

Yucca Growth's Air Permit Application Is Incomplete

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Executive Summary

Yucca Growth's air permit is incomplete because:

1. The number of fuel cell units they propose **do not add up** to anything close to the amount of energy they claim will be generated. There is an error or omission in the application. There should be an explanation for how to get from the tested unit to manufactured unit counts and then to total energy produced.
2. The application does not claim any formaldehyde emissions even though Bloom fuel cells use a chemical process **known to emit formaldehyde**. If formaldehyde is below all thresholds this must, at a minimum, be explained.

Until these inconsistencies are resolved, the emissions figures in the application cannot be verified. Because the application is incomplete, NMED must **ask for an updated application** which fixes the inconsistency prior to holding the hearing for the air permit.

Details

The application is internally inconsistent. The test unit was not a full Bloom Energy Server. The cited test report (application PDF page 161, Montrose report Section 2.1) describes the test unit as a 65 kW unit. The Bloom Energy Server 6.5 specification sheet included in the same application states 325 kW nameplate capacity. The relationship between these two numbers, and how many 65 kW modules constitute one permitted Energy Server, is not explained anywhere in the application.

The tested unit was a 65 kW fuel cell **module**. One Bloom Energy Server contains approximately five such modules. So, based on the application's own figures, the following calculation reveals an irreconcilable inconsistency. At 65 kW per module and 5 modules per Energy Server, the fleet would require approximately 37,877 modules assembled into approximately 7,575 Bloom Energy Servers.

$$2,462,005 \text{ kW} \div 65 \text{ kW per module} = 37,877 \text{ modules}$$

$$37,877 \text{ modules} \div 5 \text{ modules per server} = 7,575 \text{ Energy Servers}$$

7,575 Energy Servers is **more than three times the 2,275 servers listed** in the application.

For a permit application of this scale and novelty, NMED should not be required to **infer basic facility parameters** from incomplete information. This inconsistency must be resolved before the public hearing, so that commenters and NMED reviewers can evaluate emissions claims against a **verified and internally consistent** facility description.

Regarding formaldehyde, the source test used EPA Method TO-15, which cannot detect formaldehyde. The correct method is TO-11A. The absence of formaldehyde from the results is therefore a consequence of using the **wrong analytical method**, not evidence that formaldehyde is absent. Because formaldehyde

is listed as a toxic air pollutant under 20.2.72.502 NMAC, its presence or absence must be established through appropriate methodology before NMED can determine whether a TAP ambient impact analysis is required.

Suggested Action

Require an update to the application that contains:

1. an explicit statement of how many modules per Energy Server, how many total modules in the fleet, and the relationship between the tested unit and the permitted units so that permitted emissions totals can be independently verified; and
2. a supplemental HAP analysis using TO-11A methodology for formaldehyde.