Department of Energy
National Nuclear Security Administration
Sandia Field Office
P.O. Box 5400
Albuquerque, NM 87185

AUG 2 8 2020

RECEIVED
SEP 3 2020

Israel Tavarez, Manager
Environmental Health Department
Air Quality Program
1 Civic Plaza NW, Room 3023
P.O. Box 1293
Albuquerque, New Mexico 87103

Subject: Application to Modify Construction Permit No. 1820-M1-RV1

Dear Mr. Tavarez:

Enclosed is a permit application to modify Construction Permit No. 1820-M1-RV1, for the Sandia National Laboratories, New Mexico, 858 Complex. The modification is required for the installation of one 4-megawatt emergency generator, which will operate 500 hours or less per year. It is being requested to remove compliance testing requirements for existing emergency generators, units No. 12 and No. 13. Considering that there are no local or federal air quality regulations requiring annual performance testing of existing emergency generators and the extremely limited operation of these generators, a waiver from future compliance testing would be in accordance with regulations, reasonable, and in the interest of minimizing natural resource use and emissions from these units.

If you have questions, please contact me at (240) 474-8244 or William.Wechsler@nnsa.doe.gov or Carolyn Holloway of our staff at (505) 845-5248 or Carolyn.Holloway@nnsa.doe.gov.

Sincerely,

William V. Wechsler

Digitally signed by William V. Wechsler
Date: 2020.08.27 09:28:44 -06'00'

William V. Wechsler
Assistant Manager for Engineering

Enclosure

cc w/enclosure:
Rosemary Avery, SNL/NM
Carolyn Holloway, SFO/ENG

cc w/o enclosure:
William Wechsler, SFO/ENG
Susan Lacy, SFO/ENG
NNSA-2020-006733

EXECUTIVE SUMMARY

In accordance with 20.11.41.29 NMAC, the U.S. Department of Energy (DOE) is submitting this application to modify Construction Permit No. 1820-M1-RV1 to install a new 4 MW emergency generator. The new generator will be located at Sandia National Laboratories/New Mexico (SNL/NM) 858 Complex.

Per City of Albuquerque Air Quality Program's Internal Combustion Engine Permitting Policy, SNL/NM personnel and the DOE are requesting to operate the emergency generator for a maximum of 500 hours per year. The generator will only be operated during unavoidable loss of commercial power or during required maintenance/exercising.

SNL/NM personnel and the DOE are also requesting to remove compliance testing requirements for existing emergency generators, units #12 and #13. Currently in Construction Permit #1820-M1-RV1, the frequency of compliance testing for the units is once every five (5) years. Units #12 and #13 are intended for emergency use/loss of commercial power at the facility and normally only operate one hour per month for engine exercising and maintenance. They have been tested multiple times to demonstrate compliance and have always been well below emissions limits.

According to the Performance Testing section in 20.11.41.22(C) NMAC, Construction Permits, "the permittee shall conduct performance testing as frequently as the department requires to determine that the source demonstrates compliance with the permit. The department may waive testing, reduce testing frequency, or extend testing deadlines if the permittee delivers a written request to the department no fewer than 60 days before the test."

Considering that there are no local or federal air quality regulations requiring annual performance testing of existing emergency generators and the extremely limited operation of these generators, a waiver from future compliance testing would be in accordance with regulations, reasonable, and in the interest of minimizing natural resource use and emissions from these units.

1. PRE-PERMIT APPLICATION MEETING

Per email dated April 24, 2020, Regan Eyerman granted a waiver from performing a pre-permit application meeting to SNL/NM personnel and the DOE (see attached email) for this modification to add the emergency generator. The Pre-permit Application Meeting Checklist is attached to this section.

1.a. Pre-Permit Application Meeting Waiver

From: Eyerman, Regan V.
To: Avery, Penny; Stonesifer, Jeff W.
Cc: Tumpane, Kyle; Romero Kotovsky, Jane Catherine; Pope, Callan; Holloway, Carolyn E. (SFO)
Subject: RE: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting
Date: Friday, April 24, 2020 11:43:03 AM
Attachments: image001.jpg
image002.png
image004.jpg

Good morning Penny,

Based on this information the City of Albuquerque Air Quality Program is giving Sandia National Labs a waiver from modeling and from having to have a pre-application meeting for modifying this permit.

I hope you all have a great weekend!

Regan Eyerman, P.E.
senior environmental health scientist | environmental health department
o 505.767.5625
cabq.gov/environmentalhealth/

From: RPAVERY <rpavery@sandia.gov>
Sent: Thursday, April 23, 2020 17:25
To: Stonesifer, Jeff W. <JStonesifer@cabq.gov>
Cc: Eyerman, Regan V. <reyerman@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>; Romero Kotovsky, Jane Catherine <janrome@sandia.gov>; Pope, Callan <epope@sandia.gov>; Holloway, Carolyn E. (SFO) <carolyn.holloway@nnsa.doe.gov>
Subject: RE: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Jeff,

That's correct: the 1 proposed new emergency generator 2 existing generators are used to power the facility in the event of a loss of PNM power.

And the existing boilers produce comfort heat only.

Please feel free to contact me by email or at 273-1047 if you have any other questions.

Thanks!
Penny

From: Stonesifer, Jeff W. <JStonesifer@cabq.gov>
Sent: Thursday, April 23, 2020 4:55 PM
To: Avery, Penny <rpavery@sandia.gov>
Cc: Eyerman, Regan V. <reyerman@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>
Subject: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Penny,

Are the emergency generators only backing up PNM power (as opposed to solar or some other source)? Are the boilers used to produce comfort heat only?

Regards,
cid:image001.png@01D422A0.1517CCA0

JEFF STONESIFER
senior environmental health scientist | environmental health department
o 505.767.5624
m 505.250.2689
cabq.gov/environmentalhealth/

From: Eyerman, Regan V. <reyerman@cabq.gov>
Sent: Thursday, April 23, 2020 4:46 PM
To: Stonesifer, Jeff W. <JStonesifer@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>
Subject: FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Jeff and Kyle,

SNL wants to modify Permit #1820-M1-RV1 to add another emrgency generator. They want to waive the pre-application meeting on that particular project because the project won't require air dispersion modeling. Can you confirm that? Attached is the permit.

Thank you,

Regan

From: RPAVERY <rpavery@sandia.gov>
Sent: Thursday, April 23, 2020 14:42
To: Eyerman, Regan V. <reyerman@cabq.gov>
Cc: Pope, Callan <epope@sandia.gov>; Romero Kotovsky, Jane Catherine <janrome@sandia.gov>; Holloway, Carolyn E. (SFO) <carolyn.holloway@nnsa.doe.gov>
Subject: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Regan,

Thank you for the email about a pre-application meeting for the Brayton Cycle Test Cell. We're working on that request and scheduling now.

In the meantime, we're also starting another application to add an emergency generator at the MESA facility.

This means we're going to be modifying Construction Permit #1820-M1-RV1. This modification should be very straightforward. Since emergency generators are generally exempt from dispersion modeling requirements and we're familiar with the permitting process including timelines, fees, and public notice, I'm thinking we won't need to schedule a pre-application meeting.

So on behalf of Carolyn Holloway (DOE/NNSA/SFO) I would like to request that the Air Quality Program waive the requirement for a pre-application meeting for the modification of Construction Permit 1820-M1-RV1.

When you can, please provide a current list of emails of the neighborhood associations and coalitions within 0.5 miles of the KAFB fenceline for us to notify prior to our application submittal.

Also, please let me know if there's a change to your process for us to pick up the public notice sign.

Thanks!
Penny

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This message has been analyzed by Deep Discovery Email Inspector.

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This message has been analyzed by Deep Discovery Email Inspector.

1.b. Pre-Permit Application Meeting Checklist

City of Albuquerque

Environmental Health Department
Air Quality Program

Pre-Permit Application Meeting Checklist

Any person seeking a permit under 20.11.41 NMAC, Authority-to-Construct Permits, shall do so by filing a written application with the Department. Prior to submitting an application, the applicant shall contact the department in writing and request a pre-application meeting for information regarding the contents of the application and the application process. This checklist is provided to aid the applicant and **a copy must be submitted with the application.**

Applications that are ruled incomplete because of missing information will delay any determination or the issuance of the permit. The Department reserves the right to request additional relevant information prior to ruling the application complete in accordance with 20.11.41 NMAC.

Name: 858 Complex – Add Emergency Generator
Contact: Carolyn Holloway (5050) 845-5248/ Penny Avery (505) 273-1047
Company/Business: Dept of Energy/Sandia Field Office (DOE/SFO) Sandia National Laboratories/New Mexico (SNL/NM)

☒ Fill out and submit a Pre-Permit Application Meeting Request form
- ⇒ Available online at http://www.cabq.gov/airquality
- ⇒ The department waived the pre-application meeting requirement in an email from Regan Eyerman on April 24, 2020.

☐ Emission Factors and Control Efficiencies
Notes: N/A

☐ Air Dispersion modeling guidelines and protocol
Notes: N/A

☐ Department Policies
Notes: N/A

☐ Air quality permit fees
Notes: N/A

☐ Public notice requirements
- ☐ Replacement Part 41 Implementation
  - ☐ *20.11.41.*13 B. Applicant's public notice requirements
    - ☐ Providing public notice to neighborhood association/coalitions
      - Neighborhood association:_____
      - Coalition: _____
      - Notes: N/A

Ver. 11/13

- ☐ Posting and maintaining a weather-proof sign
  Notes: N/A

☐ Regulatory timelines
- 30 days to rule application complete
- 90 days to issue completed permit
- Additional time allotted if there is significant public interest and/or a significant air quality issue
  - Public Information Hearing
  - Complex permitting action

Notes: N/A

City of Albuquerque- Environmental Health Department
Air Quality Program- Permitting Section
Phone: (505) 768-1972 Email: aqd@cabq.gov

2. PUBLIC NOTICE

Attached to this section are all completed public notice requirements including:

a) Notice of Intent to Construct Form
b) Public Sign Notice Guidelines
c) Public Notice Sign Photograph

2.a. Notice of Intent to Construct Form

Notice of Intent to Construct

Under 20.11.41.13B NMAC, the owner/operator is required to provide public notice by certified mail or electronic mail to the designated representative(s) of the recognized neighborhood associations and recognized coalitions that are within one-half-mile of the exterior boundaries of the property on which the source is or is proposed to be located if they propose to construct or establish a new facility or make modifications to an existing facility that is subject to 20.11.41 NMAC – Construction Permits. **A copy of this form must be included with the application.**

Applicant's name and address:
Nombre y domicilio del solicitante:
Department of Energy
Sandia Field Office (SFO)
P.O. Box 5400, Albuquerque, NM, 87185

Owner or operator's name and address:
Nombre y domicilio del propietario u operador:
Sandia National Laboratories
P.O. Box 5800 MS 1512, Albuquerque NM, 87185-1512

Actual or estimated date the application will be submitted to the department:
Fecha actual o estimada en que se entregará la solicitud al departamento: July 15, 2020

Description of the source:
Descripción de la fuente: Emergency Generators and Boilers

Exact location of the source or proposed source:
Ubicación exacta de la fuente o fuente propuesta: 858 Complex (K Street and 20th Street)

Nature of business:
Tipo de negocio: Research and Development

Process or change for which the permit is requested:
Proceso or cambio para el cuál de solicita el permiso: Addition of a emergency diesel generator

Preliminary estimate of the maximum quantities of each regulated air contaminant the source will emit:
Estimación preliminar de las cantidades máximas de cada contaminante de aire regulado que la fuente va a emitir:

Air Contaminant *Contaminante de aire*	**Proposed Construction Permit** *Permiso de Construcción Propuesto*		**Net Changes (for permit modification or technical revision)** *Cambio Neto de Emisiones (para modificación de permiso o revisión técnica)*	
	pounds per hour *libras por hora*	tons per year *toneladas por año*	pounds per hour *libras por hora*	tons per year *toneladas por año*
CO	31.5	21.5	+7.49	+1.87
NOx	162.4	48.7	+78.52	+19.63
VOC	3.4	1.7	+0.69	+0.17
SO2	27.3	7.0	+0.058	+0.02
PM10	3.5	2.1	+0.69	+0.17
PM2.5	3.5	2.1	+0.69	+0.17

City of Albuquerque – Environmental Health Department
Air Quality Program – Permitting Division
Phone (505) 768-1972 **E-mail: aqd@cabq.gov**

HAP	n/a	n/a	n/a	n/a

Maximum operating schedule:
Horario máximo de operaciones: 365 days/yr, 24 hrs/day

Normal operating schedule:
Horario normal de operaciones: 6 am to 5 pm

Current contact information for comments and inquires:
Datos actuales para comentarios y preguntas:

Name *(Nombre)*: Tami Moore - DOE Public Affairs Director
Address *(Domicilio)*: PO Box 5400, Albuquerque NM, 87185
Phone Number *(Número Telefónico)*: (505) 845-5264
E-mail Address *(Correo Electrónico)*: tami.moore@nnsa.doe.gov

If you have any comments about the construction or operation of the above facility, and you want your comments to be made part of the permit review process, you must submit your comments in writing to the address below:

Environmental Health Manager
Permitting Division
Albuquerque Environmental Health Department
Air Quality Program
P.O. Box 1293
Albuquerque, New Mexico 87103
(505) 768-1972

Other comments and questions may be submitted verbally.

Please refer to the company name and facility name, as used in this notice or send a copy of this notice along with your comments, since the Department may not have received the permit application at the time of this notice. Please include a legible mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, if required, the Department's notice will be published on the City of Albuquerque's website, https://www.cabq.gov/airquality/air-quality-permits and sent to neighborhood associations and neighborhood coalitions near the facility location or near the facility proposed location.

Environmental Health Department

Air Quality Program

Interoffice Memorandum

TO: PENNY AVERY, AIR QUALITY COMPLIANCE PROGRAM LEAD

FROM: REGAN EYERMAN, SENIOR ENVIRONMENTAL HEALTH SCIENTIST

SUBJECT: VERIFICATION OF NEIGHBORHOOD ASSOCIATIONS AND COALITIONS WITHIN 0.5 MILES OF SANDIA NATIONAL LABORATORIES ON KIRTLAND AIR FORCE BASE PROPERTY, ALBUQUERQUE, NM

DATE: 5/06/2020

DETERMINATION:

On 05/06/2020, I used the City of Albuquerque Zoning Advanced Map Viewer (http://coagisweb.cabq.gov/) to verify which City of Albuquerque Neighborhood Associations (NA), Homeowner Associations (HOA) and Neighborhood Coalitions (NC) are located within 0.5 miles of Sandia National Laboratories on Kirtland Air Force Base Property, Albuquerque, NM in Bernalillo County.

I then used the City of Albuquerque (COA) Office of Neighborhood Coordination Monthly Neighborhood Association List dated May 2020 and the Bernalillo County (BC) Monthly Neighborhood Association March 2020 Excel file to determine the contact information for each NA, HOA and NC populated by the Zoning Advanced Map Viewer.

Duplicates have been deleted. Contact information is as follows:

COA/BC Association or Coalition	Name	Email or Mailing Address
District 6 Coalition of NAs	Dominic Peralta	4district6@gmail.com
	Paul Sanchez	paulsanchez7771@gmail.com
East Gateway Coalition	Michael Brasher	brasher@aps.edu
	James Andrews	jamesw.andrews01@gmail.com
	NA Email	eastgatewaycoalition@gmail.com
East Mountain Coalition	Lisa Davis	ldavis@eastmountaincoalition.org
	Paul Butler	info@eastmountaincoalition.org
Elder Homestead NA	Marian Jordan	marianjor@aol.com
	Sandra Perea	sp-wonderwoman@comcast.net
Four Hills Village HOA	James P. Cochran	FHVAPresident@gmail.com jpcochran@comcast.net
	Herb Wright	herbwright@peoplepc.com
	Dave Wallace	cactuscrownm@yahoo.com
	Steve Brugge	s.brugge@yahoo.com
Juan Tabo Hills NA	Richard Lujan	richtriple777@msn.com
	Catherine Cochrane	catcochrane1@gmail.com
La Mesa Community Improvement	Idalia Lechuga-Tena	idalialt@gmail.com

	Dayna Mares	dayna.mares76@gmail.com
	NA E-mail	lamesainternationaldistrict@gmail.com
Parkland Hills NA	Robert Leming	phnapresident@gmail.com
	C. Brooke Cholka	cbcholka@gmail.com
	Mary Darling	mldarling56@yahoo.com
Siesta Hills NA	Kathy Pierson	kp-shna@centurylink.net
	Rachel Baca	rbaca@bizjournals.com
	NA email	siesta2na.pres@gmail.com
South Los Altos	Jim Ahrend	notices@slananm.org jimahrend@gmail.com
	Arthur Bazan	sla4onc@gmail.com
South San Pedro NA	Khadijah Bottom	khadijahasili@vizionz.org
	Zabdiel Aldaz	zabdiel505@gmail.com
Southeast Heights NA	John Pate	jpate@molzencorbin.com
	Pete Belletto	pmbdoc@yahoo.com
Trumbull Village NA	Alyce Ice	alyceice@gmail.com
	Joanne Landry	landry54@msn.com
Victory Hills NA	Erin Engelbrecht	e2brecht@gmail.com
	Patricia Willson	info@willsonstudio.com
	NA email	victoryhillsabq@gmail.com
Willow Wood NA	Samantha Martinez	samijoster@gmail.com
	Pamela Meyer	pmeyer@sentrymgt.com
Yale Village NA	Kim Love	klove726@gmail.com
	Donald Love	donaldlove08@comcast.net
	NA email	yalevillage@comcast.net

From: Moore, Tami L.
To: 4district6@gmail.com; paulsanchez7771@gmail.com; brasher@aps.edu; jamesw.andrews01@gmail.com; eastgatewaycoalition@gmail.com; ldavis@eastmountaincoalition.org; info@eastmountaincoalition.org; marianjor@aol.com; sp-wonderwoman@comcast.net; fhvapresident@gmail.com; jpcochran@comcast.net; herbwright@peoplepc.com; cactuscrownm@yahoo.com; s.brugge@yahoo.com; richtrible777@msn.com; catcochrane1@gmail.com; idalialt@gmail.com; dayna.mares76@gmail.com; lamesainternationaldistrict@gmail.com; phnapresident@gmail.com; cbcholka@gmail.com; mldarling56@yahoo.com; kp-shna@centurylink.net; rbaca@bizjournals.com; siesta2na.pres@gmail.com; notices@slananm.org; jimahrend@gmail.com; sla4onc@gmail.com; khadijahasili@vizionz.org; zabdiel505@gmail.com; jpate@molzencorbin.com; pmbdoc@yahoo.com; alyceice@gmail.com; landry54@msn.com; e2brecht@gmail.com; info@wilsonstudio.com; victoryhillsabq@gmail.com; samijoster@gmail.com; pmeyer@sentrymgt.com; klove726@gmail.com; donaldlove08@comcast.net; valevillage@comcast.net
Subject: [EXTERNAL] Public Notice of Proposed Air Quality Construction Permit Application
Date: Thursday, June 25, 2020 4:15:02 PM
Attachments: Notice of Intent 06162020 Final.pdf

Dear Neighborhood Association/Coalition Representative(s),

Why did I receive this public notice?

You are receiving this notice in accordance with New Mexico Administrative Code (NMAC) 20.11.41.13.B(1) which requires any applicant seeking an Air Quality Construction Permit pursuant to 20.11.41 NMAC to provide public notice by certified mail or electronic mail to the designated representative(s) of the recognized neighborhood associations and recognized coalitions that are within one-half mile of the exterior boundaries of the property on which the source is or is proposed to be located.

What is the Air Quality Permit application review process?

The City of Albuquerque, Environmental Health Department, Air Quality Program (Program) is responsible for the review and issuance of Air Quality Permits for any stationary source of air contaminants within Bernalillo County. Once the application is received, the Program reviews each application and rules it either complete or incomplete. Complete applications will then go through a 30-day public comment period. Within 90 days after the Program has ruled the application complete, the Program shall issue the permit, issue the permit subject to conditions, or deny the requested permit or permit modification. The Program shall hold a Public Information Hearing pursuant to 20.11.41.15 NMAC if the Director determines there is significant public interest and a significant air quality issue is involved.

What do I need to know about this proposed application?

Applicant Name	United States Department of Energy (DOE)
Site or Facility Name	858 Complex
Site or Facility Address	K Street and 20th Street
New or Existing Source	Existing Source
Anticipated Date of Application Submittal	July 15, 2020
Summary of Proposed Source to Be Permitted	Addition of 4MW Tier II emergency diesel generator.

What emission limits and operating schedule are being requested?
See attached Notice of Intent to Construct form for this information.

How do I get additional information regarding this proposed application?
For inquiries regarding the proposed source, contact:

- Tami Moore – DOE Public Affairs Director
- tami.moore@nnsa.doe.gov
- (505) 845-5264

For inquiries regarding the air quality permitting process, contact:

- City of Albuquerque Environmental Health Department Air Quality Program
- aqd@cabq.gov
- (505) 768-1972

2.b. Public Sign Notice Guidelines

City of Albuquerque

Environmental Health Department
Air Quality Program

Public Notice Sign Guidelines

Any person seeking a permit under 20.11.41 NMAC, Authority-to-Construct Permits, shall do so by filing a written application with the Department. *Prior to submitting an application, the applicant shall post and maintain a weather-proof sign provided by the department. The applicant shall keep the sign posted until the department takes final action on the permit application; if an applicant can establish to the department's satisfaction that the applicant is prohibited by law from posting, at either location required, the department may waive the posting requirement and may impose different notification requirements.* **A copy of this form must be submitted with your application.**

Applications that are ruled incomplete because of missing information will delay any determination or the issuance of the permit. The Department reserves the right to request additional relevant information prior to ruling the application complete in accordance with 20.11.41 NMAC.

Name: Department of Energy
Contact: Tami Moore (DOE)
Company/Business: Address: PO Box 5400, Albuquerque NM, 87185
Phone Number: (505) 845-5264
Email Address: tami.moore@nnsa.doe.gov

☒ The sign must be posted at the more visible of either the proposed or existing facility entrance (or, if approved in advance and in writing by the department, at another location on the property that is accessible to the public)

☒ The sign shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times.

☒ The lower edge of the sign board should be mounted a minimum of 2' above the existing ground surface to facilitate ease of viewing

☒ Attach a picture of the completed, properly posted sign to this document

☐ **Check here if the department has waived the sign posting requirement.**
Alternative public notice details:

Ver. 11/13

2.c. Public Notice Sign Photograph

Proposed Air Quality Construction Permit
Permiso de Construcción de Calidad del Aire Propuesto

1. **Applicant's Name:**
Nombre del solicitante: Department of Energy
Owner or Operator's Name:
Nombre del Propietario u Operador: Sandia National Laboratories
2. **Actual or Estimated Date the Application will be Submitted to the Department:**
Fecha Actual o Estimada en que se Entragará la Solicitud al Departamento: June 15, 2020
3. **Exact Location of the Source or Proposed Source:**
Ubicación Excata de la Fuente o Fuente Propuesta: K St/20th St SE - 858 Complex
4. **Description of the Source:**
Descripción del Fuente: Emergency Generators and Boilers
Nature of Business:
Tipo de Negocio: Research and Development
Process or change for which a permit is requested:
Proceso o cambio para el cuál se solicita el permiso: Addition of an emergency diesel generator

Preliminary estimate of the maximum quantities of each regulated air contaminant the source will emit:
Estimación preliminar de las cantidades máximas de cada contaminante de aire regulado que la fuente va a emitir:

Air Contaminant *Contaminante de Aire*	Proposed Construction Permit *Permiso de Construcción Propuesto*		Net Change Emissions (for permit modification or technical revision) *Cambio Neto de Emisiones (para modificación de permiso o revisión técnica)*	
	Pounds per hour *libras por hora*	Tons per year *toneladas por año*	Pounds per hour *libras por hora*	Tons per year *toneladas por año*
CO	31.5	21.5	+7.49	+1.87
NOX	162.4	48.7	+78.52	+19.63
SO2	27.3	7.0	+0.058	+0.02
PM10	3.5	2.1	+0.69	+0.17
PM2.5	3.5	2.1	+0.69	+0.17
HAP	n/a	n/a	n/a	n/a
VOC	3.4	1.7	+0.69	+0.17

5. **Maximum Operating Schedule:**
Horario Máximo de Operaciones: 365 days/year 24 hrs/day
Normal Operation Schedule:
Horario Normal de Operaciones: 6 am to 5 pm
6. **Current Contact Information for Comments and Inquiries**
Datos actuales para Comentarios y Preguntas
Name *(Nombre):* Tami Moore - DOE Public Affairs Director
Address *(Domicilio):* PO Box 5400
Phone Number *(Número Telefónico):* (505) 845-5264
Email Address *(Correo Electrónico):* Tami.Moore@nnsa.doe.gov

Call 311 for additional information concerning this project, the Air Quality Program, or to file a complaint.
Llame al 311 para obtener información adicional sobre este proyecto, del Programa de Calidad del Aire, o para presentar una queja.
Gọi 311 để biết thêm thông tin hoặc để khiếu nại về dự án này, Chương Trình Chất Lượng Không Khí

City of Albuquerque, Environmental Health Department, Air Quality Program – Stationary Source Permitting
Ciudad de Albuquerque, Departamento de Salud Ambiental, Programa de Calidad del Aire - Permisos para Fuentes Inmóvi
(505) 768-1972, aqd@cabq.gov

THIS SIGN SHALL REMAIN POSTED UNTIL THE DEPARTMENT TAKES FINAL ACTION ON THE PERMIT APPLICATION
ESTE AVISO DEBERÁ DE MANTENERSE PUESTO HASTA QUE EL DEPARTAMENTO TOME UNA DECISIÓN SOBRE LA SOLICITUD DE PERMISO

3. AIR PERMIT APPLICATION

Attached to this section are as follows:

a) Required Permit Application Forms:
   - Permit Application Checklist
   - Permit Application Review Fee Checklist
   - Short Permit Application Form

b) Plot Pan identifying the location of the new emergency generator
   - USGS 7.5'- Quadrangle Map
   - Google Map

c) Process flow diagram

d) Emission calculations and supporting information used to calculate emissions

e) Regulatory Requirements

f) Operational and Maintenance Strategy

g) Air Dispersion Modeling Ambient Impact Analysis

3.a. Required Permit Application Forms

City of Albuquerque

Environmental Health Department
Air Quality Program

Permit Application Checklist

Any person seeking a permit under 20.11.41 NMAC, Authority-to-Construct Permits, shall do so by filing a written application with the Department. Prior to ruling a submitted application complete each application submitted shall contain the required items listed below. **This checklist must be returned with the application.**

Applications that are ruled incomplete because of missing information will delay any determination or the issuance of the permit. The Department reserves the right to request additional relevant information prior to ruling the application complete in accordance with 20.11.41 NMAC.

All applicants shall:

1. ☒ Fill out and submit the *Pre-permit Application Meeting Request* form
   a. ☒ Attach is a waiver from the Pre-Permit Application Meeting Request

2. ☒ Attend the pre-permit application meeting
   a. ☒ Attach is a waiver from the pre-permit application meeting.

3. ☒ Provide public notice to the appropriate parties
   a. ☒ Attach a copy of the completed *Notice of Intent to Construct* form to this form
      i. Neighborhood Association(s): See Attached Memo From Regan.
      ii. Coalition(s): _____
   b. ☒ Attach a copy of the completed *Public Sign Notice Guideline* form

4. Fill out and submit the *Permit Application*. All applications shall:

   A. ☒ be made on a form provided by the Department. Additional text, tables, calculations or clarifying information may also be attached to the form.

   B. ☒ at the time of application, include documentary proof that all applicable permit application review fees have been paid as required by 20 NMAC 11.02. Please refer to the attached permit application worksheet.

   C. ☒ contain the applicant's name, address, and the names and addresses of all other owners or operators of the emission sources.

   D. ☒ contain the name, address, and phone number of a person to contact regarding questions about the facility.

E. ☒ indicate the date the application was completed and submitted

F. ☒ contain the company name, which identifies this particular site.

G. ☒ contain a written description of the facility and/or modification including all operations affecting air emissions.

H. ☒ contain the maximum and standard operating schedules for the source after completion of construction or modification in terms of hours per day, days per week, and weeks per year.

I. ☒ provide sufficient information to describe the quantities and nature of any regulated air contaminant (including any amount of a hazardous air pollutant) that the source will emit during:

- Normal operation
- Maximum operation
- Abnormal emissions from malfunction, start-up and shutdown

J. ☒ include anticipated operational needs to allow for reasonable operational scenarios to avoid delays from needing additional permitting in the future.

K. ☒ contain a map, such as a 7.5-minute USGS topographic quadrangle, showing the exact location of the source; and include physical address of the proposed source.

L. ☒ contain an aerial photograph showing the proposed location of each process equipment unit involved in the proposed construction, modification, relocation, or technical revision of the source except for federal agencies or departments involved in national defense or national security as confirmed and agreed to by the department in writing.

M. ☒ contain the UTM zone and UTM coordinates.

N. ☒ include the four digit Standard Industrialized Code (SIC) and the North American Industrial Classification System (NAICS).

O. ☒ contain the types and **potential emission rate** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.

P. ☒ contain the types and **controlled** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.

Q. ☒ contain the basis or source for each emission rate (include the manufacturer's specification sheets, AP-42 Section sheets, test data, or other data when used as the source).

R. ☒ contain all calculations used to estimate **potential emission rate** and **controlled** emissions.

S. ☒ contain the basis for the estimated control efficiencies and sufficient engineering data for verification of the control equipment operation, including if necessary, design drawings, test reports, and factors which affect the normal operation (e.g. limits to normal operation).

T. ☒ contain fuel data for each existing and/or proposed piece of fuel burning equipment.

U. ☒ contain the anticipated maximum production capacity of the entire facility and the requested production capacity after construction and/or modification.

V. ☒ contain the stack and exhaust gas parameters for all existing and proposed emission stacks.

W. ☒ provide an ambient impact analysis using a atmospheric dispersion model approved by the US Environmental Protection Agency (EPA), and the Department to demonstrate compliance with the ambient air quality standards for the City of Albuquerque and Bernalillo County (See 20.11.01 NMAC). If you are modifying an existing source, the modeling must include the emissions of the entire source to demonstrate the impact the new or modified source(s) will have on existing plant emissions.

X. ☒ contain a preliminary operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown.

Y. ☒ contain a process flow sheet, including a material balance, of all components of the facility that would be involved in routine operations. Indicate all emission points, including fugitive points.

Z. ☒ contain a full description, including all calculations and the basis for all control efficiencies presented, of the equipment to be used for air pollution control. This shall include a process flow sheet or, if the Department so requires, layout and assembly drawings, design plans, test reports and factors which affect the normal equipment operation, including control and/or process equipment operating limitations.

AA. ☒ contain description of the equipment or methods proposed by the applicant to be used for emission measurement.

BB. ☒ be signed under oath or affirmation by a corporate officer, authorized to bind the company into legal agreements, certifying to the best of his or her knowledge the truth of all information submitted.

City of Albuquerque

Environmental Health Department
Air Quality Program

Permit Application Review Fee Instructions

All source registration, authority-to-construct, and operating permit applications for stationary or portable sources shall be charged an application review fee according to the fee schedule in 20.11.2 NMAC. These filing fees are required for both new construction, reconstruction, and permit modifications applications. Qualified small businesses as defined in 20.11.2 NMAC may be eligible to pay one-half of the application review fees and 100% of all applicable federal program review fees.

Please fill out the permit application review fee checklist and submit with a check or money order payable to the "City of Albuquerque Fund 242" and either:

1. be delivered in person to the Albuquerque Environmental Health Department, 3rd floor, Suite 3023 or Suite 3027, Albuquerque-Bernalillo County Government Center, south building, One Civic Plaza NW, Albuquerque, NM or,

2. mailed to Attn: Air Quality Program, Albuquerque Environmental Health Department, P.O. Box 1293, Albuquerque, NM 87103.

The department will provide a receipt of payment to the applicant. The person delivering or filing a submittal shall attach a copy of the receipt of payment to the submittal as proof of payment Application review fees shall not be refunded without the written approval of the manager. If a refund is requested, a reasonable professional service fee to cover the costs of staff time involved in processing such requests shall be assessed. Please refer to 20.11.2 NMAC (effective January 10, 2011) for more detail concerning the "Fees" regulation as this checklist does not relieve the applicant from any applicable requirement of the regulation.

City of Albuquerque

Environmental Health Department
Air Quality Program

Permit Application Review Fee Checklist

Please completely fill out the information in each section. Incompleteness of this checklist may result in the Albuquerque Environmental Health Department not accepting the application review fees. If you should have any questions concerning this checklist, please call 768-1972.

I. COMPANY INFORMATION:

Company Name	United States Department of Energy (DOE)	
Company Address	1515 Wyoming Boulevard SE	
Facility Name	Sandia National Laboratories/New Mexico	
Facility Address	K Street and 20th Street (858 Complex)	
Contact Person	Carolyn Holloway (SFO)/ Penny Avery (SNL/NM)	
Contact Person Phone Number	(505) 845-5248/ (505) 273-1047	
Are these application review fees for an existing permitted source located within the City of Albuquerque or Bernalillo County?	**Yes**	**No**
If yes, what is the permit number associated with this modification?	**Permit # 1820-M1-RV1**	
Is this application review fee for a Qualified Small Business as defined in 20.11.2 NMAC? (See Definition of Qualified Small Business on Page 4)	**Yes**	**No**

II. STATIONARY SOURCE APPLICATION REVIEW FEES:

If the application is for a new stationary source facility, please check all that apply. If this application is for a modification to an existing permit please see Section III.

Check All That Apply	Stationary Sources	Review Fee	Program Element
	Air Quality Notifications		
	AQN New Application	$573.00	2801
	AQN Technical Amendment	$313.00	2802
	AQN Transfer of a Prior Authorization	$313.00	2803
X	*Not Applicable*	*See Sections Below*	
	Stationary Source Review Fees (Not Based on Proposed Allowable Emission Rate)		
	Source Registration required by 20.11.40 NMAC	$ 584.00	2401
	A Stationary Source that requires a permit pursuant to 20.11.41 NMAC or other board regulations and are not subject to the below proposed allowable emission rates	$ 1,168.00	2301
X	*Not Applicable*	*See Sections Below*	
	Stationary Source Review Fees (Based on the Proposed Allowable Emission Rate for the single highest fee pollutant)		
	Proposed Allowable Emission Rate Equal to or greater than 1 tpy and less than 5 tpy	$876	2302
	Proposed Allowable Emission Rate Equal to or greater than 5 tpy and less than 25 tpy	$1,752	2303
	Proposed Allowable Emission Rate Equal to or greater than 25 tpy and less than 50 tpy	$3,503	2304
	Proposed Allowable Emission Rate Equal to or greater than 50 tpy and less than 75 tpy	$5,255	2305
	Proposed Allowable Emission Rate Equal to or greater than 75 tpy and less than 100 tpy	$7,006	2306
	Proposed Allowable Emission Rate Equal to or greater than 100 tpy	$8,758	2307
X	*Not Applicable*	*See Section Above*	

Federal Program Review Fees (In addition to the Stationary Source Application Review Fees above)			
	40 CFR 60 - "New Source Performance Standards" (NSPS)	$1,168	2308
	40 CFR 61 - "Emission Standards for Hazardous Air Pollutants (NESHAPs)	$1,168	2309
	40 CFR 63 - (NESHAPs) Promulgated Standards	$1,168	2310
	40 CFR 63 - (NESHAPs) Case-by-Case MACT Review	$11,677	2311
	20.11.61 NMAC, Prevention of Significant Deterioration (PSD) Permit	$5,838	2312
	20.11.60 NMAC, Non-Attainment Area Permit	$5,838	2313
X	*Not Applicable*	*Not Applicable*	

III. MODIFICATION TO EXISTING PERMIT APPLICATION REVIEW FEES:

If the permit application is for a modification to an existing permit, please check all that apply. If this application is for a new stationary source facility, please see Section II.

Check All That Apply	Modifications	Review Fee	Program Element
Modification Application Review Fees (Not Based on Proposed Allowable Emission Rate)			
	Proposed modification to an existing stationary source that requires a permit pursuant to 20.11.41 NMAC or other board regulations and are not subject to the below proposed allowable emission rates	$ 1,168.00	2321
X	*Not Applicable*	*See Sections Below*	
Modification Application Review Fees (Based on the Proposed Allowable Emission Rate for the single highest fee pollutant)			
	Proposed Allowable Emission Rate Equal to or greater than 1 tpy and less than 5 tpy	$876	2322
	Proposed Allowable Emission Rate Equal to or greater than 5 tpy and less than 25 tpy	$1,752	2323
X	Proposed Allowable Emission Rate Equal to or greater than 25 tpy and less than 50 tpy	$3,503	2324
	Proposed Allowable Emission Rate Equal to or greater than 50 tpy and less than 75 tpy	$5,255	2325
	Proposed Allowable Emission Rate Equal to or greater than 75 tpy and less than 100 tpy	$7,006	2326
	Proposed Allowable Emission Rate Equal to or greater than 100 tpy	$8,758	2327
	Not Applicable	*See Section Above*	
Major Modifications Review Fees (In addition to the Modification Application Review Fees above)			
	20.11.60 NMAC, Permitting in Non-Attainment Areas	$5,838	2333
	20.11.61 NMAC, Prevention of Significant Deterioration	$5,838	2334
X	*Not Applicable*	*Not Applicable*	
Federal Program Review Fees (This section applies only if a Federal Program Review is triggered by the proposed modification) (These fees are in addition to the Modification and Major Modification Application Review Fees above)			
X	40 CFR 60 - "New Source Performance Standards" (NSPS)	$1,168	2328
	40 CFR 61 - "Emission Standards for Hazardous Air Pollutants (NESHAPs)	$1,168	2329
	40 CFR 63 - (NESHAPs) Promulgated Standards	$1,168	2330
	40 CFR 63 - (NESHAPs) Case-by-Case MACT Review	$11,677	2331
	20.11.61 NMAC, Prevention of Significant Deterioration (PSD) Permit	$5,838	2332
	20.11.60 NMAC, Non-Attainment Area Permit	$5,838	2333
	Not Applicable	*Not Applicable*	

IV. ADMINISTRATIVE AND TECHNICAL REVISION APPLICATION REVIEW FEES:

If the permit application is for an administrative or technical revision of an existing permit issued pursuant to 20.11.41 NMAC, please check one that applies.

Check One	Revision Type	Review Fee	Program Element
	Administrative Revisions	$ 250.00	2340
	Technical Revisions	$ 500.00	2341
X	*Not Applicable*	*See Sections II, III or V*	

V. PORTABLE STATIONARY SOURCE RELOCATION FEES:

If the permit application is for a portable stationary source relocation of an existing permit, please check one that applies.

Check One	Portable Stationary Source Relocation Type	Review Fee	Program Element
	No New Air Dispersion Modeling Required	$ 500.00	2501
	New Air Dispersion Modeling Required	$ 750.00	2502
X	*Not Applicable*	*See Sections II, III or V*	

VI. Please submit a check or money order in the amount shown for the total application review fee.

Section Totals	Review Fee Amount
Section II Total	$ 0
Section III Total	$ 4,671
Section IV Total	$ 0
Section V Total	$ 0
Total Application Review Fee	**$ 4,671**

I, the undersigned, a responsible official of the applicant company, certify that to the best of my knowledge, the information stated on this checklist, give a true and complete representation of the permit application review fees which are being submitted. I also understand that an incorrect submittal of permit application reviews may cause an incompleteness determination of the submitted permit application and that the balance of the appropriate permit application review fees shall be paid in full prior to further processing of the application.

Signed this_____ day of _____ 20____

William V. Wechsler — **Print Name**

Assistant Manager for Engineering — **Print Title**

William V. Wechsler Digitally signed by William V. Wechsler Date: 2020.08.27 09:32:11 -06'00'

Signature

Definition of Qualified Small Business as defined in 20.11.2 NMAC:
"Qualified small business" means a business that meets all of the following requirements:

(1) a business that has 100 or fewer employees;
(2) a small business concern as defined by the federal Small Business Act;
(3) a source that emits less than 50 tons per year of any individual regulated air pollutant, or less than 75 tons per year of all regulated air pollutants combined; and
(4) a source that is not a major source or major stationary source.

Note: Beginning January 1, 2011, and every January 1 thereafter, an increase based on the consumer price index shall be added to the application review fees. The application review fees established in Subsection A through D of 20.11.2.18 NMAC shall be adjusted by an amount equal to the increase in the consumer price index for the immediately-preceding year. Application review fee adjustments equal to or greater than fifty cents ($0.50) shall be rounded up to the next highest whole dollar. Application review fee adjustments totaling less than fifty cents ($0.50) shall be rounded down to the next lowest whole dollar. The department shall post the application review fees on the city of Albuquerque environmental health department air quality program website.

Albuquerque Environmental Health Department - Air Quality Program
Please mail this application to **P.O. Box 1293, Albuquerque, NM 87103**
or hand deliver between 8:00am - 5:00pm Monday - Friday to:
3rd Floor, Suite 3023 - One Civic Plaza NW, Albuquerque, New Mexico 87103
(505) 768 – 1972 aqd@cabq.gov (505) 768 - 1977 (Fax)

Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)

Clearly handwrite or type **Corporate Information** **Submittal Date:** ___/___/___

1. Company Name: United States Department of Energy (DOE) 2. Street Address: 1515 Wyoming Boulevard S.E. Zip: 87123

3. Company City: Albuquerque Company State: NM 5. Company Phone: (505) 845-5178 6. Company Fax: (505) 845-4710

7. Company Mailing Address: Sandia Field Office (SFO) P.O. Box 5400, Albuquerque, NM Zip: 87185-5400

8. Company Contact and Title: William V. Wechsler/Assistant Manager Engineering 9. Phone (505) 845-4262

10. E-mail william.wechsler@nnsa.doe.gov

Stationary Source (Facility) Information: **Provide a plot plan (legal description/drawing of facility property) with overlay sketch of facility processes; Location of emission points; Pollutant type and distances to property boundaries]**

1. Facility Name Sandia National Laboratories/New Mexico 2. Street Address 858 Complex K Street SE and 20th Street SE

3. City: Albuquerque 4. State: NM 5. Facility Phone: (505) 845-5248 6. Facility Fax: (505) 845-4710

7. Facility Mailing Address (Local): SNL/NM P.O. Box 5800 MS 1512, Albuquerque, NM Zip: 87185-1512

8. Latitude - Longitude or UTM Coordinates of Facility: E - 359,745 N - 3,879,865

9. Facility Contact: Carolyn Holloway/Penny Avery 10. Phone: (505)845-5248/ (505) 273-1047 11.Title:General Engineer/AQC Program Lead

12. Email: carolyn.holloway@nnsa.doe.gov/rpavery@sandia.gov

General Operation Information (if any further information request does not pertain to your facility, write N/A on the line or in the box)

1. Facility Type (description of your facility operations) Research and Development
2. Standard Industrial Classification (SIC 4 digit #) 8733
3. North American Industry Classification System (NAICS Code #) 541712
4. Is facility currently operating in Bernalillo County. Yes If yes, date of original construction 1988
   If no, planned startup is N/A
5. Is facility permanent Yes If no, give dates for requested temporary operation - from N/A through N/A
6. Is facility process equipment new Yes If no, give actual or estimated manufacture or installation dates in the Process Equipment Table.
7. Is application for a modification, expansion, or reconstruction (altering process, or adding, or replacing process equipment, etc.) to an existing facility which will result in a change in emissions yes. If yes, give the manufacture date of modified, added, or replacement equipment in the Process Equipment Table modification date column, or the operation changes to existing process/equipment which cause an emission increase.
8. Is facility operation (circle one) [Continuous Intermittent Batch]

9. Estimated % of production Jan-Mar_25_ Apr-Jun_25_ Jul-Sep_25_ Oct-Dec_25_

10. Current or requested operating times of facility_24__ hrs/day_7__ days/wk_4__ wks/mo_12_ mos/yr

11. Business hrs_6 am to 5 pm

12. Will there be special or seasonal operating times other than shown above __NO If yes, explain _____

13. Raw materials processed __N/A_____

14. Saleable item(s) produced N/A_____

15. Permitting Action Being Requested

☐ New Permit ☒ Permit Modification ☐ Technical Permit Revision ☐ Administrative Permit Revision

Current Permit #: _1820-M1RV1_____ Current Permit #: _____ Current Permit #: _____

Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Authority-to-Construct Permits (20.11.41 NMAC)

PROCESS EQUIPMENT TABLE

(Generator-Crusher-Screen-Conveyor-Boiler-Mixer-Spray Guns-Saws-Sander-Oven-Dryer-Furnace-Incinerator, etc.)

Process Equipment Unit	Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date	Size or Process Rate (Hp;kW;Btu;ft^3;lbs; tons;yd^3;etc.)	Fuel Type
Example 1. Generator	Unigen	B-2500	A56732195C-222	7/96	7/97	N/A	250 Hp - HR. ~~YR.~~	Diesel
Example 2. Spray Gun	HVLP Systems	Spray-N-Stay 1100	k26-56-95	01/97	11/97	N/A	0.25 gal. - HR. ~~YR.~~	Electric Compressor
1. Boiler	Cleaver Brooks Inc. (CBI)	700-500-125HW	OL103203	2003	9/1/2005	N/A	20.4 MMBtu/hr	Natural Gas
2. Boiler	Cleaver Brooks Inc. (CBI)	700-500-125HW	OL103202	2003	9/1/2005	N/A	20.4 MMBtu/hr	Natural Gas
3. Boiler	Cleaver Brooks Inc. (CBI)	700-250-125HW	OL103204	2003	9/1/2005	N/A	10.2 MMBtu/hr	Natural Gas
4. Boiler	Lochinvar	2000	E07H00197188	2007	2007	N/A	2 MMBtu/hr	Natural Gas
5. Boiler	Lochinvar	2000	E07H00197180	2007	2007	N/A	2 MMBtu/hr	Natural Gas
6. Boiler	Lochinvar	2000	E07H00197206	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
7. Boiler	Lochinvar	2000	E07H00197214	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
8. Boiler	Lochinvar	2000	E07H00197162	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
9. Boiler	Lochinvar	2000	E07H00197173	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
10. Boiler	Lochinvar	2000	E07H00197163	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
11. Boiler	Lochinvar	2000	E07H00197187	2007	2007	N/A	2 MMBtu/ hr	Natural Gas
12. Emergency Generator	Caterpillar	3508B	IFZ01319	2002	2002	N/A	1480 Hp-hr	Diesel
13. Emergency Generator	Caterpillar	D3512B	CMC01064	2004	2004	N/A	1877 Hp-hr	Diesel
14. Emergency Generator	Caterpillar	C175-20	TBD	TBD	TBD	TBD	5229.9 Hp-hr	Diesel

1. Basis for Equipment Size or Process Rate (Manufacturers data, Field Observation/Test, etc. Submit information for each unit as an attachment

EXEMPTED SOURCES AND EXEMPTED ACTIVITES

(Generator-Crusher-Screen-Conveyor-Boiler-Mixer-Spray Guns-Saws-Sander-Oven-Dryer-Furnace-Incinerator, etc.)

Process Equipment Unit	Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date	Size or Process Rate (Hp;kW;Btu;ft^3;lbs; tons;yd^3;etc.)	Fuel Type
Example 1. Generator	Unigen	B-2500	A56732195C-222	7/96	7/97	N/A	250 Hp - HR. ~~YR.~~	Diesel
Example 2. Spray Gun	HVLP Systems	Spray-N-Stay 1100	k26-56-95	01/97	11/97	N/A	0.25 gal. - HR. ~~YR.~~	Electric Compressor
1.	N/A						HR. YR.	
2.							HR. YR.	
3.							HR. YR.	

1. Basis for Equipment Size or Process Rate (Manufacturers data, Field Observation/Test, etc.)_____ Submit information for each unit as an attachment

UNCONTROLLED EMISSIONS OF INDIVIDUAL AND COMBINED PROCESSES

(Process potential under physical/operational limitations during a 24 hr/day and 365 day/year = 8,760 hrs)

Process Equipment Unit*	Carbon Monoxide (CO)	Oxides of Nitrogen (NOx)	Nonmethane Hydrocarbons NMHC (VOCs)	Oxides of Sulfur (SOx)	Total Suspended Particulate Matter (TSP)	Method(s) used for Determination of Emissions (AP-42, Material balance, field tests, manufacturers' data, etc.)
Example I. Generator	1. 9.1 lbs/hr	27.7 lbs/hr	1.3 lbs/hr	0.5 lbs/hr	2.0 lbs/hr	AP-42
	1a. 39.9 tons/yr	121.3 tons/yr	5.7 tons/yr	2.2 tons/yr	8.8 tons/yr	
1. Boiler	1. 1.68 lbs/hr	2.00 lbs/hr	0.11 lbs/hr	0.04 lbs/hr	0.15 lbs/hr	AP-42
	1a. 7.36 tons/yr	8.77 tons/yr	0.48 tons/yr	0.16 tons/yr	0.67 tons/yr	
2. Boiler	2. 1.68 lbs/hr	2.00 lbs/hr	0.11 lbs/hr	0.04 lbs/hr	0.15 lbs/hr	AP-42
	2a. 7.36 tons/yr	8.77 tons/yr	0.48 tons/yr	0.16 tons/yr	0.67 tons/yr	
3. Boiler	3. 0.84 lbs/hr	1.00 lbs/hr	0.06 lbs/hr	0.018 lbs/hr	0.08 lbs/hr	AP-42
	3a. 3.68 tons/yr	4.38 tons/yr	0.24 tons/yr	0.08 tons/yr	0.33 tons/yr	
4. Boiler	4. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	4a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
5. Boiler	5. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	5a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
6. Boiler	6. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	6a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
7. Boiler	7. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	7a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
8. Boiler	8. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	8a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
9. Boiler	9. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	9a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
10. Boiler	10. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	10a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
11. Boiler	11. 0.165 lbs/hr	0.196 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	AP-42
	11a. 0.721 tons/yr	0.859 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr	
12. Emergency Generator	12. 8.14 lbs/hr	35.52 lbs/hr	1.04 lbs/hr	11.97 lbs/hr	1.04 lbs/hr	AP-42
	12a. 35.65 tons/yr	155.58 tons/yr	4.54 tons/yr	52.44 tons/yr	4.57 tons/yr	
13. Emergency Generator	13. 10.32 lbs/hr	45.05 lbs/hr	1.32 lbs/hr	15.18 lbs/hr	1.31 lbs/hr	AP-42
	13a. 45.22 tons/yr	197.31 tons/yr	5.80 tons/yr	66.51 tons/yr	5.75 tons/yr	
14. Emergency Generator	14. 7.49 lbs/hr	78.52 lbs/hr	0.69 lbs/hr	0.058 lbs/hr	0.69 lbs/hr	Manufacturer Guarantee
	14a. 32.83 tons/yr	343.91 tons/yr	3.03 tons/yr	0.26 tons/yr	3.03 tons/yr	

*** If any one (1) of these process units, or combination of units, has an uncontrolled emission greater than (>) 10 lbs/hr or 25 tons/yr for any of the above pollutants (based on 8760 hrs of operation), then a permit will be required. Complete this application along with additional checklist information requested on accompanying instruction sheet.**

* **If all of these process units, individually <u>and</u> in combination, have an uncontrolled emission less than or equal to (≤) 10 lbs/hr or 25 tons/yr for all of the above pollutants (based on 8760 hrs of operation), but > 1 ton/yr for any of the above pollutants - then a source registration is required.**

Note: <u>If your source does not require a registration or permit, based on above pollutant emissions, complete the remainder of this application to determine if a registration or permit would be required for any Toxic or Hazardous air pollutants used at your facility.</u>

CONTROLLED EMISSIONS OF INDIVIDUAL AND COMBINED PROCESSES

(Based on current operations with emission controls OR requested operations with emission controls)

Process Equipment Units listed on this Table should match up to the same numbered line and Unit as listed on Uncontrolled Table (pg.2)

Process Equipment Unit	Carbon Monoxide (CO)	Oxides of Nitrogen (NOx)	Nonmethane Hydrocarbons NMHC (VOCs)	Oxides of Sulfur (SOx)	Total Suspended Particulate Matter (TSP)	Control Equipment	% Efficiency
I. Example Generator	1. 9.1 lbs/hr	27.7 lbs/hr	1.3 lbs/hr	0.5 lbs/hr	2.0 lbs/hr	Operating Hours	N/A
	1a. 18.2 tons/yr	55.4 tons/yr	2.6 tons/yr	1.0 tons/yr	4.0 tons/yr		
1. Boiler	1. 1.68 lbs/hr	1.00 lbs/hr	0.11 lbs/hr	0.04 lbs/hr	0.15 lbs/hr	1) Total annual fuel usage for these three boilers will not exceed 219.13 MMscf/yr; 2) Low NOx burners	N/A
	1a. 3.68 tons/yr	2.19 tons/yr	0.24 tons/yr	0.08 tons/yr	0.33 tons/yr		
2. Boiler	2. 1.68 lbs/hr	1.00 lbs/hr	0.11 lbs/hr	0.04 lbs/hr	0.15 lbs/hr		
	2a. 3.68 tons/yr	2.19 tons/yr	0.24 tons/yr	0.08 tons/yr	0.33 tons/yr		
3. Boiler	3. 0.84 lbs/hr	0.50 lbs/hr	0.06 lbs/hr	0.018 lbs/hr	0.08 lbs/hr		
	3a. 1.84 tons/yr	1.10 tons/yr	0.12 tons/yr	0.04 tons/yr	0.17 tons/yr		
4. Boiler	4. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	4a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
5. Boiler	5. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	5a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
6. Boiler	6. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	6a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
7. Boiler	7. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	7a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
8. Boiler	8. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	8a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
9. Boiler	9. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	9a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		
10. Boiler	10. 0.165 lbs/hr	0.098 lbs/hr	0.011 lbs/hr	0.001 lbs/hr	0.015 lbs/hr	Low NOx burner	
	10a. 0.721 tons/yr	0.429 tons/yr	0.047 tons/yr	0.005 tons/yr	0.065 tons/yr		

11. Boiler	**11. 0.165 lbs/hr**	**0.098 lbs/hr**	**0.011 lbs/hr**	**0.001 lbs/hr**	**0.015 lbs/hr**	**Low NOx burner**	
	11a. 0.721 tons/yr	**0.429 tons/yr**	**0.047 tons/yr**	**0.005 tons/yr**	**0.065 tons/yr**		
12. Emergency Generator	**12. 8.14 lbs/hr**	**35.52 lbs/hr**	**1.04 lbs/hr**	**11.97 lbs/hr**	**1.04 lbs/hr**	**Operating hours**	**N/A**
	12a. 2.04 tons/yr	**8.88 tons/yr**	**0.26 tons/yr**	**2.99 tons/yr**	**0.26 tons/yr**		
13. Emergency Generator	**13. 10.32 lbs/hr**	**45.05 lbs/hr**	**1.32 lbs/hr**	**15.18 lbs/hr**	**1.31 lbs/hr**	**Operating hours**	**N/A**
	13a. 2.58 tons/yr	**11.26 tons/yr**	**0.33 tons/yr**	**3.80 tons/yr**	**0.33 tons/yr**		
14. Emergency Generator	**14. 7.49 lbs/hr**	**78.52 lbs/hr**	**0.69 lbs/hr**	**0.058 lbs/hr**	**0.69 lbs/hr**	**Operating hours**	**N/A**
	14a. 1.87 tons/yr	**19.63 tons/yr**	**0.17 tons/yr**	**0.015 tons/yr**	**0.17 tons/yr**		

1. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.)
   Submit information for each unit as an attachment_____

2. Explain and give estimated amounts of any Fugitive Emissions associated with facility processes _____

_____

**TOXIC EMISSIONS

VOLATILE, HAZARDOUS, & VOLATILE HAZARDOUS AIR POLLUTANT EMISSION TABLE

Product Categories (Coatings, Solvents, Thinners, etc.)	Volatile Organic Compound (VOC), Hazardous Air Pollutant (HAP), or Volatile Hazardous Air Pollutant (VHAP) Primary To The Representative As Purchased Product	Chemical Abstract Service Number (CAS) Of VOC, HAP, Or VHAP From Representative As Purchased Product	VOC, HAP, Or VHAP Concentration Of Representative As Purchased Product (pounds/gallon, or %)	1. How were Concentrations Determined (CPDS, MSDS, etc.)	Total Product Purchases For Category	(-)	Quantity Of Product Recovered & Disposed For Category	(=)	Total Product Usage For Category
EXAMPLE 1. Cleaning Solvents	TOLUENE	108883	70%	PRODUCT LABEL	lbs/yr 200 gal/yr	(-)	lbs/yr 50 gal/yr	(=)	lbs/yr 150 gal/yr
Hazardous Air Pollutants and Volatile Organic Compounds are addressed in Site-wide registration for chemical use (Construction Permit #1901-M1)					lbs/yr gal/yr	(-)	lbs/yr gal/yr	(=)	lbs/yr gal/yr

1. Basis for percent (%) determinations (Certified Product Data Sheets, Material Safety Data Sheets, etc.). Submit, as an attachment, information on one (1) product from each Category listed above which best represents the average of all the products purchased in that Category.

****NOTE:** **A REGISTRATION IS REQUIRED, AT MINIMUM, FOR ANY AMOUNT OF HAP OR VHAP EMISSION. A PERMIT MAY BE REQUIRED FOR THESE EMISSIONS, IF THE SOURCE MEETS THE REQUIREMENTS OF PART 41.**

MATERIAL AND FUEL STORAGE TABLE

(Tanks, barrels, silos, stockpiles, etc.) Copy this table if additional space is needed (begin numbering with 4., 5., etc.)

Storage Equipment	Product Stored	Capacity (bbls - tons gal - acres,etc)	Above or Below Ground	Construction (welded, riveted) & Color	Install Date	Loading Rate	Offloading Rate	True Vapor Pressure	Control Equipment	Seal Type	% Eff.
Example 1. Tank	diesel fuel	5,000 gal.	Below	welded/ brown	3/93	3000gal HR. ~~YR.~~	500 gal. - HR. ~~YR.~~	N/A Psia	N/A	N/A	N/A
Example 2. Barrels	Solvent	55 gal Drum	Above - in storage room	welded/green	N/A	N/A HR. YR.	N/A HR. YR.	N/A Psia	N/A	N/A	N/A
1.	N/A					HR. YR.	HR. YR.	Psia			

1. Basis for Loading/Offloading Rate (Manufacturers data, Field Observation/Test, etc.)_____
Submit information for each unit as an attachment.

2. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.)_____
Submit information for each unit as an attachment.

STACK AND EMISSION MEASUREMENT TABLE

If any equipment from the Process Equipment Table (Page 2) is also listed in this Stack Table, use the same numbered line for the Process Equipment unit on both Tables to show the association between the Process Equipment and it's Stack. Copy this table if additional space is needed (begin numbering with 4., 5., etc.).

Process Equipment	Pollutant (CO,NOx,TSP, Toluene,etc)	Control Equipment	Control Efficiency	Stack Height & Diameter in feet	Stack Temp.	Stack Velocity & Exit Direction	Emission Measurement Equipment Type	Range-Sensitivity-Accuracy-
Example 1. Generator	CO, NOx, TSP, SO_2, NMHC	N/A	N/A	18 ft. - H 0.8 ft. - D	225 °F	6,000 ft^3/min - V Exit - upward	N/A	N/A
Example 2. Spray Gun	TSP, xylene, toluene, MIBK	Spray Booth	99% for TSP	9 ft. - H 0.5 ft. -D	ambient	10,000 ft^3/min - V Exit - horizontal	N/A	N/A
1. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	91.9 ft – H 2.05 ft. - D	242.3 °F	23.4 ft/sec – V Exit - upward	N/A	N/A
2. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	91.9 ft – H 2.05 ft. - D	242.3 °F	23.4 ft/sec – V Exit - upward	N/A	N/A
3. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	91.9 ft – H 1.71 ft. - D	242.3 °F	16.9 ft/sec – V Exit - upward	N/A	N/A
4. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
5. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
6. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
7. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
8. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
9. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
10. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
11. Boiler	CO, NOx, TSP, SO_2, NMHC	Low NOx Burner	N/A	12.14 ft – H 0.82 ft. - D	230 °F	13.7 ft/sec – V Exit - upward	N/A	N/A
12. Emergency Generator	CO, NOx, TSP, SO_2, NMHC	N/A	N/A	10.99 ft – H 0.67 ft - D	793.13 °F	374.0 ft/sec – V Exit - upward	N/A	N/A
13. Emergency Generator	CO, NOx, TSP, SO_2, NMHC	N/A	N/A	10.99 ft – H 0.67 ft - D	793.13 °F	374.0 ft/sec – V Exit - upward	N/A	N/A
14. Emergency Generator	CO, NOx, TSP, SO_2, NMHC	N/A	N/A	55 ft – H 3.5 ft - D	885 °F	53.3 ft/sec – V Exit - upward	N/A	N/A

1. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.) Submit information for each unit as an attachment

ADDITIONAL COMMENTS OR INFORMATION

I, the undersigned, a responsible officer of the applicant company, certify that to the best of my knowledge, the information stated on this application, together with associated drawings, specifications, and other data, give a true and complete representation of the existing, modified existing, or planned new stationary source with respect to air pollution sources and control equipment. I also understand that any significant omissions, errors, or misrepresentations in these data will be cause for revocation of part or all of the resulting registration or permit.

Signed this_____ day of_____, 20_____

William V. Wechsler
Print Name

Assistant Manager for Engineering
Print Title

William V. Wechsler Digitally signed by William V. Wechsler
Date: 2020.08.27 09:33:28 -06'00'

Signature

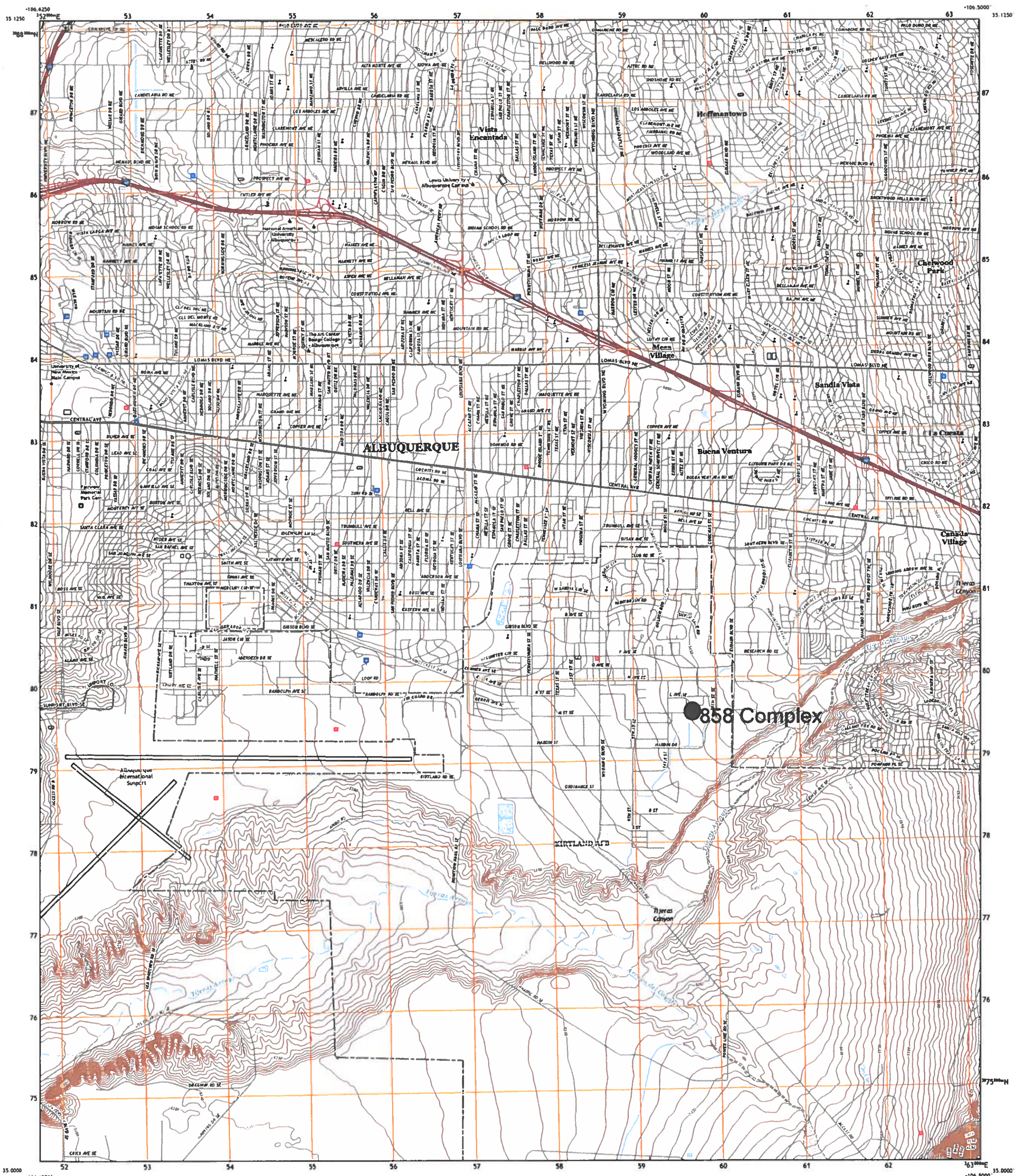
3.b. Plot Pans identifying the location of the new emergency generator

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

ALBUQUERQUE EAST QUADRANGLE
NEW MEXICO - BERNALILLO COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 13S
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery .... NAIP, June 2016 - August 2016
Roads .... U.S. Census Bureau, 2016
Names .... GNIS, 1980 - 2019
Hydrography .... National Hydrography Dataset, 1999 - 2019
Contours .... National Elevation Dataset, 1999 - 2018
Boundaries .... Multiple sources; see metadata file 2017 - 2018
Public Land Survey System .... BLM, 2019
Wetlands .... FWS National Wetlands Inventory Not Available

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
CU
Grid Zone Designation
13S

SCALE 1:24 000
KILOMETERS
METERS
MILES
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

NEW MEXICO
QUADRANGLE LOCATION

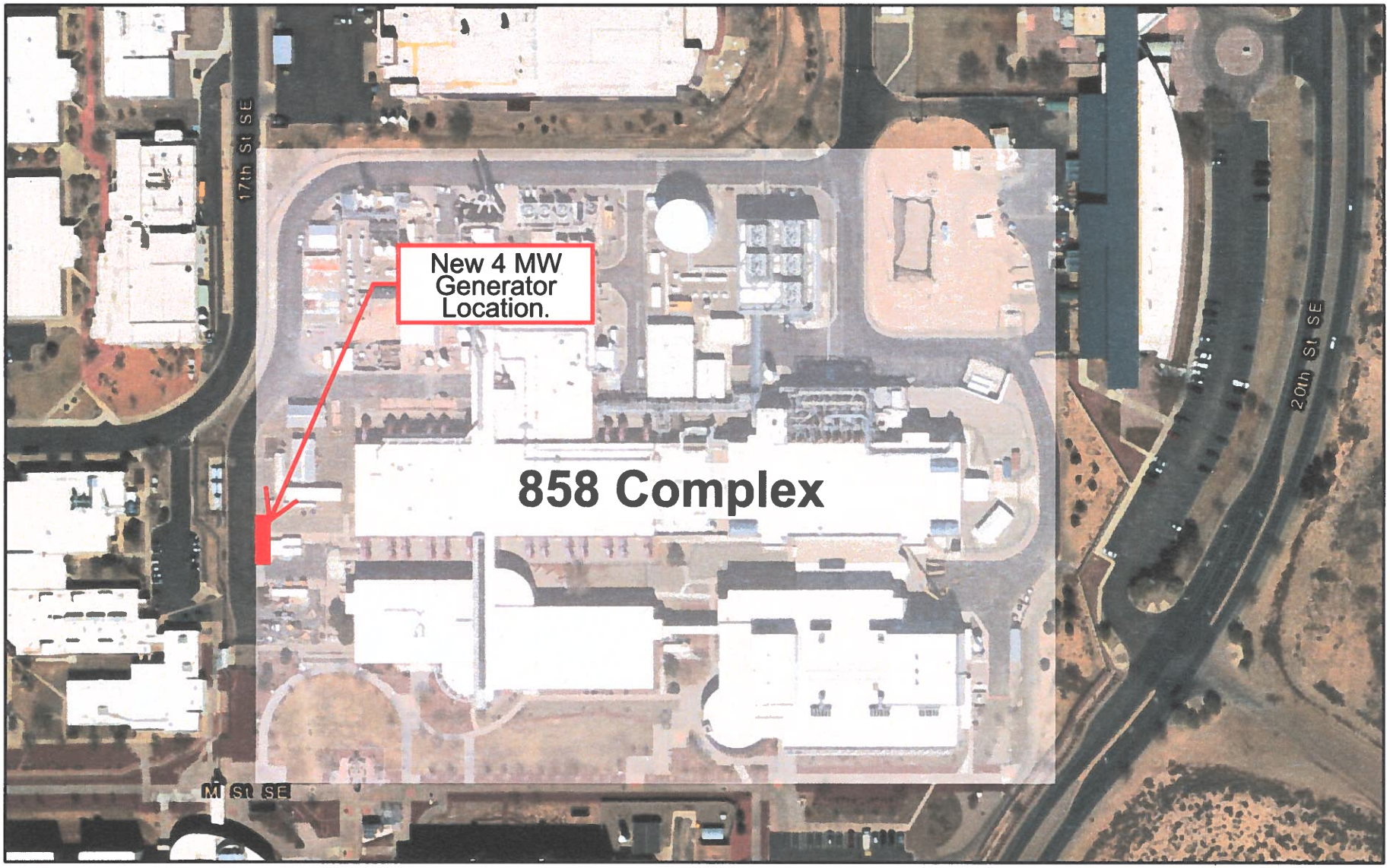
1 Los Griegos
2 Alameda
3 Sandia Crest
4 Albuquerque West
5 Tijeras
6 Isleta
7 Hubbell Spring
8 Mount Washington

ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway — Local Connector
Secondary Hwy — Local Road
Ramp — 4WD
Interstate Route — US Route — State Route

ALBUQUERQUE EAST, NM
2020

ArcGIS WebMap



May 1, 2020

1:2,257

0 0.0175 0.035 0.07 mi

0 0.03 0.06 0.12 km

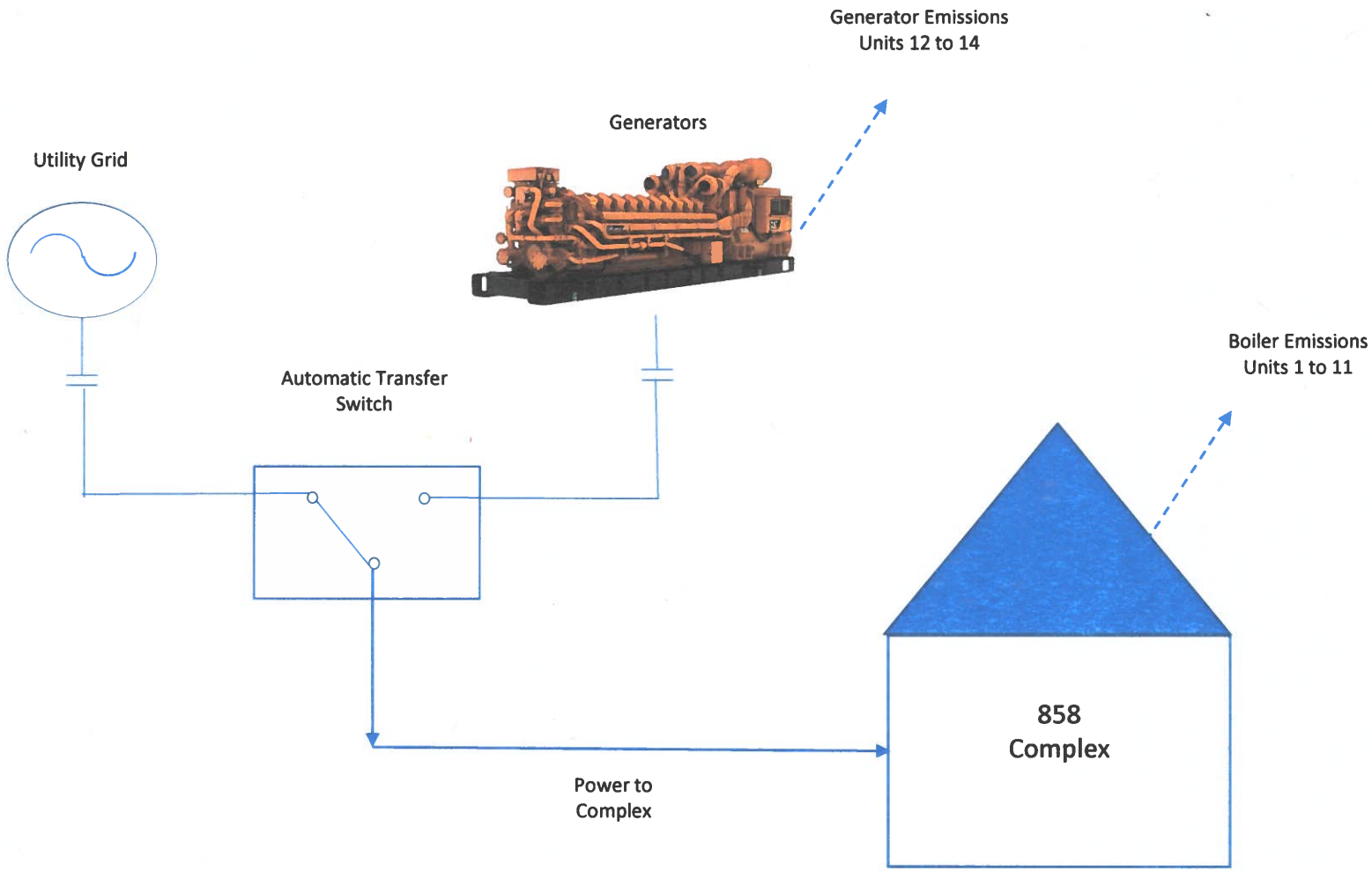
Esri, HERE, Garmin, (c) OpenStreetMap contributors
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user

ArcGIS WebApp Builder

3.c. Process flow diagram

Note: The 858 complex is comprised of multiple buildings and the emission units at the site include 3 emergency generators (this includes the additional generator being permitted in this application) and 11 comfort heater boilers.

Building 858 Complex Process Flow Diagram



4.d. Emission calculations and supporting information used to calculate emissions

Emissions Calculations

Caterpillar C175-20

System Information		
Quantity	*Value*	*Units*
Engine Specifications	3900.00	kW
	5229.90	hp
	36.61	MMBtu/hr
	274.60	gal/hr
Uncontrolled Runtime	8,760	hrs
Controlled Runtime	500	hrs
Mass Conversion	453.6	g/lb
	2.205	lb/kg
BSFC	7,000	Btu/hp-hr
Concentration	15.00	ppm(wt)
	0.0015%	---
Density	7.10	lb/gal
MW SO2	64.06	lb SO2 / lb-mol
MW S	32.06	lb S / lb-mol

Pollutant Emissions						
Pollutant	**Emission Factors**		**Uncontrolled Emissions**		**Controlled Emissions**	
	EF	**Units**	**lb/hr**	**tpy**	**lb/hr**	**tpy**
NOX*	6.81E+00	g/hp-hr	78.52	343.91	78.52	19.63
CO*	6.50E-01	g/hp-hr	7.49	32.83	7.49	1.87
PM*	6.00E-02	g/hp-hr	0.69	3.03	0.69	0.17
SO2**	2.13E-04	lb/gal	0.058	0.26	0.058	0.015
HC*	6.00E-02	g/hp-hr	0.69	3.03	0.69	0.17

*** Emissions factors are based on the manufacture guarantee. A sample calculation is provided below for NOx:**

$$NOx\ (lb/hr) = \frac{6.81\ g}{hp\text{-}hr} \cdot 5229.9\ hp \cdot \frac{1\ lb}{453.6\ g} = 78.52\ lb/hr$$

$$NOx\ (tpy) = \frac{78.52\ lb}{hr} \cdot \frac{8760\ hr}{yr} \cdot \frac{ton}{2000\ lb} = 343.91\ tpy$$

**** SO2 emissions are based on 15 ppm weight% of sulfur. A sample calculation is provided below for SO2:**

$$SO_2\ (lb/hr) = \frac{15\ ppm\ S}{} \cdot \frac{1\ wt\%\ S}{1000000\ ppm\ S} \cdot \frac{274.6\ gal}{hr} \cdot \frac{7.1\ lb}{gal} \cdot \frac{64.06\ lb\ SO2/lb\text{-}mol}{32.06\ lb\ S\ /lb\text{-}mol} = 0.058\ lb/hr$$

$$SO_2\ (tpy) = \frac{0.06\ lb}{hr} \cdot \frac{8760\ hr}{yr} \cdot \frac{ton}{2000\ lb} = 0.26\ tpy$$

Cat® C175-20

Diesel Generator Sets

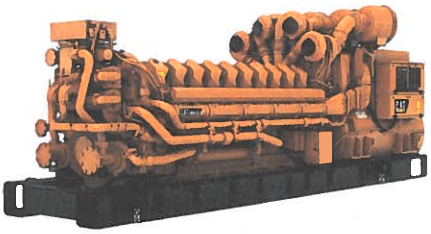


Image shown may not reflect actual configuration

Bore – mm (in)	175 (6.89)
Stroke – mm (in)	220 (8.66)
Displacement – L (in³)	105.8 (6456.31)
Compression Ratio	15.3:1
Aspiration	TA
Fuel System	Common Rail
Governor Type	ADEM™ A4

Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Continuous 60 Hz ekW (kVA)	Emissions Performance
3900 (4875)	3900 (4875)	3500 (4375)	3150 (3937)	U.S. EPA Certified for Emergency Stationary Applications (Tier 2)

Standard Features

Cat® Diesel Engine

- Designed and tested to meet the U.S. EPA Emergency Stationary (Tier 2) emission standards
- Reliable performance proven in thousands of applications worldwide

Generator Set Package

- Accepts 100% block load in one step and meets other NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators

- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System

- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels

- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty

- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support

- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing

- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Optional Equipment

Engine

Air Cleaner

- ■ Single element

Muffler

- ❑ Industrial grade (15 dB)
- ❑ Residential grade (25 dB)
- ■ Critical grade (35 dB)

Starting

- ❑ Standard batteries
- ■ Oversized batteries
- ❑ Standard electric starter(s)
- ❑ Heavy duty electric starter(s)
- ■ Dual electric starter(s)
- ❑ Air starter(s)
- ■ Jacket water heater

Alternator

Output voltage

- ❑ 4160V
- ❑ 6300V
- ❑ 6600V
- ❑ 6900V
- ■ 12470V
- ❑ 13200V
- ❑ 13800V

Temperature Rise (over 40°C ambient)

- ❑ 150°C
- ❑ 125°C/130°C
- ■ 105°C
- ❑ 80°C

Winding type

- ■ Form wound

Excitation

- ■ Permanent magnet (PM)

Attachments

- ■ Anti-condensation heater
- ❑ Stator and bearing temperature monitoring and protection

Control System

Controller

- ❑ EMCP 4.2
- ■ EMCP 4.3

Attachments

- ■ Local annunciator module
- ■ Remote annunciator module
- ❑ Expansion I/O module
- ❑ Remote monitoring software

Charging

- ❑ Battery charger – 20A
- ❑ Battery charger – 35A
- ■ Battery charger – 50A

Vibration Isolators

- ❑ Rubber
- ❑ Spring
- ■ Seismic rated

Extended Service Options

Terms

- ❑ 2 year (prime)
- ❑ 3 year
- ❑ 5 year
- ❑ 10 year

Coverage

- ❑ Silver
- ❑ Gold
- ❑ Platinum
- ❑ Platinum Plus

Ancillary Equipment

- ❑ Automatic transfer switch (ATS)
- ❑ Uninterruptible power supply (UPS)
- ■ Paralleling switchgear
- ❑ Paralleling controls

Certifications

- ❑ UL2200
- ❑ CSA
- ❑ IBC seismic certification
- ❑ OSHPD pre-approval

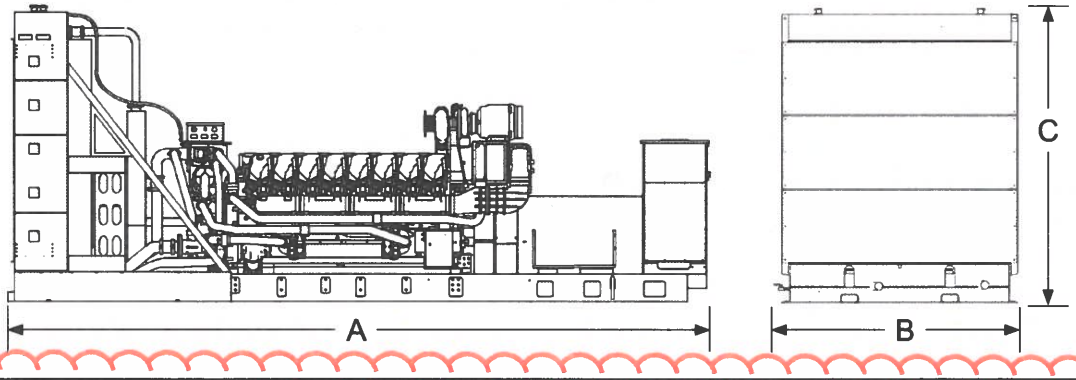
Note: *Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.*

Equates to about 5200 Horsepower

Package Performance

Performance	Standby		Mission Critical		Prime		Continuous	
Frequency	60 Hz		60 Hz		60 Hz		60 Hz	
Gen set power rating with fan	3900 ekW		3900 ekW		3500 ekW		3150 ekW	
Gen set power rating with fan @ 0.8 power factor	4875 kVA		4875 kVA		4375 kVA		3937 kVA	
Emissions	EPA ESE (Tier 2)		EPA ESE (Tier 2)		EPA ESE (Tier 2)		EPA ESE (Tier 2)	
Performance number	EM0791-00		EM0790-01		EM0792-00		EM0793-00	
Fuel Consumption								
100% load with fan – L/hr (gal/hr)	1039.6	(274.6)	1039.6	(274.6)	925.6	(244.5)	826.5	(218.3)
75% load with fan – L/hr (gal/hr)	776.0	(205.0)	776.0	(205.0)	713.1	(188.4)	651.1	(172.0)
50% load with fan – L/hr (gal/hr)	623.3	(164.7)	623.3	(164.7)	583.4	(154.1)	547.7	(144.7)
25% load with fan – L/hr (gal/hr)	386.5	(102.1)	386.5	(102.1)	359.0	(94.8)	330.9	(87.4)
Cooling System								
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	3426	(120988)	3426	(120988)	3426	(120988)	3426	(120988)
Engine coolant capacity – L (gal)	440.0	(116.2)	440.0	(116.2)	440.0	(116.2)	440.0	(116.2)
Radiator coolant capacity – L (gal)	845	(223.2)	845	(223.2)	845	(223.2)	845	(223.2)
Total coolant capacity – L (gal)	1285	(339.5)	1285	(339.5)	1285	(339.5)	1285	(339.5)
Inlet Air								
Combustion air inlet flow rate – m³/min (cfm)	339.2	(11977.6)	339.2	(11977.6)	314.7	(11113.5)	284.5	(10044.5)
Exhaust System								
Exhaust stack gas temperature – °C (°F)	473.9	(885.0)	473.9	(885.0)	462.8	(865.0)	452.1	(845.8)
Exhaust gas flow rate – m³/min (cfm)	871.6	(30778.2)	871.6	(30778.2)	787.4	(27804.5)	707.1	(24966.9)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection								
Heat rejection to jacket water – kW (Btu/min)	2148	(122141)	2148	(122141)	1866	(106125)	1660	(94406)
Heat rejection to exhaust (total) – kW (Btu/min)	3918	(222793)	3918	(222793)	3504	(199249)	3088	(175587)
Heat rejection to aftercooler – kW (Btu/min)	448	(25500)	448	(25500)	342	(19467)	293	(16677)
Heat rejection to atmosphere from engine – kW (Btu/min)	206	(11727)	206	(11727)	194	(11013)	189	(10734)
Heat rejection from alternator – kW (Btu/min)	167	(9480)	167	(9480)	153	(8724)	142	(8047)
Emissions (Nominal)								
NOx mg/Nm³ (g/hp-h)	2652.9	(5.67)	2652.9	(5.67)	2755.6	(5.73)	3020.7	(6.20)
CO mg/Nm³ (g/hp-h)	149.6	(0.36)	149.6	(0.36)	148.5	(0.37)	184.3	(0.43)
HC mg/Nm³ (g/hp-h)	17.4	(0.05)	17.4	(0.05)	15.0	(0.04)	19.1	(0.05)
PM mg/Nm³ (g/hp-h)	14.8	(0.04)	14.8	(0.04)	16.8	(0.05)	13.7	(0.03)
Emissions (Potential Site Variation)								
NOx mg/Nm³ (g/hp-h)	3183.5	(6.81)	3183.5	(6.81)	3306.7	(6.87)	3624.9	(7.44)
CO mg/Nm³ (g/hp-h)	269.2	(0.65)	269.2	(0.65)	267.3	(0.67)	331.8	(0.77)
HC mg/Nm³ (g/hp-h)	23.1	(0.06)	23.1	(0.06)	19.9	(0.06)	25.4	(0.07)
PM mg/Nm³ (g/hp-h)	20.7	(0.06)	20.7	(0.06)	23.5	(0.06)	19.1	(0.05)

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
8397 (330.6)	3244 (127.7)	3827 (150.7)	30 000 (66,200)

Note: *For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.*

Ratings Definitions

Standby
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Mission Critical
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime
Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Continuous
Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rated kW for 100% of the operating hours.

Applicable Codes and Standards
AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications
Tier III/Tier IV compliant per Uptime Institute requirements. ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates
Fuel rates are based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.)

www.cat.com/electricpower

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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

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4.e. Regulatory Requirements

The emergency diesel generator that will be installed has not been ordered at this time. The unit will be a new purchase and will meet the requirements of 40 CFR 63 Subpart ZZZZ (MACT ZZZZ) and 40 CFR 60 Subpart IIII (NSPS IIII) specified here.

40 CFR 63 Subpart ZZZZ (MACT ZZZZ)

Per 63.6590(C)(1), the unit is a new stationary RICE located at an area source and meets the requirements of MACT ZZZZ by meeting the requirements of NSPS IIII. No further requirements apply for the unit under MACT ZZZZ.

40 CFR 60 Subpart IIII (NSPS IIII)

The new emergency generator (Unit 14) has a displacement of 5.3 liters per cylinder, a maximum horsepower of 5,229.90, and is a Tier 2 certified engine. The unit meets the definition of emergency stationary ICE under §60.4211(f).

Per §60.4202 (b)(2), 2011 model year and later emergency stationary CI ICE, must certify emissions standards for new emergency nonroad CI engine to emission standards in 40 CFR §89.112 and 40 CFR §89.113. The engine has been certified to 40 CFR §89.112 and 40 CFR §89.113 as the engine is a Tier 2 certified engine.

The owner or operator is not required to submit an initial notification but since the engine does not meet the standards applicable to non-emergency engines, the owner and operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time (60.4214(b)).

4.f. Operational and Maintenance Strategy

The generators and boilers will be maintained and operated in accordance with manufacturer's specifications and the facility's standard operating procedures.

The new standby generator (Unit 14) will have the capability to detect faulty operations that would result in higher than normal emissions and alert the operator at the control panel, who would simply shut the unit down and service it.

The existing emergency generators (Units 12 and 13) are critical to the life safety of the occupants of the building when there is a loss of commercial power. In the event that a higher than normal emission rate is detected when the unit is providing backup power, an operator will be alerted at the control panel but the unit will continue to operate until commercial power is restored. Once commercial power is restored the unit will be pulled from service and repaired.

If an issue with the operation of one of the boilers (Units 1-11) is observed, the unit will be taken out of service and repaired.

4.g. Air Dispersion Modeling Ambient Impact Analysis

Note: Per email dated April 24, 2020, Regan Eyerman granted a waiver from modeling to SNL/NM personnel and the DOE for modification of this permit (see attached email). This is consistent with the Air Quality Program's Internal Combustion Engine Permitting Policy and the Air Dispersion Modeling Guidelines for Air Quality Permitting which generally exempt emergency generators from modeling requirements.

From: Eyerman, Regan V.
To: Avery, Penny; Stonesifer, Jeff W.
Cc: Tumpane, Kyle; Romero Kotovsky, Jane Catherine; Pope, Callan; Holloway, Carolyn E. (SFO)
Subject: RE: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting
Date: Friday, April 24, 2020 11:43:03 AM
Attachments: image001.jpg
image002.png
image004.jpg

Good morning Penny,

Based on this information the City of Albuquerque Air Quality Program is giving Sandia National Labs a waiver from modeling and from having to have a pre-application meeting for modifying this permit.

I hope you all have a great weekend!

Regan Eyerman, P.E.
senior environmental health scientist | environmental health department
o 505.767.5625
cabq.gov/environmentalhealth/

From: RPAVERY <rpavery@sandia.gov>
Sent: Thursday, April 23, 2020 17:25
To: Stonesifer, Jeff W. <JStonesifer@cabq.gov>
Cc: Eyerman, Regan V. <reyerman@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>; Romero Kotovsky, Jane Catherine <janrome@sandia.gov>; Pope, Callan <epope@sandia.gov>; Holloway, Carolyn E. (SFO) <carolyn.holloway@nnsa.doe.gov>
Subject: RE: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Jeff,

That's correct: the 1 proposed new emergency generator 2 existing generators are used to power the facility in the event of a loss of PNM power.

And the existing boilers produce comfort heat only.

Please feel free to contact me by email or at 273-1047 if you have any other questions.

Thanks!
Penny

From: Stonesifer, Jeff W. <JStonesifer@cabq.gov>
Sent: Thursday, April 23, 2020 4:55 PM
To: Avery, Penny <rpavery@sandia.gov>
Cc: Eyerman, Regan V. <reyerman@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>
Subject: [EXTERNAL] FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Penny,

Are the emergency generators only backing up PNM power (as opposed to solar or some other source)? Are the boilers used to produce comfort heat only?

Regards,
cid:image001.png@01D422A0.1517CCA0

JEFF STONESIFER
senior environmental health scientist | environmental health department
o 505.767.5624
m 505.250.2689
cabq.gov/environmentalhealth/

From: Eyerman, Regan V. <reyerman@cabq.gov>
Sent: Thursday, April 23, 2020 4:46 PM
To: Stonesifer, Jeff W. <JStonesifer@cabq.gov>; Tumpane, Kyle <ktumpane@cabq.gov>
Subject: FW: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Jeff and Kyle,

SNL wants to modify Permit #1820-M1-RV1 to add another emrgency generator. They want to waive the pre-application meeting on that particular project because the project won't require air dispersion modeling. Can you confirm that? Attached is the permit.

Thank you,

Regan

From: RPAVERY <rpavery@sandia.gov>
Sent: Thursday, April 23, 2020 14:42
To: Eyerman, Regan V. <reyerman@cabq.gov>
Cc: Pope, Callan <epope@sandia.gov>; Romero Kotovsky, Jane Catherine <janrome@sandia.gov>; Holloway, Carolyn E. (SFO) <carolyn.holloway@nnsa.doe.gov>
Subject: Application to modify Permit #1820-M1-RV1 - request to waive a pre-application meeting

Hi Regan,

Thank you for the email about a pre-application meeting for the Brayton Cycle Test Cell. We're working on that request and scheduling now.

In the meantime, we're also starting another application to add an emergency generator at the MESA facility.

This means we're going to be modifying Construction Permit #1820-M1-RV1. This modification should be very straightforward. Since emergency generators are generally exempt from dispersion modeling requirements and we're familiar with the permitting process including timelines, fees, and public notice, I'm thinking we won't need to schedule a pre-application meeting.

So on behalf of Carolyn Holloway (DOE/NNSA/SFO) I would like to request that the Air Quality Program waive the requirement for a pre-application meeting for the modification of Construction Permit 1820-M1-RV1.

When you can, please provide a current list of emails of the neighborhood associations and coalitions within 0.5 miles of the KAFB fenceline for us to notify prior to our application submittal.

Also, please let me know if there's a change to your process for us to pick up the public notice sign.

Thanks!
Penny

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SANDIA NATIONAL LABORATORIES
NTESS, LLC for the US DEPARTMENT OF ENERGY
Albuquerque, New Mexico 87185-5800
ADVANCED FUNDS ACCOUNT CONTRACT DE-NA0003525

US BANK NA
800 Nicollet Mall, BC-MN-H19U
Minneapolis, MN 55402 USA

Aug 6, 2020

No. **1459697**

VOID AFTER 180 DAYS

93-455/929

PAY Four Thousand Six Hundred Seventy-One Dollars And Zero Cents*****

PAY AMOUNT **$4,671.00**

TO THE ORDER OF **CITY OF ALBUQUERQUE**

ENVIRONMENTAL HEALTH DEPT
FINANCE SECTION
PO BOX 1293
ALBUQUERQUE,NM 87103-1293

NTESS, LLC

Valerie Peyton

⑈1459697⑈ ⑆092904554⑆ 150097136629⑈

SANDIA NATIONAL LABORATORIES
ORGANIZATION 10513
P.O. BOX 5800
ALBUQUERQUE, NEW MEXICO 87185-1385

CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPT
FINANCE SECTION
PO BOX 1293
ALBUQUERQUE, NM 87103-1293
UNITED STATES

RECEIVED
SEP 3 2020

SEE REVERSE SIDE FOR OPENING INSTRUCTIONS

MESA modification (2 hard copies + check)

Albuquerque Environmental Health Department
Air Quality Program
Attn: Israel Tavarez, P.E.
One Civic Plaza NW
3rd Floor, Suite 3023
Albuquerque, New Mexico 87103

Corporate Environmental Permits P/T: 218248/03.01.01.04.01
Please have tracking updates sent to: rpavery@sandia.gov