

To: Canadian Radium & Uranium Corp. Site File

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W.O. No.: 20405.012.013.2222.00

From: Denise Breen, Weston Solutions, Inc.

Subject: Determination of population within the 4-mile target distance limit of the Site.

References

1. U.S. Department of Commerce, U.S. Census Bureau, Geography Division. TIGER/Line Shapefile, 2010, 2010 state, New York, 2010 Census Block State-based. Accessible at <http://www.census.gov/geo/www/tiger>. Downloaded March 2013.

This project note serves to assign the populations located within 4 miles of the Canadian Radium & Uranium Corp. Site as specified by the Hazard Ranking System (HRS). WESTON obtained and interpreted 2010 U.S. Census Bureau residential population data as follows:

1. Mapped the site reference location the September 2013 reconnaissance.
2. Created and mapped ¼, ½, 1, 2, 3, and 4 mile buffers from the site reference point using the ESRI ArcGIS 10.1 Multiple Ring Buffer tool.
3. Downloaded 2010 Census block population data and GIS coverage from the U.S. Census Bureau website.
4. Used XTools Pro 7.1 for ArcGIS desktop to calculate the total area for each Census block, some of which straddle distance category boundaries.
5. Used the ESRI ArcGIS 10.1 Clip function to divide blocks and assign partial blocks to appropriate distance categories.
6. Used XTools Pro 7.1 to calculate the new areas of each partial block after being clipped.
7. Assigned populations for each block proportionally to appropriate distance categories according to area using the formula $\{(Partial\ Area/Total\ Area)*Block\ Population\}$.
8. Calculated population for each distance category by totaling block and partial-block populations as assigned
9. Evaluated the populations for level of contamination according to the HRS and as presented below.

The population by distance ring can be summarized as follows:

Distance Ring	Population
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0-0.25 mile	1,448
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0.25-0.5 mile	2,252
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0.5-1 mile	5,347
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1-2 mile	6,771
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2-3 mile	8,360
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3-4 mile	12,819
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Total Population: 36,997



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