

LA-UR-22-21112

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Title: IDEA ID 856 – Los Alamos National Laboratory 2021 Fourth Quarter Beryllium Emissions Report October 1–December 31, 2021, Air Quality Permit No. 634-M2

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**Environment, Safety, Health, Quality, Safeguards,
 and Security (ESHQSS)**

Symbol: ESHQSS: 22-009
LAUR: 22-21112

Date: FEB 15 2022

Mr. David Feather
 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 2021 Fourth Quarter Beryllium Emissions Report October 1–December 31, 2021, Air Quality Permit No. 634-M2

Dear Mr. Feather:

Attached is a copy of the sampling data for the **fourth quarter of calendar year 2021**. 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 2021 were obtained from the attached data sheet and summarized in the following table.

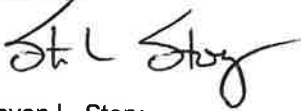
Reporting Period	Description of Data	Beryllium Emission Rate	NSR 634-M2/Title V P100-R2M4 Permit Limit
2021Q4	Highest daily emission rate	2.54×10^{-5} gm/24 hours	0.35 gm/24 hours
2021Q4	Total amount for 2021Q4	1.49×10^{-3} gm	N/A
2021Q4	Total amount for 2021	6.31×10^{-3} gm	3.5 gm/year

In addition, on the Attachment 1 datasheet, you will note that the last data point for calendar year 2021 is December 21, 2021. 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 2022 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 Marjorie B. Stockton at (505) 665-3289 or Vincent A. Carretti at (505) 665-1658.

Sincerely,



Steven L. Story
Group Leader

Attachment(s): Attachment 1 Beryllium 2021 Stack Emissions

Copy: Adrienne L. Nash, NA-LA, adrienne.nash@nnsa.doe.gov
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525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505
Phone (505) 476-4300**



Version 07.20.18

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TEMPO	

REPORTING SUBMITTAL FORM

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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: Steven L. Story			C.2 ® Title: Group Leader, EPC-CP		F.1 ® Facility Contact: Marjorie B. Stockton		F.2 ® Title: Meteorology & Air Quality Team Leader		
C.3 ® Phone Number: (505) 665-2169		C.4 ® Fax Number: (505) 665-8858		F.3 ® Phone Number: (505) 665-3289		F.4 ® Fax Number: NA			
C.5 ® Email Address: story@lanl.gov				F.5 ® Email Address: mstockton@lanl.gov					
G. Responsible Official: (Title V only): Theodore A. Wyka			H. Title: Manager		I. Phone Number: (505) 667-5105		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, 2021 To: December 31, 2021									

Do NOT submit NSPS 0000 or 0000a 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)				
<input type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s):	Description:	
<input type="checkbox"/>	Title V Semi-Annual Monitoring Report	Permit Condition(s):	Description:	
<input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
<input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
<input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
<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: 2021Q4 Report containing beryllium emissions data from the continuous air monitor of the exhaust stack, due within 60 days after calendar quarter.
<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>Steven L. Story</u> certify that the information in this submittal is true, accurate and complete.			
® Signature of Certifier: 		® Title: Group Leader, EPC-CP	® Date: 2/14/22
		® Responsible Official for Title V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Reviewed By: _____

Date Reviewed: _____

ATTACHMENT 1
Beryllium 2021 Stack Emissions

ESHQSS: 22-009

LA-UR-22-21112

Date: FEB 15 2022

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2021 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/>	
12/22/2020	-	01/07/2021	< 1.22E-04	< 7.63E-06
01/07/2021	-	01/14/2021	< 1.22E-04	< 1.75E-05
01/14/2021	-	01/21/2021	< 1.22E-04	< 1.75E-05
01/21/2021	-	01/28/2021	< 1.22E-04	< 1.76E-05
01/28/2021	-	02/04/2021	< 1.22E-04	< 1.74E-05
			Period 1 Sum: < 6.10E-04	
Period #: 2			<hr/>	
02/04/2021	-	02/11/2021	< 1.22E-04	< 1.75E-05
02/11/2021	-	02/18/2021	< 1.22E-04	< 1.71E-05
02/18/2021	-	02/25/2021	< 1.22E-04	< 1.80E-05
02/25/2021	-	03/04/2021	< 1.22E-04	< 1.75E-05
			Period 2 Sum: < 4.88E-04	
Period #: 3			<hr/>	
03/04/2021	-	03/11/2021	< 1.24E-04	< 1.76E-05
03/11/2021	-	03/18/2021	< 1.24E-04	< 1.78E-05
03/18/2021	-	03/25/2021	< 1.24E-04	< 1.77E-05
03/25/2021	-	04/01/2021	< 1.24E-04	< 1.77E-05
			Period 3 Sum: < 4.96E-04	
			<hr/>	
			1st Quarter Total: 1.59E-03	^aHDER 1.80E-05

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2021 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/>	
04/01/2021	-	04/08/2021	< 1.24E-04	< 1.77E-05
04/08/2021	-	04/15/2021	< 1.24E-04	< 1.77E-05
04/15/2021	-	04/22/2021	< 1.24E-04	< 1.77E-05
04/22/2021	-	04/29/2021	< 1.24E-04	< 1.75E-05
			Period 4 Sum: < 4.96E-04	
Period #: 5			<hr/>	
04/29/2021	-	05/06/2021	< 1.24E-04	< 1.80E-05
05/06/2021	-	05/13/2021	< 1.24E-04	< 1.77E-05
05/13/2021	-	05/20/2021	< 1.24E-04	< 1.76E-05
05/20/2021	-	05/27/2021	< 1.24E-04	< 1.76E-05
05/27/2021	-	06/03/2021	< 1.24E-04	< 1.79E-05
			Period 5 Sum: < 6.20E-04	
Period #: 6			<hr/>	
06/03/2021	-	06/10/2021	< 1.24E-04	< 1.76E-05
06/10/2021	-	06/17/2021	< 1.24E-04	< 1.79E-05
06/17/2021	-	06/24/2021	< 1.24E-04	< 1.77E-05
06/24/2021	-	07/01/2021	< 1.24E-04	< 1.74E-05
			Period 6 Sum: < 4.96E-04	
			<hr/>	
			2nd Quarter Total: 1.61E-03 ^aHDER 1.80E-05	

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2021 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/>	
07/01/2021	-	07/08/2021	< 1.24E-04	< 1.80E-05
07/08/2021	-	07/15/2021	< 1.24E-04	< 1.77E-05
07/15/2021	-	07/22/2021	< 1.24E-04	< 1.77E-05
07/22/2021	-	07/29/2021	< 1.24E-04	< 1.77E-05
			Period 7 Sum: < 4.96E-04	
Period #: 8			<hr/>	
07/29/2021	-	08/05/2021	< 1.24E-04	< 1.77E-05
08/05/2021	-	08/12/2021	< 1.24E-04	< 1.77E-05
08/12/2021	-	08/19/2021	< 1.24E-04	< 1.77E-05
08/19/2021	-	08/26/2021	< 1.24E-04	< 1.77E-05
08/26/2021	-	09/02/2021	< 1.24E-04	< 1.77E-05
			Period 8 Sum: < 6.20E-04	
Period #: 9			<hr/>	
09/02/2021	-	09/09/2021	< 1.24E-04	< 1.77E-05
09/09/2021	-	09/16/2021	< 1.24E-04	< 1.77E-05
09/16/2021	-	09/23/2021	< 1.24E-04	< 1.77E-05
09/23/2021	-	09/30/2021	< 1.24E-04	< 1.77E-05
			Period 9 Sum: < 4.96E-04	
			3rd Quarter Total: 1.61E-03	^aHDER 1.80E-05

^a HDER = Highest Daily Emission Rate

**Los Alamos National Laboratory
TA-03-0141 Beryllium 2021 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/>	
09/30/2021	-	10/07/2021	< 1.24E-04	< 1.77E-05
10/07/2021	-	10/14/2021	< 1.24E-04	< 1.77E-05
10/14/2021	-	10/21/2021	< 1.24E-04	< 1.74E-05
10/21/2021	-	10/28/2021	< 1.24E-04	< 1.79E-05
10/28/2021	-	11/04/2021	< 1.24E-04	< 1.75E-05
			Period 10 Sum: < 6.20E-04	
Period #: 11			<hr/>	
11/04/2021	-	11/10/2021	< 1.24E-04	< 2.06E-05
11/10/2021	-	11/18/2021	< 1.24E-04	< 1.56E-05
11/18/2021	-	11/23/2021	< 1.24E-04	< 2.46E-05
11/23/2021	-	12/02/2021	< 1.24E-04	< 1.38E-05
			Period 11 Sum: < 4.96E-04	
Period #: 12			<hr/>	
12/02/2021	-	12/09/2021	< 1.24E-04	< 1.77E-05
12/09/2021	-	12/16/2021	< 1.24E-04	< 1.77E-05
12/16/2021	-	12/21/2021	< 1.24E-04	< 2.54E-05
			Period 12 Sum <: 3.72E-04	

4th Quarter Total: 1.49E-03	^aHDER 2.54E-05
Sum of Four Quarters: 6.31E-03	

^a HDER = Highest Daily Emission Rate