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### Indian Point blast radius calculation from NRC supplied data and equations

$$W_{\text{Feet}} = 45 \sqrt[3]{(w_{\text{Feet}})^{1/3}} = 45 \sqrt[3]{\frac{Mf_{\text{lbm}} * DHC_{\text{BTU/lbm}} * Y_{\text{Yield}\%}}{4500}} = \sqrt[3]{\frac{Mf_{\text{lbm}} * 50030 * 0.95_{\text{BTU}} * 5\%}{4500}} = \text{Feet}$$

Time in minutes	Blast Radius Feet	Blast Radius Meters	Constant (45)	M <sub>r</sub> (Kg)	Mf Lbm	DHC (BTU/lbm)	Yield	Kilotons TNT Equivalent for 100% yield. (Total energy released)	TNT Equivalent in tons for a 5% yield
1	1338	1064	18	376000	827200	50030	5%	<b>8</b>	414
2	1543	1226	18	576000	1267200	50030	5%	<b>13</b>	634
3	1627	1293	18	676000	1487200	50030	5%	<b>15</b>	744
4	1704	1354	18	776000	1707200	50030	5%	<b>17</b>	854
5	1774	1410	18	876000	1927200	50030	5%	<b>19</b>	964
6	1839	1462	18	976000	2147200	50030	5%	<b>21</b>	1074
7	1900	1510	18	1076000	2367200	50030	5%	<b>24</b>	1184
8	1957	1555	18	1176000	2587200	50030	5%	<b>26</b>	1294
9	2011	1598	18	1276000	2807200	50030	5%	<b>28</b>	1404
10	2062	1639	18	1376000	3027200	50030	5%	<b>30</b>	1514
11	2110	1677	18	1476000	3247200	50030	5%	<b>32</b>	1624
12	2157	1715	18	1576000	3467200	50030	5%	<b>35</b>	1734
13	2202	1750	18	1676000	3687200	50030	5%	<b>37</b>	1844
14	2245	1784	18	1776000	3907200	50030	5%	<b>39</b>	1954
15	2286	1817	18	1876000	4127200	50030	5%	<b>41</b>	2064
16	2326	1849	18	1976000	4347200	50030	5%	<b>43</b>	2174

Calculation performed by Paul M Blanch PE

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17	2364	1879	18	2076000	4567200	50030	5%	<b>46</b>	2284
18	2402	1909	18	2176000	4787200	50030	5%	<b>48</b>	2394
19	2438	1938	18	2276000	5007200	50030	5%	<b>50</b>	2504
20	2473	1966	18	2376000	5227200	50030	5%	<b>52</b>	2614
21	2507	1993	18	2476000	5447200	50030	5%	<b>54</b>	2724
22	2540	2019	18	2576000	5667200	50030	5%	<b>57</b>	2834
23	2573	2045	18	2676000	5887200	50030	5%	<b>59</b>	2944
24	2604	2070	18	2776000	6107200	50030	5%	<b>61</b>	3054
25	2635	2095	18	2876000	6327200	50030	5%	<b>63</b>	3164
26	2665	2119	18	2976000	6547200	50030	5%	<b>65</b>	3274
27	2695	2142	18	3076000	6767200	50030	5%	<b>68</b>	3384
28	2724	2165	18	3176000	6987200	50030	5%	<b>70</b>	3494
29	2752	2188	18	3276000	7207200	50030	5%	<b>72</b>	3604
30	2780	2210	18	3376000	7427200	50030	5%	<b>74</b>	3714

See: <https://www.nrc.gov/docs/ML1516/ML15168A042.pdf>