

# Appendix G

## **Risk of Upset Worksheets**

**Santa Susana Field Laboratory**  
**Accident Release Risk Assessment Calculations**

**Overall Project**

	Outbound Trips <sup>a</sup>	Miles per Trip <sup>b</sup>	Rural	Urban	Total
<b><u>Project Estimated Total Vehicle Miles Traveled (within California)</u></b> <i>(based on maximum annual estimated VMT and rural/urban split)</i>			50%	50%	
<b><u>Data Sources:</u></b>	<b><u>PEIR, Table 3-4:</u></b>	<b><u>PEIR, Appx. D &amp; G:</u></b>			
Boeing (Hazardous Waste):	4,110	291.00	598,005	598,005	1,196,010
Boeing (Radiological/Mixed Waste):	1,110	398.51	221,173	221,173	442,346
DOE (Hazardous Waste):	3,200	228.00	364,800	364,800	729,600
DOE (Radiological/Mixed Waste):	5,940	288.80	857,736	857,736	1,715,472
NASA (Hazardous Waste):	45,400	297.39	6,750,753	6,750,753	13,501,506
NASA (Radiological/Mixed Waste):	1,700	398.51	338,734	338,734	677,467
<i>Total Trips and VMT (outbound trips):</i>	<i>61,460</i>		<i>9,131,201</i>	<i>9,131,201</i>	<i>18,262,401</i>
Maximum Truck Accident Involvement Rate: Per # of miles: <i>(Source: Argonne National Laboratory, 1996)</i>			1.18 1,000,000	2.18 1,000,000	
Project Estimated Vehicle Miles Traveled (outbound trips):			9,131,201	9,131,201	18,262,401
Project Estimated Truck Accident Involvement Rate:			10.77	19.91	30.68
Probability of Release of Solid Haz. Mat. in an Accident: <i>(Source: Argonne National Laboratory, 1996)</i>			9.10%	9.10%	9.10%
<b>Project Probability of Release of Solid Hazardous Material:</b>			<b>0.98</b>	<b>1.81</b>	<b>2.79</b>

Notes:

a. Outbound trips based on data provided in Section 3.0, Project Description, of the Draft Program EIR (refer to Table 3-4 and associated discussions).

b. Miles per trip based on data provided in Appendix D (Air Quality Worksheets) and Appendix G (Greenhouse Gas Worksheets) of the Draft Program EIR.

**Initial Projects**

	Outbound Trips <sup>c</sup>	Miles per Trip <sup>d</sup>	Rural	Urban	Total
<b>Project Estimated Total Vehicle Miles Traveled (within California) (based on maximum annual estimated VMT and rural/urban split)</b>			50%	50%	
<i>Data Sources:</i>	<u>PEIR, Table 3-15:</u>	<u>PEIR, Appx. D &amp; G:</u>			
Demolition - Boeing TTF Closure (Mixed Waste):	26	288.80	3,754	3,754	7,509
Demolition - DOE (Radiological/Mixed Waste):	361	288.80	52,128	52,128	104,257
Area IV (Radiological/Mixed Waste): <sup>e</sup>	5,936	288.80	857,158	857,158	1,714,317
Area IV (Hazardous):	3,200	125.00	200,000	200,000	400,000
Liquid Oxygen Plant (Hazardous):	3,890	297.39	578,424	578,424	1,156,847
RMHF/HWMF (Hazardous):	13	125.00	813	813	1,625
RMHF/HWMF (Radiological/Mixed Waste):	248	288.80	35,811	35,811	71,622
<b>Total Trips and VMT (outbound trips):</b>	<b>13,674</b>		<b>1,728,088</b>	<b>1,728,088</b>	<b>3,456,177</b>
Maximum Truck Accident Involvement Rate: Per # of miles: <i>(Source: Argonne National Laboratory, 1996)</i>			1.18 1,000,000	2.18 1,000,000	
Project Estimated Vehicle Miles Traveled (outbound trips):			1,728,088	1,728,088	3,456,177
Project Estimated Truck Accident Involvement Rate:			2.04	3.77	5.81
Probability of Release of Solid Haz. Mat. in an Accident: <i>(Source: Argonne National Laboratory, 1996)</i>			9.10%	9.10%	9.10%
<b>Project Probability of Release of Solid Hazardous Material:</b>			<b>0.19</b>	<b>0.34</b>	<b>0.53</b>

Notes:

c. Outbound trips based on data provided in Section 3.0, Project Description, of the Draft Program EIR (refer to Tables 3-9, -10, -11, -13, -14, and -15, and associated discussions).

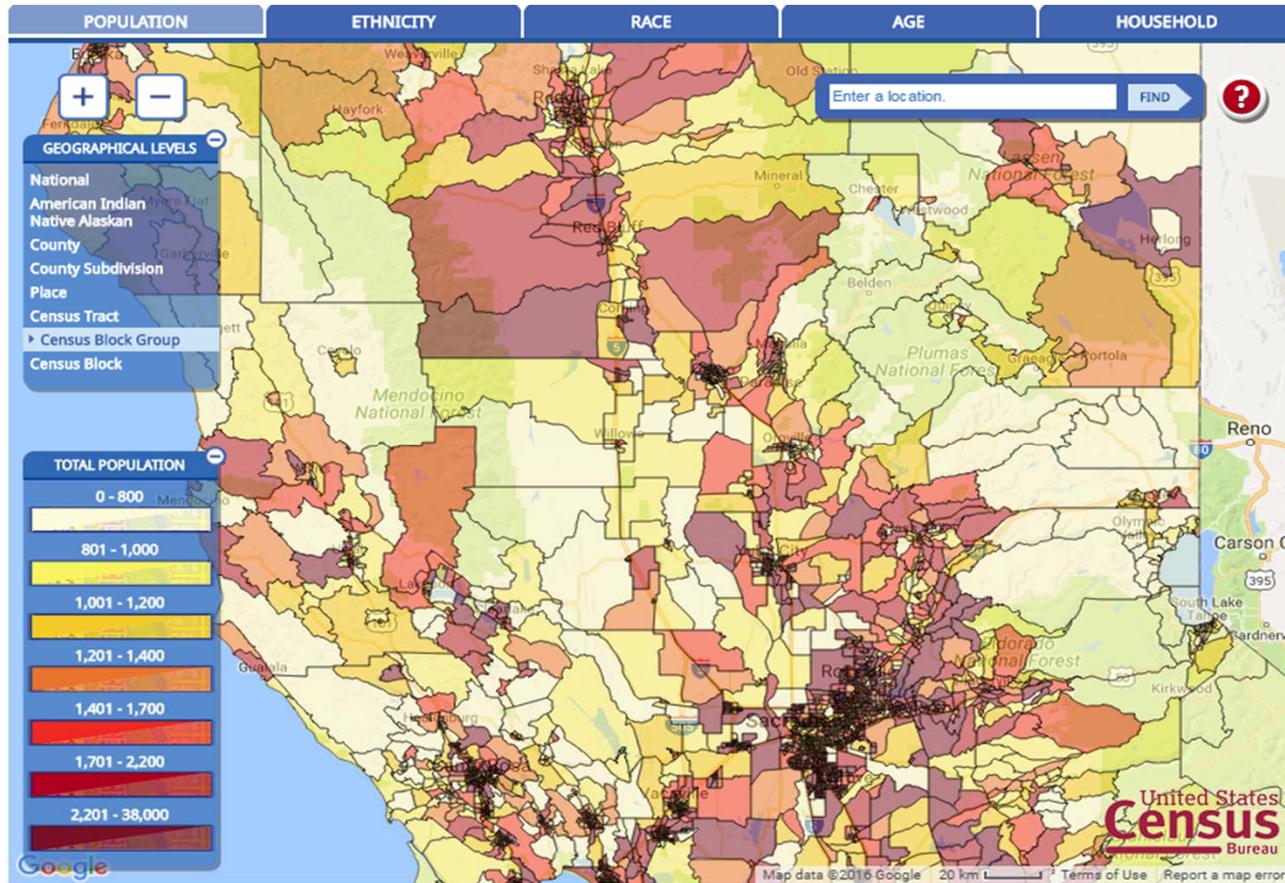
d. Miles per trip based on data provided in Appendix D (Air Quality Worksheets) and Appendix G (Greenhouse Gas Worksheets) of the Draft Program EIR.

e. Calculated as 196 + 2,870 + 2,870 outbound trips from PEIR Table 3-9.

**U.S. Census Bureau, Census Block Group Data**  
<https://www.census.gov/2010census/popmap/>

For the 2010 Census, an urban area comprises census tracts or census blocks that, among other requirements, encompass at least 2,500 people (76 Fed. Reg. 164 (August 24, 2011) 53029-53043). Rural areas are all other areas not classified as urban.

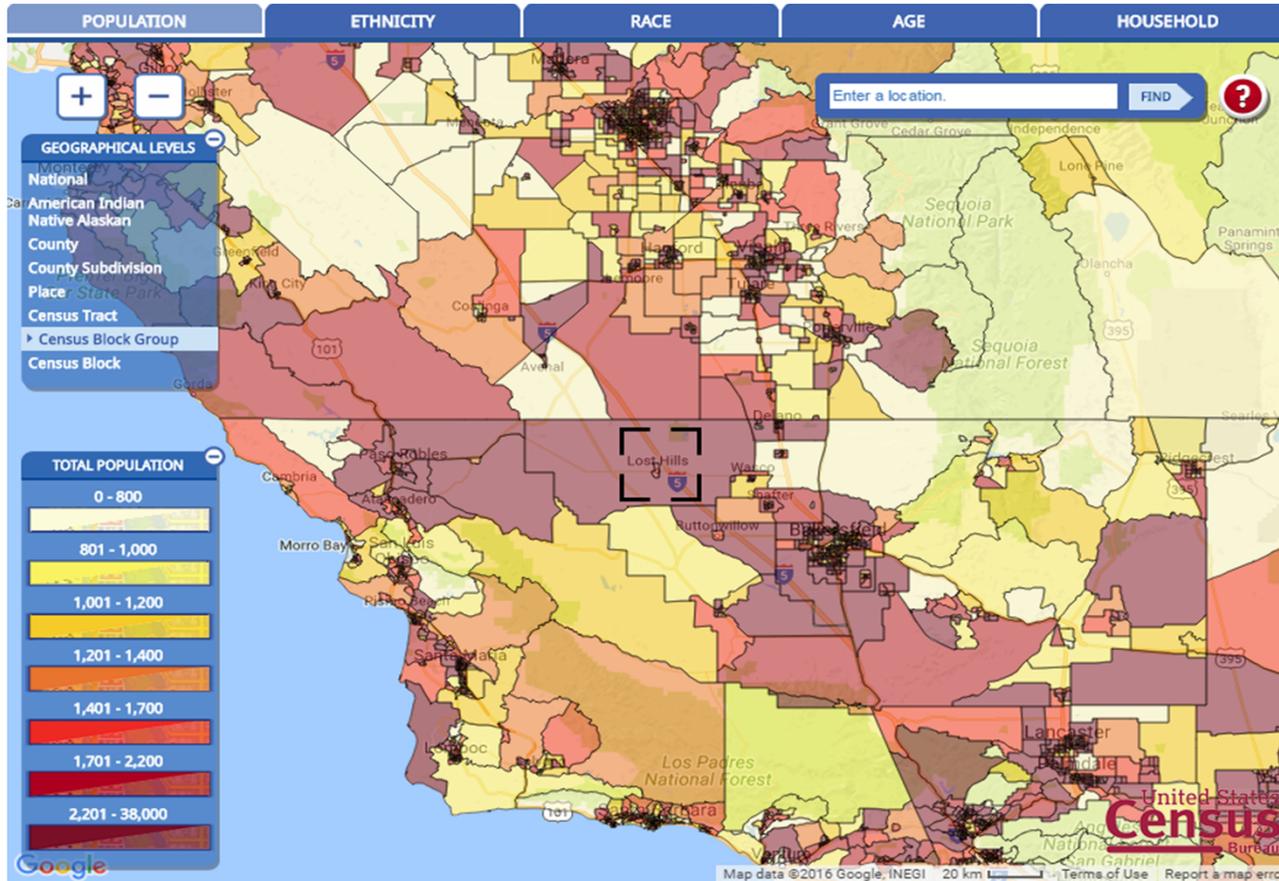
Northern California: As shown, the major transit route (i.e., Interstate 5) traverses primarily through rural areas (indicated by all shaded categories except the darkest shade category).



**U.S. Census Bureau, Census Block Group Data**  
<https://www.census.gov/2010census/popmap/>

For the 2010 Census, an urban area comprises census tracts or census blocks that, among other requirements, encompass at least 2,500 people (76 Fed. Reg. 164 (August 24, 2011) 53029-53043). Rural areas are all other areas not classified as urban.

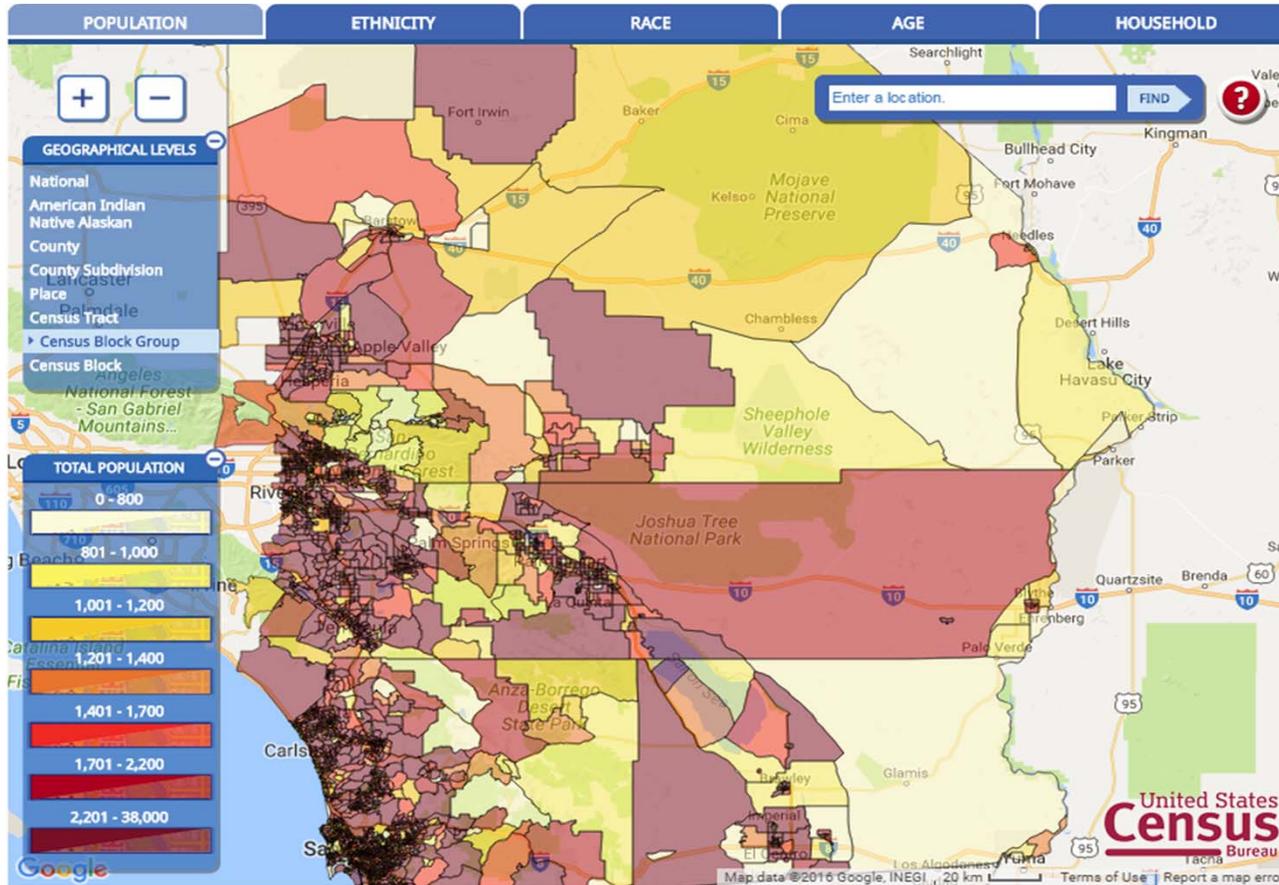
Central California: As shown, the major transit route (e.g., Interstate 5) traverses primarily through rural areas (indicated by all shaded categories except the darkest shade category).



**U.S. Census Bureau, Census Block Group Data**  
<https://www.census.gov/2010census/popmap/>

For the 2010 Census, an urban area comprises census tracts or census blocks that, among other requirements, encompass at least 2,500 people (76 Fed. Reg. 164 (August 24, 2011) 53029-53043). Rural areas are all other areas not classified as urban.

Southern California: As shown, the major transit routes (e.g., Interstate 5, Interstate 10, Interstate 15, Interstate 40) traverse primarily through rural areas (indicated by all shaded categories except the darkest shade category). (Note: The Census Block Group in Eastern Riverside County is classified as rural as it corresponds to the second darkest shade category).



**Santa Susana Field Laboratory**  
**Accident Release Risk Assessment Calculations**  
**Out-of-State (outside of California)**

Overall Project					
	Outbound Trips <sup>f</sup>	Miles per Trip <sup>g</sup>	Rural	Urban	Total
<b>Project Estimated Total Vehicle Miles Traveled (outside California)</b> <i>(based on maximum annual estimated VMT and rural/urban split)</i>			50%	50%	
<b>Data Sources:</b>	<b>DEIR, Table 3-4:</b>	<b>DEIR, Appx. D &amp; G:</b>			
Boeing (Hazardous Waste):	4,110	-	-	-	-
Boeing (Radiological/Mixed Waste):	1,110	299.49	166,217	166,217	332,434
DOE (Hazardous Waste):	3,200	-	-	-	-
DOE (Radiological/Mixed Waste):	5,940	48.20	143,154	143,154	286,308
NASA (Hazardous Waste):	45,400	26.61	604,047	604,047	1,208,094
NASA (Radiological/Mixed Waste):	1,700	299.49	254,567	254,567	509,133
<b>Total Trips and VMT (outbound trips):</b>	<b>61,460</b>		<b>1,167,984</b>	<b>1,167,984</b>	<b>2,335,969</b>
Maximum Truck Accident Involvement Rate: Per # of miles: <i>(Source: Argonne National Laboratory, 1996)</i>			1.18 1,000,000	2.18 1,000,000	
Project Estimated Vehicle Miles Traveled (outbound trips):			1,167,984	1,167,984	2,335,969
Project Estimated Truck Accident Involvement Rate:			1.38	2.55	3.92
Probability of Release of Solid Haz. Mat. in an Accident: <i>(Source: Argonne National Laboratory, 1996)</i>			9.10%	9.10%	9.10%
<b>Project Probability of Release of Solid Hazardous Material:</b>			<b>0.13</b>	<b>0.23</b>	<b>0.36</b>

Notes:

f. Outbound trips based on data provided in Section 3.0, Project Description, of the Draft Program EIR (refer to Table 3-4 and associated discussions).

g. Miles per trip based on data provided in Appendix D (Air Quality Worksheets) and Appendix G (Greenhouse Gas Worksheets) of the Draft Program EIR.

**Initial Projects**

	Outbound Trips <sup>h</sup>	Miles per Trip <sup>i</sup>	Rural	Urban	Total
<b>Project Estimated Total Vehicle Miles Traveled (outside California) (based on maximum annual estimated VMT and rural/urban split)</b>			50%	50%	
<b>Data Sources:</b>	<b>DEIR, Table 3-15:</b>	<b>DEIR, Appx. D &amp; G:</b>			
Demolition - Boeing (Mixed Waste):	26	48.20	627	627	1,253
Demolition - DOE (Radiological/Mixed Waste):	361	48.20	8,700	8,700	17,400
Area IV (Radiological/Mixed Waste): <sup>j</sup>	5,936	48.20	143,058	143,058	286,115
Area IV (Hazardous):	3,200	-	-	-	-
Liquid Oxygen Plant (Hazardous):	3,890	26.61	51,756	51,756	103,513
RMHF/HWMF (Hazardous):	13	-	-	-	-
RMHF/HWMF (Radiological/Mixed Waste):	248	48.20	5,977	5,977	11,954
<b>Total Trips and VMT (outbound trips):</b>	<b>13,674</b>		<b>210,118</b>	<b>210,118</b>	<b>420,235</b>
Maximum Truck Accident Involvement Rate: Per # of miles: (Source: Argonne National Laboratory, 1996)			1.18 1,000,000	2.18 1,000,000	
Project Estimated Vehicle Miles Traveled (outbound trips):			210,118	210,118	420,235
Project Estimated Truck Accident Involvement Rate:			0.25	0.46	0.71
Probability of Release of Solid Haz. Mat. in an Accident: (Source: Argonne National Laboratory, 1996)			9.10%	9.10%	9.10%
<b>Project Probability of Release of Solid Hazardous Material:</b>			<b>0.02</b>	<b>0.04</b>	<b>0.06</b>

Notes:

h. Outbound trips based on data provided in Section 3.0, Project Description, of the Draft Program EIR (refer to Tables 3-9, -10, -11, -13, -14, and -15, and associated discussions).

i. Miles per trip based on data provided in Appendix D (Air Quality Worksheets) and Appendix G (Greenhouse Gas Worksheets) of the Draft Program EIR.

j. Calculated as 196 + 2,870 + 2,870 outbound trips from PEIR Table 3-9.