LA-UR-08-0444

*Approved for public release; distribution is unlimited.*

| | |
|---|---|
| *Title:* | 2007 Fourth Quarter Beryllium Emissions Report<br>October 1 - December 31, 2007<br>Air Quality Permit No. 634-M2<br>Los Alamos National Laboratory |
| *Author(s):* | Kathleen Gorman-Bates, ENV-EAQ |
| *Intended for:* | Ms. Debra McElroy<br>Manager Compliance and Enforcement Program<br>New Mexico Environment Department<br>Air Quality Bureau<br>1301 Siler Road; Building B<br>Santa Fe. New Mexico 87507 |




Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Form 836 (7/06)

# Enclosure 1

# *Beryllium 2007 Stack Emissions*
# *TA-03-0141*

## TA-3-141 StackID: 3014101

| Sampling dates | | | Emissions (g) | | | | Comments |
|---|---|---|---|---|---|---|---|
| | | | Weekly(1) | | Daily(2) | | |
| | | | *Sum of weekly results must be <3.5 g/year* | | *Cannot Exceed 0.35 g/day* | | |
| **Period #: 1** | | | | | | | |
| 12/21/2006 | - | 01/04/2007 | < | 1.21E-04 | < | 8.69E-06 | Run time due to holiday. |
| 01/04/2007 | - | 01/11/2007 | < | 1.21E-04 | < | 1.72E-05 | |
| 01/11/2007 | - | 01/18/2007 | < | 1.21E-04 | < | 1.75E-05 | |
| 01/18/2007 | - | 01/25/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 01/25/2007 | - | 02/01/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | **Period 1 Sum:** | **<** | **6.05E-04** | | | |
| **Period #: 2** | | | | | | | |
| 02/01/2007 | - | 02/08/2007 | | 1.62E-04 | | 2.31E-05 | Duct work was performed during this period. HVAC maintenance. |
| 02/08/2007 | - | 02/15/2007 | < | 1.21E-04 | < | 1.70E-05 | |
| 02/15/2007 | - | 02/22/2007 | < | 1.21E-04 | < | 1.78E-05 | Snow day two hour delay. |
| 02/22/2007 | - | 03/01/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | **Period 2 Sum:** | **<** | **5.25E-04** | | | |
| **Period #: 3** | | | | | | | |
| 03/01/2007 | - | 03/08/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 03/08/2007 | - | 03/15/2007 | | 1.48E-04 | | 2.11E-05 | |
| 03/15/2007 | - | 03/22/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 03/22/2007 | - | 03/29/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| | | **Period 3 Sum:** | **<** | **5.11E-04** | | | |
| | | **1st Quarter Total:** | **<** | **1.64E-03** | **HDER** | **2.31E-05** | |

[a] HDER = Highest Daily Emission Rate

# *Beryllium 2007 Stack Emissions*
## *TA-03-0141*

**TA-3-141 StackID: 3014101**

| Sampling dates | | | Emissions (g) | | | | Comments |
|---|---|---|---|---|---|---|---|
| | | | Weekly(1) | | Daily(2) | | |
| | | | *Sum of weekly results must be <3.5 g/year* | | *Cannot Exceed 0.35 g/day* | | |
| **Period #:** | **4** | | | | | | |
| 03/29/2007 | - | 04/05/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 04/05/2007 | - | 04/12/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 04/12/2007 | - | 04/19/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 04/19/2007 | - | 04/26/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | | **Period 4 Sum: <** | **4.84E-04** | | | |
| **Period #:** | **5** | | | | | | |
| 04/26/2007 | - | 05/03/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 05/03/2007 | - | 05/10/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 05/10/2007 | - | 05/17/2007 | < | 1.21E-04 | < | 1.72E-05 | |
| 05/17/2007 | - | 05/24/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 05/24/2007 | - | 05/31/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | | **Period 5 Sum: <** | **6.05E-04** | | | |
| **Period #:** | **6** | | | | | | |
| 05/31/2007 | - | 06/07/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 06/07/2007 | - | 06/14/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 06/14/2007 | - | 06/21/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 06/21/2007 | - | 06/28/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | | **Period 6 Sum: <** | **4.84E-04** | | | |
| | | | **2nd Quarter Total: <** | **1.57E-03** | **HDER** | **<** **1.74E-05** | |

[a] HDER = Highest Daily Emission Rate

# *Beryllium 2007 Stack Emissions*
# *TA-03-0141*

## TA-3-141 StackID: 3014101

| Sampling dates | | | Emissions (g) | | | | Comments |
|---|---|---|---|---|---|---|---|
| | | | Weekly(1) | | Daily(2) | | |
| | | | *Sum of weekly results must be <3.5 g/year* | | *Cannot Exceed 0.35 g/day* | | |
| **Period #:** | **7** | | | | | | |
| 06/28/2007 | - | 07/05/2007 | < | 1.21E-04 | < | 1.70E-05 | |
| 07/05/2007 | - | 07/12/2007 | < | 1.21E-04 | < | 1.77E-05 | |
| 07/12/2007 | - | 07/19/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 07/19/2007 | - | 07/26/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 07/26/2007 | - | 08/02/2007 | < | 1.21E-04 | < | 1.69E-05 | |
| | | **Period 7 Sum:** | **<** | **6.05E-04** | | | |
| **Period #:** | **8** | | | | | | |
| 08/02/2007 | - | 08/09/2007 | < | 1.21E-04 | < | 1.77E-05 | |
| 08/09/2007 | - | 08/16/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 08/16/2007 | - | 08/23/2007 | | 1.89E-04 | | 2.69E-05 | |
| 08/23/2007 | - | 08/30/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| | | **Period 8 Sum:** | **<** | **5.52E-04** | | | |
| **Period #:** | **9** | | | | | | |
| 08/30/2007 | - | 09/06/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 09/06/2007 | - | 09/13/2007 | < | 1.21E-04 | < | 1.71E-05 | |
| 09/13/2007 | - | 09/20/2007 | < | 1.21E-04 | < | 1.74E-05 | |
| 09/20/2007 | - | 09/27/2007 | < | 1.21E-04 | < | 1.76E-05 | |
| | | **Period 9 Sum:** | **<** | **4.84E-04** | | | |
| | | **3rd Quarter Total:** | **<** | **1.64E-03** | **HDER** | **2.69E-05** | |

[a] HDER = Highest Daily Emission Rate

# *Beryllium 2007 Stack Emissions*
# *TA-03-0141*

## TA-3-141 StackID: 3014101

| Sampling dates | | | Emissions (g) | | | | Comments |
|---|---|---|---|---|---|---|---|
| | | | Weekly(1) | | Daily(2) | | |
| | | | *Sum of weekly results must be <3.5 g/year* | | *Cannot Exceed 0.35 g/day* | | |
| **Period #:** | | **10** | | | | | |
| 09/27/2007 | - | 10/04/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 10/04/2007 | - | 10/11/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 10/11/2007 | - | 10/18/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 10/18/2007 | - | 10/25/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 10/25/2007 | - | 11/01/2007 | < | 1.21E-04 | < | 1.69E-05 | |
| | | **Period 10 Sum:** | **<** | **6.05E-04** | | | |
| **Period #:** | | **11** | | | | | |
| 11/01/2007 | - | 11/08/2007 | < | 1.21E-04 | < | 1.78E-05 | |
| 11/08/2007 | - | 11/15/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 11/15/2007 | - | 11/21/2007 | < | 1.21E-04 | < | 2.01E-05 | Run time due to Thanksgiving holiday. |
| 11/21/2007 | - | 11/29/2007 | < | 1.21E-04 | < | 1.52E-05 | |
| | | **Period 11 Sum:** | **<** | **4.84E-04** | | | |
| **Period #:** | | **12** | | | | | |
| 11/29/2007 | - | 12/06/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 12/06/2007 | - | 12/13/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| 12/13/2007 | - | 12/20/2007 | < | 1.21E-04 | < | 1.73E-05 | |
| | | **Period 12 Sum:** | **<** | **3.63E-04** | | | |
| | | **4th Quarter Total:** | **<** | **1.45E-03** | **HDER** | **<** **2.01E-05** | |
| | | **Sum of four quarters:** | **<** | **6.31E-03** | | | |

Stony 1/16/08

[a] HDER = Highest Daily Emission Rate