



Consequence Report
Smoke Plume for Wellington
Automated Report - Actual Release

Issued: January 13, 2012 20:18 UTC

SUMMARY:

This report describes the health effect consequences associated with a actual unknown release to the atmosphere from a generic source. This is an initial, automated NARAC product, not a final recommendation. Initial predictions are for a limited time period and areas affected may change at later times. Please consult NARAC staff (925-422-7627) for refined, quality assured predictions. Predictions should be confirmed and refined using measurements.

PRODUCTS:

1 Hr Avg Air Conc. at 01/13/2012 18:00:00 UTC

Material: particulate

This product identifies relative magnitudes of air concentration from a release of a non-specific material. These levels should be confirmed by monitoring surveys.

1 Hr Avg Air Conc. at 01/13/2012 19:00:00 UTC

Material: particulate

This product identifies relative magnitudes of air concentration from a release of a non-specific material. These levels should be confirmed by monitoring surveys.

1 Hr Avg Air Conc. at 01/13/2012 20:00:00 UTC

Material: particulate

This product identifies relative magnitudes of air concentration from a release of a non-specific material. These levels should be confirmed by monitoring surveys.

1 Hr Avg Air Conc. at 01/13/2012 21:00:00 UTC

Material: particulate

This product identifies relative magnitudes of air concentration from a release of a non-specific material. These levels should be confirmed by monitoring surveys.

Total Deposition of particulate

Material: particulate

This product identifies areas of possible surface contamination due to deposition of a non-specific material. These levels should be confirmed by monitoring surveys.

SOURCE INFORMATION:

Release Start Time: January 13, 2012 17:00 UTC

Release Stop Time: January 13, 2012 21:00 UTC

NARAC Contact Information email: narac@llnl.gov or phone (925) 424-6465

Release Location:	(41.1792,-82.2172)
Source Material and Amount:	1 kg of particulate (100% respirable) Total Strength: 1.0 kg
Source Geometry:	point released at 0 m
Particle Size Distribution:	All particulate is in the respirable range from 0.1 to 10 microns

METEOROLOGY:

Observations from 01/13/2012 17:00:00 UTC to 01/13/2012 20:00:00 UTC at 1 hr intervals were used in the NARAC meteorological model

Observation Met Times

- January 13, 2012 17:00 UTC
- January 13, 2012 18:00 UTC
- January 13, 2012 19:00 UTC
- January 13, 2012 20:00 UTC

No precipitation is included in this calculation

CONTACT INFORMATION:

Calculation requested on January 13, 2012 19:27 UTC by:

Connee Foster (mgr), NARAC -- Operation
312-353-9351
foster5@llnl.gov

Approved by: NARAC Operations
Approver organization: NARAC
Phone: 925-422-9100
Email: narac@llnl.gov
Approved on: January 13, 2012 19:32 UTC

Classification: Not for Public Dissemination

DISCLAIMER:

NARAC Contact Information email: narac@llnl.gov or phone (925) 424-6465

These model predictions are intended to be guidance, and are not final recommendations. The accuracy of any prediction will be limited by the accuracy of the input data, such as estimates of the amount of material that becomes airborne and the available meteorological data for the area and time of the incident. Plume predictions may be for a limited time period, and may change at later times if new input data becomes available. Predictions should be confirmed and refined using field measurements. Air and ground concentration may be higher than predicted by this plume model simulation due the limited resolution of this particular simulation. For actual incidents or exercises, consult incident command and subject matter experts from the appropriate coordinating agency before making any decisions based on this model prediction.

This document was prepared as an account of work sponsored by an agency of the United States government. Neither the United States government nor Lawrence Livermore National Security, LLC, nor Lockheed Martin, nor Sandia Corporation, nor any of their employees makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or Lawrence Livermore National Security, LLC. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or Lawrence Livermore National Security, LLC, and shall not be used for advertising or product endorsement purposes.

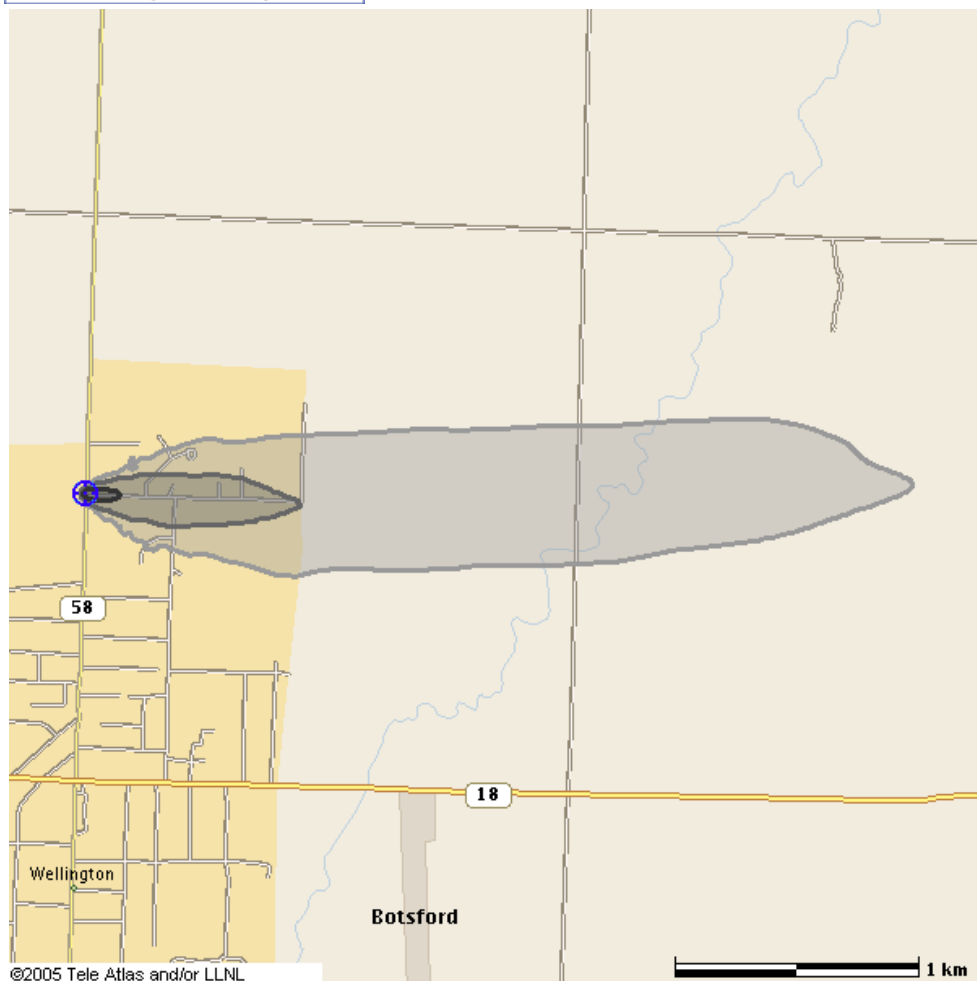
This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

The Department of Homeland Security sponsored the production of this material under the Department of Energy contract for the management and operation of Lawrence Livermore National Laboratory.



1 Hr Avg Air Conc. at 01/13/2012 18:00:00 UTC

Smoke Plume for Wellington
Automated Report - Actual Release



©2005 Tele Atlas and/or LLNL

Map Size: 4.0 km by 4.0 km Id: Production2.rcE44452.rcC1

NARAC Operations: (onDuty Assessor); narac@llnl.gov; 925-424-6465

Requested by: {Connee Foster (mgr); NARAC -- Operation; 312-353-9351; foster5@llnl.gov}

Approved by: {NARAC Operations; NARAC; 925-422-9100}

Effects and Actions

	Description	(g/m3) Extent Area	Population
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-5 0.1 km 0.005 km2	10
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-6 0.9 km 0.1 km2	170
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-7 3.4 km 1.6 km2	280

Note: Areas and counts in the table are cumulative. Population Source = LandScan USA V1.0.

Effects or contamination from January 13, 2012 17:00 UTC to January 13, 2012 18:00 UTC

Release Location: 41.179219 N, 82.217238 W

Material: particulate

Generated On: January 13, 2012 19:27 UTC

Model: ADAPT/LODI

Comments:

Hypothetical release

of 1 kg starting at

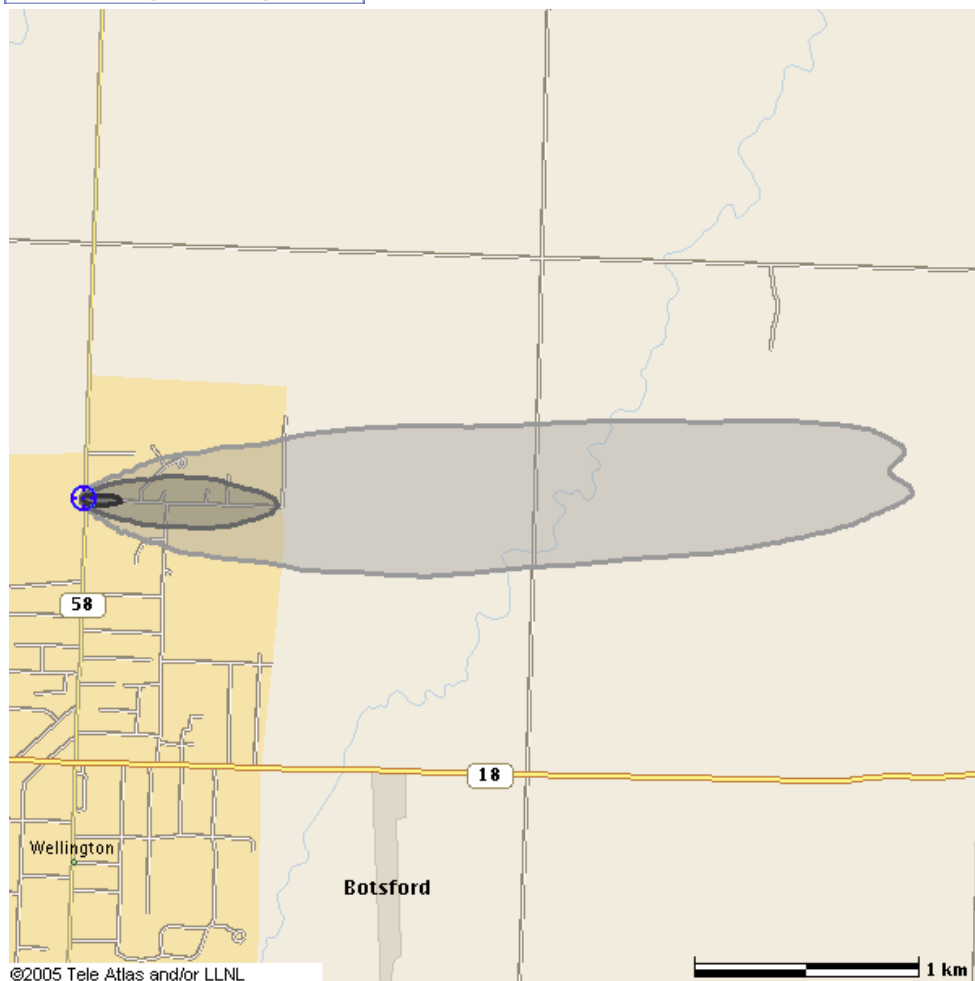
01/13/2012 17:00:00 UTC for 4 hr

met obs



1 Hr Avg Air Conc. at 01/13/2012 19:00:00 UTC

Smoke Plume for Wellington
Automated Report - Actual Release



©2005 Tele Atlas and/or LLNL

Map Size: 4.4 km by 4.4 km Id: Production2.rcE44452.rcC1

NARAC Operations: (onDuty Assessor); narac@llnl.gov; 925-424-6465

Requested by: {Connee Foster (mgr); NARAC -- Operation; 312-353-9351; foster5@llnl.gov}

Approved by: {NARAC Operations; NARAC; 925-422-9100}

Effects and Actions

	Description	(g/m3) Extent Area	Population
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-5 0.2 km 0.006 km2	10
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-6 0.9 km 0.1 km2	180
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-7 3.7 km 2.0 km2	270

Note: Areas and counts in the table are cumulative. Population Source = LandScan USA V1.0.

Effects or contamination from January 13, 2012 18:00 UTC to January 13, 2012 19:00 UTC

Release Location: 41.179219 N, 82.217238 W

Material: particulate

Generated On: January 13, 2012 19:27 UTC

Model: ADAPT/LODI

Comments:

Hypothetical release

of 1 kg starting at

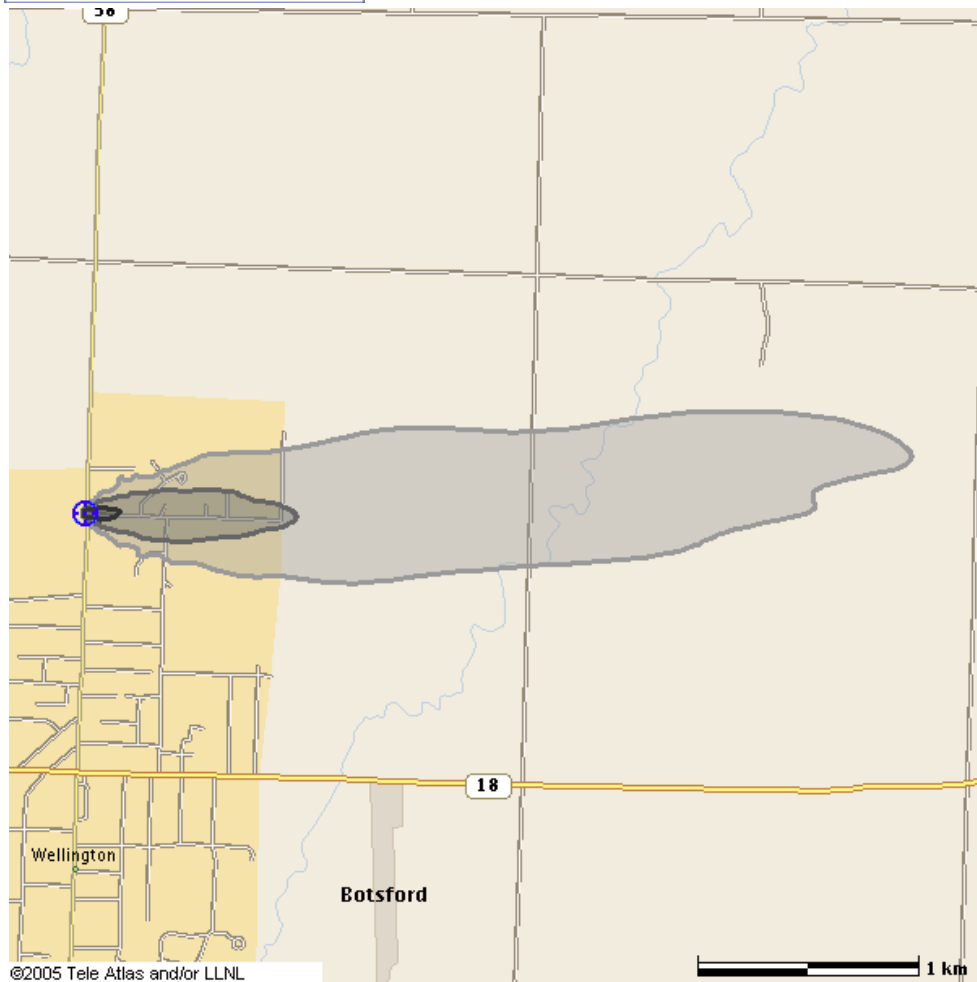
01/13/2012 17:00:00 UTC for 4 hr

met obs



1 Hr Avg Air Conc. at 01/13/2012 20:00:00 UTC

Smoke Plume for Wellington
Automated Report - Actual Release



©2005 Tele Atlas and/or LLNL

Map Size: 4.4 km by 4.4 km Id: Production2.rcE44452.rcC1

NARAC Operations: (onDuty Assessor); narac@llnl.gov; 925-424-6465

Requested by: {Connee Foster (mgr); NARAC -- Operation; 312-353-9351; foster5@llnl.gov}

Approved by: {NARAC Operations; NARAC; 925-422-9100}

Effects and Actions

	Description	(g/m3) Extent Area	Population
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-5 0.2 km 0.007 km2	10
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-6 1.0 km 0.2 km2	180
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-7 3.8 km 2.0 km2	270

Note: Areas and counts in the table are cumulative. Population Source = LandScan USA V1.0.

Effects or contamination from January 13, 2012 19:00 UTC to January 13, 2012 20:00 UTC

Release Location: 41.179219 N, 82.217238 W

Material: particulate

Generated On: January 13, 2012 19:27 UTC

Model: ADAPT/LODI

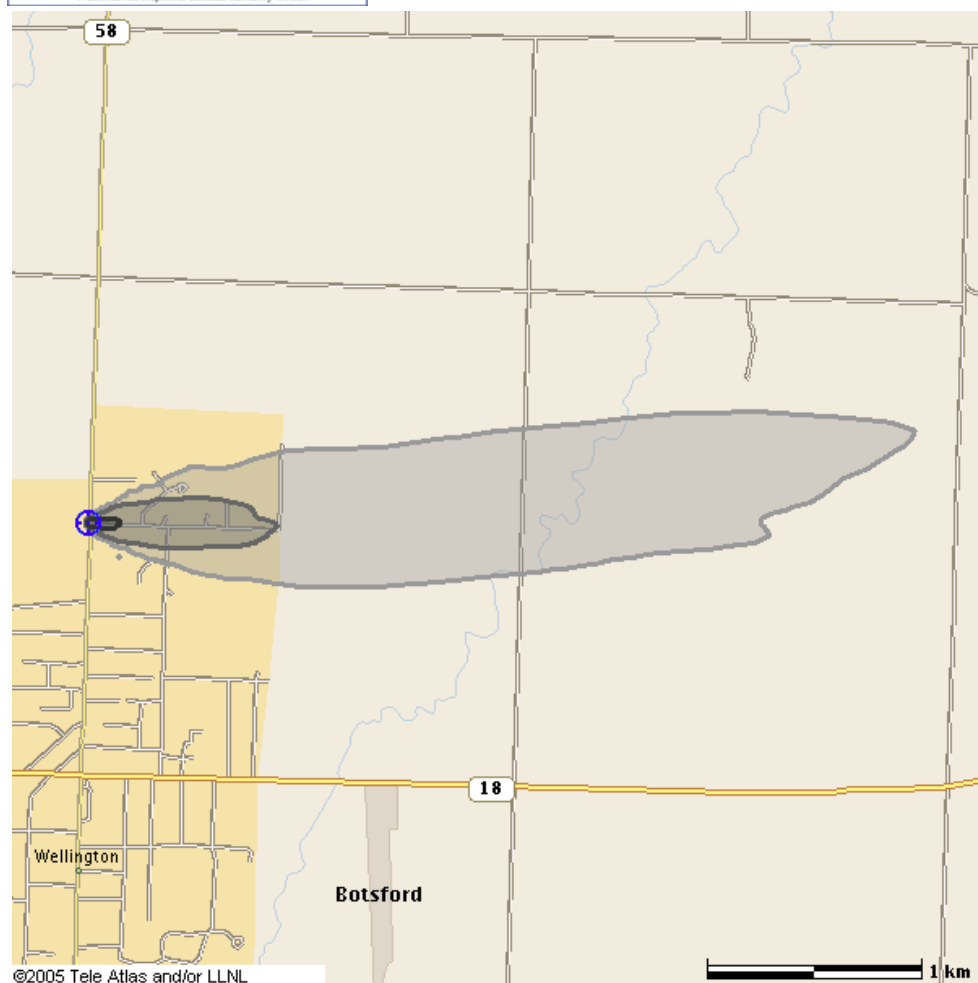
Comments:

Hypothetical release
of 1 kg starting at
01/13/2012 17:00:00 UTC for 4 hr
met obs



1 Hr Avg Air Conc. at 01/13/2012 21:00:00 UTC

Smoke Plume for Wellington
Automated Report - Actual Release



Map Size: 4.6 km by 4.6 km Id: Production2.rcE44452.rcC1

NARAC Operations: (onDuty Assessor); narac@llnl.gov; 925-424-6465

Requested by: {Connee Foster (mgr); NARAC -- Operation; 312-353-9351; foster5@llnl.gov}

Approved by: {NARAC Operations; NARAC; 925-422-9100}

Effects and Actions

	Description	(g/m3) Extent Area	Population
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-5 0.1 km 0.006 km2	10
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-6 0.9 km 0.2 km2	180
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-7 3.9 km 2.1 km2	270

Note: Areas and counts in the table are cumulative. Population Source = LandScan USA V1.0.

Effects or contamination from January 13, 2012 20:00 UTC to January 13, 2012 21:00 UTC

Release Location: 41.179219 N, 82.217238 W

Material: particulate

Generated On: January 13, 2012 19:27 UTC

Model: ADAPT/LODI

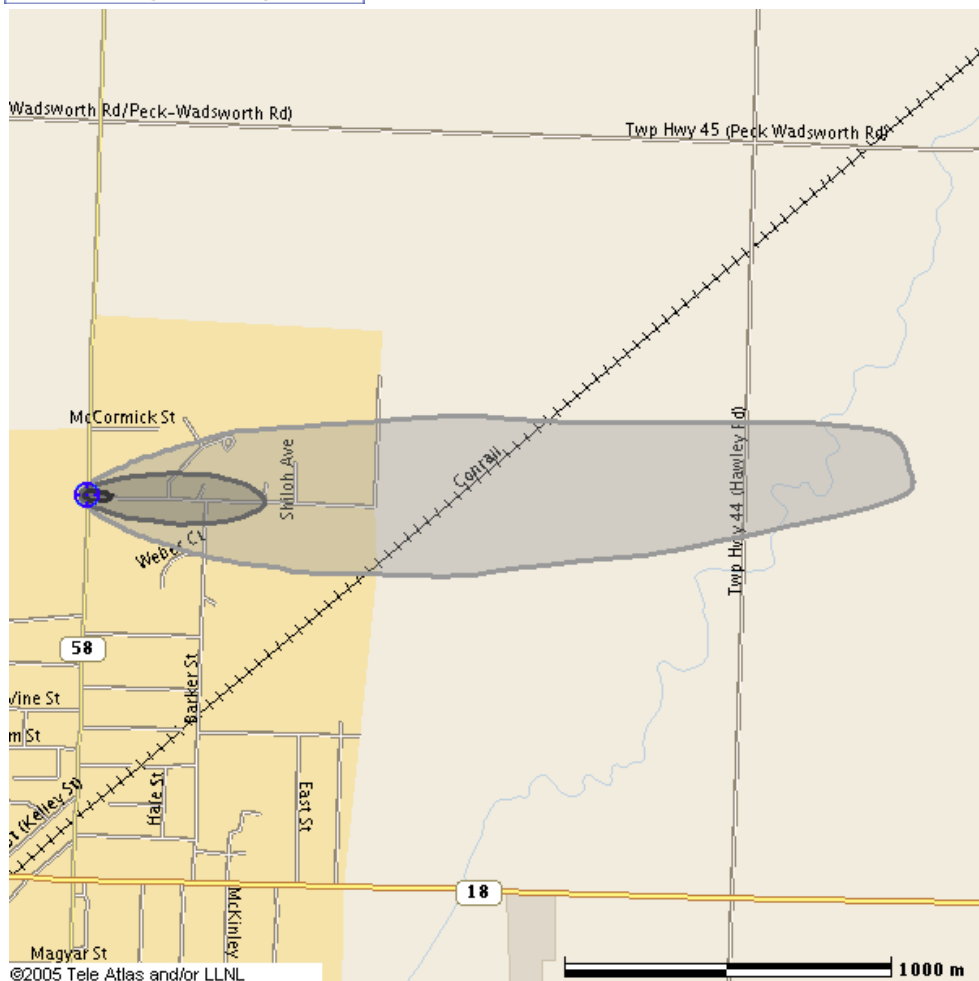
Comments:

Hypothetical release
of 1 kg starting at
01/13/2012 17:00:00 UTC for 4 hr
met obs



Total Deposition of particulate

Smoke Plume for Wellington
Automated Report - Actual Release



Map Size: 3.0 km by 3.0 km Id: Production2.rcE44452.rcC1

NARAC Operations: (onDuty Assessor); narac@llnl.gov; 925-424-6465

Requested by: {Connee Foster (mgr); NARAC -- Operation; 312-353-9351; foster5@llnl.gov}

Approved by: {NARAC Operations; NARAC; 925-422-9100}

Effects and Actions

	Description	(g/m2) Extent Area	Population
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>0.0010 74.9 m 1,899 m2	10
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>0.0001 548 m 66,530 m2	30
	No guidelines specified. Possibly contaminated area. Use to confirm with monitoring surveys.	>1.00E-5 2,540 m 966,316 m2	260

Note: Areas and counts in the table are cumulative. Population Source = LandScan USA V1.0.

Effects or contamination at January 13, 2012 21:00 UTC

Release Location: 41.179219 N, 82.217238 W

Material: particulate

Generated On: January 13, 2012 19:27 UTC

Model: ADAPT/LODI

Comments:

Hypothetical release

of 1 kg starting at

01/13/2012 17:00:00 UTC for 4 hr

met obs