

**Table B-1. Compilation of Ambient Air Monitoring Program Parameters at DOE Facilities:  
Tritium**

|                                       | <b>Length of sampling period</b>              | <b>Number of Stations</b>          | <b>Adsorbent</b> | <b>Cartridge size or adsorbent mass</b> | <b>Flow rate</b>         | <b>Detection limits</b>                                     | <b>Comments</b>   | <b>Contact</b>  |
|---------------------------------------|---|------------------------------------|------------------|---|--------------------------|---|---|---|
| <b>Los Alamos National Laboratory</b> | 2 weeks, continuous                           | 52                                 | Silica Gel       | 135g                                    | 200 cm <sup>3</sup> /min | 2 pCi/m <sup>3</sup>  |   | Jean Dewart<br>(505) 665-0239                                     |
| <b>Savannah River Site</b>            | 2 weeks, continuous                           | 17                                 | Silica Gel       | 400–450g                                | 150 cm <sup>3</sup> /min | 49 pCi/m <sup>3</sup>                                       |   | Pete Fledderman<br>(803) 725-1736                                 |
| <b>Hanford Site-WMNV</b>              | N/A   | N/A                                | N/A              | N/A                                     | N/A                      | N/A   | WMNV – Waste Management Northwest. Near Facility Environmental Monitoring                     | Craig Perkins<br>(509) 372-8042                                   |
| <b>Hanford Site-PNNL</b>              | Monthly                                       | 20                                 | Silica Gel       | Approximately 1,000 g                   | 0.4 ft <sup>3</sup> /hr  | 3 pCi/m <sup>3</sup>  | Pacific Northwest National Laboratory conducts far field monitoring for Hanford.              | Barb Gillespie<br>(509) 376-5802                                  |
| <b>Brookhaven</b>                     | 1 week, continuous                            | 22                                 | Silica Gel       | Cartridge size @12" x 2"                | 200 cm <sup>3</sup> /min | 1–4 pCi/m <sup>3</sup>                                      |   | Gary Schroeder<br>(516) 344-7045                                  |
| <b>INEEL – BBWI</b>                   | 1–8 weeks, continuous, depending on indicator | 2–3                                | Molecular Sieve  | 200g                                    | 120 cm <sup>3</sup> /min | 10 pCi/m <sup>3</sup>                                       | Bechtel, Babcock & Wilcox Idaho (BBWI) performs near field monitoring.                        | Maria Miles<br>(208) 526-7924                                     |
| <b>INEEL – ESRF</b>                   | 1–13 weeks, continuous depending on indicator | 4                                  | Silica Gel       | 230g                                    | 300 cm <sup>3</sup> /min | 4 x 10 <sup>-12</sup> μCi/ml<br>4 pCi/m <sup>3</sup>        | Environmental Science and Research Foundation (ESRF) conducts far field monitoring for INEEL. | Roy Evans<br>(208) 525-7102                                       |
| <b>Nevada Test Site</b>               | 2 weeks, continuous                           | 12                                 | Molecular Sieve  | 350g                                    | 570 cm <sup>3</sup> /min | 2.9 x 10 <sup>-12</sup> μCi/mL<br>2.9 pCi/m <sup>3</sup> *  |   | Frank Grossman<br>(702) 295-5742                                  |
| <b>Oak Ridge National Laboratory</b>  | 1–2 weeks, continuous, depending on loading   | 9 Outside Lab<br>4 on Lab property | Silica Gel       | 250g                                    | 180 cm <sup>3</sup> /min | 1.56 μCi/year<br>1.7 x 10 <sup>4</sup> pCi/m <sup>3</sup> * |   | Laury Hamilton<br>(423) 576-4526<br>Joan Hughes<br>(423) 574-6649 |

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Tritium (Cont.)**

|  | Length of sampling period  | Number of Stations             | Adsorbent                | Cartridge size or adsorbent mass                     | Flow rate   | Detection limits  | Comments   | Contact                            |
|--|--|--------------------------------|--------------------------|--|---|---|--|------------------------------------|
| <b>E.O. Lawrence Berkeley National Lab</b> | 1 Month, continuous  | 6                              | Silica Gel               | 333g<br>480 cc                                       | 100 cm <sup>3</sup> /min  | 10 pCi/m <sup>3</sup>   |  | Patrick Thorson<br>(510) 486-5852  |
| <b>Sandia National Laboratories</b>        | N/A  | N/A                            | N/A                      | N/A  | N/A   | N/A   | No routine tritium monitoring. Tritium monitoring may be done on a project specific basis.   | Gina Deola<br>(505)845-7688        |
| <b>Argonne National Laboratory</b>         | N/A  | N/A                            | N/A                      | N/A  | N/A   | N/A   | No tritium monitoring  | Norbert Golchert<br>(630)252-3912  |
| <b>Pantex</b>                              | U tube –<br>1 week, continuous<br><br>Dual cartridge-<br>4 weeks, continuous | 10<br><br>17<br><br>(27 total) | Silica Gel               | U-tube – 200 g<br><br>Dual cartridges<br>–400 g each | U-Tube—1.5<br>cfm (42.5<br>L/min)<br><br>Dual Cartridges<br>–180 cm <sup>3</sup> /min | 0.5 dpm/mL<br>(1.1 x 10 <sup>3</sup><br>pCi/m <sup>3</sup> *) | Two monitoring systems are used. Oxidized tritium (tritiated water vapor) is measured at 10 stations. Both oxidized and elemental tritium are measured using a monitoring system placed at 17 locations. | David W. Griffis<br>(806) 477-4426 |
| <b>Lawrence Livermore</b>                  | 2 weeks, continuous  | 20                             | Silica Gel               | ~1,000 g in a glass flask                            | 700 cm <sup>3</sup> /min  | 0.4 pCi/m <sup>3</sup>  | Use freeze-dried technique   | Paula Tate<br>(925) 423-4858       |
| <b>Waste Isolation Pilot Plant</b>         | N/A  | N/A                            | N/A                      | N/A  | N/A   | N/A   | No tritium monitoring  | Stewart Jones<br>(505) 234-8293    |
| <b>Rocky Flats-APCD</b>                    | N/A  | N/A                            | N/A                      | N/A  | N/A   | N/A   | No tritium monitoring  | Richard Fox<br>(303) 692-3251      |
| <b>Rocky Flats-LARS</b>                    | Weekly;<br>quarterly composites  | 3                              | Collect precipitation    | N/A  | N/A   | ~140 pCi/L  | Precipitation only;<br>No conversion to air  | Tony Harrison<br>(303) 692-3046    |
| <b>Rocky Flats-RFETS</b>                   | N/A  | N/A                            | N/A                      | N/A  | N/A   | N/A   | N/A  | Bob Nininger<br>(303) 966-4663     |
| <b>Mound Plant</b>                         | Weekly   | 20                             | Ethylene glycol, Bubbler | 200 mL   | 1000cm <sup>3</sup> /min  | 20x10 <sup>-12</sup><br>μCi/mL<br>20 pCi/m <sup>3</sup> *     | HTO only   | Steve Howard<br>(937) 865-4188     |

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|---|----------------------------------|---------------------------|------------------|---|------------------|-------------------------|-----------------|------------------------------------|
| <b>Fernald Environmental Management Project</b> | N/A                              | N/A                       | N/A              | N/A                                     | N/A              | N/A                     | N/A             | Kathy Nickel<br>(513) 648-3166     |
| <b>Knolls Atomic Power Laboratory</b>           | N/A                              | N/A                       | N/A              | N/A                                     | N/A              | N/A                     | N/A             | Doug Marx<br>(518) 395-6169        |
| <b>Bettis Atomic Power Laboratory</b>           | N/A                              | N/A                       | N/A              | N/A                                     | N/A              | N/A                     | N/A             | Connie Carpenter<br>(412) 476-7388 |

\* Denotes a calculation and is not the value and/or units given by the facility.