



February 17, 2021

Mr. Wayne Richardson, Chair
Central Planning Board
Room 112 City Hall
Newark, NJ 07102
ehd@ci.newark.nj.us

cc: Mayor Ras J. Baraka
Newark City Council Members

Re: Aries Newark LLC Sewage Gasification Facility, 400 Doremus Avenue

Dear Mr. Richardson,

On behalf of the Ironbound Community Corporation (ICC), Earthjustice and the Vermont Law School Environmental Advocacy Clinic request that the Newark Central Planning Board withhold approval of the application for planning permission submitted by Aries Newark LLC for the proposed sewage gasification facility at 400 Doremus Avenue because Aries's application fails to address significant community and environmental concerns.

ICC serves the already overburdened environmental justice community of the Ironbound, where environmental problems that affect public health and quality of life will be further impacted if the Planning Board were to approve the proposed Aries facility. ICC and the Ironbound community have numerous questions and concerns about the proposed sewage facility which Aries must address before the Planning Board could consider approving the application.

Newark Environmental Justice and Cumulative Impacts Ordinance

The Environmental Justice form submitted by Aries pursuant to the City of Newark Environmental Justice and Cumulative Impacts Ordinance is incomplete because it does not include an environmental resources inventory and, as discussed below, it includes several assumptions that raise questions about the facility's actual community impacts and environmental benefits. The environmental resource inventory should be complete soon, and there is no reason to rush through an incomplete proposal now instead of waiting for Aries to submit a complete form. The Planning Board should wait until the environmental resource inventory is completed and require Aries to provide a more thorough analysis of community impacts.

Inconsistency with Doremus Avenue Redevelopment Plan

As proposed, Aries's sewage facility appears to be inconsistent with the "Forward Doremus Bound Redevelopment Plan" initiated by the City of Newark and Mayor Baraka last fall and set to be completed this spring. The Plan is driven by a need to rethink how the Port District operates because (1) frequent and increasing flooding is causing disruption, health risks, and financial losses; (2) pollution from trucks and other industrial sources is making people sick; (3) there is a need to invest in aging infrastructure – road networks, sewer, rail, and electric; (4) the encroachment of industrial uses into residential areas has made it critical to better manage the interaction of industrial and non-industrial uses; and (5) rapid change in maritime shipping coupled with rapid loss of industrial land near the port make it necessary to rethink land uses. Approving any new, large-scale industrial facilities in this study area, including this proposed sewage facility, may exacerbate these issues, be inconsistent with the goals of the Plan, and undermine the stakeholder process underway with the City of Newark and residents.

Wind Estimates & Community Impacts

Aries's conclusion that emissions from the project will not impact the community is based on a flawed assessment that the prevailing wind direction blows away from the Newark community and out toward the river (p 3). However, Aries uses meteorological data from the Newark Airport which is 3.5 miles away and does not represent the wind direction at the proposed facility location, which is adjacent to a body of water that can materially alter wind direction compared to the more inland Newark Airport. Further, this conclusion does not account for impacts to the sensitive receptors in the detained populations of the Delaney Hall Detention Facility ("Delany Hall") or Essex County Correctional Facility ("ECCF"), both of which are directly across the street from the proposed site and within the area identified on Aries's map with the strongest wind. Delaney Hall has a capacity of 1,200 persons and ECCF has an authorized capacity of 2,434 persons. Aries must assess the impacts of its facility on these detained and incarcerated people, who do not choose where they live, cannot choose to leave, and have no voice when it comes to the foundational question of where surrounding facilities are constructed. Aries's Environmental Justice form impermissibly ignores these sensitive populations which are highly susceptible to the adverse impacts from the proposed sewage facility.

Alternatives

Aries's submission says that the average truck trip to the facility is 25 miles, so it seems that there is no reason why this facility needs to be located in the Ironbound and in a base flood zone. Aries must provide an analysis of alternate sites it has considered for its project, including sites outside of the Ironbound, to the Planning Board.

Types of Sludge Accepted

We are concerned that the facility may accept municipal sewage sludge that is not adequately pretreated and also industrial sludge, both of which are more toxic than properly pretreated sewage sludge. With an average truck trip of 25 miles, the facility could accept industrial sludge from a wide variety of facilities in the Northeast New Jersey industrial corridor. Even if Aries accepts most of its sludge from PVSC, PVSC itself accepts industrial waste, commercial waste, and landfill

leachate.¹ And Aries’s website says that the fluidized bed gasification technology proposed for the Newark facility can be used not only for biosolids from municipal solid waste treatment plants, but also for “biomass residues” from certain types of industrial manufacturing and processing operations. Aries’s permit application for the Newark facility uses the term “domestic wastewater sludge” which appears to allow for industrial sludge. The Planning Board should require Aries to provide a list of all facilities that Aries intends to accept sludge from, as well as the chemical composition of that sludge.

Odor

Aries’s application does not appear to include odor mitigation measures, such as limits on how long the facility can store sludge or biosolids on site or possible odor impacts from trucks. The proposed facility is only 2,000 feet from the Darling fat rendering plant and the open-air PVSC sewage treatment plant, two of the worst contributors to putrid smells in the Ironbound. The last thing that the Ironbound needs is another odor-emitting facility.

Flooding

Aries proposes to site the facility in the base flood zone and has an insufficient flood mitigation plan. FEMA predicts that over 30 years, there is more than a 1-in-4 chance that the site will experience a flood of 13 feet. Indeed, the area saw a 12-foot tidal surge during Hurricane Sandy, flooding nearby PVSC in over 4 feet of salt water. In response to this flooding, PVSC has proposed to build a flood wall around its site of up to 19 feet above elevation. Meanwhile, Aries merely notes that “a retaining wall of varying height” runs along the site, but there is no indication that the current retaining wall would be sufficient to protect from flooding and storm surges for the proposed use. The efficacy of PVSC’s flood wall is hampered if PVSC’s sludge – and other sludge – is stored down the street at a site unprotected from expected storm surges.

“Biochar” Ash Waste Product

Aries appears to be greenwashing its “biochar” waste as a beneficial byproduct. Some portions of the application characterize this biochar as “carbon-rich” (p 23), but other portions note that the biochar “consists primarily of ash and a small amount of residual unconverted carbon” (p 12). Our understanding is that while biochar produced by other means may indeed be carbon-rich and reusable as fertilizer, the gasification technology that Aries is proposing will remove all of the carbon in the biosolids and convert it into carbon monoxide and carbon dioxide (greenhouse gas) emissions. The resulting “biochar” is thus really only ash laden with toxic metals that do not vaporize during the gasification process. This ash is thus more toxic than the sludge that enters the facility (since heavy metals are not as concentrated in the sludge), and that is why Aries is proposing to dispose of this ash in concrete like coal plants do for their highly toxic coal ash. We are concerned that this ash will have a chemical composition different than coal ash/cement and will not be a desirable product for use in concrete, and so will instead end up in landfills. Moreover, even if this biochar ash is indeed usable in concrete, it is not necessarily environmentally preferable for this biochar ash to displace coal ash, which itself will likely be stored in landfills or impoundments if not used in concrete. And Aries does not propose to test this toxic ash waste to

¹ <https://www.nj.gov/pvsc/what/lwa/>.

determine whether the ash is in fact a hazardous waste and needs to be handled differently under hazardous waste regulations.

Ammonia Storage

The Aries facility will store on site large quantities of ammonia, a substance regulated under both the Clean Air Act and the New Jersey Toxic Catastrophe Prevention Act for its flammability and ability to cause explosions and industrial accidents. We are particularly concerned that the facility may attempt to save money by transporting even more dangerous anhydrous ammonia to the site to mix with water on-site. The Ironbound is already home to multiple facilities that store ammonia on-site like the Newark Bay gas plant, Newark Energy Center gas plant, and Covanta Essex incinerator, and does not need another site of potential industrial accidents.

PFAS

We are concerned that the facility will accept sludge that contains per- and polyfluoroalkyl substances (PFAS) and that the gasification process will release this PFAS into the air, contributing to the airborne PFAS that is already being emitted into the Ironbound from other facilities like the Covanta Essex incinerator.

High Emission Estimates

Aries's air permit application says that the Newark facility will emit more pollution than the nearly identical facility that Aries is currently constructing in Linden. The Newark facility's particulate matter (soot), smog-forming volatile organic compounds, and ammonia emissions are 50% higher than the Linden facility's, and Newark's carbon monoxide emissions are *nine times* higher than Linden's. The Planning Board must require Aries to explain this discrepancy: is there a miscalculation, or is Aries indeed planning to emit more pollution in Newark than in Linden?

Unrealistic Control Efficiency Estimates

Aries's air permit application assumes unrealistic emission control efficiencies so that the facility can slide under the "major facility" thresholds and avoid heightened regulation. Aries claims that its emission control technology will stop the emission of 99.99% of carbon monoxide, 99% of smog-forming volatile organic compounds, 96% of sulfur dioxide, and 95% of smog-forming nitrogen oxides. But assuming more realistic emission control efficacy, then the facility would be a major facility and need a major source permit. For example, if control efficiency were only 99.1% for carbon monoxide, 98.5% for volatile organic compounds, 91% for sulfur dioxide, or 93% for nitrogen oxides, then the facility would be a major source. We are also concerned that Aries has not proposed to continuously monitor these and other pollutants, so there is no way for State regulators of the community to know if these high control efficiency assumptions are accurate.

We are also concerned that Aries is rushing this proposal before the nearly identical facility in Linden is open and operational. Instead of taking at their word Aries's unrealistic assumptions about emissions etc., the Planning Board should wait to observe the real-world performance of the Linden facility and then apply that actual data to the Newark proposal.

Truck Traffic

Far from reducing truck traffic, the Aries facility is likely to only add to the already congested truck traffic on Doremus Avenue, leading to additional idling and diesel emissions. Aries assumes that the trucks currently using the site for parking/staging will simply disappear from the area once the site is converted into the Aries facility—but the reason the trucks use Doremus Avenue is because of Port Newark, so as long as the Port remains in operation, the trucks are likely to use another nearby area of the Ironbound for staging and parking. Aries does not indicate any place where these 110 trucks could park/stage if they can no longer use the site for this, nor does Aries indicate if these alternate locations could in fact worsen truck traffic. So the existing trucks are likely to continue to use the area, and the Aries facility operations will only add more trucks.

Greenhouse Gas Analysis

The greenhouse gas analysis that Aries presented to the Planning Board is misleading and flawed. Aries provides no information about the amount of greenhouse gases the facility's own operations will emit, even though the gasification process is likely to emit large amounts of carbon dioxide and methane. A true greenhouse gas analysis must include an accounting of all greenhouse gas emissions associated with current sludge disposal methods compared to Aries' proposal for sludge disposal. As for Aries's analysis of emissions associated with truck trips, as noted above, truck trips in the Ironbound are likely to increase – not reduce – if the facility were built. Furthermore, the information that Aries presents in Table 1 (p 2) does not align with the data presented in the text above (e.g., the text says that the Aries facility would have 19-25 truck trips and 30 passenger vehicle trips, but the table shows 50 trips for both). Moreover, Aries provides no basis for its assumption that the site currently sees 400 vehicle trips per day, and current vehicle trips are likely to be much less if the site is used for long-term truck parking.

Claims of “Clean” Energy

Claims that the facility will produce “clean” energy are questionable. First, the facility will not produce energy that will be used for any beneficial purpose offsite. The only “energy” produced is the synthetic gas that the facility will use for the sole purpose of running the facility's own thermal oxidizers intended to dry the sludge and destroy a portion of the facility's own emissions – two uses that are not needed but for the existence of the Aries facility. In addition, though Aries touts that the gasification technology avoids the high levels of emissions produced by incineration,² that claim glosses over the fact that the facility itself will burn the synthetic gas in the thermal oxidizers. Thus, the harmful emissions from combustion are not avoided, they are instead simply moved to a different point in the industrial process. Aries is still incinerating the sludge, but is merely converting the sludge into a gaseous form before incinerating it.

Incomplete Risk Screening

The risk screening form that Aries has submitted to DEP is incomplete and unrepresentative of the facility's emissions. Of the 250 air toxics listed on the Level 1 Risk Screening Form that Aries submitted to DEP, Aries provides emission data for only *four* air toxics (arsenic, cadmium,

² <https://ariescleantech.com/gasification/>.

hydrogen chloride, and nickel compounds). The gasification, combustion, and other processes at the facility will emit many more pollutants than just these – indeed, Aries’s submittal to the Planning Board (at pdf p. 14) itself lists over a dozen additional air toxics that the facility will emit that Aries has not included on the DEP form, including toxics such as lead and mercury. The Planning Board cannot approve of this project without knowing whether the facility’s emissions may exceed DEP risk screening thresholds.

Given these numerous outstanding, serious environmental concerns, the Planning Board must not approve the application by Aries Newark LLC for the Doremus Avenue sewage facility and must postpone its decision on the facility until after Aries addresses these concerns. The impacts from the proposed sewage facility are inconsistent with the Newark Environmental Justice and Cumulative Impacts Ordinance and the Doremus Avenue Redevelopment Plan, and will cause further harm to Ironbound residents who have already been unreasonably burdened with an overwhelming number of environmentally hazardous facilities in their area.

Sincerely,

/s/ Jonathan Smith

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On behalf of the Ironbound Community Corporation