

LA-UR-20-21117

Approved for public release; distribution is unlimited.

Title: IDEA ID 856 – Los Alamos National Laboratory 2019 Fourth Quarter
Beryllium Emissions Report October 1–December 31, 2019, Air Quality
Permit No. 634-M2

Author(s): Carretti, Vincent Anthony

Intended for: Environmental Regulatory Document

Issued: 2020-02-19 (rev.1)

Disclaimer:

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by Triad National Security, LLC for the National Nuclear Security Administration of U.S. Department of Energy under contract 89233218CNA000001. By approving this article, the publisher recognizes that the U.S. Government retains 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.



*Environment, Safety, Health, Quality,
Safeguards, and Security*

PO Box 1663, K491
Los Alamos, New Mexico 87545
(505) 667-4218

Symbol: ESHQSS: 20-007
LAUR: 20-21117
Locates Action No: N/A
Date: **FEB 13 2020**

Mr. Edward O'Brien
Compliance Reporting Manager
New Mexico Environment Department, Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816

Subject: IDEA ID 856 – Los Alamos National Laboratory 2019 Fourth Quarter Beryllium Emissions Report October 1–December 31, 2019, Air Quality Permit No. 634-M2

Dear Mr. O'Brien:

Attached is a copy of the sampling data for the **fourth quarter of calendar year 2019**. The attached emissions data were obtained from the continuous air monitor installed on the main exhaust stack at the Beryllium Technology Facility (BTF) at Los Alamos National Laboratory (LANL). This submission of the quarterly emissions data, collected from this source, is required by permit condition 5.f of the New Mexico Environment Department (NMED) New Source Review (NSR) Air Quality Permit #634-M2 dated October 30, 1998. This quarterly report is transmitted within the allowed 60 days after the end of the calendar quarter, as specified in NSR permit and incorporated in Title V permit P100-R2M4.

Air Quality Permit #634-M2 condition #2 requires that 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. For this reporting period, the current quarterly data and the total emissions for calendar year 2019 were obtained from the attached data sheet and summarized in the following table.

Reporting Period	Description of Data	Beryllium Emission Rate	NSR 634-M2/Title V P100-R2M4 Permit Limit
2019Q4	Highest daily emission rate	2.44×10^{-5} gm/24 hours	0.35 gm/24 hours
2019Q4	Total amount for 2019Q4	1.34×10^{-3} gm	N/A
2019Q4	Total amount for 2019	6.35×10^{-3} gm	3.5 gm/year

In addition, on the Attachment 1 datasheet, you will note that the last data point for calendar year 2019 is December 19, 2019. 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 2020 emission report for this facility. Based on the above summary table and Attachment 1 datasheet, the beryllium emissions are well below the permit limit and LANL is in compliance with condition #2 of NMED Air Quality Permit #634-M2.

If you have questions or comments regarding this submittal or would like to discuss this in greater detail, please feel free to contact Aaron M. Dailey at (505) 667-7276 or Vincent A. Carretti at (505) 665-1658.

Sincerely,



Taunia Van Valkenburg
Group Leader

TVV/AMD/VAC;jdm

Attachment(s): Attachment 1 Beryllium 2019 Stack Emissions

Copy: Adrienne L. Nash, NA-LA, adrienne.nash@nnsa.doe.gov
James P. Johnson, DDOPS, jpi@lanl.gov
Michael W. Hazen, ALDESHQSS, mhazen@lanl.gov
William Mairson, ALDESHQSS, wrmairson@lanl.gov
Enrique Torres, EWP, etorres@lanl.gov
Jennifer E. Payne, EPC-DO, jpayne@lanl.gov
David M. Montoya, PF-DO, dmmontoya@lanl.gov
Paul A. Blumberg, STO-DO, blumberg@lanl.gov
Matt Martinez, PF-WFS, mgmartinez@lanl.gov
Steven Gonzales, PF-WFS, sgg@lanl.gov
Marc R. Gallegos, DESH-STO, marcg@lanl.gov
Timothy A. Dolan, GC-ESH, tdolan@lanl.gov
Aaron M. Dailey, EPC-CP, adailey@lanl.gov
Vincent A. Carretti, EPC-CP, vcarretti@lanl.gov
EPC-CP Beryllium Permit #634-M2 Quarterly Report File
aldeshqsscorrespondence@lanl.gov
epccorrespondence@lanl.gov
adesh-records@lanl.gov



**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505
Phone (505) 476-4300**



Version 07.20.18

NMED USE ONLY	
TEMPO	

REPORTING SUBMITTAL FORM


NMED USE ONLY	
Staff	
Admin	

PLEASE NOTE: ® - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
A. ® Company Name: Triad National Security, LLC			D. ® Facility Name: Los Alamos National Laboratory		
B.1 ® Company Address: P.O Box 1663 MS K491			E.1 ® Facility Address: Same as Company		
B.2 ® City: Los Alamos	B.3 ® State: NM	B.4 ® Zip: 8 7 5 4 5	E.2 ® City:	E.3 ® State:	E.4 ® Zip:
C.1 ® Company Environmental Contact: Tania S. Van Valkenburg	C.2 ® Title: Group Leader, EPC-CP		F.1 ® Facility Contact: Aaron M. Dailey	F.2 ® Title: Meteorology & Air Quality Team Leader	
C.3 ® Phone Number: (505) 665-9827	C.4 ® Fax Number: (505) 665-8858		F.3 ® Phone Number: (505) 667-7276	F.4 ® Fax Number: NA	
C.5 ® Email Address: tauniav@lanl.gov			F.5 ® Email Address: adailey@lanl.gov		
G. Responsible Official: (Title V only): Michael J. Weis		H. Title: Manager	I. Phone Number: (505) 667-5015		J. Fax Number: NA
K. ® AI Number: 856	L. Title V Permit Number: P100-R2M4	M. Title V Permit Issue Date: 07/18/2019	N. NSR Permit Number: 634-M2	O. NSR Permit Issue Date: 10/30/1998	
P. Reporting Period: From: October 1, 2019 To: December 31, 2019					

Do NOT submit NSPS OOOO or OOOOa well completion or flowback notifications to the Air Quality Bureau. See <https://www.env.nm.gov/air-quality/notices-and-faqs-for-compliance-and-enforcement/> for explanation.

SECTION II - TYPE OF SUBMITTAL (check one that applies)				
A. <input type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s):	Description:	
B. <input type="checkbox"/>	Title V Semi-Annual Monitoring Report	Permit Condition(s):	Description:	
C. <input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
D. <input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
E. <input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
F. <input checked="" type="checkbox"/>	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: 2019Q4 Report containing beryllium emissions data from the continuous air monitor of the exhaust stack, due within 60 days after calendar quarter.
G. <input type="checkbox"/>	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 - CERTIFICATION			
After reasonable inquiry, I <u>Tania S. Van Valkenburg</u> certify that the information in this submittal is true, accurate and complete. (Name of Certifier)			
® Signature of Certifier: 	® Title: Group Leader, EPC-CP	® Date: 2/5/2020	® Responsible Official for Title V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____

ATTACHMENT 1

Beryllium 2019 Stack Emissions

ESHQSS: 20-007

LA-UR-20-21117

Date: **FEB 13 2020**

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2019 Stack Emissions**

TA-03-0141 StackID: 03014101

Sampling dates			Emissions (g)	
			Weekly(1)	Daily(2)
			<i>Sum of weekly results must be <3.5 g/year</i>	<i>Cannot Exceed 0.35 g/day</i>
Period #: 1			<hr/>	
12/20/2018	-	01/10/2019	< 3.67E-04	< 1.75E-05
01/10/2019	-	01/17/2019	< 1.22E-04	< 1.75E-05
01/17/2019	-	01/24/2019	< 1.22E-04	< 1.75E-05
01/24/2019	-	01/31/2019	< 1.22E-04	< 1.75E-05
			Period 1 Sum: < 7.33E-04	
Period #: 2			<hr/>	
01/31/2019	-	02/07/2019	< 1.22E-04	< 1.75E-05
02/07/2019	-	02/14/2019	< 1.22E-04	< 1.74E-05
02/14/2019	-	02/21/2019	< 1.22E-04	< 1.76E-05
02/21/2019	-	02/28/2019	< 1.22E-04	< 1.75E-05
			Period 2 Sum: < 4.88E-04	
Period #: 3			<hr/>	
02/28/2019	-	03/07/2019	< 1.22E-04	< 1.75E-05
03/07/2019	-	03/14/2019	< 1.22E-04	< 1.75E-05
03/14/2019	-	03/21/2019	< 1.22E-04	< 1.75E-05
03/21/2019	-	03/28/2019	< 1.22E-04	< 1.74E-05
03/28/2019	-	04/04/2019	< 1.22E-04	< 1.74E-05
			Period 3 Sum: < 6.10E-04	
			<hr/>	
			1st Quarter Total: 1.83E-03 ^aHDER 1.76E-05	

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2019 Stack Emissions**

TA-03-0141 StackID: 03014101

Sampling dates			Emissions (g)	
			Weekly(1)	Daily(2)
			<i>Sum of weekly results must be <3.5 g/year</i>	<i>Cannot Exceed 0.35 g/day</i>
Period #: 4			<hr/>	
04/04/2019	-	04/11/2019	< 1.22E-04	< 1.76E-05
04/11/2019	-	04/18/2019	< 1.22E-04	< 1.72E-05
04/18/2019	-	04/25/2019	< 1.22E-04	< 1.78E-05
04/25/2019	-	05/02/2019	< 1.22E-04	< 1.75E-05
			Period 4 Sum: < 4.88E-04	
Period #: 5			<hr/>	
05/02/2019	-	05/09/2019	< 1.22E-04	< 1.75E-05
05/09/2019	-	05/16/2019	< 1.22E-04	< 1.74E-05
05/16/2019	-	05/23/2019	< 1.22E-04	< 1.76E-05
05/23/2019	-	05/30/2019	< 1.22E-04	< 1.75E-05
			Period 5 Sum: < 4.88E-04	
Period #: 6			<hr/>	
05/30/2019	-	06/06/2019	< 1.22E-04	< 1.75E-05
06/06/2019	-	06/13/2019	< 1.22E-04	< 1.75E-05
06/13/2019	-	06/20/2019	< 1.22E-04	< 1.75E-05
06/20/2019	-	06/27/2019	< 1.22E-04	< 1.75E-05
06/27/2019	-	07/03/2019	< 1.22E-04	< 2.02E-05
			Period 6 Sum: < 6.10E-04	
			2nd Quarter Total: 1.59E-03	^aHDER 2.02E-05

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2019 Stack Emissions**

TA-03-0141 StackID: 03014101

Sampling dates			Emissions (g)	
			Weekly(1)	Daily(2)
			<i>Sum of weekly results must be <3.5 g/year</i>	<i>Cannot Exceed 0.35 g/day</i>
Period #: 7			<hr/>	
07/03/2019	-	07/11/2019	< 1.22E-04	< 1.53E-05
07/11/2019	-	07/18/2019	< 1.22E-04	< 1.77E-05
07/18/2019	-	07/25/2019	< 1.22E-04	< 1.75E-05
07/25/2019	-	08/01/2019	< 1.22E-04	< 1.75E-05
			Period 7 Sum: < 4.88E-04	
Period #: 8			<hr/>	
08/01/2019	-	08/08/2019	< 1.22E-04	< 1.75E-05
08/08/2019	-	08/15/2019	< 1.22E-04	< 1.75E-05
08/15/2019	-	08/22/2019	< 1.22E-04	< 1.74E-05
08/22/2019	-	08/29/2019	< 1.22E-04	< 1.76E-05
			Period 8 Sum: < 4.88E-04	
Period #: 9			<hr/>	
08/29/2019	-	09/05/2019	< 1.22E-04	< 1.73E-05
09/05/2019	-	09/12/2019	< 1.22E-04	< 1.77E-05
09/12/2019	-	09/19/2019	< 1.22E-04	< 1.74E-05
09/19/2019	-	09/26/2019	< 1.22E-04	< 1.75E-05
09/26/2019	-	10/03/2019	< 1.22E-04	< 1.75E-05
			Period 9 Sum: < 6.10E-04	
			<hr/>	
			3rd Quarter Total: 1.59E-03	^aHDER 1.77E-05

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2019 Stack Emissions**

TA-03-0141 StackID: 03014101

Sampling dates			Emissions (g)	
			Weekly(1)	Daily(2)
			<i>Sum of weekly results must be <3.5 g/year</i>	<i>Cannot Exceed 0.35 g/day</i>
Period #: 10			<hr/>	
10/03/2019	-	10/10/2019	< 1.22E-04	< 1.75E-05
10/10/2019	-	10/17/2019	< 1.22E-04	< 1.74E-05
10/17/2019	-	10/24/2019	< 1.22E-04	< 1.75E-05
10/24/2019	-	10/31/2019	< 1.22E-04	< 1.76E-05
			Period 10 Sum: < 4.88E-04	
Period #: 11			<hr/>	
10/31/2019	-	11/07/2019	< 1.22E-04	< 1.75E-05
11/07/2019	-	11/14/2019	< 1.22E-04	< 1.73E-05
11/14/2019	-	11/21/2019	< 1.22E-04	< 1.76E-05
11/21/2019	-	11/26/2019	< 1.22E-04	< 2.44E-05
			Period 11 Sum: < 4.88E-04	
Period #: 12			<hr/>	
11/26/2019	-	12/05/2019	< 1.22E-04	< 1.36E-05
12/05/2019	-	12/12/2019	< 1.22E-04	< 1.75E-05
12/12/2019	-	12/19/2019	< 1.22E-04	< 1.75E-05
			Period 12 Sum <: 3.66E-04	

4th Quarter Total: 1.34E-03	^aHDER 2.44E-05
Sum of Four Quarters: 6.35E-03	

^a HDER = Highest Daily Emission Rate