Environmental Protection Division



	LABORATORY ST. 1943	Document Identification ESH&Q Doc. #: Other : ENV-Group: EAQ Doc. #: ESHQ-03-047							
		Is this a response to an action	item? Yes	🗌 No	x	l			
		E Mail Memo Letter	Docu	ment Da ment Du	te: e Date:	08/05/2008 08/14/2008			
То:	Compliance Repo	orting Manager, Air Quality Bureau		co Envir	onment	Department			
Subject:		Sting Manager, Air Quarty Dureat			Jiiiiciit	Department			
Action:	Semi-Annual Ope Review and Endo	erating Permit Monitoring Report(rse	January - Ju	ine 2008)	w			
Background:	See form 1824	¥.							
Issues:	See form 1824					an a			
Authoriz	zing Official	Name		Appro Yes	oved No	Date			
From									
Author		David Paulson		./		8/6/08			
Group/Deputy	Group Leader	Dianne Wilburn		\checkmark		See Form 1824			
Division Lead	er	Victoria A. George				See Form 1824			
Associate Dire	ector	Richard S. Watkins				See Form 1824			
ADC Review		Steve Story		V		8/1/08			
Security Revie	ew (S-7)								
LC-LESH Revi Coordinated w Program	iew vith Facility or	Phil Wardwell				See Form 1824			
Comments an	d/or Special Instru	uctions:	121	1		1			
		Group Office U	se Only						
Completed Fir	nal Distribution								
Distributed To	: IRM-RMMSO, A	150							



Signature/Review/Coordination Sheet

This form is to accompany all documents requiring review, approval, or signature by the Laboratory Director or Designee.

Data	Deadline			
8/05/08	08/14/08	Is this a response to an	action item? Yes	No 🗵
From:		Call for Pick-up		
Name: David L. Paulson	n MS: 1978	Name: David L P	aulson Phone 60	65-8884
Latin La Lation		Traine. David L. Fr		55-000+
Title: Identify documen	t, briefly describing subject m	atter.		
Semi-annual Monitoring	Report (January - June 2008), A	air Quality Operating Permit P100)-M2	
D . D				
Action Info	ormation Only			
Background/Issues:	· · · · · · · · · · · · · · · · · · ·		1. 11 11 1. 1	
Semi-Annual monitoring	report required under Permit Co	ondition 4.2. This report is requir	ed to address all monitoring a	activities, and
be submitted within 45 da	ays from the end of the reporting	g period (period ends June 30, 200	18, report due August 14, 200	18 to NMED).
V				
ACTION requested of	Laboratory Director or Des	ignee:		
Review and endorse corre	espondence to NMED.			
NMED-AQB requires the	e use of the "Reporting Submitt	al Form" with all correspondence.	This is not an attachment.	
Because Title V ve	port - certification	by ADESH+Q (per di	Scussions - NMED.	-AQB).
PAD Endorsement				
Name (<i>print</i>)	Signature		Date	
			1	
AD Endorsement	Cignoture		Data	
Name (print)	Signature		Date	1 -
Richard S. Wat	kins DV		8/7/	08
Coordinated with				
1 Name (print)	Signature		Date	
r. ramo (print)	olghatare	7/1/	Date /a /	1-0
Victoria George, E	NV-DO	1///	8/F/	OB
2. Name (print)	Signature	90	Date	
Phil Wardwell, LC	C-LESH			
3. Name (print)	Signature		Date	
Dianne Wilburn El	NV-FAO Man	me h/10 laura	8/7	108
4 Name (print)	Signature	The fulle	Date	- 0
			Duto	
5. Name (print)	Signature		Date	
31-1 - 72				

Please ensure appropriate inter/intra Directorate/Divisional coordination and review prior to submittal to the Director's Office. Form 1824 (1/07)

Page 1 of 2

X-Sieve: CMU Sieve 2.2 X-CTN-5-Virus-Scanner: amavisd-new at mailrelay2.lanl.gov Subject: Re: Review of Monitoring Report To: Dave Paulson <dpaulson@lanl.gov> X-Mailer: Lotus Notes Release 6.5.1 January 21, 2004 From: wardwell@lanl.gov Date: Thu, 7 Aug 2008 13:17:48 -0600 X-MIMETrack: Serialize by Router on WPCMail03P/LANL(Release 7.0.3|September 26, 2007) at 08/07/2008 01:17:50 PM X-CTN-5-MailScanner-Information: Please see http://network.lanl.gov/email/virus-scan.php X-CTN-5-MailScanner: Found to be clean X-CTN-5-MailScanner-From: wardwell@lanl.gov X-Spam-Status: No

Dave - After reviewing the report and discussing it with you, I approve. I think the report is fine.

Phil Wardwell Office of Laboratory Counsel Environment, Safety and Health Practice Group Mail Stop A 187 Telephone 505 667 3766 Fax 505 665 4424

|------> | Dave Paulson | | <dpaulson@lanl.go| | v> | | | 08/05/2008 05:18 | | PM | |-----+--->

> To: Phil Wardwell <wardwell@lanl.gov> cc: Subject: Review of Monitoring Report

Phil,

Would you please review the attached monitoring report and provide comment/approval. If you approve of the report, please provide me with an e-mail stating such so I can include it with the report package to be signed. If you have any questions, please do not hesitate to contact me.

Thank you, Dave

Printed for Dave Paulson <dpaulson@lanl.gov>

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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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C.1 ® C Dianne	ompany Environmer Wilburn	ntal Contact:	C.2 ® Title: EAQ Group	Leader			F.1 ® Facilit Steve Story	y Contact:		F.2®	Fitle: nplian	ce Team Leader
C.3 ® F	Phone Number: 7-6952		C.4 ® Fax N 505-665-88	Samuelant			F.3 ® Phone 505-665-216	9 Number:		F.4 ®	Fax N	lumber:
C.5 ® I dianne	Email Address: @lanl.gov	8					F.5 ® Email story@lanl.c	Address:				
G. Resp Richard	onsible Official: (Titl d S. Watkins	e V onlv):	H. Title: Associate D	irector ESH	1&Q		I. Phone Nu 505-667-421	mber: 18		J. Fax	Num	ber: 11
K. ® A 856	l Number:	L. Title V Pe P100M2	ermit Number	: M. T 7/16	itle V Pe /2007	rmit Is	sue Date:	N. NSR Perm 2195	it Numbe	r: 0 V	. NSF	R Permit Issue Date:
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SECTION II - TYPE OF SUBMITTAL (check one that applies)												
A. 🗌	A. Title V Annual Compliance Permit Condition(s): Description:											
	Title V Semi	-annual	Permit Cond	ition(s):	Desc	riptio	n:					
в. 🖂	Monitoring	Report	All Monitoring]	LANL	Semi	-Annual Monit	toring Report	January-J	une 2008		
с. 🗌	NSPS Requ (40CFR	irement 60)	Regulation:		Section(s):		Description:					
D. 🗌	MACT Requ (40CFR	irement 63)	Regulation:		Secti	on(s)	:	Descriptio	n:			
E. 🗌	NMAC Requ (20.2.xx) or N Requirement (irement NESHAP 40CFR61)	Regulation:		Secti	on(s)	:	Descriptio	n:			
F. 🗌	Permit or Notic (NOI) Requi	e of Intent rement	Permit No. 🗌 : o	or NOI No.	: Conc	lition(s):	Descriptio	n:			<u>r</u>
G. 🗌	Requiremer Enforcemen	nt of an t Action	NOV No. : or or CD No. : o	SFO No.	: Secti	on(s)	:	Descriptio	n:			
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T. Initial Compliance Periodic D. Test (EPA E. Test (EPA F. RATA G. Opacity H Analyzer Methods) Methods) F. Rata G. Opacity H Analyzer												
SECTION IV - CERTIFICATION												
After reasonable inquiry, I Richard S. Watkins certify that the information in this submittal is true, accurate and complete.												
® Sign	ature of Reportin	ng Official:	(® Title: Assoc. D	irector	ESH		Date 6	Responsib	le Official for	Title \	/?
	100000	- un							-			

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Date Reviewed:



Environmental, Safety, Health & Quality PO Box 1663, MS K491 Los Alamos, New Mexico 87545 505-667-4218/Fax 505-665-3811

Date: August 7, 2008 Refer To: ESH&Q-08-047

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

SUBJECT: SEMI-ANNUAL MONITORING REPORT FOR JANUARY – JUNE 2008 AIR QUALITY TITLE V OPERATING PERMIT P100-m2 IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)

Dear Compliance Reporting Manager:

Enclosed is Los Alamos National Laboratory's Title V Operating Permit Semi-Annual Monitoring Report for the period **January 1 – June 30, 2008** (Enclosure-1). This submission is required by permit condition 4.2 of Operating Permit P100-M2 and is being submitted within the allowed 45 days after the end of the reporting period as specified in permit condition 4.3. No deviations were identified during this reporting period.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Steve Story at 665-2169 or David Paulson at 665-8884.

Sincerely,

hard Allackens-

Richard S. Watkins Associate Director, ESH&Q

DLP

Enc: a/s

Cy: M. Mallory, w/o enc., ADPADOPS, A102
S. Fong, w/o enc., DOE-LA-AO, A316
P. Wardwell, w/o enc., LC-ESH, A187
D. Wilburn, w/o enc., ENV-EAQ, J978
S. Story, w/o enc., ENV-EAQ, J978
D. Paulson, w/o enc., ENV-EAQ, J978
J. Stanton, w/o enc., SSS-AE-V02, A199
ENV-DO FILE
IRM-RMSSO, A150
ENV-EAQ Title V Monitoring Report File

Enclosure - 1

Los Alamos National Laboratory's Title V Operating Permit Monitoring Report for the period January 1 – June 30, 2008

Title V Report Certification Form

I. Report Type								
Annual Compliance Certification								
🖾 Semi-Annual Monitoring Report								
□ Other Specify:		an an an tha an an tha an an tha an an than an that and a straight for a straight for a straight for a straight						
II. Identifying Information								
Facility Name: Los Alamos National Laboratory								
Facility Address: P.O. Box 1663, MS J978, Los Alamos	State: NN	Л	Zip	: 87545				
Responsible Official (RO): Richard S. Watkins	Phone	505-667-42	.18	Fax: 505-665-3811				
RO Title: Assoc. Director Environmental, Safety, Health, and	Quality	RO e-mail:	rsw	atkin@lanl.gov				
Permit No.: P100M2	Date Per	Date Permit Issued: July 16, 2007						
Report Due Date (as required by the permit): 08/14/2008	Permit A	I number: 8:	56					
Time period covered by this Report: From: January 1, 200)8	To: June 3	30, 2	.008				
III. Certification of Truth, Accuracy, and Comple	eteness							
I am the Responsible Official indicated above. I, <u>(Richard S. Watkins)</u> certify that I meet the requirements of 20.2.70.7.AD NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.								
Signature Richard Ul	Date: 8/7	108						

LA-UR-08-05152

Approved for public release; distribution is unlimited.

Title:	Semi-Annual Monitoring Report January 1 - June 30, 2008 Air Quality Operating Permit P100M2 Los Alamos National Laboratory
Author(s):	David Paulson, ENV-EAQ
Intended for:	Compliance Reporting Manager New Mexico Environment Department - Air Quality Bureau 1301 Siler Road, Building B Santa Fe, New Mexico 87507



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Title V Semi - Annual Monitoring Report for Permit P100M2

Part 1 – Monitoring Activity Reporting Requirements

4.0 REPORTING

Conditions of 4.0 are pursuant to 20.2.70.302.E NMAC.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.
- 4.3 The report required by Condition 4.1 shall be submitted within 90 days from the end of the reporting period. The semiannual report required by Condition 4.2 shall be submitted within 45 days from the end of the reporting period. The reporting periods are January 1st to June 30th and July 1st to December 31st. This condition is pursuant to 20.2.70.302.E.1 NMAC.
- 4.4 The permittee shall submit reports of all deviations (including emergencies) from permit requirements to the Department when they occur. The permittee shall communicate initial notice of the deviation to the Department within twenty-four (24) hours of the start of the first business day following the start of the occurrence via telephone or facsimile. Within ten (10) calendar days of the start of the first business day following the start of the occurrence, written notice using the Excess Emissions Form (attached to this permit) shall be submitted to the Department. This condition is pursuant to 20.2.70.302.E.2. NMAC.

Specific Monitoring Reports:

2.1 Asphalt Production

- 2.1.4 Emissions Monitoring Requirements
- 2.1.4.1 Perform monthly six (6) minute opacity readings for each emission point having opacity greater than zero as determined by EPA Method 22.
- 2.1.4.2 Monitor the differential pressure (inches of water) across the baghouse by the use of a differential pressure gauge, in accordance with condition IV.C.2 of NSR permit number GCP-3-2195G.
- 2.1.4.3 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

Reporting Requirement

- 2.1.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.
- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment. Comments:

- 2.1.4.1 See Attachment 1 for monthly opacity reports. Monthly six minute opacity readings are taken using the required EPA Methods.
- 2.1.4.2 A differential pressure gauge is in place to continuously monitor the differential pressure across the baghouse as required by NSR permit GCP-3-2195G condition IV.C.2. The differential pressure is recorded twice each day during operations. This is consistent with NSR permit GCP-3-2195G condition IV.D.2(e). Records are available on-site for NMED inspection.
- 2.1.4.3 LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

Attachment 1 Asphalt Plant Opacity Reports

	Sum	Summary Table, Reports Attached										
Month	Read Location	Date	Time	Average Opacity	EPA Method							
January	Top of Shaker	01/15/08	9:07 am	0	9 ^(a)							
February	Top of Shaker	02/12/08	8:46 am	0	9 ^(a)							
March	Top of Shaker	03/05/08	8:34 am	0	9 ^(a)							
April	Top of Shaker	04/01/08	8:42 am	0	9 ^(a)							
May	Top of Shaker	05/13/08	8:40 am	0	9 ^(a)							
June	Top of Shaker	06/03/08	12:55 pm	0	9 ^(a)							

Summary Table, Reports Attached

(a) EPA Method 9 was used. Average opacity for the Asphalt Plant is the sum of the highest consecutive 24 readings divided by 24 (6 minutes of readings). The method is in accordance with 20.2.61 NMAC and conditions 2.1.4.1 and 2.1.4.3 of the Los Alamos National Laboratory (LANL) Operating Permit P100M2.



LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MUNUTE)

Source Name:	Source Name:			te		Start	Time	End Time	
	LANL A	sphalt Plant	1-15.	-08		09	0907 0913		
Source Location	:	A	Sec	T		1			
CALCE DE LENNINGE	TA-60 (Sigma Mesa)	Min	0	15	30	45	Comments	
Type of Source	111 00 (To ge of Control Equipment	1						
Amba	It Dlant	Dechange		D	D	2	D		
Aspha	ut Fiam	Bagnouse	2	0	0	0	0		
Describe Emissi	on Point (Top of st	ack, elc.)		2	0	N	0		
TOP E	F SHA	KER STACK	3	0	n	0	n		
Height Above G	round Level	Height Relative to Observer		1º	-V	12	10		
	15 Feet	L/S Feel	4	0	0	n	D		
Distance From C	Observer	Direction of Source From Observer			-	1.1			
	Freet	1/1/	5	D	D	D	D		
	2	<u> </u>	6		-				
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ENV-EAQ-307, R3, ATTACHMENT 2 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

os Alamos - ----

LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name:	Observation Da		Start Time		End Time			
LANLA	Asphalt Plant	2-12-	2-12-08			46	0852	
Source Location: TA-60 (Sigma Mesa)	Min	0	15	30	45	Comments	
Type of Source	Type of Control Equipment	1	D	D	D	D		
Asphalt Plant	Baghouse	2	n	0	a	10		
Describe Emission Point (Top of s	epor Start	3	0	0	0	0		
Height Above Ground Level	Height Relative to Observer 44 Feet	4	0	0	n	0		
Distance From Observer	Direction of Source From Observer	5	C	0	0	0		
65 Feet	NN		0	0	P	U		
Description of Plume (stack exit of Description of Plume (stack exit of Description of Plume (stack exit of	nly) ng 🗆 Fanning 🗠 Coning	6	D	D	D	0		
No Plume Present		7						
Plume Ty	uous DENo Plume Present	8						
Water Droplets Present?	me is 🛙 Attached 🛛 🗖 Detached	9						
At what point in the plume was op	acity determined?	10				Ser.		
VIA. abover to	pot stack	11						
Blue 5KU	, nees, ee.)	12						
Background Color	13							
Vind Speed Wind Dir	14	als.						
3-5 mph (provide)	from/to, i.e. from North to South)	15						
Ambient Temperature	n ESE Relative Humidity	15	A ARCINER THE ARCINE		and the second	1.194		
30 °F	62 %	10			Sand-			
Additional Comments/Information	smits class	17						
The service in ,	action crear	18						
11		19	653					
Stack SOURCE	LAYOUT SKETCH	20						
Plume	Draw Arrow in North Direction	Average 6-M	Average 6-Minute Opacity			Range of Opacity Readings		
Sun 🕂 Er	Point A	0	10	جسوست		0	10 0%	
Ψ WEI S		OBSERVER	(please	print)		Title		
YY 110		Done	to	<i>a</i> .		I.	A1 100 -	
		Signature	yea	6/		- Cal	Date	
		1)	1	L			7-13 -00	
		Observer Or	anizati	on	re-	-	-12-08	
		161	2.43					
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ENV-EAQ-307, R3, ATTACHMENT 2 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

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Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE

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Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE

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2.2 Beryllium Activit	ies
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Source	Monitoring Required
Chemistry and Metallurgy Research Facility TA-3-29	A log shall be maintained during operations which indicates the number of Be samples processed.
Sigma Facility TA-3-66	A log shall be maintained during operations which shows the number of metallographic specimens used in the polishing operation and the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.
Beryllium Test Facility TA-3-141	Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions. Cartridge and HEPA filters will be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.
TA-16-207	Project files shall be maintained of components prepared for testing.
TA-35-87	A log shall be maintained during operations which shows the number of beryllium filters cut.
Target Fabrication Facility TA-35-213	Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.
Plutonium Facility TA-55-PF4	The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation. Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters.

Reporting Requirement

Source	Reporting Required
Chemistry and Metallurgy Research Facility TA-3-29	See condition 4.2.
Sigma Facility TA-3-66	See condition 4.2.
Beryllium Test Facility TA-3-141	Anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date.Actual date of initial startup of each new or modified source within fifteen (15) days after the startup date.Provide the date when each new or modified emission source reaches the maximum production rate at which it
	will operate within fifteen (15) days after that date. Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the

	permitted emission rate from the continuous monitoring system.
	Provide any data generated by activities described in the Quality Assurance Plan (QAP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request.
TA-16-207	See condition 4.2.
TA-35-87	See condition 4.2.
Target Fabrication Facility TA-35-213	See conditions 4.1 and 4.2.
Plutonium Facility TA-55-PF4	Stack emission test results and facility operating parameters will be made available to Department personnel upon request.
	Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted: January 22, 2008 & April 28, 2008 Tracking Number: SBR20080004

No Provide comments and identify any supporting documentation as an attachment.

Comments:

<u>Chemistry and Metallurgy Research Facility (TA-3-29)</u> – This beryllium source was removed from Operating Permit P100M1 as requested by LANL. A letter from NMED-AQB amending the permit was dated July 16, 2007. This amendment resulted in the assignment of Operating Permit No. P100M2.

<u>Sigma Facility (TA-3-66)</u> - A log is maintained showing the number of metallographic specimens used in the polishing operation. Logs are maintained showing the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. Logs are available on-site for NMED inspection.

<u>Beryllium Test Facility (TA-3-141)</u> - The BTF is equipped with a continuous emissions monitor to measure beryllium emissions. The monitoring system is operated in accordance with LANL Quality Assurance Project Plans and emission results are provided to NMED quarterly. Submissions for this period were provided to NMED in reports dated January 22, 2008 [ENV-EAQ:08-020] and April 28, 2008 [ENV-EAQ:08-105]. Cartridge and HEPA filters are equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.

- <u>TA-16-207</u> Project files are maintained of components prepared for testing. Files are available on-site for NMED inspection.
- <u>TA-35-87</u> A log is maintained showing the number of beryllium filters cut. The log is available on-site for NMED inspection.
- <u>Target Fabrication Facility (TA-35-213)</u> Records of stack emission test results are maintained on-site and are available for NMED inspection. Stack emission test results are used to determine total emissions from this facility.
- <u>Plutonium Facility (TA-55-PF4)</u> The HEPA filtration systems are equipped with differential pressure gauges that measure the differential pressure across the HEPA filters while the exhaust fans are in operation. Control efficiency is verified by daily HEPA filter pressure drop readings. Readings are recorded in the TA-55 Operations Center. Annual HEPA filter challenge tests of accessible filters are performed. Test results are summarized in **Attachment 2**.

Attachment 2 Beryllium HEPA Filter Tests Results

Summary Table, Reports Attached

Unit	Date	Pass/Fail
TA-55 (H-5-1430) (FF-852)	06/03/2008	Pass
TA-55 (H-5-1440) (FF-853)	06/03/2008	Pass

.

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100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT A 100 Area Glovebox Exhaust FF-852 Data Sheet

Date: C($\frac{1}{\sqrt{3}} \frac{1}{\sqrt{3}} \frac{1}{\sqrt{3}$	Date: 05/21/01 E:	uter Calibration xpiration Date:	CA/(3)	Di 1	Ilution Ratio: <u>1 \</u>
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9.1.12.2	Background conce	entration (part./cc)			2.19.5tc	part. concentration
9.1.12.3	Upstream concent	ration (part./cc)			2.510	Sto part. concentration
9.1.12.4	Challenge aerosol	concentration between	2.00 x10 ⁶ and	2.71 x1	0 ⁶ part./cc	Initials
9.1.12.5	1 st stage downstre	am concentration (part.	/cc)		6.3251	2 161 part. concentration
9.1.12.6	2 nd /3 rd stage down	stream concentration (p	part./cc)		3.5311	ور ال part. concentration
9.1.12.7	1 st stage Penetrati	on $\leq 5.0 \times 10^{-4}$ (efficienc	y <u>≥</u> 99.95%)		2.51	9 x 10-5
9.1.12.8	2 nd /3 rd stage Pene	tration $\leq 2.5 \times 10^{-7}$ (efficient	ency <u>></u> 99.999	975%)	562%	x lo s
9.1.13.3 9.1.13.4	Ensure all test por	t ball valves are closed	and capped.	Ņ	1 mAtnitials	Independent Verification
Ś	Valve	Required Position	Initials	Indepe Verific	ndent ation	
and a	HV-852-H	Closed and Locked	MMAT	Pr	-	
-	HV-852-G	Closed	MINT	P	7	
An J	HV-852-F	Closed	mini	PT		
Le	HV-852-D	Closed	MMZ	PI		
	HV-852-C	Closed	mmt	PT		
	HV-852-B	Closed	mint	PT	-	5
	HV-852-A	Closed	Think	PT		
	HV-852-AA	Closed	the shall	12		

MUNI WHYOU Comments: -1999 12552 OC On-duty Surveillance

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V. 11 <u>∖⊊/0₩/\≀_</u> Date Supervisor Personnel Signature Signature Date Notify CSE that complete and accepted surveillance is available for review. 6/11/08 System Engineer RECEIVED JUN 2 6 2008 10 Signature Date

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100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT B 100 Area Glovebox Exhaust FF-853 Data Sheet

Date: 0.4	LAS Calibration Expiration Date: DS/3/04 Diluter Calibration Expiration Date: D3/	Dilution Ratio:				
Step	1.4.1) (8.4.3) (Item	FF-853				
Number		3 - 3 - 4 - 3				
9.2.12.2	Background concentration (part./cc)	J 5 51 X part. concentration				
9.2.12.3	Upstream concentration (part./cc)	ン・HJO XiteL part concentration				
9.2.12.4	Challenge aerosol concentration between 2.00 x10 ⁶ and 2.71	x x10 ⁶ part./cc)				
9.2.12.5	1 st stage downstream concentration (part./cc)	$1 20 + X10^{2}$ part. concentration				
9.2.12.6	2 nd /3 rd stage downstream concentration (part./cc)	トルンジス NUT				
9.2.12.7	1^{st} stage Penetration $\leq 5.0 \times 10^{-4}$ (efficiency $\geq 99.95\%$)					
9.2.12.8	$2^{nd}/3^{rd}$ stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq 99.999975\%$) 4.514x10-2				
9.2.13.3 9.2.13.4	Ensure all test port ball valves are closed and capped.	n mat Initials Independent Verification				

Valve	Required Position	Initials	Independent Verification
HV-853-H	Closed and Locked	in Mal	PT
HV-853-G	Closed	What	PT-
HV-853-F	Closed	Imm	PT
HV-853-D	Closed	MMMA	DT
HV-853-C	Closed	He was	PT
HV-853-B	Closed	14 mil	PT
HV-853-A	Closed	KIN	DT
HV-852-AA	Closed	14/14	PT

Comments: 551-41 840 $\langle \hat{\Lambda} \rangle$ 2 14 27 ch. \$ 1

Surveillance OC On-duty Supervisor Personnel 104 Signature Date Signature Date Notify CSE that complete and accepted surveillance is available for review. System Engineer 6/11/08 RECEIVED JUN 2 6 2008

Date

Signature

ere e

2.3 Boilers and Heaters

- 2.3.4 Emissions Monitoring Requirements
- 2.3.4.1 Emission units TA-21-357-1, TA-21-357-2, and TA-21-357-3: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.
- 2.3.4.2 Emission units TA-55-6-BHW-1 and TA-55-6-BHW-2: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.
- 2.3.4.3 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

Reporting Requirement

- 2.3.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.
- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

- 2.3.4.1 The TA-21 Steam Plant was officially and permanently shut-down as of September 28, 2007. This information was communicated to NMED in a letter dated October 16, 2007.
- 2.3.4.2 Volumetric flow meters are utilized to measure the total amount of natural gas being used by units TA-55-6-BHW-1 and TA-55-6-BHW-2 on a monthly basis. Natural gas usage is summarized in Attachment 3.
- 2.3.4.3 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

Attachment 3 **Boilers and Heaters Natural Gas Usage**

		h	letered Boile	ers						
		TA-55 Boi (MS	TA-55 Boiler Gas Use (MSCF) ^(c)		Total Gas Use ^(a) (MSCF) (MMSCF)		Non-Metered Gas Use	12-Month Rolling Total for		
	Month	h (B-602) (B-603)		BS-1			(MMSCF)	all Small Boilers (MMSCF) ^(e)		
	January	3441	2		84,295	84.30	80.85	504.67		
	February	2075	8		65,795	65.80	63.71	504.27		
	March	1786	2		58,027	58.03	58.24	507.94		
-	April	1175	951		40,942	40.94	38.82	504.67		
5	May	528	969	CONTRACTOR OF A	28,334	28.33	26.82	503.54		
5	June	505	1340	1.2	17,402	17.40	15.56	507.41		
R	July									
g	August			mannaman						
-	September									
	October		a state of the second		-					
	November									
	December									
	TOTAL	9510	3292	1.2	294,798	294.80	281.99	Permit Limit = 870		

2008 Small Boilers Data Entry / Gas Use

2008 Non Metered Boiler Pool Capacity: Estimated Gas-Use per MMBtu rating Jan-June: 305.3 MMBTU/hr(1) 0.92 MMscf/MMBtu/hr Estimated Gas-Use per MMBtu rating July-Dec: MMscf/MMBtu/hr 0.00 Estimated Gas-Use per MMBtu - Annual 0.92 MMscf/MMBtu/hr

Definitions:

MMSCF= Million Standard Cubic Feet MSCF = Thousand Standard Cubic Feet

Metered/Non-metered: Metered boilers are those units that have unit specific volumetric flow meters for the boiler(s) only.

		(Gas Use No	n-Metered ^{(g}	(MMSCF)				
AIRS Stack #	015	016	017	018	019	020	021	024	Units ^{inv}
Location:	TA-48-1	TA-48-1	TA-48-1	TA-53-365	TA-53-365	TA-69-1	TA-59-1	TA-18-1484	Lab Wide
ID:	BS-1	BS-2	BS-6	BHW-1	BHW-2	BHW-1	BHW-2	Plant 6	Various
Design Rate ^{vy} (MMBTU/hr)	5.336	5.335	7.140	7.115	7.115	5.335	5.335	12.700	250
Calculated Gas Use-Jan-June	4.929	4.928	6.595	8.571	6.571	4.928	4.928	11.731	230.513
Calculated Gas Use-July-Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Calculated Gas Use-Annual	4.929	4.928	6.595	6.571	6.571	4.928	4.928	11.731	230.513

1

2.4 Carpenter Shops

2.4.4 Emissions Monitoring

2.4.4.1 The permittee shall maintain logs of the hours the carpenter shops are in operation.

Reporting Requirement

2.4.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

2.4.4.1 A log is maintained of the hours of operation for each of the carpenter shops. Hour readings are collected and recorded monthly from hour meters installed on each of the cyclone separators. Hours of operation are provided in **Attachment 4**.

Attachment 4 Carpenter Shop Hours of Operation

2008 TA-3 & TA-15 Carpenter Shops

TA-3	Data Entry	TA-3	Data Entry
	Hours of Operation		Hours of Operation ¹
Month	TA-3	Month	TA-3
January	1.7	July	
February	1.0	August	2
March	1.1	September	
April	3.3	October	and the state of the second day
Мау	6.0	November	The second states and
June	3.7	December	
6 mo. Total	16.8	6 mo. Total:	0.0

TA-15	Data Entry	TA-15	Data Entry
	Hours of Operation ¹		Hours of Operation ¹
Month	TA-15	Month	TA-15
January	7.6	July	
February	9.8	August	
March	8.3	September	Design of the second second
April	14.4	October	
May	5.2	November	
June	6.4	December	The second second
6 mo. Total	51.7	6 mo. Total:	0.0

Reference 1. Based on information provided monthly by the shop foreman from each shop. Saws, drills, shaping and sanding equipment shall each not operate in excess of 4368 hours per year.

2.5 Chemical Usage

- 2.5.4 Emissions Monitoring/Recordkeeping Requirements
- 2.5.4.1 Maintain records of chemical purchasing through facility-wide chemical tracking system, and use the data to calculate the emissions on a semiannual basis in accordance with Condition 4.1.

Reporting Requirement

2.5.5 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

2.5.4.1 Records of chemical purchases are maintained through LANL's facility wide chemical tracking system (ChemLog). The data is used to calculate emissions which are submitted in the Semi-Annual Emission Report.

2.6 Degreasers

- 2.6.4 Emissions Monitoring Requirements
- 2.6.4.1 Record the amount of solvent added to the degreaser and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.
- 2.6.4.2 Complete checklist for work practice standards.

Reporting Requirement

2.6.6 Reporting

- 2.6.6.1 Submit notification of initial startup.
- 2.6.6.2 Submit a compliance report 150 days after initial startup.
- 2.6.6.3 Reports shall be submitted in accordance with conditions 4.1 and 4.2.
- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

2.6.4.1 Records are maintained of the amount of solvent added to the degreaser. This data is used to calculate emissions on a semi-annual basis. The Semi-Annual Emissions Report, containing the degreaser emissions, will be submitted within 90 days from the end of the reporting period in accordance with condition 4.3 of the operating permit. LANL's "Historical Solvent Usage Data" report for January 1 through June 30, 2008 is provided in Attachment 5.

2.6.4.2 The degreaser operations staff completes checklists for work practice standards. The checklists are available on-site for NMED inspection.

Attachment 5 Degreaser Solvent Usage

Historical Solvent Usage Data

The usage information for TA-55-DG-1 degreaser from Jan-01-2008 through Jun-30-2008 is displayed below.

General Degreaser Information

DegreaserTypeTA BuildingSolventTA-55-DG-1Cold Batch55Trichloroethylene

Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)
Jan-07-2008	6.00	3.44	1.75	0.00	0.00
Feb-21-2008	7.25	0.00	0.00	14.25	7.25
Feb-26-2008	0.00	14.74	7.50	0.00	0.00
Mar-31-2008	7.25	0.00	0.00	0.00	0.00
Apr-09-2008	7.25	1.00	0.50	0.00	0.00
Apr-29-2008	7.25	2.00	1.01	0.00	0.00
Apr-30-2008	7.75	0.00	0.00	14.50	7.37
May-01-2008	0.00	14.50	7.37	0.00	0.00
May-13-2008	7.25	1.00	0.50	0.00	0.00
May-28-2008	7.75	0.00	0.00	0.00	0.00
Jun-05-2008	7.50	0.00	0.00	14.00	7.11
Jun-10-2008	0.00	14.74	7.50	0.00	0.00
Jun-30-2008	7.25	0.50	0.25	0.00	0.00

2.7 Internal Combustion Sources

2.7.4 Emissions Monitoring Requirements

Source	Monitoring Required						
Stationary Standby Generators	Track and record hours of operation for stationary standby generators on a semi-annual basis.						
TA-33-G-1	Track hourly and 12-month rolling total kWh. Record hours of operation and the time operation begins and ends each day.						

2.7.4.1 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

Reporting Requirement

- 2.7.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.
- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

2.7.4 (Stationary Standby Generators) - LANL tracks and records generator hours of operation on a semi-annual basis. Stationary generator hours of operation for this reporting period are provided in **Attachment 6**.

- 2.7.4 (TA-33-G-1) NSR Air Quality Permit 2195-F-R3 was issued on May 28, 2008. This revision included a change to the kilowatt-hour (kWh) monitoring for the generator. The new condition, 4.a., reads: "The permittee shall record the kilowatt-hours produced by Unit TA-33-G-1 on a daily basis and on a monthly rolling 12-month total basis." A kWh tracking form has been created and will be used for tracking generator start and stop times as well as daily kWh. These daily readings will be used in tracking the 12-month rolling kWh total. These records are available on-site for NMED inspection. This change has also been requested as part of our Operating Permit Renewal Application submitted earlier this year.
- 2.7.4.1 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine opacity compliance.

Attachment 6 Internal Combustion Generator Hours of Operation

								First 6	Month Re	adings	Second	6 Month R	leadings
T.A	Bidg	Manufacturer	MODEL	ĸw	Fuel Type	Previous Reading Date	Previous Reading	6 Month Reading Date	Reading	Hours Run	12 Month Reading Date	Reading	Hours Rur
3	40	Onan Sons	1500DVE15R31374B	150	Diesel	Dec-08	6.6	Jun-08	11.8	5.2	Dec-DS	Racet	18 - 1 ⁸⁶¹
3	223	Onan Sons	45.0EM-15R/10742D	45	Propane	Dec-08	489.5	Jun-08	492.5	3.0	Dec-DS		() Arrest
3	440	Cummins	500FDR5051	260	Diesel	Dec-08	121.8	Jun-08	121.8	0.0	Dec-DS	Section 2	A Despect
3	440	Cummins	DFGA-5005210	500	Diesel	Dec-08	81.8	Jun-08	93.8	12.0	Dec-DS	1 .	1.489
3	1076	Cummins	DGBB-5601289	35	Diesel	Dec-08	129.7	Jun-08	141.2	11.5	Dec-DS	Sugar Sector	vi sines
3	1400	Cummins	DFEH-5899818	400	Diesel	Dec-08	33.0	Jun-08	37	4.0	Dec-DS		The owned
3	1404	Cummins	DFLC-5554001	1250	Diesel	Dec-08	336.5	Jun-08	368.4	31.9	Dec-DS	deside there is	Service Sector
3	1498	Caterpillar	SR-4	006	Diesel	Dec-08	326.0	Jun-08	331.0	5.0	Dec-DS	In the Property of	A DECK OF
3	2322	Onan Sons	DGDA-5005757	SD	Diesel	Dec-08	339.8	Jun-08	352	12.2	Dec-DS		- 00 - 10 - 10 - 10 - 10 - 10 - 10 - 10
16	930	Cummins	KTA50-G2	1100	Diesel	Dec-08	293.4	Jun-08	305.2	11.8	Dec-DS	A State Day	MACTURES
16	1374	Onan Sons	6DENA	60	Nat. Gas	Dec-08	1092.9	Jun-08	1115.8	22.9	Dec-D8	decurs.	1. A 1. A
18	31	Onan Sons	275DFML29807N	275	Diesel	Dec-08	180.8	Jun-08	180.5	0.0	Dec-08	201.00	the sale of
35	2	Onan Sons	100DGDB	100	Diesel	Dec-08	115.5	Jun-08	115.5	0.0	Dec-08	1	1.
35	402	Cummins	DGCB-5674244	6D	Diesel	Dec-08	138.4	Jun-08	158.0	19.6	Dec-08	EPSIlons 1	DUSED
43	1	Cummins	4BT3.9-GC	50	Diesel	Dec-08	383.9	Jun-08	387.7	3.8	Dec-DS	The Here's	
43	1	Onan Sons	DVE	150	Diesel	Dec-08	620.0	Jun-08	644.4	24.4	Dec-08		Rose all
48	335	Onan Sons	300DEFCB	300	Diesel	Dec-08	959.5	Jun-08	995.4	35.9	Dec-DS	1 million and	Libror in
48	45	Onan Sons	DFCB-5740130	300	Diesel	Dec-08	53.5	Jun-08	69.5	18.0	Dec-08	Text to Letter	
50	37	Cummins	680FDR5059FF	500	Diesel	Dec-08	502.9	Jun-08	502.9	0.0	Dec-08	In the second	A Harden
50	184	Onan Sons	DGFA-568741	150	Diesel	Dec-08	212.7	Jun-08	238.6	25.9	Dec-DS	a la second	1 SADATE
50	188	Onan Sons	L940563879	1250	Diesel	Dec-08	149.0	Jun-08	149.0	0.0	Dec-08	1000	A Diset
53	1	Onan Sons	6DENA	60	Nat. Gas	Dec-08	1234.1	Jun-08	1261.2	27.1	Dec-DS	1.11.12.14.12	1000
53	2	Kato Eng.	Kamag-14	50	Diesel	Dec-08	194.3	Jun-08	194.3	0.0	Dec-08	COLUMN TO D	ALC: ROYA
53	3N	Onan	15.0JC-18R	15	Propane	Jun-08	345.3	Jun-08	345.3	0.0	Dec-08	THUS OF	- 154
54	412	Olympian	95M-07874-F	500	Diesel	Dec-08	317.9	Jun-08	324.7	6.8	Dec-DS	Con Starte	1.1.1.1.1.1.1.1
55	ō	Kohler	100RZ71	100	Propane	Dec-08	79.3	Jun-08	93.4	14.1	Dec-08	1	1.
55	8	Delco/Detroit	E7014DD	600	Diesel	Dec-08	822.2	Jun-08	831.8	9.6	Dec-0S	2 States	HARVER
55	364	Onan Sons	1250DFLC-4987	1250	Diesel	Dec-08	82.8	Jun-08	101.3	18.5	Dec-08	N. 1. 1. 1. 1. 1.	
55	28	Onan Sons	40DL6T	40	Diesel	Dec-08	66.5	Jul-08	72.4	5.9	Dec-DS	Sector was	1000
55	47	Onan Sons	1465	200	Diesel	Dec-08	540.0	Jul-08	555.5	15.5	Dec-DS	Tet. The	
55	142	Cummins	DFEB-4963414	400	Diesel	Dec-08	105.0	Jul-08	114.8	9.8	Dec-DS	(特許)	Contraction of
59	1	Allis Chalmers	2554-0703	90	Diesel	Dec-08	750.0	Jul-08	750.0	0.0	Dec-DS		111122
60	yard	Cummins	DFHD-4964979	1000	Diesel	Dec-08	648.4	Jun-08	649.4	1.0	Dec-DS		1046 236
63	93	Murphy	3166-0084	30	Diesel	Dec-08	716.0	Jul-08	716.0	0.0	Dec-DS	14 14 14 14	The Second
64	1	Onan Sons	250DVG	250	Diesel	Dec-08	166.9	Jul-08	171.8	4.9	Dec-DS		11 2018
69	33	Cummins	DFLC-5568730	1250	Diesel	Dec-08	71.3	Jul-08	78.6	7.3	Dec-DS	Const Statistics	- o / en Angel
-	36	Generators in u	ISE	and the second second second second	And an	and the other states with the			TOTAL	365.6		TOTAL	0.0

First half average hours per unit

2008 Generator Hours

N/R = Not Read

10.2 Second half average hours per unit

2.8 Data Disintegrator

- 2.8.4 Emissions Monitoring
- 2.8.4.1 The permittee shall maintain a log of the number of boxes of media that are destroyed and calculate the emissions on a semiannual basis in accordance with Condition 4.1. This condition is pursuant to 20.2.70.302.C NMAC.
- 2.8.4.2 The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer's recommendations. This condition was brought forward from NSR Permit No. 2195H Condition 1.d.

Reporting Requirement

- 2.8.6 Report shall be submitted in accordance with conditions 4.1 and 4.2.
- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

☐ Yes Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

- 2.8.4.1 LANL maintains a log of the number of boxes of media that are shredded and calculates the emissions on a semi-annual basis. The actual number of boxes shredded during this reporting period is included in **Attachment 7**.
- 2.8.4.2 The Data Disintegrator and associated pollution control devices are maintained under a preventative maintenance contract. LANL maintains documentation of all maintenance and repairs performed on the cyclone and cloth tube filters. This documentation is available on-site for NMED inspection.

Attachment 7 Data Disintegrator Box Throughput

2008 TA-52 Data Disintegrator

	Data Entry		Data Entry
Month	Boxes ^(o) Shredded	Month	Boxes ^(c) Shredded
January	876	July	
February	761	August	
March	840	September	demain a distant
April	657	October	
May	837	November	in Regime (
June	567	December	a senit of the senit of
6 mo. Total:	4,538	6 mo. Total:	0
	Annual Boxes:	4,538	

2.9 Power Plant at Technical Area 3 (TA-3-22)

- 2.9.4.1 Total fuel oil consumption shall be monitored so that combined fuel oil usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.a.
- 2.9.4.2 Natural gas consumption shall be monitored so that combined natural gas usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.b.
- 2.9.4.3 Natural gas consumption shall be monitored so that natural gas usage for Unit TA-3-22 CT-1 can be calculated on a rolling 365-day total. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.f.
- 2.9.4.4 A certification of total sulfur content of the No. 2 fuel oil used by Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 shall be obtained from the supplier whenever No. 2 fuel oil is delivered to the facility. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.c.
- 2.9.4.5 If the certification as specified by Condition 2.9.4.4 is not available at delivery, the permittee shall analyze the No. 2 fuel oil to determine the total sulfur content. The analysis shall be conducted using Department approved methods and standards for determining total sulfur content of No. 2 fuel oil. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.d.
- 2.9.4.6 The operating load of Unit TA-3-22 CT-1 specified by Condition 2.9.3.7 shall be monitored and recorded hourly during normal operations of that unit. Periods of startup and shutdown shall not be included in the hourly monitoring but shall be recorded separately. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.e.
- 2.9.4.7 Compliance with NOx pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit) and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8. Compliance with NOx annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit). This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.g.
- 2.9.4.8 Compliance with CO pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.731 pounds CO per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit), and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8). Compliance with CO annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.0613 pounds CO per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit). This condition was brought forward from NSR Permit No.

2195BM1, Condition 3.h.

- 2.9.4.9 At least once each calendar quarter the permittee shall use the method specified in Conditions 2.9.4.7 and 2.9.4.8 to determine compliance of Unit TA-3-22 CT-1 with the hourly and annual emission limits specified in this permit. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.i.
- 2.9.4.10 Visible emissions from stationary combustion equipment shall not equal or exceed an opacity of 20%. Use of pipeline quality natural gas fuel as defined in Conditions 2.9.3.1 and 2.9.3.4 constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20%. At such time as No. 2 fuel oil as defined in Condition 2.9.3.1 is used, opacity shall be measured in accordance with the procedures at 40 CFR 60, Appendix A, Method 9. Opacity measurements shall continue on a quarterly basis per calendar year for each effected unit until such time as pipeline quality natural gas is used. This condition is pursuant to 20.2.61 NMAC and NSR Permit No. 2195BM1, Condition 2.c.
- 2.9.4.11 Initial compliance tests are required on Unit TA-3-22 CT-1 for NOx and CO. These tests shall be conducted within sixty (60) days after the unit achieves the maximum normal production. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source. The tests shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 7E for NOx, and Method 10 for CO contained in CFR Title 40, Part 60, Appendix A, and with the requirements of Subpart A, General Provisions, 60.8(f). Alternative test method(s) may be used if the Department approves the change. The permittee shall submit a testing protocol to the Department at least thirty (30) days prior to the test date, and provide notification to the Department at least thirty (30) days prior to the test date. This condition was brought forward from NSR Permit No. 2195BM1, Condition 6.b and General Condition 13.
- 2.9.4.12 The permittee shall comply with fuel sulfur monitoring requirements at 40 CFR 60.334(h) applicable to Unit TA-3-22 CT-1 by making the required demonstration which shows the fuel combusted in the turbine meets the definition of natural gas at 40 CFR 60.331(u).

The conditions of Section 2.9.4 are pursuant to 20.2.70.302.C NMAC.

Reporting Requirement

2.9.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

This condition is pursuant to 20.2.60.302.E NMAC.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NOx, CO, SO₂, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Tes Yes	Date report submitted: Tracking Number:
🖂 No	Provide comments and identify any supporting documentation as an attachment.
Comme	nts:
2.9.4.1	Total fuel oil consumption is monitored on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment 8 contains a summary of monthly fuel oil consumption. Records of daily fuel oil use are available on-site for NMED inspection.
2.9.4.2	A volumetric flow meter is used to measure the total amount of natural gas used on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment 8 contains a summary of monthly natural gas usage. Daily totals are available on-site for NMED inspection.
2.9.4.3	The Combustion Turbine started operation on September 23, 2007. A monthly gas consumption report, containing daily turbine gas use, is generated by the plant operator. This data is used to calculate a rolling 365-day total. See Attachment 9 for the daily and rolling 365-day totals.
2.9.4.4	No fuel oil was purchased or delivered during this reporting period.
2.9.4.5	No fuel oil was purchased or delivered during this reporting period.
2.9.4.6	A tracking log was created that contains the hours of start-up, normal operation, shut-down, and the hourly operating load during normal operation. The turbine did not achieve "normal" operation during this reporting period. The combustion turbine has run less than 12 hours for this reporting period due to equipment problems. The tracking logs are available on-site for NMED inspection.
2.9.4.7	An emission calculation spreadsheet was created, using the formula in this permit condition, to calculate the NOx pound per hour and ton per year emission rates. This data is compared with the permit emission limits.
2.9.4.8	An emission calculation spreadsheet was created, using the formula in this permit condition, to calculate the CO pound per hour and ton per year emission rates. This data is compared with the permit emission limits.
2.9.4.9	Daily gas use data is entered into the above mentioned spreadsheet on a monthly basis. The spreadsheet uses the required calculation to provide both NOx and CO hourly and annual emissions. The resulting data is used to determine compliance with emission limits.
2.9.4.10	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation. Delivery of pipeline quality natural gas is specified in the transportation contract with the supplier. Opacity measurements performed at the Power Plant are provided in Attachment 10 .
2.9.4.11	An initial compliance test was performed on the combustion turbine within 60 days following the unit achieving maximum normal production. The unit achieved its maximum normal production rate on September 27, 2007, and the compliance test was performed on October 5, 2007. The test report was provided to NMED on October 22, 2007. The test consisted of the EPA test methods identified in this permit condition.

2.9.4.12 The natural gas used by the combustion turbine meets the definition of natural gas in 60.331(u). The sulfur monitoring requirement is met under 40 CFR 60.334(h)(3)(i), which allows the use of a current and valid transportation contract that specifies the maximum total sulfur content is 20 grains per100 scf or less. The transportation contract specifies a sulfur content not to exceed 2 grains of total sulfur per 100 scf. A copy of the transportation contract is available at the facility.

Attachment 8 Power Plant Natural Gas and Fuel Oil Usage

	TA-3 Power Plant Fuel Use Totals 2008 (Data Entry)										
			DATA	INTRY							
	TA-3-22 Po Boiler # 1 (Ed Works, 210	wer Plant ^b dgemoor Iron MMBTU/hr)	TA-3-22 Po Boiler # 2 (Ec Works, 210	ower Plant ^b Igemoor Iron MMBTU/hr)	TA-3-22 Po Boiler # 3 (Unio 210 MM	wer Plant ^b on Iron Works, BTU/hr)	, Monthly Totals				
Month	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF)ª	Fuel Oil (gallons) ^a	Natural Gas (MMCF)³	Fuel Oil (gallons) ^a			
January	6,912	328	63,171	0	1,108	0	71.191	328			
February	19,497	493	34,960	0	3,618	0	58.075	493			
March	617	603	50,578	0	866	384	52.061	987			
April	0	0	37,023	219	4,276	0	41.299	219			
May	0	0	23,792	0	7,242	331	31.034	331			
June July	148	55	11,048	0	9,920	0	21.116	55			
August											
September											
October											
November											
December					The second second						
Annual Totals:	27,174	1,479	220,572	219	27,030	715	274.776	2413			
Jan June	27,174	1,479	220,572	219	27,030	715	274.776	2413			
July - Dec.	0	0	0	0	0	0	0.000	0			

Blant Eval Use Totale 2009 (Date Entry) TA 2 D.

Semi-annual Form - Permit Number P100M2 LA-UR -08-05152

			2008	B Dail	v Tu	rbine	Gas	Use	(MC	F). 3	65 D	av Ro	olling	1 Tot	al Ga	s Us	e. &	Hou	's of	Oper	ratio	n		
-	Ji	an	F	eb	N	lar	A	pr	M	lay	J	un	J	ul	A	ug	S	ер	0	Oct	N	lov	D	ec
Day	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours
					-						-						and the based of	-	-				-	-
1	0	0	0	0	0	0	0	0	0	0	0	0												
2	0	0	0	0	0	0	0	0	0	0	0	0												
3	0	0	0	0	0	0	0	0	0	0	0	0												
4	0	0	0	0	0	0	0	0	0	0	42	1										-		
5	0	0	0	0	0	0	0	0	0	0	70	0.75	-											
6	0	0	0	0	8	0.75	0	0	0	0	0	0									i			1
7	0	0	0	0	5	0.5	0	0	0	0	0	0												1
8	0	0	0	0	16	1.1	0	0	0	0	0	0	1											
9	0	0	0	0	0	0	0	0	0	0	0	0												Ĩ
10	0	0	0	0	0	0	0	0	0	0	0	0												
11	0	0	0	0	0	0	0	0	0	0	0	0		_							_			
12	0	0	0	0	0	0	0	0	0	0	0	0												1
13	0	0	0	0	0	0	0	0	0	0	0	0				1								
14	0	0	0	0	0	0	0	0	5	0.5	0	0												
15	0	0	0	0	0	0	0	0	110	2.5	0	0												
16	0	0	0	0	0	0	0	0	0	0	0	0												
17	0	0	0	0	0	0	0	0	0	0	0	0												
18	0	0	0	0	0	0	0	0	0	0	0	0												
19	0	0	0	0	0	0	0	0	0	0	301	2.3												
20	0	0	0	0	0	0	0	0	0	0	0	0												
21	0	0	0	0	0	0	0	0	0	0	0	0			-									
22	0	0	0	0	0	0	0	0	0	0	0	0				· · · · ·				L				-
23	1	1	0	0	0	0	0	0	0	0	0	0			<u> </u>									-
24	0	1.0	0	0	0		0	0	0	0	0	0	-						-			-	-	-
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SUM	10	2.5	0	0	29	2.35	0	0	115	3	413	4.05	0	0	0	0	0	0	0	0	0	0	0	0
	First H	lalf Ga	s Use:	5	67	MCF	Se	cond H	lalf Ga	s Use:		0	MCF		Ann	ual Ga	s Use:	5	67	MCF				

Attachment 9 Daily and Rolling 365-Day Gas Use Totals

 365 day rolling total: 6875 MCF

 The SCFH value (fuel flow rate) in the cell equation is from the compliance test report (223620 SCFH or 223.6 MSCFH)
 6.875 MMSCF

 Permit Limit (365 day rolling total): 646 MMSCF

Attachment 10 Power Plant Opacity Reports

Source	Date	Time	Average Opacity ^(a)
TA-3-22 Power Plant	01-15-08	10:00 am	0.25%
	02-12-08	11:00 am	0%
	03-04-08	11:13 am	0%
	03-04-08	11:47 am	0%
	03-18-08	11:33 am	0%
	03-25-08	09:56 am	0%
	04-15-08	10:20 am	0.75%
	04-15-08	10:42 am	0.875%
	05-14-08	08:44 am	0%
	05-14-08	10:03 am	0%
	05-22-08	10:14am	0%
	June 2008	N/A	(b)

Summary Table, Reports Attached

(a) Average opacity for the Power Plant is the sum of the highest consecutive 40 readings divided by 40 (10 minutes of readings). The method is in accordance with EPA Method 9 and 20.2.61 NMAC.

(b) There were no visible emission observations taken in June due to boiler certifications.

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LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Mana-	1994 - 1997 - 19	ISTUER EATBOICH ODDERV		ervation Da	I (IOI	ALIVE	Start	Fime	End Time
Source Martie.	Dower Plan	at at TA_3	0.3	/ /	r	01	10	000	Line in
Source Location	1 Ower 1 iai	R at 177-5		1-1:	2-0	8	10	20	1010
Source Excanon	TA-3	3-22	Mir	, Sec	0	15	30	45	Comments
Type of Source Boiler #	1	Type of Control Equipment No Particulate Control		1	0	0	0	0	
Describe Emissi	n Point (Top of st	lack etc.)	-	2	n	0	0	0	
TOPO	F Boile	er#1 stack		3	0	0	0	0	
Height Above G	Feet	Height Relative to Observer		4	0	0	5	5	
Distance From O	Dhserver	Direction of Source From Observer	-		V_	e	17_	2	
20	Dp Feet	ENE		5	0	D	0	0	
Description of P	fume (stack exit or rapping □Loopir	nly) ng 🛛 Fanning 🖾 Coning		6	0	D	0	0	
□No Plume Pre Emission Color	Plume Ty	pe DNo Plume Present	-	7	0	0	0	Ø	
Black	Continu	ious DFugitive MIntermittent		8	0	0	0	0	
Water Droplets	Present? f YES, droplet plui	me is 🛙 Attached 🛛 🗇 Detached		9	0	0	0	D	
At what point in	the plume was op	acity determined?	1	10	0	D	0	0	
Describe Backg	9 OOUP 7 round (i.e. blue sky	n bes, etc.)		11					Harden and
Blue	sky.	0. 0. 0.		12	No.				
Blue		Clear		13		1000		12	
Wind Speed	ph (provide f	ection rom/to, i.e. from North to South)		14					Trail State of
	Fr	OM NE		15					
Z	5°F	Helative Humany 42 %		16					
Additional Com	ments/Information		1000					San Charles	
Fuel O	11 burn	exercise		17	190	<u>n</u>			- Carlos - C
1			記録	18	1		200		
				19			17.35		
Stack of with	SOURCE I	AYOUT SKETCH		20					
Plume		Draw Arrow In North Direction	Ave	rage 10-M	linute (Opacity	· .	Range of	Opacity Readings
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Wind	\wedge	\mathcal{Y}	Neu	ne:		ŕ		Title:	
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			14	for	-4	D	Me-		1-15-08
			Øbs	erver Org	anizati	on			
		OBSERVER'S POSITION	Eer	iffied by				Τ	Certification Date
	\sim	140*	E	TA-					8-29-07
	SUNLOC	ATION LINE		tanan tanah manana					and an
	an area a survey had		1						

ENV-EAQ-307, R3, ATTACHMENT 3 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

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LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

VIS	IBLE EMISSION OBSERVA	TION FOR	M (101	MINU	JIE)		
Source Name:		Observation I	Date		Start	Time	End Time
Power Plant	at TA-3	2-12	-05	3	1110	20	1110
Source Location:	22	Sec	Ι.				
1A-3-2	ZZ	Min	<u> </u>	15	30	45	Comments
Boiler # /	No Particulate Control	1	0	0	0	0	
Describe Emission Point (Top of stack	k, etc.)	2	D	0	0	0	
Top of Bole #1	stark		V			0	
Height Above Ground Level H	leight Relative to Observer	3	P	0	P	0	
150 Feet	140 Feet	4	0	0	0	0	
Distance From Observer D 70 Yards	THE ENE	5	0	0	O	0	
Description of Plume (stack exit only))	6	0	0	0	P	The second s
MNo Plume Present	Note Diama Darrant	7	Q	D	n	0	
AD Continuou	is El Fugitive Elintermittent	8	0	n	0	0	
Water Droplets Present?	is DAttached Distached	0	- per-	0	0	0	an a
At what point in the plume was opacit	ty determined?		10	e_	0	P	
21ft above ton	of stack		P.	0	P	P	and the second laws
Describe Background (i.e. blue sky, tr	rees, etc.)						
Background Color S	ky Conditions	12					
Blue	Clear	13					
Wind Speed Wind Directi 7-4 mph (provide from	ion m/to, i.e. from North to South)	14	-	1			ANN 1920 (11 - 11 - 11 - 11 - 11 - 11 - 11 - 11
from	n E		-		-		
Ambient Temperature R	celative Humidity		_				Martin Martin and a state of the state
31 °	20 "	16					
Additional Comments/Information:		17					
FUEL DIC DUIN EXE	2r <i>L15e_</i> 5	18	-				12 (11) 10/27/10 (10 and a data
		10	1				Reason of Academic Street
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with O	Draw Arraw in	20			<u> </u>		COursin De diese
Plume Emiss	sion North Direction	Average 10-	Minute .	opacit	y	Kange c Min.	Max.
Sun 🕂 Poir	nt A	6	1%			Ð	10 Olo
wind - (X	\rightarrow \sim	OBSERVER	t (please	print)		Title	
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ENV-EAQ-307, R3, ATTACHMENT 3 (OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING)

4						
Los Alamos LOS ALAMOS NATIONAL	LABORATO	RY (L	ANL)		
VISIBLE EMISSION OBSERV.	ATION FORM	1 (10 2	IINU	TE)	T	
TAZZZZ PLA		312	1	Staat	1 mie	End Time
Source Location:	3-4-	08	{	11	13	1123
TA-3-22	Min	0	15	30	45	Comments
Type of Source Type of Control Equipment] 1	0	0	D	0	
Doiler ND Tarticulate Control	2	1	0	0	0	
TOP of bouled Stack		0	D	0	0	
Height Above Ground Level Height Relative to Observer		0	D	D	D	
Distance From Observer	4	0	0	D	0	
ZOD Feet E ALE	5	D	0	D	D	
Description of Phune (stack exit only)	6	n	0	0	5	
Lofting DTrapping Decoping DFaining Deconing	7		0	D	0	
Emission Color Plume Type #No Plume Present	1	0	0	0	D	
Water Droplets Present?	8	D	0	0	0	
TNO UVES If YES, droplet plume is UAttached UDetached	9	0	0	0	0	1
At what point in the plume was opacity determined?	10	0	0	0	n	
Describe Background (i.e. blue sly trees etc.)	- 11		0			
Blue 5Ky	12		1999 (1) 1999 (1)			
Background Color Sky Conditions			<u>e de lite</u>			
Wind Speed Wind Direction	13					
5-8 mph (provide from to Le, from North to South)	14					
Ambient Temperature Relative Humidity	15					
	16		A.C.			
Additional Comments Information:	17				i stren	
tuel OIL bUSN EXERCISE		AND STREET	A MARK	na sel pr Protector		
	18			Sec.		和法律自动策
	19			自主部		
Stack SOURCE LAYOUT SKETCH	20					
Phune Draw Arrow in North Direction	Average 10-M	finute (Opacity	1	Range of	f Opacity Readings
Sun 🕂 Point	D P	2/	5	2	//m.	Of Max Of
	OBSERVER	(please	print)			0.00
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	KSL					
OBSERVER S POSITION	Certified by					Certification Date
140'	ETA	<				2-27-08
SUN LOCATION LINE						

A						
LOS Alamos LOS ALAMOS NATIONAL I MUEDUE E ENUSSION OBSERVA	ABORATOR	RY (L	ANL)		
Source Name	Observation Da	ta (10 1	IINC	Start	Time	End Tume
TA-3-22 Power Plant	3-4.	DE	3	110	47	1157
TA-3-22	Min	0	15	30	45	Comments
Type of Source Type of Control Equipment	1	0	D	D	0	
Describe Emission Point (Top of stack, etc.)	2	D	0	D	0	
Too of boyler # Stack	3	0	D	0	0	
150 Feet 140 Feet	4	0	0	0	0	
200 Feet From Observer	5	0	0	D	D	
Description of Plume (stack exit only) □Lofting □Trapping □Looping □Faming □Cening	6	0	0	P	D	
ZNo Plume Present Emission Color Plume Type ZNo Plume Present	7	0	O	0	O	
NA Continuous D Fugitive OIntermittent	8	D	0	0	0	
ANO □YES If YES, droplet plume is □Attached □Detached	9	0	0	D	0	
At what point in the plume was opacity determined?	10	0	0	0	0	
Describe Background (i.e. ohne sky, trees, etc.)	11			10	144	
Backgrand Color Sky Conditions	12		-			
Wind Speed Wind Direction	13					的一次 中国 144
5.8 mph (provide from/to, i.e. from North to South)	14	1219				
Ambient Temperature Relative Humidity	15	1.50	1			
Additional Comments Information	16			1 an		
Free Dit burn exercise	17					
all the state	18					
	19				(1994) (1994)	
Stack SOURCE LAYOUT SKETCH	20	12	in the		18 24	
Phune Draw Arrow in Emission North Direction	Average 10-M	linute (Opacity		Range o Min. – A	f Opacity Readings
Sun 🕂 Peint	OPCEDUTE	10			D	10 010
Wind - (X)	Name:	D	pinit)		Title:	
	Signature	210	ne.		Enc	Date
	Observer Org		in	n-		3-4-08
	KSL					
OBSERVER'S POSITION	Certified by					Certification Date
SINI OCATION LDT	OM				4	
- SUN LOCATION LINE						

5						
LOS Alamos LOS ALAMOS NATIONAL VISIBLE ENUSSION OBSERV	LABORATO	RY (L	ANL) ITEN		
Source Name:	Observation D	1 (10 1	ML VL	Start	Time	End Time
TA-3-22 POWER Plant	3-11	3-0	28	11	33	1143
TA-3-22	Min	0	15	30	45	Comments
Type of Source Type of Control Equipment	1	O	0	D	D	
Describe Enussion Point (Top of stack, etc.)	2	Ø	0	D	D	
Height Above Ground Level Height Relative to Observer	3	0	0	0	0	
15D Feet 14D Feet	4	0	0	0	0	
Z-DD Feet ENE	5	0	D	D	D	,
Description of Plume (stac): exit only) □Lofting □Trapping □Looping □Fauning □Coning	6	0	0	D	D	
ZNo Plume Present Emission Color Plume Type JSNo Plume Present	7	0	D	0	0	
Water Dealers Process	S	D	0	0	D	
Ano TYES If YES, droplet plume is Attached Detached	9	O	0	O	0	
At what point in the phune was opacity determined?	10	0	D	O	0	
Describe Background (i.e. blue sky, trees, etc.)	11				and the second s	
Background Color Sky Conditions	12	10				And Another All
Wind Speed Wind Direction	- 13					
10-13 mph (provide from/to, i.e. from North to South)	14	1			1. 14	
Ambient Temperature Relative Humidity	- 15					
Additional Comments Information:	16				1200	
FULL DIL BURN EXERCISES	17		8 10.5	12.4		
	18				Seat 1	
	19		- Elina			
Stack SOURCE LAYOUT SKETCH	20			14.8		
Prime Emission North Direction	Average 10-0	amute 0	opacity		Min.	Max.
$ \begin{array}{c} \text{Sum} \Psi \\ \text{Wind} \end{array} \rangle \qquad \qquad$	OBSERVER	(please	print)		0	10 010
	Name:	Ste	ne		Title:	INPPT
	Signature		. 1		2	Date
Ľ	Lon Observer Or	2	fe	m	_	3-18.08
	K51					
OBSERVER'S POSITION	Certified by					Certification Date
140	ETA					2-27.08
SUN LOCATION LINE						

Ecology and Air Quality Los Alamos National Laboratory

<u><u></u></u>		1717 57 1124				
Los Alamos LOS ALAMOS NATIONAL I	LABORATO	RY (L	ANL) TE)		
Source Name:	Observation D:	ite	in it	Start	Time	End Time
TA-3-22 Power Plant	3-2	5-1	28	Ø	756	IDDIA
Source Location	Nin Sec	0	15	30	15	Comments
Type of Som ce Type of Control Equipment	1	0	0	0	0	
Boilest 3 No Portugulate Control	2	0	0	0	2	
TOP of Boller#3 stack	3	0	0	0	0	
Height Above Ground Level Height Relative to Observer	1	V	2	0	V	
Distance From Observer Direction of Source From Observer		0	0	0	D	
Z3D reet NW	2	D	Ø	0	0	
Detemption of Finne (stack exit chiy) □Lofning □Trapping □Looping □Fauning □Coning ■Coning	6	D	0	D	D	
Ennyton Color Plume Type ITNo Plume Present	7	0	D	Ø	D	
NA Continuous E Fugative Enternational	\$	0	D	D	0	
ØNO □VES If VES, droplet plume is □Attached □Detached	9	0	0	0	0	
Ar what point in the plume was opacity determined?	10	0	0	0	0	
Describe Baliground (i.e. blue sky, drees, etc.)	11					
Balue SKU	12					
Blue Clear	13					
3, 7 mph (previde from to, i.e. from North to South)	14		10.0	1.4.5		63.72.7
FromE	15		1	2.3		
SZ Z Z3 *	16					1
Additional Comments Information:	17					
tuel DILburn exercises	10	-		1		1000
	10		-			
	19	-	-	-		and the second
with O	20					
Finne Emission North Direction	Average 10-5	O /	Opacity		Mai.	D, Max OI
$\begin{array}{c} \text{Sim} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	OBSERVER'	10 Intense	orinti		Ð	10 0/0
	Name	6	L	-	Title:	
	Symanure	210	212	2	-H	Date
	1 011	4	to	N	-	325-08
	Observer Or	acy zit:	04			
OBSERVER'S POSITION	Certified by				T	Certification Date
	EYA					2-27.08
SUN LOCATION LINE	K-IA					A ALLON

and the second s	ATTON FOR	11110.	MILVO	. IE)		1 27 1 7
Sense Jone	Qoservolien .	late -		Start	. (10) 10	End Loos
1H-3-22 Power Plant	- 7-12	-28	·····	12	10	1230
TA-3-22-	Mis	. 0	13	30	45	Commente
Type of Sources Type of Control Tetrapment	1	D	n	i	10	
Dorler # 1 NO Partic Wate (Dri	2	n	17	m	n	arean and a second s
Top of barler #1 Stack	3		6	162	12	
Height Above Organit Level Height Rebuire to Observer		10	10	<u>60</u>	$ \mathcal{Q} $	11 - 2000 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200
Divonce From Observer Direction of Spince From Observer		\mathcal{D}	D	O	0	
ZDD THE ENE	5	0	0	D	0	
Description of Finne streek set only: Motions II Trappus II secure Disaments II Course	6	0	D	O	0	
DNe Plane Present Ferry for N Primes Tons - IT No Plane, Parson		0	0	0	01	
Black Dominicus C Fugnitive Minternation	8	n	n	n	n	
Water Drevient Present 1950 - 1972 - 1972 - Jonale riboux et Clausetaal - Differentiaal	9	-0-	1	0	0	
At other means on the plants was exactly determined" .	<u>1</u> 0	12	0	10		
1ft. abrue top of Stack		$+\upsilon$	12	15.	0	
Beteribe Badiground in et bine shift trees été s Relation de La L						
25cl stering color Stor Condigions	12	_				
Uni Speed Wind Direction	13					
15-20 mph sportde frem to, 14 from North to South	1.4					
Salvant Teaperstore Estative Housing						
63 5 10 5	16					
Educional Constitution	17	-				
uel Dil Burn Exercises	1\$	-	-			
	10			-		
	19					
STAR SOURCE LAVOUT SKETCH	20			<u> </u>		
Phane Encoded Nonb Date	ion Average 10-	Mignte (N Sbadiči		Rouge of Mai, 👝	Opacity Reading By Max/5 a
su I Free K	0.7	5 %	9			10 -19-7
	Nige	- 1	[nm:		Tyle:	
1	and the second	rton	2		Enc	VHOCT
· · · /	de la	C	· /		,	Liran
	Observer Ob	- Z	1A	14	f	7-/9-08
	KS1		83731			
OBSERVER'S POSITION	Cerufied by				1	Cemiscanos Dale
	ETA		12-19-00		2	2-27-09
VINTOGATION LINE						and a second

THIS FORM IS FROM E4Q-397, 84

Page 40 of 46

LOS ALAMOS NATIONAL L	ABORATOR	3Y(L)	ANL	X		
VISIBLE EMISSION OBSERVA	TION FORM	(10)	IIN	TE)	-	and a state of the
Source Vonte:	Observation Da	19 ~ ~ ~		State.	100; 	End Tuge
TA-3-22 Power Floor	4-13-	28	, ,	10	42	1052
TA-3-22	Min: Sec	\$	15	30	45	Comments
Type of Seruce at Type of Control Equipment	1	5	5	17	0	
Bouche Formion Pronte Ten et rach er	2	5	6	5	0	
Top of besiler #1 Stork	3	P.	5	6	62	
Height Above Ground Level 7 Height Rebrive to O'scover 15 D Feet 124 D Feet	1	0	1	2	2	a tan a sa
Distance From Observer Direction of Senace From Observer		0	0	0	12	
ZDD # ENE		Q_	0	$ \mathcal{O} $	$ \mathcal{O} $	
Begenpron of Figure offsterest only. Resting Trapping Electing DFairing DCounty	0	0	D	D	0	
Entreton Color Prime Type ENo Plane Setem		D	0	0	0	
Black Dentituring E Fogure Blacencurrent	8	0	0	0	Q	
Alber Derford Freeder 2000 CVES IFVES, droplet planets Electriched - EDettched	9	0	0	0	Q	
Ar what populate the plante was opacity determined?	10	D	0	0	0	
Becaule Bage pound (i.e. Mare show teels, etc.)	L L C					1997 Mary M. (2011), in third due of the first second second second
5/ue sky	1.2					
Blue Gear	13			iy.		
1.5.75 mph (provide from to vel from North to bourho	1.4		1			
FromSW	15			1		
64 · · · · · · · · · · · · · · · · · · ·	16					
Additional Comments Information	17				an a	
Freed Dil Burn Exercise 3	15					
	10					
SWE SOURCE L MOLT SUETCH			Salar Linas S	-		
SOR ELATOR I SKEICH	20 De server 10 N		The state		Parent	Construction Paradiantes
Finne Employed Neria Direction	A C	75	> -1		Sind Co.	DI Mar 191
	OBSERVER (Diesse	pr igt)		64	10 2/0
	NEW	St			Ticia:	
	folginasque	1.12	me_		151	Elsie Bare
	1 Jou	- 4	-ste	714-		4-15-258
	Observer Org	anazyk	Sa			ann a suite a state ann an Saolain Ar Anna a
CASEPVER'S POSITION	Centrad by					Certificación Date
	FETA					7-77.08
	C/A			and West Taxant		arage UD
$(x, z) = \frac{1}{2} (x^2 x^2 z^2 + z^2 z^2 z^$						

5									
- Los Alamo	55	LOS ALAMOS NA	TIONAL I	LABORATOI	RY (L	ANL)		
Source Name	1	ISIBLE EMISSION	OBSERVA	Observation Da	te (10)	ILM	Start	Time	End Time
Power	Plant at	TA-3		5-14	1-0	8	08	44	0854
Source Location	-3-ZZ	2		Min	0	15	30	45	Comments
Type of Source	# 2	Type of Centrel Equipment		1	D	D	D	0	
Describe Emissi	ion Point (Top of s	tack, etc.)	ontrol	2	0	0	0	0	
Top of Height Above (Barler ⁵	755Tack		3	0	0	0	0	
12	56 Feet	170	Feet	4	0	0	0	0	
Distance From	Observer 200 ^{Free}	A/La)	bserver	5	0	0	0	0	
Description of P	hune (stack exit o rapping ELoopi		б	0	0	0	0		
2No Plume Pre Emission Color	rsent Phone Ty	pe KNo Plume Present		¢ 7	0	0	0	0	
NA	Contin	ious 🖸 Fugicive 🛛 Buren	uliterit	8	0	0	0	0	
ANO EYES I	r YES, droplet plu	sd.	9	0	0	0	0		
At what point in the 1 ft of		10	0	0	0	0			
Describe Backg	round (i.e. blue shy	t trees, etc.)		11 -					
Background Cel	re-gra		12						
Wind Speed	Vind Dr		13						
0-4 1	iph (provide) Fe	frencito, i.e. from Nerris to Sou	ch)	14				See.	
Ambient Tempe	racice	Relative Humidary		15					
Additional Com	ments. Information	0/ 0	•	16					
Fuelo	12 BURN	Exercises		17					
				18		ALC: N		E. Con	
				19					
Stack Q	SOURCE	AYOUT SKETCH		20					S.1
Sun 🔶	En I	utsion Nei Peint 👡	nh Direction	Average 10-N	licute (Va	Opacity		Range o Mm. O	Opacity Readings
Wind			$ \Psi $	OBSERVER	please To s	ріш1) 2 <i>С</i> -		Tute Eng	Dureer
				Observer Org	57	5n	٤		5-14-08
		OBSERVER'S POSITION	N	K5L Certified by					Certification Date
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	SUN LOC	ATION LINE							

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Sal		LOS MANOS NATIONA		IDODITO	D32 /T	1.3.7			
- Los Alamos	x	ISIBLE EMISSION OBSERV	A	TION FORM		ANL) TE)		
Source Name:			7	Observation Da	ite		Start	l'inte	End Time
Powert	Manti	at TA-3		5-14	0	8	10	03.	1013
Source Location.	4-3-	-22		Mint	0	15	30	45	Comments
Type of Source	# 7	Type of Centrol Equipment		1	0	D	0	D	
Describe Enussion Po	oint (Top of :	stack, etc.)	4	2	0	0	m	0	
Top of	Boile	1#3 Stack		3	0	0	0	0	
Height Above Groun	d Level) Feet	Height Relative to Observer		4	0	0	0	0	
Destance From Obser	Ver	Direction of Source From Observer		5	0	0	0	0	
Description of Pluma	(encl. are a	NW	4		0	12	0	0	
Defing Diappi	ag ELoopi	ing OFaming OCcoing			0	0	0	O	
Emission Color	Plume T	pe KNo Plume Present	1		P	0	0	0	
Water Droplets Prese	nt?	ucus L rugave L'anenament	-	8	0	0	0	O.	
XNO DYES IFYES	s. droplet plu	ane is DAttached DDetached		9	0	0	0	0	
At what point in the p	lume was op	٦	10	D	0	0	D	_	
Describe Background	(i.e. blue sk	y, trees, etc.)	٦	11		30			
Background Celor	rgrau	Sky Condenants		12					
White ogr	ay	Choudy	_	13				-	
4-6 mph	eprovide	from to, i.e. from Narth to South)		14	120				AND TRUES
Ambient Tenmerature	Fre	DM ESE	-	15		Ser.	1		C. Later State
46	-	75 .		16	-		2.5%		TO AND SALE
Additional Comments	Lufermanos	2		17			1		States and the
Fuel out	burn	repercises		18				0.00	
				10				Contract I	
Stack Se	DURCE	LAYOUT SKETCH	7	20			122.2	1000	the second
with Q		Draw Arrow u		Average 10-N	finute (Opacity		Range of	f Opacity Readings
Sun 🕀	E	Boint North Direction	1	er.	0/			Mia.	2 Max De
Wind		Q NV		OBSERVER	please	print)			10 010
				Don 5	tes	10	E	_Title:	MERY
		, i i i i i i i i i i i i i i i i i i i	e	Stenanue	1	1		1	Date
			Dow Observer Ora	Canada	ton	<u>n</u>		5-14.08	
			KSL	0					
	-	OBSERVER'S POSITION		Certified by					Certification Date
-2"	\sim	110		ETA					2-27-08
	SUN LOC	ATION LINE							

3			_				
- Los Alamos	LOS ALAMOS NATIONAL	LABORATO	RY (L	ANL)		
Information in all states	VISIBLE EMISSION OBSERVA	110N FORM	1 (10.	MLNC	Start	linte	I End Time
Power Plant	at TA-3	5-22	-0	8	10	14	1024
TA-3-3	22	Min	0	15	30	45	Counsents
Type of Source Barlantt Z	Type of Control Equipment	1	Ø	0	0	0	
Describe Emission Point (Top	of stack, etc.)	2	0	0	0	0	
Height Above Ground Level	Height Relative to Observer	3	0	0	0	0	
150 Feet	170 Feet	1	0	D	0	0	
ZOD Feet	NW/	5	0	0	0	0	
Description of Plume (stack ex Dofting Dirapping DL:	cit only) poping DFaming DCening	6	0	D	D	O	
Sino Plane Present Emission Color Plana	e Type RNo Plume Present	7	P	0	0	0	
N/A DCo	ntinuous 🗆 Fugative 🗆 Intermittent	- 8	0	0	0	0	
RNO EVES IF YES, droplet	t plume is CAttached Detached	9	0	Ø	0	0	No. of Harden and Street
At what point in the plume wa	s opacity determined?	10	0	0	D	0	and the state of the second
Describe Background (1 e. blue	e iky: trees. etc.)	11					
Background Color	K U Sky Cenditions 1	12					
Gray Wind Speed Wind	Cloudy	13			1.40		
10-12 reph (prov	ide from to, 1 e. from North to South)	14					
Ambient Temperature	Relative Humidity	15					
<u>39</u> *	87 .	16					
Fuel pil bre	In exercises	17					
		18			1		
		19					
Stack SOURC	E LAYOUT SKETCH	20		1.53		a land	
Plunse Sun 🔶	Enuracei North Direction	Average 10-M	linute) 9/e	Opacit 2	y	Range o Min. Ø	f Opacity Readings
Wind		Name Von Signiture	ton	e.	2	Title:	Incor Date
х		Hon Observer Or	G	tou	e-	-	5-22-08
	ODEEDITED'S DOCTION	K5L					Cadifana Da
	140 NORTH STUDINION	ETA					7 27.00
	LOCATION LINE	1en			شيد (الجور العربي العرب الع		2-4100
36.1.	LOUSIERON LENE						

Part 2

Deviation Summary Report

SUMMARY OF DEVIATIONS PREVIOUSLY REPORTED											
Unit # and description	Date deviation reported Tracking Nur										
				с							
			4								

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2. A F	🗌 Yes	No No							
3. Did any of the deviations result in excess emissions? For deviations resulting in excess emissions a completed Excess Emission Form for each deviation must be attached to this report.									
Dev	viation Summary Tab	ole for deviation	ons not yet reported.	ie c					
No.	Applicable Requirement (Include Rule Citation)	Emission Unit ID(s)	Cause of Deviation	Corrective Action Taken	Corrective Action Taken				
1					FC.				

Deviation Summary Table (cont.)												
Dev	viation	Started	Deviation	Ended				Did you attac excess form?	ch an emission			
No. Dat	ate	Time	Date	Time	Pollutant	Monitoring Method	Amount of Emiss ions	0				
1	27							🗌 Yes	🗌 No			
2						8		🗌 Yes	🗌 No			
3								Tes Yes	No No			
4								🗌 Yes	No No			

2

3

4