

Natasha Watson

Dear ADEQ Permitting Team,

I am submitting the following public comment regarding the Class I Air Quality Permit application for Aluminum Dynamics, Inc. (ADI), proposed for Benson, Arizona. I am deeply concerned about the environmental and public health implications of the facility's planned 90-foot-deep melting and casting pit, which reportedly involves chemical processes. This structure raises serious questions about both air emissions and potential groundwater contamination.

The permit application lacks sufficient detail regarding the melting/casting pit operations, including the use of fluxing agents, degassing chemicals, and other additives known to emit hazardous air pollutants such as hydrogen chloride (HCl), volatile organic compounds (VOCs), and fine particulate matter (PM_{2.5}). These emissions are subject to federal and state regulation and must be explicitly modeled and controlled.

This comment is submitted in response to the Class I Air Quality Permit application for Aluminum Dynamics. While ADEQ has stated that it will only consider air-related concerns under this permit, the following points are directly relevant to air emissions, air dispersion modeling, and regulatory compliance. Specific attention is given to emissions from the melting/casting pit, hazardous air pollutants, fugitive emissions from chemical handling, and the need for coordinated review with other ADEQ divisions where air quality intersects with water protection and emergency planning.

1. Air Emissions and Modeling Gaps: The melting/casting pit is likely to release hazardous air pollutants (HAPs), including hydrogen chloride (HCl), particulate matter (PM_{2.5}), and volatile organic compounds (VOCs), depending on the chemical fluxes and thermal processes involved. These emissions must be explicitly included in the facility's emissions inventory and dispersion modeling. I respectfully request that ADEQ:

Confirm whether the pit has been modeled as a discrete emissions source.

Require ADI to disclose the chemical composition and thermal processes associated with the pit.

Independently verify emissions estimates and modeling assumptions, especially for HCl and PM_{2.5}.

Given the proximity to residential areas and the San Pedro River watershed, robust emission controls and conservative modeling assumptions are essential.

2. Aquifer Protection Permit (APP) Status: Under A.R.S. § 49-241, any facility that discharges pollutants to land or groundwater, or uses pits or impoundments that could affect aquifer quality, is required to obtain an Aquifer Protection Permit (APP). To date, there is no public record indicating that ADI has submitted an APP application. I request that ADEQ:

Clarify whether an APP is required for the melting/casting pit and associated operations.

Disclose whether ADI has submitted an APP application, and if not, explain the rationale.

Delay final permitting until all applicable environmental permits—including APP—are reviewed concurrently.

Although ADEQ's Air Quality Division may not regulate groundwater directly, the agency must coordinate with its Water Quality Division to ensure that the facility's operations do not pose cross-media risks. The absence of an Aquifer Protection Permit (APP) raises serious concerns about unregulated discharges and the potential for air-to-water pollutant transfer. ADEQ should not issue an air permit in isolation when interconnected environmental impacts are evident.

3. Hazardous Materials Handling and Emergency Planning: If the melting/casting pit or other facility operations involve the use or storage of hazardous chemicals, ADEQ must ensure that ADI complies with all applicable federal and state safety regulations. Specifically:

Has ADEQ reviewed ADI's compliance with the Emergency Planning and Community Right-to-Know Act (EPCRA), including chemical inventory reporting and emergency notification requirements?

Has ADI submitted a Spill Prevention, Control, and Countermeasure (SPCC) plan or equivalent documentation for chemical containment and emergency response?

Will ADEQ require secondary containment, leak detection, and groundwater monitoring for any subsurface chemical storage or processing areas?

Given the depth and scale of the proposed pit, and the potential for chemical migration, these safeguards are essential to protect both public health and aquifer integrity.

4. Procedural Transparency and Public Accountability: I urge ADEQ to ensure that all relevant environmental permits are reviewed in an integrated and transparent manner. Specifically:

Provide a clear timeline and process for public engagement on any future APP or related water quality permits.

Require ADI to submit a comprehensive environmental impact summary that includes cumulative risks to air, water, and public health.

The proposed melting/casting pit is not a minor operational detail—it is a chemically active, deep subsurface structure with potential to affect both air and water quality. ADEQ must ensure that all regulatory safeguards are applied and that the public is fully informed and engaged throughout the permitting process. ADEQ has a statutory and ethical obligation to ensure that all air emissions are fully disclosed, modeled, and regulated. This includes emissions from the melting/casting pit, fugitive releases from chemical handling, and any operations that intersect with other environmental media. I urge ADEQ to revise the permit application, require additional documentation, and coordinate across divisions to protect public health and environmental integrity.

Thank you for your attention to these concerns and for your commitment to protecting Arizona's environment and communities.

Sincerely,

Natasha Watson
St. David, AZ 85630