

Community Services Department  
Planning and Building  
APPEAL TO BOARD OF COUNTY  
COMMISSIONERS (BCC)  
APPLICATION



Community Services Department  
Planning and Building  
1001 E. Ninth St., Bldg. A  
Reno, NV 89512-2845

Telephone: 775.328.6100

## Washoe County Appeal of Decision to Board of County Commissioners

Your entire application is a public record. If you have a concern about releasing personal information please contact Planning and Building staff at 775.328.6100.

### Appeal of Decision by (Check one)

**Note:** Appeals to the Washoe County Board of County Commissioners are governed by WCC Section 110.912.20.

Planning Commission  Board of Adjustment

Hearing Examiner  Other Deciding Body (specify) \_\_\_\_\_

### Appeal Date Information

**Note:** This appeal must be delivered in writing to the offices of the Planning and Building Division (address is on the cover sheet) within 10 calendar days from the date that the decision being appealed is filed with the Commission or Board Secretary (or Director) and mailed to the original applicant.

**Note:** The appeal must be accompanied by the appropriate appeal fee (see attached Master Fee Schedule).

Date of this appeal: December 1, 2025

Date of action by County: November 20, 2025

Date Decision filed with Secretary: November 21, 2025

### Appellant Information

Name: Burning Man Project

Phone: ( ) -

Address: 1

Fax:

City: .

State: .

Zip: .

Cell: .

Describe your basis as a person aggrieved by the decision:

Please see Section II of the attached letter, which sets forth the basis on which Burning Man Project is aggrieved by the decision.

### Appealed Decision Information

Application Number: WSUP25-0018

Project Name: Iveson Ranch

State the specific action(s) and related finding(s) you are appealing:

Burning Man Project appeals the entirety of Washoe County Planning Commission's approval of WSUP-25-0018 with conditions as amended by staff as to the special use permit requests for General Industrial - Heavy, High Technology Industrial and Private Airstrip.

**Appealed Decision Information (continued)**

Describe why the decision should or should not have been made:

Please see attached letter.

Cite the specific outcome you are requesting with this appeal:

As provided in the attached letter, Burning Man Project requests that the Washoe County Board of County Commissioners modify the Planning Commission's decision and instead, approve with modified conditions as set forth in Section V. of the attached letter.

Did you speak at the public hearing when this item was considered?

Yes  
 No

Did you submit written comments prior to the action on the item being appealed?

Yes  
 No

**Appellant Signature**

Printed Name: **Sev Carlson on behalf of Burning Man Project**

Signature:

A handwritten signature in blue ink, appearing to read "Sev Carlson" followed by "NSB 9373".

Date: **12/1/25**

Monday, December 1, 2025 at 2:28:07 PM Pacific Standard Time

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**Subject:** Re: WSUP25-0018 Appeal - Signing Authority  
**Date:** Monday, December 1, 2025 at 2:26:33 PM Pacific Standard Time  
**From:** Adam Belsky  
**To:** Marissa Fehrman  
**CC:** Sev Carlson, Angelica Posadas  
**Attachments:** image001.gif

Yes. Please sign on my behalf. Thank you!

On Mon, Dec 1, 2025 at 2:24 PM Marissa Fehrman <[MFEhrman@kcnvlaw.com](mailto:MFEhrman@kcnvlaw.com)> wrote:

Hi Adam -

Please let us know if we have your permission to sign the attached appeal form on behalf of Burning Man Project. We will, of course, attach this correspondence to the application. Thank you!

KAEMPFER

CROWELL

Marissa T. Fehrman  
Kaempfer Crowell  
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Las Vegas, NV 89135-2958  
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Catalyst for creative culture in the world

December 1, 2025

Chair Alexis Hill & Honorable Commissioners  
Board of County Commissioners of Washoe County  
1001 E. Ninth Street, Bldg. A  
Reno, Nevada 89512

RE: Appeal of WSUP25-0018 (Iveson Ranch)

Dear Chair Hill and Honorable Commissioners:

**I. INTRODUCTION**

Burning Man Project ("Burning Man") hereby submits an appeal, through this letter and Appeal Application form submitted concurrently herewith, of the Washoe County Planning Commission's approval of Application WSUP25-0018 (Iveson Ranch) as it relates to special use permits for General Industrial-Heavy (hazardous materials explosive testing and storage) and High Technology Industrial (drone research and testing and a private airstrip uses) within the High Desert planning area ("Application"). These proposed land uses have the potential to generate noise and other disruptions detectable at nearby properties, including Burning Man's sanctuary property at Fly Ranch and its operations center at Black Rock Station.

As the result of good faith discussions and collaboration between BRDR Properties, LLC ("the Applicant") and Burning Man to address these concerns, the Applicant agreed to a number of measures to mitigate the potential impact. These included two key conditions to limit the size and intensity of the hazardous materials explosive testing ("energetics testing"), which the Applicant stipulated be incorporated into the approval of WSUP25-0018:

- **Condition #1** - To limit energetics testing to no more than 12 lbs. of explosive and/or detonative material per test subject to Condition #2.
- **Condition #2** - To limit energetics test frequency to 5 tests per day no more than 375 tests per calendar year including:
  - up to 260 detonators
  - up to 40 1 to 5 pound charges
  - up to 40 5.1 to 12 pound charges
  - up to 40 hobby rocket motors

Despite the Applicant and Burning Man's joint support for these conditions, the Planning Commission declined to adopt them. The approved conditions include only a daily limit of five tests per day—an allowance that could permit more than 1,800 tests per year—and contains no restrictions on maximum charge weight.

Without these conditions, the record does not support the Planning Commission's determination that the requested special use permits satisfy *all* required findings as set forth in Washoe County Code ("WCC") Sections 110.810.30, Article 810, *Special Use Permits* and 110.810.42(d), *Hazardous Materials*. On the contrary, the record emphasizes the grave concern that the proposed hazardous materials explosive testing/storage, drone research testing and private airstrip use may very well be: (i) significantly detrimental to the public health, safety or welfare; (ii) injurious to the property or improvements of adjacent properties; and (iii) detrimental to the character of the surrounding area. See Section 110.810.30(d). Accordingly, Burning Man respectfully requests this Board modify the Planning Commission's approval of WSUP25-0018 to incorporate the two stipulated conditions, set forth above, in their entirety.

## II. **STANDING**

Burning Man is a California nonprofit public benefit corporation with its headquarters in San Francisco, California, and regional offices in Reno and Gerlach, Nevada. Since 1990, Burning Man and its predecessors have held the "Burning Man" arts and culture event (the "Event") primarily within the Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area ("Black Rock NCA") on an annual basis. The Event now draws nearly 80,000 people from around the world to the Black Rock Desert. Burning Man has established a substantial year-round presence in Washoe County to support operations for the Event and carry out its global non-profit mission. Burning Man employs more than 40 people in Washoe County on a year-round basis, and an additional 850 people to support Event operations during the months of April to October. The Event brings an estimated \$80 million in tourism revenue to Washoe County each year.

Burning Man owns a significant number of properties in the Gerlach area, including several of the private properties closest to the Applicant's property (Iveson Ranch): Fly Ranch, Black Rock Station and Dog Ranch. See Map of Burning Man Properties, attached hereto as Exhibit 1.

- **Fly Ranch** - Fly Ranch is a quiet sanctuary and a year-round home for art, ecology, wildlife, and community. Burning Man's programming on the property has a central focus on maintaining a calm, quiet, open space for hosting gatherings, supporting restoration work, and giving staff and volunteers a safe place to relax and work. Burning Man has invested significant resources into restoring, protecting and preserving the unique and serene environment at Fly Ranch. Worth noting, scientists have documented 144 plant, 15 mammal, 138 bird, and 12 reptile species

on the property. The world-renowned Fly Geyser is located approximately 5.8 miles from the Iveson Ranch property.

- **Black Rock Station** - Black Rock Station is located four miles from the proposed energetics testing area at Iveson Ranch, at 88 Jackson Lane. This 200-acre property serves as a seasonal storage and preparation facility for the Burning Man event. It includes employee housing for year-round and seasonal staff, auto and welding shops, outdoor storage, and many other uses allowed under a county-issued Specific Plan.
- **Dog Ranch** - Dog Ranch is an 80-acre property east of, and adjacent to, Black Rock Station, at 220 Jackson Lane. Dog Ranch is zoned General Rural. There are periods where staff members may stay on the property for long stretches of time.

As more fully discussed below, the drone and energetics testing uses - particularly the noise - will directly impact Burning Man's property interests and the use and enjoyment of these properties by Burning Man staff, volunteers and invitees to its properties.

Burning Man has worked collaboratively with the Applicant to identify special use permit conditions that would help address these concerns and solidify that the Applicant is committed to being a "good neighbor" and seeks to mitigate any negative impact its operation may have on surrounding property owners. Burning Man and the Applicant requested the incorporation of the two conditions set forth above at the November 20th Planning Commission Meeting, but the Planning Commission ultimately declined to incorporate these agreed-to conditions. For these reasons, Burning Man is an "aggrieved person" as defined in WCC § 110.912.20 and its submission of this appeal is proper.

### III. **STATEMENT OF FACTS**

The Applicant's property - Iveson Ranch - lies within the High Desert planning area, surrounded largely by public lands, private ranches, and wilderness areas with sensitive environmental resources. Nearby properties include Burning Man's Fly Ranch—an ecological sanctuary with unique geothermal features and diverse species as well as Black Rock Station, Burning Man's year-round operational base for staff and volunteers of the Burning Man event. The character of this region is defined by its rural desert environment, wildlife, and limited human activity.

The Applicant seeks Special Use Permits for a private airstrip, drone research and testing, and energetics testing and storage. These proposed land uses have the potential to generate high levels of noise and other disruptions detectable at nearby properties, including Fly Ranch and Black Rock Station.

Throughout the public hearing process, including the Applicant's November 13<sup>th</sup> presentation before the Gerlach Empire Citizen Advisory Board (the "CAB") and its November 20<sup>th</sup> presentation before the Planning Commission, the Applicant provided

specific information describing the anticipated scale and frequency of its energetics operations. Specifically, the Applicant represented that its energetics use of the property would involve in part:

- Static testing of charges no larger than 10 pounds.
- A typical frequency of no more than five tests per day and 360 tests per year, with an expected annual test volume of:
  - 250 detonators,
  - 36 tests of 1-5 lb. charges,
  - **36 tests of 5-10 lb. charges, and**
  - 36 hobby rocket motors.

See Applicant PowerPoint Presentation, attached hereto as Exhibit 2. These statements formed the basis of Burning Man, the public, the CAB, and the Planning Commission's understanding regarding the scope, scale and intensity of the proposed energetics use. The Staff Report's conditions of approval, however, did not reflect or incorporate these limitations.

Following collaborative discussions between Burning Man and the Applicant, the Applicant agreed to include several protocols into its operating plan to further mitigate potential impacts on Burning Man and nearby properties. The Applicant agreed to support additional conditions of approval to WSUP-25-0018 which limited: 1) the size and frequency of energetics testing; and 2) the frequency and timing of drone and other aircraft flights. At the November 20<sup>th</sup> Planning Commission meeting, Burning Man and the Applicant jointly requested the following conditions:

- **Condition #1** - Limit energetics testing to no more than 12 lbs. of explosive and/or detonative material per test subject to Condition 2.
- **Condition #2** - Limit energetics test frequency to 5 tests per day and no more than 375 tests per calendar year including:
  - up to 260 detonators
  - up to 40 1 to 5 pound charges
  - up to 40 5.1 to 12 pound charges
  - up to 40 hobby rocket motors

\*Total tests not to exceed 375 per year.

- **Condition #3** - Airplane and drone flights on Sundays shall not exceed five times per year, at the Applicant's discretion<sup>1</sup>
- **Condition #4** - No drone or energetics testing between sunset and sunrise except for nighttime line of sight drone testing if approved by the FAA.

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<sup>1</sup> Burning Man and Applicant had intended for this condition to include an exception for medical evacuation flights, however that exception was not included in the approved conditions. Burning Man still supports including this exception in Stipulated Condition #3.

These conditions effectively translated the Applicant's publicly-stated operational limits into clear, enforceable terms. In other words, it created a "ceiling" to the Applicant's energetic testing operation. These conditions further provided the guardrails necessary to ensure the Applicant would operate at the scale as described in the public record.

Despite the Applicant and Burning Man's joint support for these conditions, Washoe County Planning Staff expressed hesitation about limiting the size and frequency of energetics testing during the Planning Commission meeting. As a result, the Planning Commission approved the Application without adopting the critical conditions #1 and #2, which would have limited explosive size and annual test numbers. The approved conditions include only a daily limit of five tests per day—an allowance that could permit more than 1,800 tests per year—and contains no restrictions on maximum charge weight. By failing to approve each of these critical, agreed-to conditions, Burning Man considers WSUP25-0018 an "open" special use permit with little regulation and oversight.

#### **IV. ANALYSIS**

##### **A. The Size and Frequency Limitations on the Applicant's Energetics Testing through Stipulated Conditions #1 and #2 are Well Within the Board's Purview.**

The Stipulated Conditions are similar in nature to the type of conditions that Washoe County may impose on special use permit applications. Washoe County routinely imposes conditions on special use permits that limit the scale, scope and intensity of land use operations. Special use permits provide a method of reviewing proposed uses "which possess characteristics that require *special appraisal* in order to determine if the uses have the potential to adversely affect other land uses, transportation systems, or public facilities in the vicinity." WCC §110.810.00. This Board has both the authority and responsibility to limit the scale, scope and intensity of the Iveson Ranch operation. It is indisputable that hazardous materials and explosives have the potential to adversely impact Burning Man's property as well as several other nearby landowners, public land, visitors and wildlife.

Further, the Planning Commission may require conditions of approval necessary to eliminate or minimize to an acceptable level any potentially adverse effects of the use. Section 110.810.30 of the WCC lays out the general findings, all of which must be satisfied prior to approving a special use permit:

- **Consistency:** is the proposed use consistent with the action programs, policies, standards and maps of the Master Plan and the applicable area plan?
- **Improvements:** Have adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities been provided or existing?

- **Site Suitability:** Is the site physically suitable for the type of development and for the intensity of the development?
- **Issuance Not Detrimental:** Will issuance of the special use permit not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area?
- **Effect on a Military Installation:** Will issuance of the permit not have a detrimental effect on the location, purpose or mission of a military installation?

Even more, WCC imposes the same findings for special use permit applications concerning hazardous materials. See WCC 110.810.42(d)(1)-(5). Beyond that, it is worth acknowledging the County's statutory authority as it relates to hazardous materials. NRS 278.147 codifies Washoe County's responsibility to regulate land uses involving explosives or hazardous materials. Specifically, Washoe County must "[c]onsider **fully** the effect the facility will have on: (1) the health and safety of the residents of the city, county or region...." *Id.* NRS 278.147(5) explicitly requires the Planning Commission when *recommending approval of the special use permit*, to include "such terms and conditions for the **operation** of the facility as it deems necessary for the protection of the health and safety of the residents of the city, county or region...."

The legislative history behind NRS 278.147 further underscores the critical nature of the "special appraisal" required for use permits contemplating hazardous materials. NRS 278.147 was enacted as a response to two explosions at the Sierra Chemical Company's Kean Canyon explosives manufacturing plant on January 7, 1998 which killed four employees and injured six others. Just ten miles east of Reno, two blasts were detonated and an estimated 47,000 lbs. of explosive materials were consumed in these blasts.

The incident was investigated by Drennan A. Clark, Chairman of the Governor's Commission on Workplace Safety and Community Protection which issued several recommendations. These recommendations later became part of the legislation creating NRS 278.147. See Senate Government Affairs Committee Hearing May 3, 1993. General Clark explained that the proposed legislation would require "a facility which manufactures, uses, or stores explosives or highly hazardous materials to obtain a conditional use permit from the local government authority." By requiring the use permit, the planning authority was also required to hold a public hearing with notices provided to all within proximity to the facility. Most importantly, General Clark pointed out that "local governments would thereby be mandated to take the safety of surrounding areas into consideration...He indicated a public use permit would be necessary when such a facility was applying for a business license, a change order to the business license, or a building permit." *Id.*

When questioned by a senator about whether [NRS 278.147] "aims to protect safety without prohibiting these businesses," General Clark concurred, "**noting a concern expressed was that an involved local government might not know what**

**activities are being conducted at a particular site. He pointed out the use permit would give the local governments knowledge of site practices while allowing them to ensure safety of the surrounding community through regulation.” *Id.***

Burning Man requests that this Board exercise its authority under NRS 278.147 and adopt Stipulated Conditions #1 and #2 to ensure reasonable and ongoing regulation of the hazardous materials and explosives uses in WSUP25-0018. By placing defined limits on the size and frequency of explosives testing, the Stipulated Conditions provide the level of oversight and clarity the law envisions.

#### **B. The Stipulated Conditions are Reasonable and Enforceable**

The Stipulated Conditions reflect the operational parameters the Applicant has consistently described throughout the public review process, and the Applicant advised the Planning Commission that these limitations are reasonable, feasible, and aligned with its intended use of the property. These conditions fit squarely within the broader framework of conditions already recommended by County Staff and other agencies, several of which require comparable monitoring, record-keeping, and reporting, and can be enforced through the same mechanisms Staff has deemed adequate for other aspects of this project. The Stipulated Conditions translate the Applicant’s publicly stated comments into clear, enforceable terms that mitigate many of the potential impacts to neighboring properties.

Stipulated Conditions #1 and #2 simply seek to limit the amount of explosive material tested and the makeup of such testing to occur on-site. Washoe County has already proposed a condition requiring similar methods of enforcement. For example, Condition (j) from the *Truckee Meadows Fire Protection District* requires the following: “[r]ecords and record keeping of explosives and hazardous materials storage and use including proposed scheduling of energetics testing, weather/ wind criteria, misfire procedures, communications, exclusion zones, and public notification protocols shall be kept in accordance with Chapter 56 of the IFC. See p. 9 of *Conditions of Approval*. The same record-keeping and review could similarly ensure the Applicant’s compliance with the Stipulated Conditions.

Additionally, the Planning Commission approved Stipulated Conditions #3 and #4 which placed limitations on the frequency and timing of energetics testing. This is similar to Planning Staff’s Condition (O): “[t]here shall be no blasting or explosives during nighttime and crepuscular periods. Blasting and explosive testing may occur from 3 hours after 6:00 AM to 2 hours before 8:00 PM from May 1 through June 30 of each year to protect mule deer and antelope fawning. The blasting schedule shall occur no more than 50% of the weeks during the months of May and June.” See p. 3 of *Conditions of Approval*.

The Conditions of Approval also state that the “Washoe County Commission oversees many of the reviewing agencies/departments” listed. See p. 1 of *Conditions of Approval*. Since several other agencies imposing conditions on WSUP25-0018 already report to the Washoe County Commission, it appears enforcement mechanisms are already in place. Stipulated Conditions #1 and #2 are also similar to

Condition (a) from Washoe County Engineering and Capital Project, which requires "a condition response memorandum with each subsequent permit application." See p. 4 of Conditions of Approval.

A similar enforcement mechanism through record-keeping and reporting requirements is possible here. A detailed narrative provided by the Applicant describing how each condition was met is a simple way to monitor operations and enforce proposed conditions. That way, the onus is on the Applicant to show they have complied. Enforcement is more than reasonable here and would guarantee long-term regulation by Washoe County to ensure safety, security and most importantly, that Washoe County stays informed and involved with an explosive material testing operation within its jurisdiction.

Beyond the suitability of enforcement framework already in place for the other conditions recommended by Staff and other county agencies, it is unclear why the enforcement mechanisms needed for Stipulated Conditions #3 and #4 (which were incorporated) would differ from Conditions #1 and #2 (which were not incorporated). Neither Staff nor the Planning Commission distinguished why certain conditions were enforceable and Stipulated Conditions #1 and #2 were not. Based on the other conditions recommended from other county agencies, enforceability of Stipulated Conditions #1 and #2 is not unreasonable here. Moreover, conditions that establish a ceiling for hazardous materials use are precisely the type that the Legislature expected local governments to impose. See NRS 278.147.

**C. Without Stipulated Conditions #1 and #2, the Required Findings in Sections 110.810.30 and 110.810.42(d) are Not Satisfied**

As set forth above, the hearing body must determine that the Applicant satisfies all required findings prior to the approval of a special use permit, namely, that the use is not: (i) significantly detrimental to the public health, safety or welfare; (ii) injurious to the property or improvements of adjacent properties; or (iii) detrimental to the character of the surrounding area.

Limiting the size, timing and frequency of the Applicant's explosive material testing operation would ensure that the above findings are satisfied. These Stipulated Conditions do not impede the Applicant's planned business, operation or use of its land. Rather, the Stipulated Conditions mitigate the significant and serious concerns that would accompany an otherwise unchecked explosives testing operation near Burning Man's property - not to mention other private property, wildlife, and public lands. The Applicant's own willingness to collaborate with Burning Man in drafting these conditions indicates a shared purpose and understanding that additional parameters are justified when it comes to hazardous materials and explosive testing.

**V. CONCLUSION**

For the foregoing reasons, Burning Man respectfully requests that the Washoe Board County Commissioners modify the decision of the Planning Commission and incorporate the following conditions in their entirety:

- **Condition #1** - Limit energetics testing to no more than 12 lbs. of explosive and/or detonative material per test subject to Condition 2.
- **Condition #2** - Limit energetics test frequency to 5 tests per day and no more than 375 tests per calendar year including:
  - up to 260 detonators
  - up to 40 1 to 5 pound charges
  - up to 40 5.1 to 12 pound charges
  - up to 40 hobby rocket motors

\*Total tests not to exceed 375 per year.

The above conditions are critical to ensure the protection of the health and safety of the residents of the city, county and region.

Sincerely,

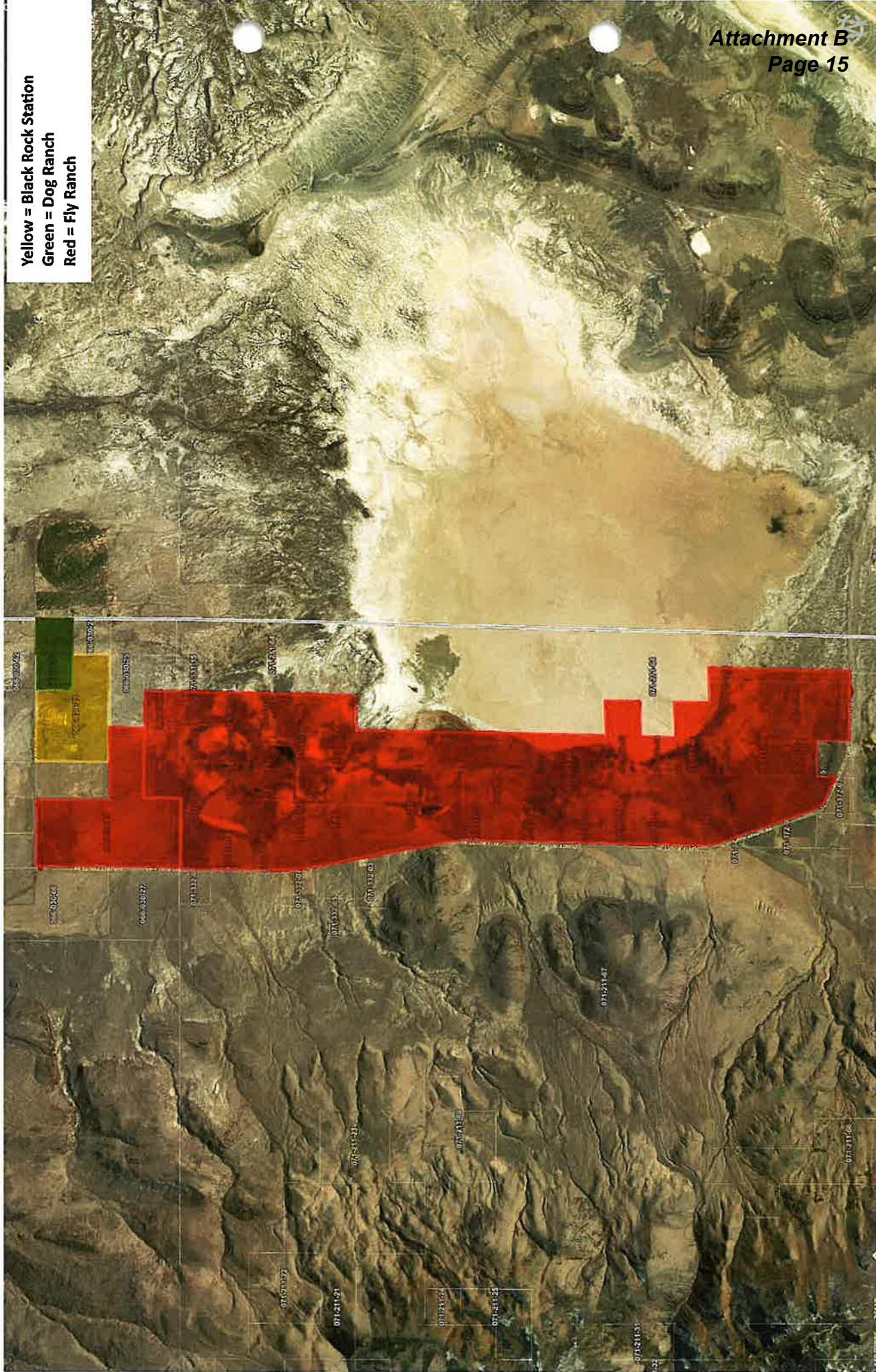
/s/ Adam Belsky  
General Counsel  
Burning Man Project

With a copy to Applicant via mail and email:

BRDR Properties, LLC, % G. Barton Mowry  
4785 Caughlin Parkway  
Reno, NV 89519

Catherine Reichenberg, Esq.  
[creichenberg@gundersonlaw.com](mailto:creichenberg@gundersonlaw.com)

# EXHIBIT 1



## EXHIBIT 2

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**Iveson Ranch  
Special Use Permit**

**Gerlach CAB  
13 November 2025**

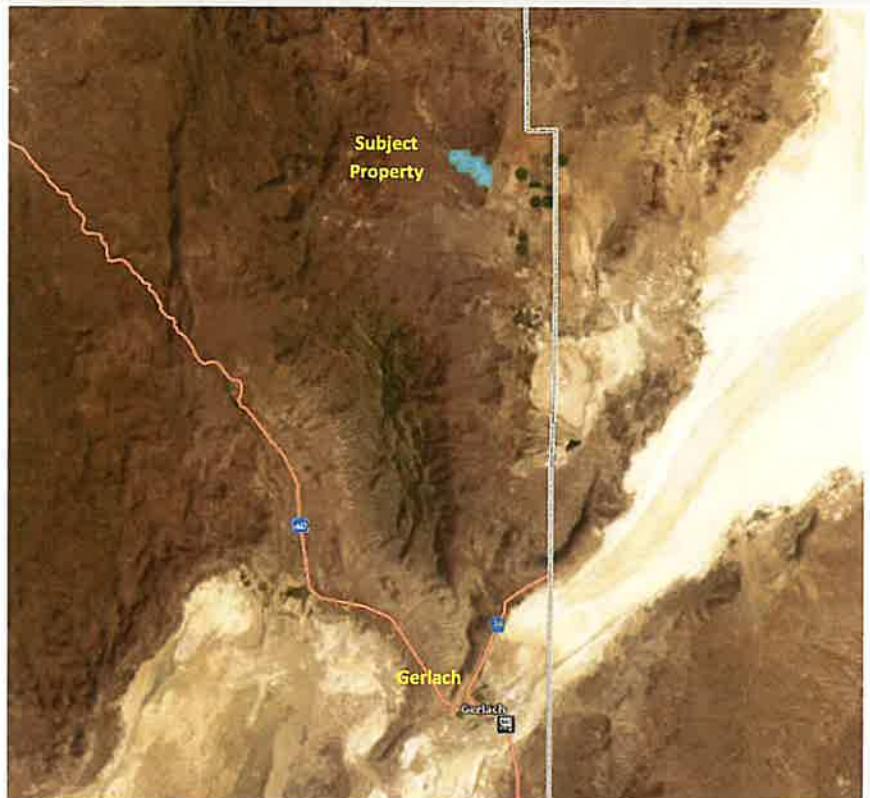
## Special Use Permit

- Covers three areas:
  - Runway
  - Outdoor storage
  - Energetics
- Requested variances:
  - Parking
  - Paving
  - Landscaping
  - Noise



## Site Location

- 2.4 miles to nearest inhabited non-Iveson building
- 5.8 miles to Fly Geyser
- 11 miles to Black Rock Playa
- 13.5 miles to Burning Man
- 20 miles to Gerlach



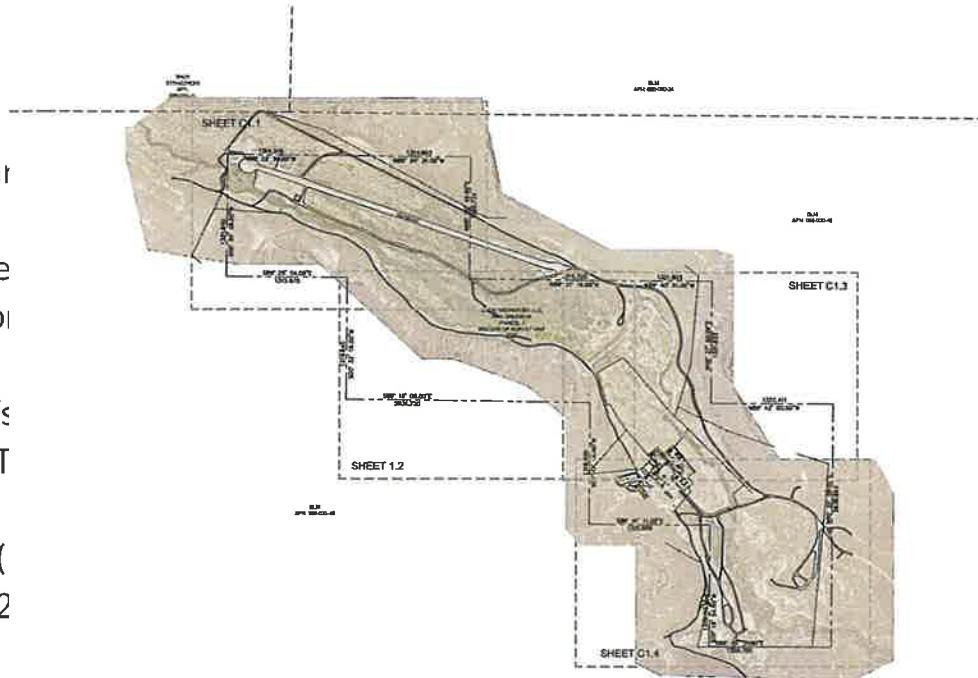
## Outdoor Storage

- SUP required by Washoe
- 20 and 40 foot containers
- Neatly arranged
- Out of sight of County 34



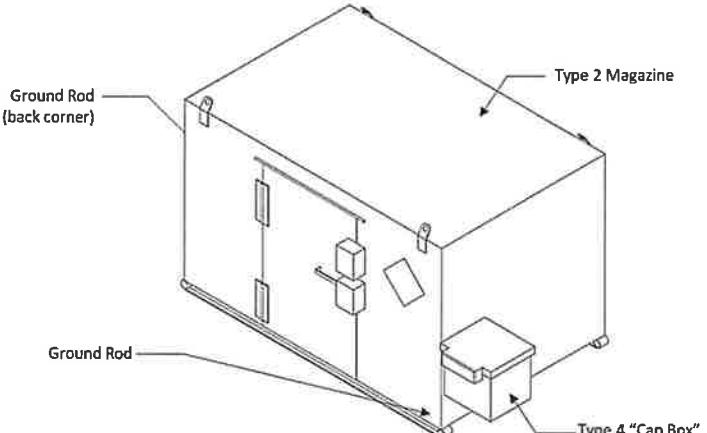
## Runway

- SUP required by Washoe to clarify existing runway status
- Will bring into code compliance
- Noise variance to account for property line with BLM
- Expecting fewer than 7 takeoffs/landings weekly - primarily on Tuesday, Wednesday, and Thursday
- 80% small piston prop aircraft (
- 20% small turboprop (PC12, C2

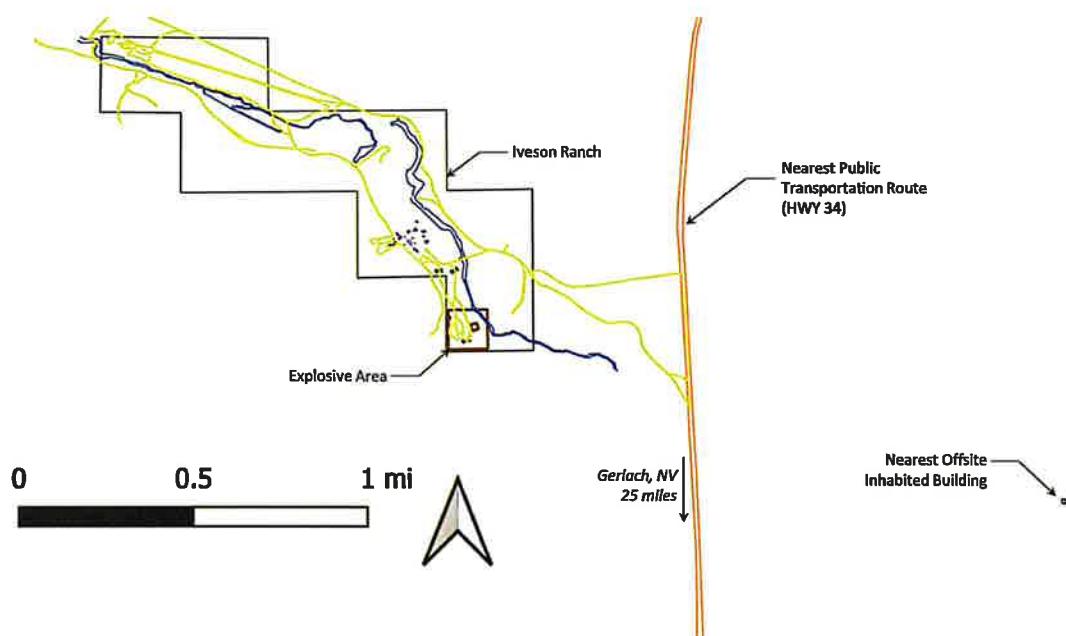


## Energetics - Overview

- Seeking to:
  - store **up to** 2000 pounds of energetic material in magazine
  - **static** testing of <10 pounds
- Testing known compounds for reliability and effectiveness
- **Not** testing new materials
- **Not** flying munitions on drones



## Energetics - Location



## Energetics – Location Aerial Map



## Energetics - Materials

TABLE 1: LIST OF ENERGETIC MATERIAL ON SITE

### List of Energetic Material

<i>CAS #</i>	<i>Explosive</i>	<i>Expected Applications</i>
121-82-4	RDX	Composition C-4, A5
118-96-7	TNT	Hexolite, Pentolite
78-11-5	PETN	Detasheet, Blasting Caps, Detonating Cord
2691-41-0	HMX	NONEL, PBX 9501
7790-98-9	AP	Hobby Rocket Motors

## Energetics - Frequency

**TABLE 6: TYPICAL ANNUAL TEST FREQUENCY**

Number of Tests per Day	5
Test Days per Week	4
Test Weeks per Year	18
Total # of Tests per Year:	360

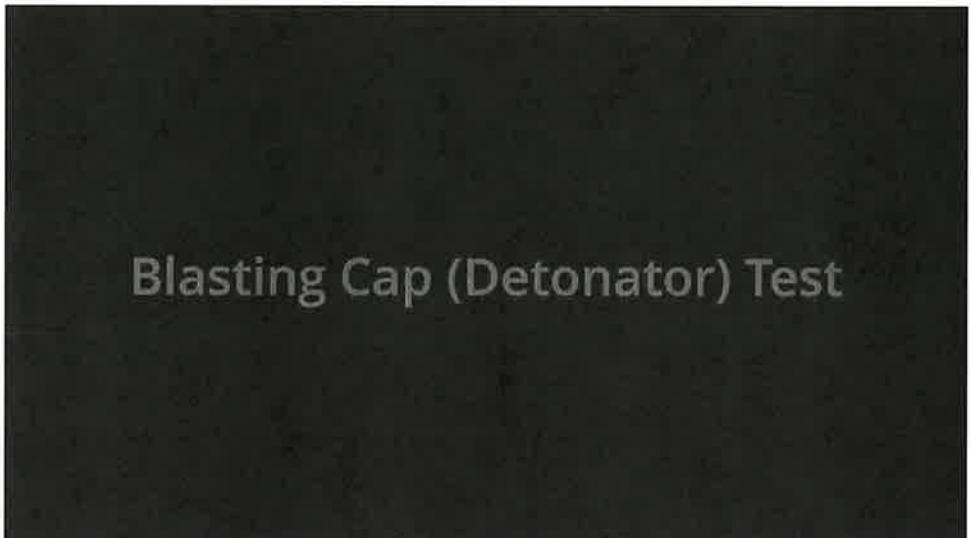
## Energetics - Type Distribution

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- 70% (250) Detonators
- 10% (36) 1-5 pound charges
- 10% (36) 5-10 pound charges
- 10% (36) Hobby Rocket Motors

## Energetics - Detonators

- 250 events will be detonator-only
- Smaller than a shotgun or firework
- Still requires approval by Washoe and ATF for storage and use



Blasting Cap (Detonator) Test

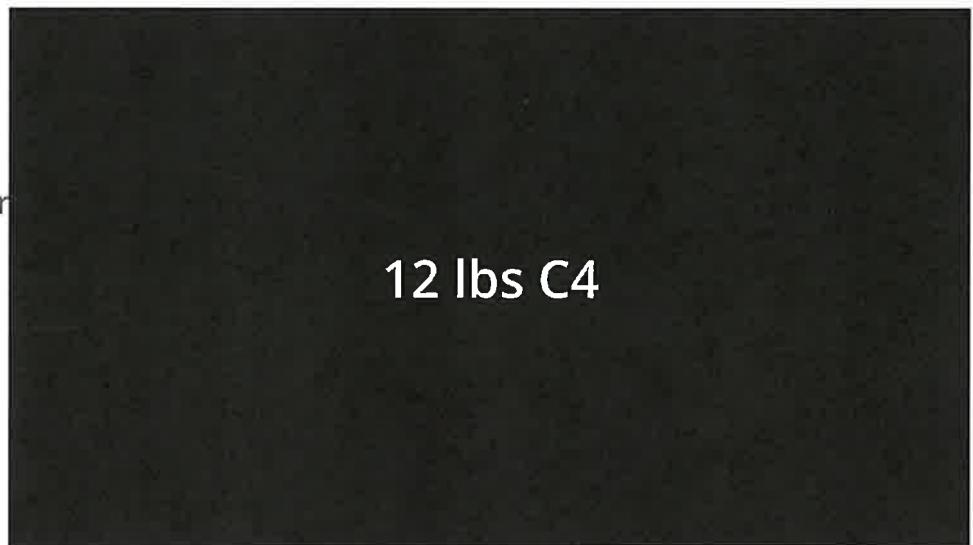
## Energetics - Hobby Rocket Motor

- 36 tests per year
- Static tests only
- Permitted on Black Rock  
Playa during Tripoli  
Events



## Energetics - 12 pound charge

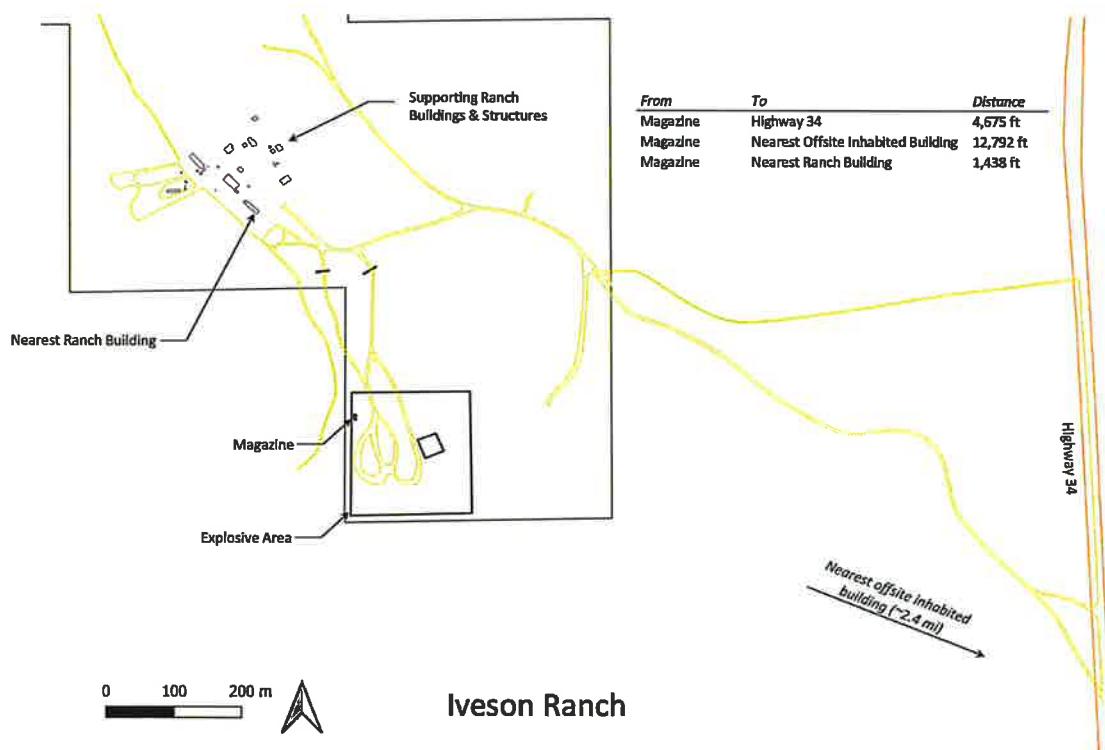
- Larger than anything we will use at Iveson
- Around 36 test events per year in the 5-10 lb range



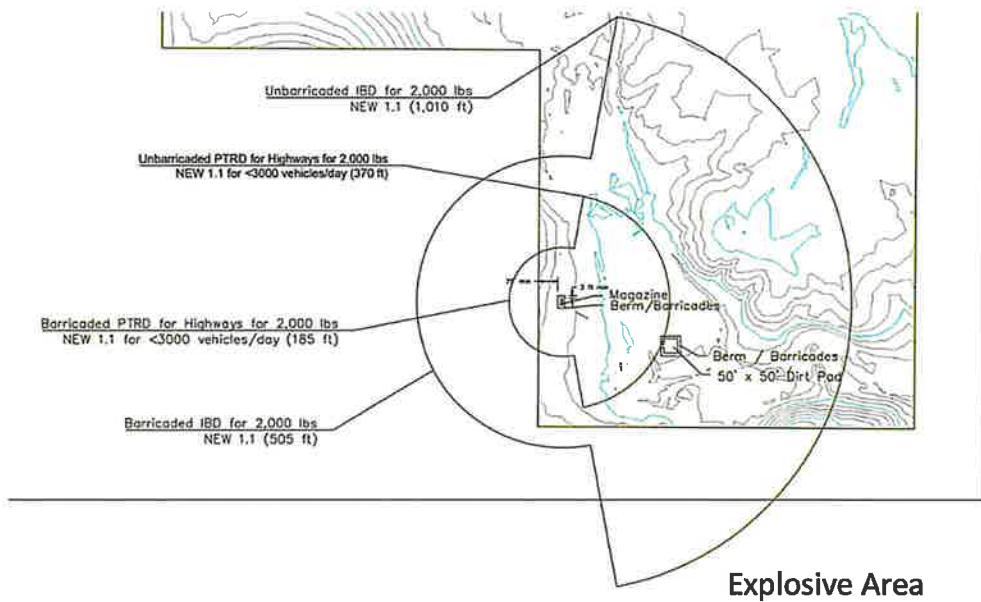
## Energetics - Safety

Exposure	K-Factor	Distance (ft) for 200 lbs	Distance (ft) for 10 lbs
Inhabited Building (IBD) (<100,000 lbs)	40	233.9	86.2
Public Traffic Route (PTRD) Distance (<100,000 lbs)	24	140.4	51.7
Absolute Safe Distance	328	1918.2	706.7

## Energetics – Safety Map of Iveson Ranch



## Energetics – Safety Map - Explosive Area



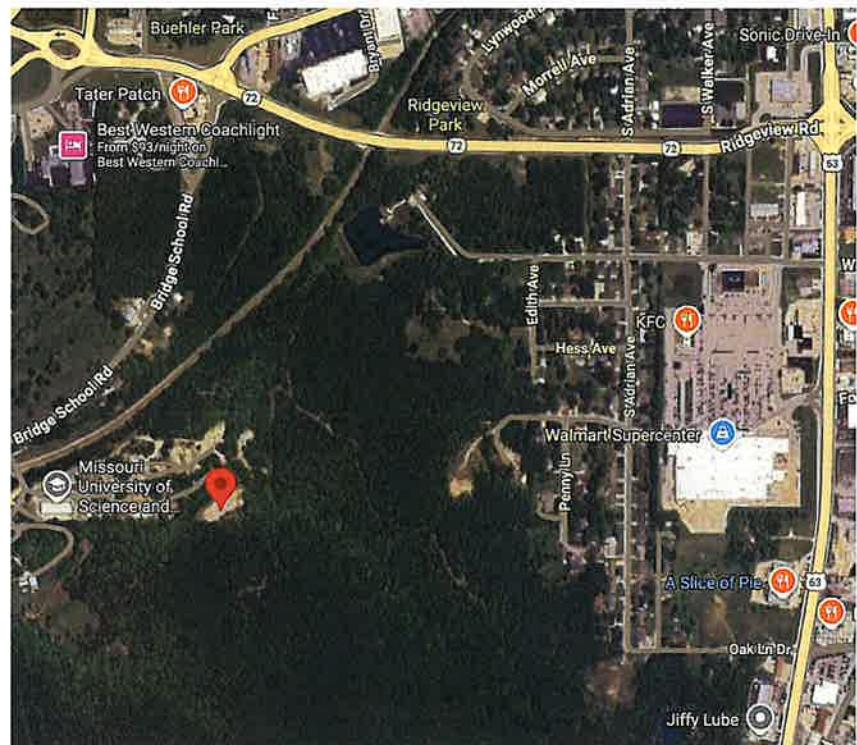
## Energetics - Noise

- Iveson's terrain naturally shields from noise propagation
- May faintly hear sounds if within 5 miles, outdoors, and no other sound around you. Ie, no wind, engines, birds, conversations, etc.
- Rocket motors and munitions similar noise signature to shotgun.



## Energetics - Noise Comparison

- Rolla, Missouri
- Missouri University of Science and Technology Experimental Mine Site
- Above and below ground testing
- Less than half a mile from Walmart, housing, hotels, restaurants
- No noise complaints with charges less than 7 pounds above ground or 100 pounds below ground



## Energetics - Pollution

TABLE 7: IVESON RANCH EMISSION RATES SHOWN AGAINST THRESHOLD LIMITS

Regulated Criteria Pollutant	Minor Source Potential to Emit (PTE) Threshold (tons/year)	Ivesone Potential to Emit (tons/year)
PM10	5	0.019
PM2.5	5	0.041
Carbon Monoxide (CO)	5	0.244
Volatile Organic Compounds	5	<i>Note 1</i>
Nitrous Oxides (NOx)	5	0.024
Sulfur Dioxide (SO2)	5	0.027
Lead (Pb)	0.3	0.00014
Hazardous Air Pollutants (HAP)	5 (major)	1.2

*Note 1: VOCs are included in HAP calculation*

## Energetics – Pollution Table

**TABLE 8: REQUIRED TESTS TO ACHIEVE FIVE TONS OF HAP OUTPUT**

<b>Tons of Criteria Pollutant / Yr</b>		
	<i>No. of Tests/Yr</i>	
	360	1503
PM10	0.018684	0.078004804
PM2.5	0.040695	0.16990029
Carbon Monoxide (CO)	0.243684	1.017380355
Nitrous Oxides (NOx)	0.023677	0.098850982
Sulfur Dioxide (SO2)	0.027105	0.113163475
Lead (Pb)	0.000145	0.000604777
Hazardous Air Pollutants (HAPs)	1.196937	4.997212151

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## Questions?

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