RECEIVED
MAR 31 2015
Air Quality Bureau

COPY

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT BOARD

MAR 2015
Received

IN THE MATTER OF THE PETITION FOR HEARING ON TITLE V AIR QUALITY PERMIT NO. P100-R2 FOR LOS ALAMOS NATIONAL LABORATORY

EIB 15-02 (A)

Tewa Women United,
Dr. Maureen Merritt, and
Concerned Citizens for Nuclear Safety,

Petitioners.

Introduction

Tewa Women United, Dr. Maureen Merritt and Concerned Citizens for Nuclear Safety (the "Petitioners") petition the New Mexico Environmental Improvement Board ("Board") for a hearing concerning the Title V Air Quality Permit No. P100-R2 issued by the New Mexico Environment Department ("the Department") to the U.S. Department of Energy ("DOE"), National Nuclear Security Administration and Los Alamos National Security, LLC ("Permittees") for Los Alamos National Laboratory ("LANL"). The Petitioners submit this petition under 20.1.2.200 NMAC.

The Petitioners certify that we have standing to submit this petition to the Board under the New Mexico Air Quality Control Act, Sections 74-2-7(H) NMSA 1978. Petitioners participated in the permitting action and are adversely affected by it. On January 18, 2015, Petitioners filed timely public comments in response to the Department's "Public Notice for Air Quality Operating Permit for Los Alamos National Laboratory of U.S. Department of Energy National Nuclear Security Administration." On February 2, 2015, Petitioners responded to the Department's January 26, 2015 response to our comments. On February 24, 2015, Petitioners participated in a teleconference with the Department and a representative of the Permittees. On February 26, 2015, Petitioners submitted additional comments to the Department.

We received the Department's "Notification of the Issuance of Title V Air Quality Permit No. P100-R2 for Los Alamos National Laboratory" electronically on March 2, 2015.

Petitioners will deliver a copy of this petition to the Department. 20.2.70.403.A NMAC.

The Petitioners

Tewa Women United is a collective intertribal women's voice in the Tewa homelands of Northern New Mexico. The name Tewa Women United comes from the Tewa words *wi don gi mu,* which translated to "we are one."

TWU began in 1989 as a support group for women concerned with the traumatic effects of colonization leading to issues including alcoholism, suicide, terricide, environmental violence and domestic and sexual violence. In a safe space women created, transformed and empowered one another through critical analysis and the embracing and re-affirming of our cultural identity.

In 2001 TWU transitioned from an informal, all volunteer group to a formal 501(c)(3) non-profit organization. TWU was incorporated for educational, social and benevolent purposes, specifically for ending all forms of violence against Native women and girls, Mother Earth and to promote peace in New Mexico.

Maureen Merritt, DO is a board certified Family Practice physician and Occupational Medicine practitioner with 30 years experience, a retired Chief Medical Officer and Lieutenant Commander with the United States Public Health Service and Indian Health Service, and a recipient of two different State Governors' Awards for public health initiatives.

Dr. Merritt is founder of the local group New Mexico Alliance of Nuclear Worker Advocacy. She also serves on the advisory board of Cold War Patriots ("CWP"), a 501(c)(3) non-profit organization with over 20,000 members nationwide. CWP is dedicated to honoring and helping former uranium miners, millers, ore haulers and nuclear workers with health and safety issues related work under the DOE, Department of Labor and Department of Justice.

Dr. Merritt also created the New Mexico State Office of Nuclear Worker Advocacy, which is the first in the nation. In addition, she assists individual workers with difficult claims under the Energy Employees Occupational Illness Compensation Program Act. She speaks at town hall meetings nationwide on these and other nuclear industry issues.

Concerned Citizens for Nuclear Safety ("CCNS") formed in 1988 to address community concerns about the proposed transportation of nuclear waste from LANL to the Waste Isolation Pilot Plant ("WIPP") on St. Francis Drive in Santa Fe. CCNS is a 501(c)(3) non-profit organization, based in Santa Fe, New Mexico. *Our mission is to protect all living beings and the environment from radioactive and other hazardous materials now and in the future.*

For over 27 years, CCNS has actively participated in state and federal administrative proceedings about LANL. The proceedings have concerned air emissions, surface water discharges, ground water protection, and hazardous waste disposal storage and disposal.

In 2010, CCNS participated in the Department's public hearings about the LANL and WIPP hazardous waste permits. We raised public concerns about waste characterization, emergency preparedness and response, protection of human health and the environment, and protection of surface and ground water, among others. The facilities, along with the regulators, did not take many of our concerns as seriously as we did. Now, because of mis-characterization of the waste at LANL and acceptance of that waste at WIPP (some of the issues raised by CCNS in the administrative processes), in February 2014 radionuclides and hazardous chemicals exploded from the underground mine. The WIPP waste disposal site is closed, and remains closed with a possible re-opening date of 2018 at a cost to the taxpayers of at least $1 billion. We take our community participation in public processes seriously.

Previous Clean Air Act Appeals to the Board

In 2005, Tewa Women United and CCNS came before the Board to successfully appeal two Clean Air Act permits which allowed for the open burning and open detonation of hazardous waste at LANL. At the beginning of the Board's December 2005 public hearing, the Permittees withdrew their application. *See* Statement of Basis – Narrative Title V Permit, Section 5.0 History, Permit Nos. 2195J-R1 and 2195K-R1, p. 6.

Applicable Title V and Prevention of Significant Deterioration Requirements

The Department describes the applicable Title V and Prevention of Significant Deterioration ("PSD") permits as:

> **Title V Operating Permits** (under the Title V program) are required for major sources that have a potential to emit more than 100 tons per year for criteria pollutants, or for landfills greater than 2.5 million cubic meters (2.5 million-mg). In addition, TV major sources also include facilities that have the potential to emit greater than ten tons per year of a single Hazardous Air Pollutant, or 25 tons per year of any combination of Hazardous Air Pollutants (HAP). These facilities are subject to and the associated operating permits are issued pursuant to the New Mexico Administrative Code (NMAC) regulation 20.2.70 NMAC.
>
> "Permit Programs Overview," accessed March 30, 2015, http://www.nmenv.state.nm.us/aqb/permit/index.htm

Prevention of Significant Deterioration (PSD) Permits (subject to 20.2.74 NMAC) are required prior to construction or modification of sources subject to 20.2.74 NMAC. PSD permit applications may require pre-construction air monitoring before submittal of the application.

1. Any stationary source listed in table 1 (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any regulated new source review pollutant.
2. Any stationary source not listed in table 1 (20.2.74.501 NMAC) and which emits or has the potential to emit two hundred fifty (250) tons per year or more of any regulated new source review pollutant.

"Permit Programs Overview," accessed March 30, 2015, http://www.nmenv.state.nm.us/aqb/permit/index.htm

The Issues

We begin by acknowledging the sacred place where the emissions are occurring. The Permittees are emitting, and have emitted for over 73 years, chemicals, including volatile organic compounds ("VOCs"), radionuclides and particulates into the air of the Sacred Jemez Mountains of the Pueblo Peoples. In the early 1940s the U.S. Government told the Pueblo Peoples that the Pajarito Plateau (where LANL is situated) would be used for a short time and then it would be returned to them. This has not been the case. The Plateau has been used, and projected for use, by the U.S. Government and the nuclear weapons enterprise for at least the next 50 years. One hundred and twenty years is not a short amount of time.

A. Environmental Justice

The New Mexico Health Department defines environmental justice as:

> Environmental Justice - The right to a safe, healthy, productive, and sustainable environment for all, where "environment" is considered in its totality to include the ecological (biological), physical (natural and built), social, political, aesthetic, and economic environments. Environmental justice refers to the conditions in which such a right can be freely exercised, whereby individual and group identities, needs, and dignities are preserved, fulfilled, and respected in a way that provides for self-actualization and personal and community empowerment. This term acknowledges environmental "injustice" as the past and present state of affairs and expresses the socio-political objectives needed to address them.

Accessed March 31, 2015, http://nmhealth.org/publication/view/help/309/

The highest number of minority and low-income peoples of any of the DOE sites in the U.S reside within a 50-mile radius of LANL. *See* Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, Los Alamos, New Mexico, DOE/EIS-0380, May 2008, Fig. 4-33 on p. 474 and Fig. 4-34 on p. 476 at http://energy.gov/sites/prod/files/EIS-0380-FEIS-01-2008.pdf

The Peoples living downwind and downstream of LANL have borne the cumulative burden of over 70 years of emissions of chemicals, particulates and radionuclides into the air. The pollutants have been transported throughout the watershed – they have been deposited on the soil, been transported by water, and re-suspended in the winds.

The Environmental Protection Agency ("EPA") requires analysis of the cumulative effects to minority and low-income populations from polluting facilities. The Petitioners will also file an appeal with EPA as well.

B. Request for Additional Monitoring to Verify Whether Sources Are In Fact "Insignificant"

Petitioners requests additional monitoring of sources the Department has determined are "insignificant" in order to verify that they are, in fact, insignificant sources.

1. Request for Continuous Monitoring at the Soil Extraction System at Technical Area 54.

Because of our concerns about VOC emissions, including 1.1.1-trichloroethane ("TCA"), from the Soil Extraction System (SVE) at Technical Area 54 (TA-54), the permit now requires the Permittees to conduct monitoring and calculate emissions. EPA has determined that TCA is a possible carcinogen. It does have liver and kidney toxicity that can lead to organ failure via acute or chronic exposure over time. *See* Petitioners' February 2, 2015 comments to the Department, pp. 3-6.

The Department previously determined that these SVE emissions were "insignificant." The Petitioners raised concerns and provided additional information in our comments that the Permittees needed to demonstrate that the emissions are in fact "insignificant." As a result, the Department has required monitoring. Below is the permit language, which we believe serves as a model for our other requests below, with one requested addition:

A113 Other Provisions - (20.2.70.302.G.3 NMAC)

A. To verify Insignificant Activity 1.a and 1.b status of the TA-54 MDA L Soil Vapor Extraction System (SVE), the Permittees shall perform the following actions.
   (1) At least once every 3 months, the permittee shall calculate and record the tons of VOC and HAP emissions from both SVE units (east and west) using data collected from the SVE stack monitoring system and periodic sampling of the SVE stack gas. The record shall include both measured individual HAPs and total HAPs. These calculations and records shall begin upon startup of the SVE system and shall continue for a period of no less than 12-months to determine the actual ton per year emissions.
   (2) The permittee shall report the available tons of HAPs (individual and total) and total VOC emissions data in the Semi-Annual reports required in Condition A109.A.
   (3) Within 45 days of collecting 12 months of emissions data, the permittee shall submit the final ton per year VOC and HAPs emissions, the calculations, and the supporting data to AQB's Permit Program Manager that verifies the Insignificant Activity status of TA-54 MDA L SVE. This submittal shall also cite the Title V Insignificant activity number that applies to the SVE units. Within 30 days of the receipt of the submittal, the AQB will complete a review of the information and respond to the permittee in writing. Once the AQB provides a written response of this Insignificant source verification, the monitoring, calculations, and reporting of the SVE system emissions no longer applies.

Section A113 "Other Provisions" (20.2.70.302.G.3 NMAC).

In order to definitively verify the emissions, Petitioners believe that the monitoring must be continuous. We suggest that the word "continuous" be inserted in A.(1) above – "using data collected **continuously** from the SVE stack monitoring system and **continuous** sampling of the SVE stack gas."

2. Request for Activated Carbon Filtration on the SVE at TA-54.

The Permittees conducted a SVE pilot test in 2006 at this location. At that time an activated carbon filter was installed to capture the emissions. We respectfully request that the permit be modified to require activated carbon filtration of the emissions. *See* Petitioners' February 2, 2015 comments, pp. 3 – 6.

3. Request for Continuous Monitoring of Previously Permitted Beryllium Facilities and/or Beryllium Operations Deemed "Insignificant" Sources.

Petitioners are concerned that all beryllium sources are not being monitored. The permit requires monitoring at only four sites. For people who are sensitive to beryllium, one exposure can lead them onto the path of contracting chronic beryllium disease, or berylliosis. We are concerned that beryllium is leaving LANL and exposing the public.

Dr. Merritt summarizes her comments about beryllium (Be) exposure here. *See also* Petitioners' January 18, 2015 comments, pp. 5 – 7, and February 2, 2015 comments, pp. 6 - 7.

Beryllium (Be) exposure IS a serious occupational and public health issue. For example, an initial health screening in 1998 by the DOE of 23,000 former workers for Be has revealed an incidence of 3-4% beryllium sensitivity (BeS), and about 1% incidence of chronic beryllium disease (CBD) <u>at the time</u> of screening. Time exposed, route (inhaled vs. skin) and intensity of exposure are just part of the risk picture. There is a genetic component that can increase likelihood of contracting berylliosis, a chronic and progressive, irreversible respiratory illness that can lead to cancer and death.

An additional example, a Be+ machinist has a much higher incidence of conversion annually from BeS to CBD (30% or>). For scientists and engineers and the like, the incidence of conversion is about 10%.

From current scientific research it is learned that anyone who is sensitized (BeS) will on average convert to CBD at a rate of about 6-8% a year. There are some who do not go on to succumb to CBD, but many do.

Once a worker tests positive by blood beryllium lymphocyte proliferation test (BeLPT), then medical centers such as National Jewish Medical Center in Denver (nationally recognized leaders on Be disease), who partners with DOE and the Department of Labor (DOL), will use their clinical protocols on Beryllium to do more invasive testing, such as CT Scans, bronchoscopy, and/or lung lavage and biopsy, to look for classic pulmonary signs of CBD.

Monitoring is typically done about every two years, more frequently once a person acquires the disease. It is not a benign process and in fact, is often deadly.

Another side note: Of 16 nuclear weapons facilities around the country listed on DOE's web site that are part of the free Beryllium worker screening program since 1998 to present, LANL was not among them. LANL did not begin routine Be screening for their workers until 2000.

The old 1999 Occupational Safety and Health Administration ("OSHA") standards for "acceptable" Be exposure in the workplace was a permissible exposure limits ("PEL") no greater than 2 mcg/m3 (micrograms per cubic meter) as a time weighted average ("TWA") over an 8 hour period. The EPA regulations limit exposure to no greater than 0.01 mcg/m3 released into the air over a 30-day period (a miniscule amount). The ACGIH (Industrial Hygienists Association) recommends no more than 0.02 mcg/m3 per 8 hour TWA. That is two orders of magnitude smaller than OSHA's PEL.

In light of the efforts of OSHA to revise the standards downward to those recommended by the ACGIH, we find the permit limits for beryllium to be excessive and increases the health risks to the public. Permit Table 702.A allows emissions of beryllium particulate matter - and are in units of grams per hour or 24 hour -- which are not in the same units as the OSHA and EPA standards - causing confusion for the public.

Further, the permitted Beryllium Technology Facility at TA-3-141 is allowed to use 10,000 pounds of beryllium per calendar year and process 1,000 pounds per day. *See* A707C "Other - Beryllium Activities - Recordkeeping Requirements. Again, this amount of beryllium in one place is excessive and increases the public health risks.

The National Jewish Medical Center of Denver, as well as other medical experts, acknowledge there IS NO safe level of Be exposure. *See,* http://www.atsdr.cdc.gov for toxfacts on Beryllium. Also in the past year or so, the National Institute for Occupational Safety and Health (NIOSH) has only recently begun publishing newsletters on the topic.

General awareness of Be causing some health problems has been known for decades. But refined knowledge of the beryllium exposure/disease process is not that old and is evolving; only in the last ~ 10 years has it been on the federal government's front burner. This includes DOE.

Monitoring of all facilities that have used beryllium must be a requirement of the permit. We respectfully request that Section A700 "Regulated Sources - Beryllium Activities" including **continuous** monitoring requirements similar to that required for the TA-54 SVE in order to verify Insignificant Activity 1.a and 1.b status.

The Department has determined that some of the beryllium operations listed below are Insignificant. Because of the danger of exposure, we question whether the beryllium has been cleaned up.

The beryllium facilities requiring monitoring are included in the permit action history (in descending chronological order, showing NSR and TV). Unfortunately, it is not clear whether the list covers those facilities permitted under the Title V permit (TA-3-66

(Sigma Facility), TA-3-141 (Beryllium Technology Facility), TA-35-213 (Target Fabrication Facility) and TA-55-PF4 (Plutonium Facility).

Permit No.	Issue Date	Action Type	Description of Action (Changes)
P100M2	7/16/07	Adm. Amend-ment	Retired Beryllium operations at the Chemistry and Metallurgy Research Facility at TA-3-29 [Petitioners question whether the beryllium has been cleaned up.]
2195Q	1/30/07	NPR	NPR for the construction and operation of two micro electric discharge machines used to create small holes in beryllium gaskets at LANL, TA-39-89. This application was submitted as a follow up to the Department's June 22, 2005 determination (See 2195-O) that the micro electric discharge machines required a permit.
1081-M1-R6	5/12/06	Technical Rev	Replaced permitted vacuum furnace (1081M1R3) with a CM Model 1712 electric furnace. Modifies 1081-M1.
2195O	6/22/05	Denial of NPR - Closed	The proposed research activity will use Electric Discharge Machines (EDM) to cause a static discharge and form a 50-μm-diameter hole in a beryllium gasket submerged in dielectric fluid. The Micro EDM device meets the definition of a "Machine Shop" found at 40 CFR § 61.31(d) and therefore the proposed research activity is subject to 40 CFR Part 60, Subpart C, National Emission Standard (NESHAP) for Beryllium. Therefore, a construction permit is required. [Petitioners question whether the beryllium has been cleaned up.]
635-R1	11/25/02	Admin Rev - Closed	Surrendered Air Quality Permit 635 for the facility. Request received on Oct. 25, 2002. The final beryllium activities were conducted in the facility in Jan. 2001; thus the machine shop will be decommissioned. No further beryllium activities will occur at the facility and the permit is no longer

Permit No.	Issue Date	Action Type	Description of Action (Changes)
			needed. [Petitioners question whether the beryllium has been cleaned up.]
1081-M1-R3	2/11/00	Technical Rev	Revision 1) limited Beryllium emissions based to throughput instead of cutting / machining time; 2) replaced the one hour emission limit with a 24 hour emission limit from 40 CFR 61, subpart C, section 61.32, i.e., 10 grams of Be per 24 hours; and 3) added a vacuum induction melt furnace operation for melting down classified shapes of machined Beryllium components. Supersedes many portions of 1081-M1 and 1081-M1-R1. [Petitioners question whether the beryllium has been cleaned up.]
634-M2	10/30/98	Modification	Modified permit for Be machining and foundry operations. Established maximum annual throughput of 10,000 lbs Be, facility-wide 24 hr and annual Be emission limits, Be Control requirements, and continuous stack monitoring for Be. Application received on September 23, 1997. This permit supersedes all portions of Permit 634-M1. [Petitioners question whether the beryllium has been cleaned up.]
1081-M1-R1	3/11/98	Revision	Required that emissions generated from weld cutting, dressing, and metallography operation be routed through H[E]PA filtration having 99.95% control efficiencies and specified the testing requirements based on accessibility to the HEPA filters. [Petitioners question whether the beryllium has been cleaned up.]
1081-M1	7/1/94	Modification	Allowed for the use of lubricant baths instead of kerosene baths in the cutting and grinding operations. The original permit only allowed for grinding to eliminate rough edges. Cutting will produce less fine particles, and therefore is both cleaner and easier to control. Supersedes all portions of 1081, except the portion requiring compliance testing. [Petitioners question whether the beryllium has been cleaned up.]
1081	11/25/92	New	Authorized beryllium machining operation in TA-

		NSR	55, Building 4.
741	4/26/89	New NSR	Permit to construct a beryllium processing facility within TA 3-35. Closed with 741-R1. [Petitioners question whether the beryllium has been cleaned up.]

Permit No.	Issue Date	Action Type	Description of Action (Changes)
634-M1	9/8/87	Modification	Maximum process rate is limited to 2.0 pph of beryllium and not to exceed the estimated emission rate specified in section 5 of the permit application. Supersedes permit 634. [Petitioners question whether the beryllium has been cleaned up.]
636	3/19/86	New NSR - Closed	Construction and operation of a beryllium machine shop in TA-3, building 102. LANL surrendered permit 636 on Feb. 20, 2004. Final beryllium activities were conducted at the facility in CY 2000.
635	3/19/86	New NSR - Closed	Modification of beryllium machine shop in TA-3, building 39. Closed with 635-R1.
634	3/19/86	New NSR	Construction and operation of a beryllium machine shop in TA-3, building 141.
632	12/26/85	New NSR	Construction and operation of a beryllium machine shop in TA-35, building 213.

Statement of Basis – Narrative, Title V Permit, Section 5 "History," pp. 3 – 9. An analysis of what facilities are already permitted would have to be done to pinpoint the facilities/sites that would require monitoring.

4. Request for Continuous Monitoring of Emissions from the Solar Evaporative Tanks at TA-52 and Mechanical Evaporative System at TA-50.

Similarly, emissions from the Solar Evaporative Tanks (SET) at TA-52 and the Mechanical Evaporative System (MES) at TA-50 have been determined by the Department to be "insignificant."

On September 20, 2010, the Department determined that no permit was required ("NPR") for the MES, or TA-50 Thermal Evaporation Unit. Permit No. 2195U. Id., p. 4.

The MES is described in an October 16, 2006 Administrative Review - NOE of Permit No. 2195R-27 as: "Added six, fifty thousand gallon wastewater storage tanks. These tanks store wastewater contaminated with radionuclides and potentially volatile organic compounds prior to treatment by the existing wastewater facility. Request received on Aug. 31, 2006."

On June 20, 2014 the Department determined NPR for the TA-52 SET. Permit No. 2195X. Id., p. 4.

Similar to the requirements for monitoring the SVE, Petitioners respectfully request that **continuous** monitoring of emissions from the MES and the SET be permit requirements in order to verify that the emissions are, in fact, Insignificant Activity under 1.a and 1.b.

5. Request that Permittees be Required to Provide Petitioners with Reports to the Department.

Petitioners respectfully request that the Permittees provide the Petitioners with electronic copies of all reports submitted to the Department under the proposed continuous monitoring provisions. Thank you.

Respectfully submitted for the Petitioners by:

I affirm and attest to the truth of the information contained herein.

/s/

Kathy Sanchez

Kathy Sanchez, Environmental Health and Justice Program Manager and
Gathering for Mother Earth
Tewa Women United
P. O. Box 397
Santa Cruz, NM 87567
(505) 747-3259
Kathy@tewawomenunited.org

Dr. Maureen Merritt
1012 Summerlin Falls Court
Wilmington, NC 28412
abovepar33@gmail.com

Joni Arends, Executive Director
Concerned Citizens for Nuclear Safety
P. O. Box 31147
Santa Fe, NM 87594-1147
(505) 986-1973
jarends@nuclearactive.org