-10	3.088E-07	3.912E-07	3.128E-07	1.390E-05	0.000E+00	5.559E-08	7.512E-09	0.000E+00	6.782E-10	2.131E-06	1.145E-08
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	3.666E-04	6.829E-09	1.715E-06	8.005E-06	2.616E-04	5.929E-07	3.812E-07	4.892E-05	3.750E-06	1.868E-07	0.000E+00	8.124E-09	4.200E-07	2.001E-09	7.412E-07	9.388E-07	7.508E-07	3.335E-05	0.000E+00	1.334E-07	1.803E-08	0.000E+00	1.628E-09	5.114E-06	2.749E-08

Table A-11. Emission Rates and REER Calculations - Non-Resident Child Chronic Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	12.000	0.000	0.000	0.001	3.300	0.011	0.014	0.001	0.000	0.000	10.000	4.300	0.000	0.000	0.000	0.000	0.100	0.002	0.002	0.760	0.000	0.000	0.000	0.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	6.706E-03	5.744E-07	0.000E+00	0.000E+00	3.421E-04	3.908E-06	2.426E-06	1.747E-04	5.986E-03	0.000E+00	0.000E+00	1.534E-06	6.360E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.669E-05	1.390E-04	1.668E-06	8.777E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	2.237E-03	2.656E-07	0.000E+00	0.000E+00	1.140E-04	1.797E-06	8.085E-07	5.823E-05	1.995E-03	0.000E+00	0.000E+00	7.041E-07	2.930E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-05	4.632E-05	5.559E-07	2.926E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	2.237E-03	2.656E-07	0.000E+00	0.000E+00	1.140E-04	1.797E-06	8.085E-07	5.823E-05	1.995E-03	0.000E+00	0.000E+00	7.041E-07	2.930E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-05	4.632E-05	5.559E-07	2.926E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	1.678E-03	1.992E-07	0.000E+00	0.000E+00	8.552E-05	1.348E-06	6.064E-07	4.368E-05	1.497E-03	0.000E+00	0.000E+00	5.281E-07	2.198E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.167E-05	3.474E-05	4.169E-07	2.194E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	1.678E-03	1.992E-07	0.000E+00	0.000E+00	8.552E-05	1.348E-06	6.064E-07	4.368E-05	1.497E-03	0.000E+00	0.000E+00	5.281E-07	2.198E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.167E-05	3.474E-05	4.169E-07	2.194E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	1.491E-03	1.771E-07	0.000E+00	0.000E+00	7.602E-05	1.198E-06	5.390E-07	3.882E-05	1.330E-03	0.000E+00	0.000E+00	4.694E-07	1.953E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.038E-05	3.088E-05	3.706E-07	1.950E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	1.118E-03	1.328E-07	0.000E+00	0.000E+00	5.701E-05	8.984E-07	4.043E-07	2.912E-05	9.977E-04	0.000E+00	0.000E+00	3.521E-07	1.465E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.782E-06	2.316E-05	2.779E-07	1.463E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	1.305E-04	1.549E-08	0.000E+00	0.000E+00	6.651E-06	1.048E-07	4.716E-08	3.397E-06	1.164E-04	0.000E+00	0.000E+00	4.107E-08	1.709E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.079E-07	2.702E-06	3.243E-08	1.707E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	2.237E-04	2.656E-08	0.000E+00	0.000E+00	1.140E-05	1.797E-07	8.085E-08	5.823E-06	1.995E-04	0.000E+00	0.000E+00	7.041E-08	2.930E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-06	4.632E-06	5.559E-08	2.926E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	2.237E-04	2.656E-08	0.000E+00	0.000E+00	1.140E-05	1.797E-07	8.085E-08	5.823E-06	1.995E-04	0.000E+00	0.000E+00	7.041E-08	2.930E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-06	4.632E-06	5.559E-08	2.926E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	2.237E-03	2.656E-07	0.000E+00	0.000E+00	1.140E-04	1.797E-06	8.085E-07	5.823E-05	1.995E-03	0.000E+00	0.000E+00	7.041E-07	2.930E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-05	4.632E-05	5.559E-07	2.926E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	2.237E-03	2.656E-07	0.000E+00	0.000E+00	1.140E-04	1.797E-06	8.085E-07	5.823E-05	1.995E-03	0.000E+00	0.000E+00	7.041E-07	2.930E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-05	4.632E-05	5.559E-07	2.926E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	2.237E-03	2.656E-07	0.000E+00	0.000E+00	1.140E-04	1.797E-06	8.085E-07	5.823E-05	1.995E-03	0.000E+00	0.000E+00	7.041E-07	2.930E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.556E-05	4.632E-05	5.559E-07	2.926E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	1.864E-04	2.213E-08	0.000E+00	0.000E+00	9.502E-06	1.497E-07	6.738E-08	4.853E-06	1.663E-04	0.000E+00	0.000E+00	5.868E-08	2.442E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.297E-06	3.860E-06	4.632E-08	2.438E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	1.864E-04	2.213E-08	0.000E+00	0.000E+00	9.502E-06	1.497E-07	6.738E-08	4.853E-06	1.663E-04	0.000E+00	0.000E+00	5.868E-08	2.442E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.297E-06	3.860E-06	4.632E-08	2.438E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	2.796E-04	3.320E-08	0.000E+00	0.000E+00	1.425E-05	2.246E-07	1.011E-07	7.279E-06	2.494E-04	0.000E+00	0.000E+00	8.801E-08	3.663E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.946E-06	5.790E-06	6.948E-08	3.657E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	6.711E-04	7.968E-08	0.000E+00	0.000E+00	3.421E-05	5.390E-07	2.426E-07	1.747E-05	5.986E-04	0.000E+00	0.000E+00	2.112E-07	8.791E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.669E-06	1.390E-05	1.668E-07	8.777E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A-12. Emission Rates and REER Calculations - Non-Resident Child Chronic Non-Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	620.000	1.500	2200.000	0.002	13.000	0.031	0.037	0.880	0.440	0.000	1100.000	40.000	3100.000	0.660	0.400	0.630	0.062	0.000	0.009	16.000	0.000	22000.000	0.440	970.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	3.722E-04	1.112E-08	4.002E-06	1.819E-05	1.853E-04	9.920E-07	8.607E-07	6.610E-05	3.537E-06	4.245E-07	0.000E+00	1.395E-08	6.837E-07	3.299E-09	1.684E-06	2.112E-06	9.176E-07	7.531E-05	0.000E+00	3.032E-07	4.169E-08	0.000E+00	2.678E-09	1.162E-05	4.516E-08
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	9.321E-05	3.855E-09	1.001E-06	4.548E-06	4.632E-05	3.421E-07	2.152E-07	1.653E-05	8.843E-07	1.061E-07	0.000E+00	4.801E-09	2.362E-07	1.130E-09	4.211E-07	5.281E-07	2.294E-07	1.883E-05	0.000E+00	7.580E-08	1.042E-08	0.000E+00	9.248E-10	2.906E-06	1.559E-08
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	9.321E-05	3.855E-09	1.001E-06	4.548E-06	4.632E-05	3.421E-07	2.152E-07	1.653E-05	8.843E-07	1.061E-07	0.000E+00	4.801E-09	2.362E-07	1.130E-09	4.211E-07	5.281E-07	2.294E-07	1.883E-05	0.000E+00	7.580E-08	1.042E-08	0.000E+00	9.248E-10	2.906E-06	1.559E-08
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	7.249E-06	2.999E-10	7.782E-08	3.537E-07	3.603E-06	2.661E-08	1.674E-08	1.285E-06	6.878E-08	8.254E-09	0.000E+00	3.734E-10	1.837E-08	8.786E-11	3.275E-08	4.107E-08	1.784E-08	1.464E-06	0.000E+00	5.896E-09	8.106E-10	0.000E+00	7.193E-11	2.260E-07	1.212E-09
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	1.243E-05	5.140E-10	1.334E-07	6.064E-07	6.176E-06	4.561E-08	2.869E-08	2.203E-06	1.179E-07	1.415E-08	0.000E+00	6.401E-10	3.150E-08	1.506E-10	5.615E-08	7.041E-08	3.059E-08	2.510E-06	0.000E+00	1.011E-08	1.390E-09	0.000E+00	1.233E-10	3.874E-07	2.078E-09
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	1.243E-05	5.140E-10	1.334E-07	6.064E-07	6.176E-06	4.561E-08	2.869E-08	2.203E-06	1.179E-07	1.415E-08	0.000E+00	6.401E-10	3.150E-08	1.506E-10	5.615E-08	7.041E-08	3.059E-08	2.510E-06	0.000E+00	1.011E-08	1.390E-09	0.000E+00	1.233E-10	3.874E-07	2.078E-09
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	1.036E-05	4.284E-10	1.112E-07	5.053E-07	5.147E-06	3.801E-08	2.391E-08	1.836E-06	9.826E-08	1.179E-08	0.000E+00	5.334E-10	2.625E-08	1.255E-10	4.679E-08	5.868E-08	2.549E-08	2.092E-06	0.000E+00	8.422E-09	1.158E-09	0.000E+00	1.028E-10	3.229E-07	1.732E-09
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	1.036E-05	4.284E-10	1.112E-07	5.053E-07	5.147E-06	3.801E-08	2.391E-08	1.836E-06	9.826E-08	1.179E-08	0.000E+00	5.334E-10	2.625E-08	1.255E-10	4.679E-08	5.868E-08	2.549E-08	2.092E-06	0.000E+00	8.422E-09	1.158E-09	0.000E+00	1.028E-10	3.229E-07	1.732E-09
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	1.553E-05	6.425E-10	1.668E-07	7.580E-07	7.720E-06	5.701E-08	3.586E-08	2.754E-06	1.474E-07	1.769E-08	0.000E+00	8.001E-10	3.937E-08	1.883E-10	7.019E-08	8.801E-08	3.823E-08	3.138E-06	0.000E+00	1.263E-08	1.737E-09	0.000E+00	1.541E-10	4.843E-07	2.598E-09
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	3.728E-05	1.542E-09	4.002E-07	1.819E-06	1.853E-05	1.368E-07	8.607E-08	6.610E-06	3.537E-07	4.245E-08	0.000E+00	1.920E-09	9.450E-08	4.519E-10	1.684E-07	2.112E-07	9.176E-08	7.531E-06	0.000E+00	3.032E-08	4.169E-09	0.000E+00	3.699E-10	1.162E-06	6.235E-09

Table A-13. Emission Rates and REER Calculations - Non-Resident Worker Chronic Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	5.500	0.000	0.000	0.001	1.500	0.005	0.007	0.001	0.000	0.000	4.800	2.000	0.000	0.000	0.000	0.000	0.046	0.003	0.003	0.350	0.000	0.000	0.000	0.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	4.406E-03	1.253E-06	0.000E+00	0.000E+00	7.173E-04	8.598E-06	5.336E-06	3.651E-04	3.113E-03	0.000E+00	0.000E+00	3.196E-06	1.367E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.015E-04	7.412E-05	8.894E-07	1.906E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	1.472E-03	5.795E-07	0.000E+00	0.000E+00	2.391E-04	3.953E-06	1.779E-06	1.217E-04	1.038E-03	0.000E+00	0.000E+00	1.467E-06	6.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-05	2.471E-05	2.965E-07	6.353E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	1.472E-03	5.795E-07	0.000E+00	0.000E+00	2.391E-04	3.953E-06	1.779E-06	1.217E-04	1.038E-03	0.000E+00	0.000E+00	1.467E-06	6.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-05	2.471E-05	2.965E-07	6.353E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	1.104E-03	4.346E-07	0.000E+00	0.000E+00	1.793E-04	2.965E-06	1.334E-06	9.126E-05	7.782E-04	0.000E+00	0.000E+00	1.100E-06	4.725E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.538E-05	1.853E-05	2.223E-07	4.765E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	1.104E-03	4.346E-07	0.000E+00	0.000E+00	1.793E-04	2.965E-06	1.334E-06	9.126E-05	7.782E-04	0.000E+00	0.000E+00	1.100E-06	4.725E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.538E-05	1.853E-05	2.223E-07	4.765E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	9.813E-04	3.863E-07	0.000E+00	0.000E+00	1.594E-04	2.635E-06	1.186E-06	8.112E-05	6.918E-04	0.000E+00	0.000E+00	9.779E-07	4.200E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.256E-05	1.647E-05	1.976E-07	4.235E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	7.360E-04	2.897E-07	0.000E+00	0.000E+00	1.195E-04	1.976E-06	8.894E-07	6.084E-05	5.188E-04	0.000E+00	0.000E+00	7.334E-07	3.150E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.692E-05	1.235E-05	1.482E-07	3.176E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	8.586E-05	3.380E-08	0.000E+00	0.000E+00	1.395E-05	2.306E-07	1.038E-07	7.098E-06	6.053E-05	0.000E+00	0.000E+00	8.557E-08	3.675E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.974E-06	1.441E-06	1.729E-08	3.706E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	1.472E-04	5.795E-08	0.000E+00	0.000E+00	2.391E-05	3.953E-07	1.779E-07	1.217E-05	1.038E-04	0.000E+00	0.000E+00	1.467E-07	6.300E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-06	2.471E-06	2.965E-08	6.353E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	1.472E-04	5.795E-08	0.000E+00	0.000E+00	2.391E-05	3.953E-07	1.779E-07	1.217E-05	1.038E-04	0.000E+00	0.000E+00	1.467E-07	6.300E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-06	2.471E-06	2.965E-08	6.353E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	1.472E-03	5.795E-07	0.000E+00	0.000E+00	2.391E-04	3.953E-06	1.779E-06	1.217E-04	1.038E-03	0.000E+00	0.000E+00	1.467E-06	6.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-05	2.471E-05	2.965E-07	6.353E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	1.472E-03	5.795E-07	0.000E+00	0.000E+00	2.391E-04	3.953E-06	1.779E-06	1.217E-04	1.038E-03	0.000E+00	0.000E+00	1.467E-06	6.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-05	2.471E-05	2.965E-07	6.353E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	1.472E-03	5.795E-07	0.000E+00	0.000E+00	2.391E-04	3.953E-06	1.779E-06	1.217E-04	1.038E-03	0.000E+00	0.000E+00	1.467E-06	6.300E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.384E-05	2.471E-05	2.965E-07	6.353E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	1.227E-04	4.829E-08	0.000E+00	0.000E+00	1.992E-05	3.294E-07	1.482E-07	1.014E-05	8.647E-05	0.000E+00	0.000E+00	1.222E-07	5.250E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.820E-06	2.059E-06	2.471E-08	5.294E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	1.227E-04	4.829E-08	0.000E+00	0.000E+00	1.992E-05	3.294E-07	1.482E-07	1.014E-05	8.647E-05	0.000E+00	0.000E+00	1.222E-07	5.250E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.820E-06	2.059E-06	2.471E-08	5.294E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	1.840E-04	7.243E-08	0.000E+00	0.000E+00	2.989E-05	4.941E-07	2.223E-07	1.521E-05	1.297E-04	0.000E+00	0.000E+00	1.834E-07	7.875E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.229E-06	3.088E-06	3.706E-08	7.941E-08	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	4.416E-04	1.738E-07	0.000E+00	0.000E+00	7.173E-05	1.186E-06	5.336E-07	3.651E-05	3.113E-04	0.000E+00	0.000E+00	4.401E-07	1.890E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.015E-05	7.412E-06	8.894E-08	1.906E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A-14. Emission Rates and REER Calculations - Non-Resident Worker Chronic Non-Cancer Exposure Scenario - Sources Combusting Natural Gas

TEU	Parameter	Units	All Compounds	75-07-0	107-02-8	7664-41-7	7440-38-2	71-43-2	7440-41-7	7440-43-9	18540-29-9	7440-48-4	7440-50-8	100-41-4	50-00-0	110-54-3	7439-92-1	7439-96-5	7439-97-6	365	401	50-32-8	91-20-3	7782-49-2	108-88-3	7440-62-2	1330-20-7
				Acetaldehyde	Acrolein	Ammonia	Arsenic and compounds	Benzene	Beryllium and compounds	Cadmium and compounds	Chromium VI, chromate and dichromate particulate	Cobalt and compounds	Copper and compounds	Ethyl benzene	Formaldehyde	Hexane	Lead and compounds	Manganese and compounds	Mercury and compounds	Nickel compounds, insoluble	Polycyclic aromatic hydrocarbons (PAHs)	Benzo[a]pyrene	Naphthalene	Selenium and compounds	Toluene	Vanadium (fume or dust)	Xylene (mixture), including m-xylene, o-xylene, p-xylene
	Exposure Scenario-specific RBC	(µg/m³)	n/a	620.000	1.500	2200.000	0.002	13.000	0.031	0.037	0.880	0.440	0.000	1100.000	40.000	3100.000	0.660	0.400	0.630	0.062	0.000	0.009	16.000	0.000	22000.000	0.440	970.000
OVEN102	Emission Rate	lb/yr		0.479	0.417	2782.588	0.031	0.897	0.002	0.170	0.216	0.013	0.131	1.067	1.901	0.711	0.077	0.059	0.040	0.325	0.015	0.000	0.046	0.004	4.097	0.356	3.045
OVEN102	REER	(g/s)/(µg/m³)	3.722E-04	1.112E-08	4.002E-06	1.819E-05	1.853E-04	9.920E-07	8.607E-07	6.610E-05	3.537E-06	4.245E-07	0.000E+00	1.395E-08	6.837E-07	3.299E-09	1.684E-06	2.112E-06	9.176E-07	7.531E-05	0.000E+00	3.032E-07	4.169E-08	0.000E+00	2.678E-09	1.162E-05	4.516E-08
OVEN1_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN1_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN1_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN2_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_A	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN2_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN2_B	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN3_A	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_A	REER	(g/s)/(µg/m³)	9.321E-05	3.855E-09	1.001E-06	4.548E-06	4.632E-05	3.421E-07	2.152E-07	1.653E-05	8.843E-07	1.061E-07	0.000E+00	4.801E-09	2.362E-07	1.130E-09	4.211E-07	5.281E-07	2.294E-07	1.883E-05	0.000E+00	7.580E-08	1.042E-08	0.000E+00	9.248E-10	2.906E-06	1.559E-08
OVEN3_B	Emission Rate	lb/yr		0.166	0.104	695.647	0.008	0.309	0.000	0.043	0.054	0.003	0.033	0.367	0.657	0.243	0.019	0.015	0.010	0.081	0.004	0.000	0.012	0.001	1.414	0.089	1.051
OVEN3_B	REER	(g/s)/(µg/m³)	9.321E-05	3.855E-09	1.001E-06	4.548E-06	4.632E-05	3.421E-07	2.152E-07	1.653E-05	8.843E-07	1.061E-07	0.000E+00	4.801E-09	2.362E-07	1.130E-09	4.211E-07	5.281E-07	2.294E-07	1.883E-05	0.000E+00	7.580E-08	1.042E-08	0.000E+00	9.248E-10	2.906E-06	1.559E-08
OVEN4_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN4_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN4_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN5_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN5_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN5_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN6_A	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_A	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN6_B	Emission Rate	lb/yr		0.148	0.093	618.353	0.007	0.275	0.000	0.038	0.048	0.003	0.029	0.326	0.584	0.216	0.017	0.013	0.009	0.072	0.003	0.000	0.010	0.001	1.257	0.079	0.934
OVEN6_B	REER	(g/s)/(µg/m³)	8.285E-05	3.427E-09	8.894E-07	4.043E-06	4.118E-05	3.041E-07	1.913E-07	1.469E-05	7.861E-07	9.433E-08	0.000E+00	4.267E-09	2.100E-07	1.004E-09	3.743E-07	4.694E-07	2.039E-07	1.674E-05	0.000E+00	6.738E-08	9.265E-09	0.000E+00	8.220E-10	2.583E-06	1.386E-08
OVEN10_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN10_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN10_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN12_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN12_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN12_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN13_A	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_A	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN13_B	Emission Rate	lb/yr		0.111	0.070	463.765	0.005	0.206	0.000	0.028	0.036	0.002	0.022	0.245	0.438	0.162	0.013	0.010	0.007	0.054	0.003	0.000	0.008	0.001	0.943	0.059	0.701
OVEN13_B	REER	(g/s)/(µg/m³)	6.214E-05	2.570E-09	6.670E-07	3.032E-06	3.088E-05	2.281E-07	1.435E-07	1.102E-05	5.896E-07	7.075E-08	0.000E+00	3.200E-09	1.575E-07	7.531E-10	2.807E-07	3.521E-07	1.529E-07	1.255E-05	0.000E+00	5.053E-08	6.948E-09	0.000E+00	6.165E-10	1.937E-06	1.039E-08
OVEN14	Emission Rate	lb/yr		0.013	0.008	54.106	0.001	0.024	0.000	0.003	0.004	0.000	0.003	0.029	0.051	0.019	0.002	0.001	0.001	0.006	0.000	0.000	0.001	0.000	0.110	0.007	0.082
OVEN14	REER	(g/s)/(µg/m³)	7.249E-06	2.999E-10	7.782E-08	3.537E-07	3.603E-06	2.661E-08	1.674E-08	1.285E-06	6.878E-08	8.254E-09	0.000E+00	3.734E-10	1.837E-08	8.786E-11	3.275E-08	4.107E-08	1.784E-08	1.464E-06	0.000E+00	5.896E-09	8.106E-10	0.000E+00	7.193E-11	2.260E-07	1.212E-09
OVEN18_A	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_A	REER	(g/s)/(µg/m³)	1.243E-05	5.140E-10	1.334E-07	6.064E-07	6.176E-06	4.561E-08	2.869E-08	2.203E-06	1.179E-07	1.415E-08	0.000E+00	6.401E-10	3.150E-08	1.506E-10	5.615E-08	7.041E-08	3.059E-08	2.510E-06	0.000E+00	1.011E-08	1.390E-09	0.000E+00	1.233E-10	3.874E-07	2.078E-09
OVEN18_B	Emission Rate	lb/yr		0.022	0.014	92.753	0.001	0.041	0.000	0.006	0.007	0.000	0.004	0.049	0.088	0.032	0.003	0.002	0.001	0.011	0.001	0.000	0.002	0.000	0.189	0.012	0.140
OVEN18_B	REER	(g/s)/(µg/m³)	1.243E-05	5.140E-10	1.334E-07	6.064E-07	6.176E-06	4.561E-08	2.869E-08	2.203E-06	1.179E-07	1.415E-08	0.000E+00	6.401E-10	3.150E-08	1.506E-10	5.615E-08	7.041E-08	3.059E-08	2.510E-06	0.000E+00	1.011E-08	1.390E-09	0.000E+00	1.233E-10	3.874E-07	2.078E-09
OVEN20_A	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_A	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN20_B	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN20_B	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
OVEN21	Emission Rate	lb/yr		0.222	0.139	927.529	0.010	0.412	0.001	0.057	0.072	0.004	0.044	0.490	0.876	0.325	0.026	0.020	0.013	0.108	0.005	0.000	0.015	0.001	1.886	0.119	1.402
OVEN21	REER	(g/s)/(µg/m³)	1.243E-04	5.140E-09	1.334E-06	6.064E-06	6.176E-05	4.561E-07	2.869E-07	2.203E-05	1.179E-06	1.415E-07	0.000E+00	6.401E-09	3.150E-07	1.506E-09	5.615E-07	7.041E-07	3.059E-07	2.510E-05	0.000E+00	1.011E-07	1.390E-08	0.000E+00	1.233E-09	3.874E-06	2.078E-08
CORE1	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE1	REER	(g/s)/(µg/m³)	1.036E-05	4.284E-10	1.112E-07	5.053E-07	5.147E-06	3.801E-08	2.391E-08	1.836E-06	9.826E-08	1.179E-08	0.000E+00	5.334E-10	2.625E-08	1.255E-10	4.679E-08	5.868E-08	2.549E-08	2.092E-06	0.000E+00	8.422E-09	1.158E-09	0.000E+00	1.028E-10	3.229E-07	1.732E-09
CORE2	Emission Rate	lb/yr		0.018	0.012	77.294	0.001	0.034	0.000	0.005	0.006	0.000	0.004	0.041	0.073	0.027	0.002	0.002	0.001	0.009	0.000	0.000	0.001	0.000	0.157	0.010	0.117
CORE2	REER	(g/s)/(µg/m³)	1.036E-05	4.284E-10	1.112E-07	5.053E-07	5.147E-06	3.801E-08	2.391E-08	1.836E-06	9.826E-08	1.179E-08	0.000E+00	5.334E-10	2.625E-08	1.255E-10	4.679E-08	5.868E-08	2.549E-08	2.092E-06	0.000E+00	8.422E-09	1.158E-09	0.000E+00	1.028E-10	3.229E-07	1.732E-09
CORE3	Emission Rate	lb/yr		0.028	0.017	115.941	0.001	0.052	0.000	0.007	0.009	0.001	0.005	0.061	0.110	0.041	0.003	0.002	0.002	0.014	0.001	0.000	0.002	0.000	0.236	0.015	0.175
CORE3	REER	(g/s)/(µg/m³)	1.553E-05	6.425E-10	1.668E-07	7.580E-07	7.720E-06	5.701E-08	3.586E-08	2.754E-06	1.474E-07	1.769E-08	0.000E+00	8.001E-10	3.937E-08	1.883E-10	7.019E-08	8.801E-08	3.823E-08	3.138E-06	0.000E+00	1.263E-08	1.737E-09	0.000E+00	1.541E-10	4.843E-07	2.598E-09
LADLE1-3	Emission Rate	lb/yr		0.066	0.042	278.259	0.003	0.124	0.000	0.017	0.022	0.001	0.013	0.147	0.263	0.097	0.008	0.006	0.004	0.032	0.002	0.000	0.005	0.000	0.566	0.036	0.420
LADLE1-3	REER	(g/s)/(µg/m³)	3.728E-05	1.542E-09	4.002E-07	1.819E-06	1.853E-05	1.368E-07	8.607E-08	6.610E-06	3.537E-07	4.245E-08	0.000E+00	1.920E-09	9.450E-08	4.519E-10	1.684E-07	2.112E-07	9.176E-08	7.531E-06	0.000E+00	3.032E-08	4.169E-09	0.000E+00	3.699E-10	1.162E-06	6.235E-09

APPENDIX B

SUPPLEMENTARY METEOROLOGICAL INFORMATION

Modeling Protocol and Risk Assessment Work Plan

Columbia Steel Casting Co., Inc.
10425 N Bloss Ave.
Portland, OR 97203

September 2021

Table B-1. Meteorological Data Completeness by Quarter

Time Period	Data Completeness (%) by Time Period and Meteorological Variable			
	Wind Speed	Wind Direction	Temperature	Cloud Cover
2015 Q1	100	100	100	100
2015 Q2	100	100	100	100
2015 Q3	100	100	100	100
2015 Q4	100	100	100	100
2016 Q1	100	100	100	100
2016 Q2	100	99	100	100
2016 Q3	100	100	100	100
2016 Q4	100	100	100	100
2017 Q1	100	100	100	100
2017 Q2	100	100	100	100
2017 Q3	100	100	100	100
2017 Q4	100	100	100	100
2018 Q1	100	99	100	100
2018 Q2	100	95	100	100
2018 Q3	100	95	100	100
2018 Q4	100	100	100	100
2019 Q1	100	99	100	100
2019 Q2	100	100	100	100
2019 Q3	100	100	100	100
2019 Q4	100	100	100	100

Data completeness is assessed by comaring the number of hours in each quarter
in the AERMET-processed surface file with valid data to the total number of hours in the quarter.

Table B-2. Surface Moisture Determinations by Month

Year	Precipitation (inches) Amount for 30 Years at Portland, OR											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	1.47	3.86	2.33	1.79	2.25	3.23	0.24	0.15	1.86	4.12	4.62	8.37
1982	6.31	5.98	2.38	3.56	0.46	1.66	0.94	1.66	3.98	4.44	3.51	8.16
1983	6.23	7.78	6.80	1.87	1.30	1.95	2.68	2.29	0.39	1.95	8.65	5.30
1984	2.01	3.93	3.19	3.20	3.41	4.06	0.00	0.09	1.46	3.85	9.74	2.56
1985	0.06	1.79	3.08	1.07	1.52	2.34	0.55	0.48	2.76	2.75	3.89	2.19
1986	4.65	5.31	2.60	1.91	2.19	0.23	1.20	0.10	4.30	1.99	6.26	4.30
1987	6.93	2.45	4.91	1.94	1.63	0.14	1.03	0.35	0.30	0.27	1.96	8.00
1988	4.95	1.17	3.13	4.57	2.53	2.34	0.69	0.10	1.76	0.19	7.92	2.37
1989	3.30	2.84	6.73	2.08	2.87	0.78	0.91	1.07	1.48	1.73	3.18	3.08
1990	7.95	3.43	2.52	2.31	2.37	1.94	0.32	0.95	0.34	4.65	3.68	2.40
1991	2.56	3.65	4.64	4.05	3.34	2.31	0.07	0.70	0.02	1.51	6.36	4.34
1992	4.31	4.12	1.87	3.82	0.10	0.60	0.67	0.49	1.12	2.87	4.55	4.98
1993	3.06	0.72	4.39	5.26	4.36	1.69	2.41	0.37	0.00	1.59	1.50	5.01
1994	3.56	4.92	1.84	1.91	0.56	1.67	0.07	0.13	1.13	8.41	5.91	4.85
1995	5.56	3.19	3.82	3.49	1.65	2.62	1.23	0.81	1.31	3.15	10.74	5.91
1996	7.15	10.03	3.24	5.12	4.88	0.44	0.73	0.25	3.05	5.38	9.58	13.35
1997	7.32	1.63	7.14	3.73	3.63	2.83	0.52	1.58	1.98	6.40	4.02	3.03
1998	6.77	5.27	4.06	1.04	5.55	1.73	0.59	0.00	1.09	2.16	11.02	6.74
1999	6.63	8.73	4.03	1.56	1.97	1.73	0.51	0.75	0.10	2.44	6.81	3.62
2000	5.66	4.50	3.21	1.82	2.70	1.19	0.15	0.12	1.67	3.25	2.46	3.47
2001	1.47	1.29	3.11	2.85	0.91	1.79	0.95	0.74	0.70	3.12	6.89	6.62
2002	6.22	3.55	3.40	2.34	1.86	1.57	0.19	0.04	1.54	0.63	1.91	8.00
2003	7.64	2.37	5.75	4.37	1.49	0.31	0.00	0.19	0.85	3.01	4.09	7.45
2004	4.86	3.95	1.53	1.01	1.78	1.12	0.04	2.68	1.03	3.36	2.38	3.91
2005	1.94	1.30	3.77	3.49	4.34	2.21	0.41	1.05	1.70	3.39	4.98	7.52
2006	10.92	2.15	2.96	2.46	3.00	0.92	0.47	0.10	0.86	1.39	11.92	5.85
2007	2.72	3.47	3.20	2.01	1.45	1.08	0.55	0.46	2.04	3.26	4.25	7.57
2008	4.71	2.19	3.71	2.08	2.02	1.00	0.29	1.23	0.48	1.74	4.15	3.52
2009	4.50	1.36	3.36	2.31	3.26	1.30	0.34	0.76	1.40	3.02	5.13	3.76
2010	4.94	2.76	3.58	2.92	4.68	4.27	0.59	0.23	3.36	3.87	6.63	8.35
30-Year Avg	**4.88**	**3.66**	**3.68**	**2.73**	**2.47**	**1.70**	**0.64**	**0.66**	**1.47**	**3.00**	**5.62**	**5.49**
30th percentile	**3.48**	**2.32**	**3.10**	**1.93**	**1.64**	**1.11**	**0.31**	**0.18**	**0.86**	**1.98**	**3.98**	**3.72**
70th percentile	**6.25**	**4.00**	**3.88**	**3.49**	**3.08**	**2.03**	**0.70**	**0.78**	**1.72**	**3.37**	**6.68**	**6.95**

Year	Precipitation (inches) Monthly Totals at Portland, OR											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	3.33	3.71	4.71	1.75	0.59	0.40	0.57	0.66	1.26	3.69	4.49	15.24
2016	7.23	4.10	4.73	1.96	1.72	1.42	0.66	0.09	1.69	8.31	6.83	4.61
2017	4.13	10.36	7.26	4.51	1.92	1.08	0.00	0.06	2.38	4.57	6.44	3.09
2018	5.36	1.86	2.50	3.34	0.17	1.03	0.02	0.06	1.59	3.43	2.86	5.08
2019	2.79	4.10	1.54	2.98	1.51	0.45	0.80	1.23	3.85	1.51	1.52	4.39

Year	Determination of Surface Moisture Status by Month (1)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	Dry	Average	Wet	Dry	Dry	Dry	Average	Average	Average	Wet	Average	Wet
2016	Wet	Wet	Wet	Average	Average	Average	Average	Dry	Average	Wet	Wet	Average
2017	Average	Wet	Wet	Wet	Average	Dry	Dry	Dry	Wet	Wet	Average	Dry
2018	Average	Dry	Dry	Average	Dry	Dry	Dry	Dry	Average	Wet	Dry	Average
2019	Dry	Wet	Dry	Average	Dry	Dry	Wet	Wet	Wet	Dry	Dry	Average

(1) Classification of Monthly Surface Moisture:

Months with less than the 30th percentile of the climatological (1981-2010) monthly average precipitation are classified as dry.

Months with greater than the 70th percentile of the climatological (1981-2010) monthly average precipitation are classified as wet.

Months with between the 30th-70th percentile of the climatological (1981-2010) monthly average precipitation are classified as average.