



COPY

*Environmental Protection Division*  
Environmental Stewardship Group  
P.O. Box 1663, MS J978  
Los Alamos, New Mexico 87545  
(505) 665-8855/FAX: (505) 665-8858

Date: January 24, 2012  
Refer to: ENV-ES: 12-0024

Compliance Reporting Manager  
New Mexico Environment Department  
Air Quality Bureau  
1301 Siler Road, Building B  
Santa Fe, New Mexico 87507



IDEA ID 856 – Los Alamos National Laboratory  
**2011 FOURTH QUARTER BERYLLIUM EMISSIONS REPORT**  
**OCTOBER 1– DECEMBER 31, 2011**  
**AIR QUALITY PERMIT NO. 634-M2**

Dear Compliance Reporting Manager:

Attached as Enclosure 1 you will find a copy of the sampling data obtained from the continuous air monitor installed on the main exhaust stack at the Beryllium Technology Facility (BTF) at Los Alamos National Laboratory (LANL) for the **fourth quarter of calendar year 2011**. This submission of the quarterly emissions data, collected from this source, is required by permit condition 5.f of NMED Air Quality Permit #634-M2 dated October 30, 1998. Furthermore, this quarterly report is transmitted within the allowed 60 days after the end of the calendar quarter, as specified in the permit.

As specified in permit #634-M2, the beryllium stack emissions from the BTF shall not exceed 0.35 grams in a 24-hour time period and shall not exceed 3.5 grams per year. As can be seen on the attached data sheet, the highest daily emission rate (HDER) during the fourth quarter of calendar year 2011 was  $< 2.06 \times 10^{-5}$  grams per 24 hours, which is well below the daily permit limit. The total amount of beryllium emitted for the fourth quarter of calendar year 2011 was  $< 1.48 \times 10^{-3}$  grams. Additionally, the total for the four quarters of calendar year 2011 was  $< 6.09 \times 10^{-3}$  grams, which is well below the 3.5 gram per year limit specified in the permit. Also, on the attached data sheet, you will note that the last data point for calendar year 2011 is December 22, 2011. This is due to the laboratory closure over the holidays during which time the facility did not process material. Stack samples are not collected during this time and are allowed to remain in the sample collector for two weeks. This two-week sample will be reported as part of the first quarter 2012 emission report for this facility. Based on the attached information, LANL is in compliance with condition #2 of NMED Air Quality Permit #634-M2.

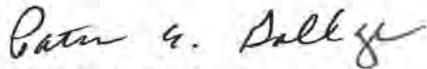
Compliance Reporting Manager  
ENV-ES:12-0024  
LA-UR: 12-00463

-2-

January 24, 2012

If you have any questions or comments regarding this submittal or would like to discuss this in greater detail, please feel free to contact Steve Story at 665-2169 or Kathleen Gorman at 665-1338.

Sincerely,



Patricia Gallagher  
Environmental Stewardship Group

KG/PG:tav

Enc: a/s

Cy:

Elizabeth Sellers, DIR, A100  
Carl Beard, PADOPS, A102  
M. Brandt, ADESH&Q, K491  
IRM-RMSS0, A150  
ADESH File, K491  
H. Shen, DOE-LASO-EO, A316  
A. Dorries, ENV-DO, K491  
D. Liechty, PF-DO, D471  
B. Aikin, MST-6, G741  
T. Morrison, STO-DO, G770  
C. Blackwell, LC-LESH, A187  
M. Gallegos, ENV-ES, E509  
S. Story, ENV-ES, J978  
K. Gorman, ENV-ES, J978  
ENV-ES Beryllium Permit #634 Quarterly Report File  
ENV-ES File

# **Enclosure 1**

*Beryllium 2011 Stack Emissions  
TA-03-0141*

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

<b>Sampling dates</b>			<b>Emissions (g)</b>		<b>Comments</b>
			<b>Weekly(1)</b>	<b>Daily(2)</b>	
<b>Period #: 1</b>			<i>Sum of weekly results must be &lt;3.5 g/year</i>	<i>Cannot Exceed 0.35 g/day</i>	
12/23/2010	-	1/6/2011	< 1.27E-04	< 9.13E-06	Run time due to holiday closure.
1/6/2011	-	1/13/2011	< 1.27E-04	< 1.82E-05	
1/13/2011	-	1/20/2011	< 1.27E-04	< 1.82E-05	
1/20/2011	-	1/27/2011	< 1.27E-04	< 1.82E-05	
1/27/2011	-	2/10/2011	< 1.27E-04	< 9.12E-06	Sample ran two weeks.
<b>Period 1 Sum:</b>			< 6.35E-04		
<b>Period #: 2</b>					
2/10/2011	-	2/17/2011	< 1.27E-04	< 1.83E-05	
2/17/2011	-	2/24/2011	< 1.27E-04	< 1.82E-05	
2/24/2011	-	3/3/2011	< 1.27E-04	< 1.82E-05	
<b>Period 2 Sum:</b>			< 3.81E-04		
<b>Period #: 3</b>					
3/3/2011	-	3/10/2011	< 1.27E-04	< 1.82E-05	
3/10/2011	-	3/17/2011	< 1.27E-04	< 1.82E-05	
3/17/2011	-	3/24/2011	< 1.27E-04	< 1.82E-05	
3/24/2011	-	3/31/2011	< 1.27E-04	< 1.82E-05	
<b>Period 3 Sum:</b>			< 5.08E-04		
<b>1st Quarter Total:</b>			< 1.52E-03	<b>*HDER &lt; 1.83E-05</b>	

<sup>a</sup> HDER = Highest Daily Emission Rate  
1/25/2012

*Beryllium 2011 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**

3/31/2011 - 4/7/2011  
4/7/2011 - 4/14/2011  
4/14/2011 - 4/21/2011  
4/21/2011 - 4/28/2011

< 1.27E-04  
< 1.27E-04  
< 1.27E-04  
< 1.27E-04

< 1.82E-05  
< 1.82E-05  
< 1.82E-05  
< 1.82E-05

**Period 4 Sum: < 5.08E-04**

**Period #: 5**

4/28/2011 - 5/5/2011  
5/5/2011 - 5/12/2011  
5/12/2011 - 5/19/2011  
5/19/2011 - 5/26/2011  
5/26/2011 - 6/2/2011

< 1.23E-04  
< 1.23E-04  
< 1.23E-04  
< 1.23E-04  
< 1.23E-04

< 1.73E-05  
< 1.79E-05  
< 1.75E-05  
< 1.74E-05  
< 1.76E-05

**Period 5 Sum: < 6.15E-04**

Run time due to sample being changed at noon.

**Period #: 6**

6/2/2011 - 6/9/2011  
6/9/2011 - 6/16/2011  
6/16/2011 - 6/23/2011  
6/23/2011 - 7/7/2011

< 1.23E-04  
< 1.23E-04  
< 1.23E-04  
< 1.23E-04

< 1.76E-05  
< 1.76E-05  
< 1.74E-05  
< 8.74E-06

**Period 6 Sum: < 4.92E-04**

Emission results due to run time.

<b>2nd Quarter Total: &lt; 1.62E-03</b>	<b>HDER &lt; 1.82E-05</b>
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<sup>a</sup> HDER = Highest Daily Emission Rate  
1/25/2012

**Beryllium 2011 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**

7/7/2011	-	7/14/2011
07/14/2011	-	7/21/2011
07/21/2011	-	7/28/2011
07/28/2011	-	8/4/2011

<	1.23E-04

<	1.77E-05
<	1.75E-05
<	1.75E-05
<	1.76E-05

Run time due to personnel timing of sample change-out.

**Period 7 Sum: < 4.92E-04**

**Period #: 8**

8/4/2011	-	8/11/2011
8/11/2011	-	8/18/2011
8/18/2011	-	8/25/2011
8/25/2011	-	9/1/2011

<	1.23E-04

<	1.75E-05
<	1.75E-05
<	1.75E-05
<	1.74E-05

Sample pump off.  
Emissions results from planned operation.

**Period 8 Sum: < 4.92E-04**

**Period #: 9**

9/1/2011	-	9/8/2011
9/8/2011	-	9/15/2011
9/15/2011	-	9/22/2011
9/22/2011	-	9/29/2011

<	1.23E-04

<	1.77E-05
<	1.75E-05
<	1.75E-05
<	1.76E-05

**Period 9 Sum: < 4.92E-04**

<b>3rd Quarter Total: &lt;</b>	<b>1.48E-03</b>	<b>HDR</b>	<b>&lt;</b>	<b>1.77E-05</b>
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<sup>a</sup> HDR = Highest Daily Emission Rate  
1/25/2012

*Beryllium 2011 Stack Emissions  
TA-03-0141*

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

**Sampling dates**

Sampling dates			Emissions (g)		Comments
			Weekly(1)	Daily(2)	
<b>Period #: 10</b>					
9/29/2011	-	10/6/2011	< 1.23E-04	< 1.75E-05	
10/6/2011	-	10/13/2011	< 1.23E-04	< 1.76E-05	
10/13/2011	-	10/20/2011	< 1.23E-04	< 1.75E-05	
10/20/2011	-	10/27/2011	< 1.23E-04	< 1.76E-05	
10/27/2011	-	11/3/2011	< 1.23E-04	< 1.75E-05	
<b>Period 10 Sum:</b>			<b>&lt; 6.15E-04</b>		
<b>Period #: 11</b>					
11/3/2011	-	11/10/2011	< 1.23E-04	< 1.76E-05	Time change during sample period
11/10/2011	-	11/17/2011	< 1.23E-04	< 1.76E-05	
11/17/2011	-	11/23/2011	< 1.23E-04	< 2.06E-05	Run time due to Holiday
11/23/2011	-	12/1/2011	< 1.23E-04	< 1.52E-05	Run time due to Holiday closure
<b>Period 11 Sum:</b>			<b>&lt; 4.92E-04</b>		
<b>Period #: 12</b>					
12/1/2011	-	12/8/2011	< 1.23E-04	< 1.76E-05	
12/8/2011	-	12/15/2011	< 1.23E-04	< 1.72E-05	Emission results from run time
12/15/2011	-	12/22/2011	< 1.23E-04	< 1.78E-05	
<b>Period 12 Sum:</b>			<b>&lt; 3.69E-04</b>		
<b>4th Quarter Total:</b>			<b>&lt; 1.48E-03</b>	<b>HDER &lt; 2.06E-05</b>	
<b>Sum of four quarters:</b>			<b>&lt; 6.09E-03</b>		

<sup>a</sup> HDER = Highest Daily Emission Rate  
1/25/2012



**New Mexico Environment Department  
Air Quality Bureau  
Compliance and Enforcement Section  
1301 Siler Road Building B  
Santa Fe, NM 87507  
Phone (505) 476-4300 Fax (505) 476-4375**



Version 07.03.08

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TEMPO	

## REPORTING SUBMITTAL FORM

NMED USE ONLY	
Staff	
Admin	

PLEASE NOTE: ® - Indicates required field

### SECTION I - GENERAL COMPANY AND FACILITY INFORMATION

<b>A. ® Company Name:</b>			<b>D. ® Facility Name:</b> Los Alamos National Laboratory		
<b>B.1 ® Company Address:</b> P. O. Box 1663 MS J978			<b>E.1 ® Facility Address:</b> Same as Company		
<b>B.2 ® City:</b> Los Alamos	<b>B.3 ® State:</b> NM	<b>B.4 ® Zip:</b> 87545	<b>E.2 ® City:</b>	<b>E.3 ® State:</b>	<b>E.4 ® Zip:</b>
<b>C.1 ® Company Environmental Contact:</b> Patricia Gallagher	<b>C.2 ® Title:</b> Group Leader, ENV-ES		<b>F.1 ® Facility Contact:</b> Steve Story	<b>F.2 ® Title:</b> Team Leader, Compliance	
<b>C.3 ® Phone Number:</b> (505) 667-2278	<b>C.4 ® Fax Number:</b> (505) 665-8858		<b>F.3 ® Phone Number:</b> (505) 665-2169	<b>F.4 ® Fax Number:</b> (505) 665-8858	
<b>C.5 ® Email Address:</b> patg@lanl.gov			<b>F.5 ® Email Address:</b> story@lanl.gov		
<b>G. Responsible Official: (Title V only):</b> M. Brandt		<b>H. Title:</b> Acting Associate Director, ESH&Q	<b>I. Phone Number:</b> (505) 667-4218	<b>J. Fax Number:</b> (505) 665-3811	
<b>K. ® AI Number:</b> 856	<b>L. Title V Permit Number:</b> P100R1	<b>M. Title V Permit Issue Date:</b> 08/07/2009	<b>N. NSR Permit Number:</b> 634-M2	<b>O. NSR Permit Issue Date:</b> 10/30/1998	
<b>P. Reporting Period:</b> From: 10/1/2011 To: 12/31/2011		OR	<b>Q. Proposed Test Date:</b> N/A	OR	<b>R. Actual Test Date:</b> N/A

### SECTION II - TYPE OF SUBMITTAL (check one that applies)

<input type="checkbox"/> A.	Title V Annual Compliance Certification	Permit Condition(s):	Description:		
<input type="checkbox"/> B.	Title V Semi-annual Monitoring Report	Permit Condition(s):	Description:		
<input type="checkbox"/> C.	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:	
<input type="checkbox"/> D.	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:	
<input type="checkbox"/> E.	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:	
<input checked="" type="checkbox"/> F.	Permit or Notice of Intent (NOI) Requirement	Permit No. <input checked="" type="checkbox"/> or NOI No. <input type="checkbox"/> 634-M2	Condition(s): 5.f	Description: Report beryllium emissions data by the continuous air monitor 60 days after Qtr.	
<input type="checkbox"/> G.	Requirement of an Enforcement Action	NOV No. <input type="checkbox"/> or SFO No. <input type="checkbox"/> or CD No. <input type="checkbox"/> or Other <input type="checkbox"/>	Section(s):	Description:	

### SECTION III - PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)

<input type="checkbox"/> T.	<input type="checkbox"/> A. Test Report CMT: _____	<input type="checkbox"/> B. Test Protocol	<input type="checkbox"/> C. Notification CMT: _____	Description: (Emission Units to be Tested)
	<input type="checkbox"/> D. Test (EPA Methods)	<input type="checkbox"/> E. Periodic Test (EPA Methods)	<input type="checkbox"/> F. RATA Test	

### SECTION IV - CERTIFICATION

After reasonable inquiry, I Patricia Gallagher certify that the information in this submittal is true, accurate and complete.  
(name of reporting official)

® Signature of Reporting Official: <i>Patricia E. Gallagher</i>	® Title: Group Leader, ENV-ES	® Date	® Responsible Official for Title V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	----------------------------------	--------	--

Reviewed By: \_\_\_\_\_

Date Reviewed: \_\_\_\_\_

## External Correspondence Traveler

 <p><b>Los Alamos</b> NATIONAL LABORATORY EST. 1943</p>	<b>Document Identification</b>				
	ENV-DO. #:		Enclosures:	Attachments:	LA-UR No.
	ENV-Group:	ENV-ES 12-0024	Yes: <input checked="" type="checkbox"/>	Yes: <input type="checkbox"/>	12-00463
	Doc. #:		No: <input type="checkbox"/>	No: <input type="checkbox"/>	
	Is this a response to an action item		Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
	Email	<input type="checkbox"/>	Document Date:	01/24/2012	
Memo	<input checked="" type="checkbox"/>	Due Date:	02/29/2012		
Letter	<input type="checkbox"/>				
<b>To:</b>	Compliance Reporting Manager, NMED, Air Quality Bureau				
<b>Subject:</b>	2011 Fourth Quarter Beryllium Emissions Report; October 1 – December 31, 2011; Air Quality Permit No. 634-M2; Los Alamos National Laboratory				
<b>Action:</b>	<i>Review and Endorse</i>				
<b>Background / Issues</b>	A quarterly beryllium emissions report is required as a permit condition under Permit 634-M2. Compliance with the permit condition is required sixty days after each calendar quarter.				
<b>Authorizing Official</b>	<b>Name</b>			<b>Date</b>	
From (Ghost Writer)					
Author	Kathleen Gorman			1/25/2012	
Group Leader	Patricia Gallagher	✓		1/31/2012	
Deputy Group Leader	Dave Fuehne (acting)				
Division Leader	Alison Dorries				
ADC Review	Steven Story			1/31/2012	
DUSA / SAFE-7	LA-UR			1/27/2012	
LC-LESH Review	Cynthia Blackwell	See attached email		1/26/2012	
Coordinated with Facility or Program					
<b>Comments:</b>					
Hand Deliver: <input checked="" type="checkbox"/> Express Mail: <input type="checkbox"/> FedEx: <input type="checkbox"/> CRRR: <input type="checkbox"/> Regular Mail Service: <input type="checkbox"/>					
<b>Group Office Use Only</b>					
<b>Final Distribution:</b>		<b>Scanned by:</b>			
<b>Time:</b>	<b>Date:</b>	<b>Date:</b>			
		<b>Logged by:</b>			
<b>Distribution to IRM-RMMSO, A150:</b>		<b>Date:</b>			
<b>Time:</b>	<b>Date:</b>				

## Gorman, Kathleen

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**From:** Blackwell, Cynthia  
**Sent:** Thursday, January 26, 2012 9:21 AM  
**To:** Gorman, Kathleen  
**Subject:** RE: Perusal: 2011 4th Qtr. Beryllium Report

Kathleen,

It is a nice morning. Hope you are enjoying it too.

My only comment is that on the report you might want to delete Ike Richardson on the cc list and add Beth Sellers.

Otherwise, I have no questions/comments.

Thanks,  
Cindy

Cindy Blackwell  
Office of Laboratory Counsel  
Los Alamos National Laboratory  
Mailstop A187  
Phone: (505) 667-7512  
Fax: (505)665-4424  
[clblackwell@lanl.gov](mailto:clblackwell@lanl.gov)

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**From:** Gorman, Kathleen  
**Sent:** Thursday, January 26, 2012 8:10 AM  
**To:** Blackwell, Cynthia  
**Subject:** Perusal: 2011 4th Qtr. Beryllium Report

Good Morning Cindy!

I hope you are doing well this beautiful morning! Attached you will find our 2011 Fourth Quarter Beryllium memorandum and supporting emissions data for your perusal.

Please let me know if you have any questions or concerns!

Thank you very much!

*Kathleen*

Reserved for Classification Group (SAFE-1) <b>LA-UR</b> <b>LA-CP</b>	<b>Submit to Classification Group (SAFE-1), MS F674, TA-3-1400, Rm 3475, the following, in order and clipped (not stapled) together:</b> <input checked="" type="checkbox"/> This form, blocks 1-9 completed <input checked="" type="checkbox"/> Appropriate cover sheet (Form 836 for LA-UR, Form 1756a-e for LA-CP) <input checked="" type="checkbox"/> 1 copy of STI product Allow 5 working days for processing.		
1. Author(s) (Include all contributing authors; first must be LANL employee.)			
Last	First	Middle	Z No.
Gorman	Kathleen		107232
Group or affiliation ENV-ES			
2. Primary Responsible Author: My signature attests to the integrity and validity of the information provided on this form and the associated STI product, and affirms that all authors concur with its publication.			
Printed Name	Signature	Date	
Kathleen Gorman	Kathleen Gorman	1/25/2012	
3. Document Title (use upper/lower case; spell out symbols)			
2011 FOURTH QUARTER BERYLLIUM EMISSIONS REPORT OCTOBER 1 - DECEMBER 31, 2011 AIR QUALITY PERMIT NO. 634-M2 LOS ALAMOS NATIONAL LABORATORY			
4. Page/Image Count Seven			
5. Type of Information		Intended for:	
<input type="checkbox"/> Abstract <input type="checkbox"/> Full Paper/Report <input type="checkbox"/> Summary <input type="checkbox"/> Poster <input type="checkbox"/> Audio-Visual (abstract required) <input type="checkbox"/> Viewgraphs/Presentations (abstract required) <input checked="" type="checkbox"/> Other: NMED Report		<input type="checkbox"/> Journal <input type="checkbox"/> Proceedings <input type="checkbox"/> Meeting/Conference <input type="checkbox"/> Book/Book Chapter <input type="checkbox"/> Electronic/World-wide Web <input checked="" type="checkbox"/> Other: Compliance	
		Particulars: (see point # 4 of instruction sheet.)	
		Meeting/Conf. Name: Quarterly Compliance Reporting	
		City, State, and Country: NMED, Santa Fe, NM    Mtg. Date: N/A	
		Journal Name: N/A	
		Other: Compliance report as required by NMED Air Quality Permit #634-M2.	
6. Research sponsored by		Cost Center (Org./Group Code) and Program Code for this work: 8A040A; WE71;1142	
<input type="checkbox"/> DOE/LANL/LDRD <input type="checkbox"/> DHS <input type="checkbox"/> DOD <input checked="" type="checkbox"/> Other: N/A		Related publication(s): LA-UR 11-00761; LA-UR 11-02643; LA-UR 11-04598; LA-UR 11-06384	
7. Deadline Date February 29, 2012		Z Number, name, e-mail, and phone number of contact for notification of release 107232, Kathleen Gorman, kgorman@lanl.gov, 665-1338	
8. Classification Category (Cite applicable DUSA or obtain Derivative Classifier review)			
<input type="checkbox"/> Unclassified Applicable DUSA Designator:		<input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Classified <input type="checkbox"/> Unclassified, controlled; Category: _____ OR Derivative Classifier Name    Signature    Date	
		Steven Story    SJS Story    1/25/2012	
9. Responsible Line Manager: Consistent with my responsibilities and authorities, my signature certifies that I have reviewed this STI product for professional, contractual, programmatic, institutional, OPSEC, and patent sensitivities, and that I concur with its publication.			
Printed Name	Signature	Date	
Patricia E. Galloway	Patricia E. Galloway	1/25/12	
<b>To be completed by Classification Group, SAFE-1</b>			
Date Received	OSTI Category	Date Released	
Classification Analyst Signature	Classification Category:		
	<input type="checkbox"/> U <input type="checkbox"/> C <input type="checkbox"/> S <input type="checkbox"/> RD <input type="checkbox"/> FRD <input type="checkbox"/> NSI <input type="checkbox"/> UCNI <input type="checkbox"/> OOU <input type="checkbox"/> ECI <input type="checkbox"/> Other: _____		
Comments:			

## Gorman, Kathleen

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**From:** Karen E. Larue [klarue@lanl.gov]  
**Sent:** Friday, January 27, 2012 12:35 PM  
**To:** Gorman, Kathleen  
**Subject:** Publication Release

The Summary submitted for publication entitled "2011 fourth quarter beryllium emissions report October 1 - December 31, 2011 Air quality permit no. 634-M2 Los Alamos National Laboratory", first author Kathleen Gorman, 107232 has been reviewed and received the following release number: [LA-UR 12-00463](#). The abstract is U and the text is U Please call 7-5013 if you have questions.