

From: [Abby Thorne-Lyman](#)
To: [Lara Weisiger](#); [Roselena MejiaCampos](#)
Subject: Fw: 7-B questions and comments
Date: Tuesday, February 18, 2025 8:53:55 PM
Attachments: [Outlook-city-of-Al.png](#)
[Outlook-nf2h020i.png](#)

Hi there
For the record please see below.

Thanks
Abby

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From: Abby Thorne-Lyman <athornelyman@alamedaca.gov>
Sent: Tuesday, February 18, 2025 4:10 PM
To: Marilyn Ezzy Ashcraft <MEzzyAshcraft@alamedaca.gov>; Len Aslanian <laslanian@alamedaca.gov>; Jennifer Ott <jott@alamedaca.gov>; Yibin Shen <yshen@alamedaca.gov>
Subject: Re: 7-B questions and comments

Thank you. I realize I forgot that Section 13.4 also allows us to terminate if Pacific Fusion pursues another site:

City Termination Rights. If Pacific Fusion elects to exclusively pursue the development of the Project on another site, or otherwise has abandoned pursuing the Project on the Property, it shall promptly notify City of the same and City shall thereafter have the right to terminate the ENA

Abby Thorne-Lyman (she/her)
Director
Base Reuse and Economic Development
City of Alameda
athornelyman@alamedaca.gov
c: 510-872-2686



 [Book time to meet with me](#)

From: Marilyn Ezzy Ashcraft <MEzzyAshcraft@alamedaca.gov>
Sent: Tuesday, February 18, 2025 4:08 PM
To: Abby Thorne-Lyman <athornelyman@alamedaca.gov>; Len Aslanian <laslanian@alamedaca.gov>; Jennifer Ott <jott@alamedaca.gov>; Yibin Shen

<yshen@alamedaca.gov>

Subject: Re: 7-B questions and comments

Great responses, Abby. Thank you.

Marilyn

Marilyn Ezzy Ashcraft
Mayor, City of Alameda
510-747-4745

From: Abby Thorne-Lyman <athornelyman@alamedaca.gov>

Sent: Tuesday, February 18, 2025 3:00 PM

To: Marilyn Ezzy Ashcraft <MEzzyAshcraft@alamedaca.gov>; Len Aslanian <laslanian@alamedaca.gov>; Jennifer Ott <jott@alamedaca.gov>; Yibin Shen <yshen@alamedaca.gov>

Subject: Re: 7-B questions and comments

Hi Mayor,

Please see my responses below. I am seeking answers to the questions on their FAQ exhibit (below the sentence in bold)

Thank you,
Abby

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From: Marilyn Ezzy Ashcraft <MEzzyAshcraft@alamedaca.gov>

Sent: Sunday, February 16, 2025 12:36 PM

To: Abby Thorne-Lyman <athornelyman@alamedaca.gov>; Len Aslanian <laslanian@alamedaca.gov>; Jennifer Ott <jott@alamedaca.gov>; Yibin Shen <yshen@alamedaca.gov>

Subject: 7-B questions and comments

Good Afternoon All,

I have the following questions and comments on this item.

From the staff report:

pg. 1 - Does the potential second phase account for the 3-acre difference in property size description between first and second paragraphs (12-18 acres vs. 12-15 acres)?

Pacific Fusion initially made an offer for 12 acres, then said they may need to redesign and have the first phase be up to 15 acres. The 18 acres assumed their first phase would be 12, and the 6 acres along West Pacific to the east would be the second phase for a total of 18

acres. Because the Navy owned property takes a chunk out of the middle of the second phase it is hard to confirm the acreage that the developer would want for a second Phase.

A Land Transfer Agreement is a sale, right? What control do we have over this property if Pacific Fusion (PF) buys it, but doesn't succeed in its mission, and sells the property? Land use restrictions through zoning?

Yes a Land Transfer Agreement would be a sale. We are currently assuming this would be a purchase option which would allow us to retain ownership until they are ready to build. But we are also contemplating including a "buy back" clause so that if the property were sold and not delivered as promised we could have the rights to take it back.

pg. 2 - What is the other East Bay city PF is considering?

We believe it is Livermore.

pp. 2-3 - If PF is expected to decide on a location by mid-2025, why are we offering them up to 33 months? Is ENA phased so that the first milestone requires PF to decide its preferred location by mid-2025? (We're not in the business of land banking and I don't want to tie up property that others may become interested in.)

If they opt not to pursue the first phase within the first 12 months, we do in the ENA section 3 have a right to terminate.

The ENA allows up to a year as the 4-6 month timeline is going to be aggressive, so we are providing a more reasonable 12 month time frame for entitlements and negotiations (akin to the length of time we have given Radium).

pg. 3 - Some terminology seems to change throughout the staff report. For example, the first paragraph refers to the proposal as a "research and development facility" but later in the report, the facility is called a "demonstration facility." Is there a difference?

Good question. Pacific Fusion uses the term "demonstration facility" but my understanding is that this is really research and development, keyed into their particular use (they will build a fusion contraption that they can test in different ways). However it is important to note that with Hines involved as their developer, they would like to seek broader, more flexible approvals for research and development so that if Pacific Fusion were not to work out, they would be able to market the building for broader research and development uses. This would be true of any developer fronting the money; they would want flexibility to make the building usable for a variety of different tenants. Of course a different R&D user would have to comply with our zoning and secure relevant use permits.

The facility is regulated by the CA Department of Public Health. What are the health risks?

Pacific Fusion has stated that the materials they use contain low levels of radiation similar to a hospital. We will need to get a deeper understanding and response to this question from them.

In the last paragraph, are you referring to “levies,” i.e., taxes or levees, i.e., embankments to prevent flooding?

Whoops! That should say levees.

pp. 3-4 - Is the City proposing to provide the land to PF in exchange for infrastructure improvements?

Yes

pg. 5 - I understand from the ENA that PF and/or the developer will develop Community Engagement Plan. Will there be targeted outreach to residents and businesses closest to the site? AUSD since EHS is nearby?

Yes there will be. They have already begun outreach to AUSD. We can include specific requirements in their Engagement Plan.

Exh. 2 - Third bullet point would seem to eliminate the Radium project

These are intended specific to the Enterprise District but I understand your point.

Can Pacific Fusion be considered a “clean” use?

We believe so but we need additional information from Pacific Fusion to confirm. They are stating they are a clean use. Their byproduct is helium and the elements they plan to use have a short half life.

Exh. 3, pg. 4, section 8.2 - re Community Engagement Plan, I would like to add a date by which community group meetings must start. As previously noted, there should also be targeted outreach to residents and businesses closest to the site, and AUSD since EHS is also nearby.

We can require this of them in the plan.

Exh. 3, pg. 5, section 8.5 - When does Pacific Fusion need to provide the referenced evidence of financial ability?

There is no specified date, however we will not bring a term sheet or purchase agreement to Council without this step completed. As far as we are concerned it is a minimum requirement for Council to reasonably consider a deal.

Exh. 4, pg. 1 - PF was founded in 2023; it is a new company without much track record. Just an observation.

Yes- agreed. This is important. We believe this is why it is good they have Hines on board who should be prepared to build without Pacific Fusion for a more flexible R&D user (please see above).

I will follow up with them for the remaining questions.

Exh. 4, pg. 2 - Where would the power plant be built? Is PF contemplating Alameda Point for power plant location?

So health risk is radiation leak?

Does water from the passive water shield become irradiated? If so, where is water discharged?

Exh. 4, pg. 4 - PF's fusion process uses lithium. We've seen lithium battery fires. Is there a fire danger associated with this facility?

Explain "weakly radioactive" and "short half-life." What is tritium's half-life?

If "fusion does not create any long-lived radioactive waste," does it create any radioactive waste? If so, how and where is this waste disposed?

Are the National Ignition Facility in Livermore, CA and the Z Facility in Albuquerque, NM located in as close proximity to a residential area as the potential Pacific Fusion site?

Exh. 4, pg. 5 - Does this mean that "radiological waste brokers" will transport the radiological waste in trucks out of Alameda? Where is this waste disposed?

Where will the tritium be sourced from?

Exh. 4, pg. 6 - Would Pacific Fusion consider locating a power plant at Alameda Point?

Resolution, pg. 1 - I would like to see the ENA bifurcated so that PF is granted 12 months to decide if they want to locate this facility in Alameda or the other city they are also negotiating with. (Apparently this ENA is only "exclusive" for Alameda.) That way we don't tie up the property for 2+ years which developers sometimes do to prevent others from acquiring it.

Correspondence: Bill Quirk letter, second to last paragraph, says, "Pacific Fusion must also demonstrate that any radiation is contained within a limited area of the facility and poses no risk to the surrounding community." How will PF do that?

And fyi, I am also going to speak to an engineer with experience in this field and will pose many of these questions to him. I'll let you know what I learn. Thank you.

Marilyn

Marilyn Ezzy Ashcraft
Mayor, City of Alameda
510-747-4745

From: [Abby Thorne-Lyman](#)
To: [Lara Weisiger](#); [Roselena MejiaCampos](#)
Subject: Fw: [EXTERNAL] Re: Fw: 7-B questions and comments
Date: Tuesday, February 18, 2025 8:52:02 PM
Attachments: [Questions from the Mayor 2_18.pdf](#)

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From: Abby Thorne-Lyman <athornelyman@alamedaca.gov>
Sent: Tuesday, February 18, 2025 5:22 PM
To: Marilyn Ezzy Ashcraft <MEzzyAshcraft@alamedaca.gov>; Jennifer Ott <jott@alamedaca.gov>; Yibin Shen <yshen@alamedaca.gov>; Len Aslanian <laslanian@alamedaca.gov>
Subject: Fw: [EXTERNAL] Re: Fw: 7-B questions and comments

Good evening Mayor,

Please find the pdf attached with responses from Pacific Fusion to your questions about the FAQ document (exhibit 4).

Thanks
Abby

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From: Alex Doniach <alex.doniach@pacificfusion.com>
Sent: Tuesday, February 18, 2025 5:14:01 PM
To: Abby Thorne-Lyman <athornelyman@alamedaca.gov>
Cc: Courtney Richardson <courtney@pacificfusion.com>; becca@voxpathulpr.net <becca@voxpathulpr.net>; Jennifer Ott <jott@alamedaca.gov>
Subject: [EXTERNAL] Re: Fw: 7-B questions and comments

Hi Abby,

Please see our responses to the Mayor's questions attached.

Thank you,
Alex

On Tue, Feb 18, 2025 at 3:01 PM Abby Thorne-Lyman <athornelyman@alamedaca.gov> wrote:

Hi all

Please see the questions below from the Mayor and get us responses asap.

Thank you

Abby

Exh. 4, pg. 2 - Where would the power plant be built? Is PF contemplating Alameda Point for power plant location?

So health risk is radiation leak?

Does water from the passive water shield become irradiated? If so, where is water discharged?

Exh. 4, pg. 4 - PF's fusion process uses lithium. We've seen lithium battery fires. Is there a fire danger associated with this facility?

Explain "weakly radioactive" and "short half-life." What is tritium's half-life?

If "fusion does not create any long-lived radioactive waste," does it create any radioactive waste? If so, how and where is this waste disposed?

Are the National Ignition Facility in Livermore, CA and the Z Facility in Albuquerque, NM located in as close proximity to a residential area as the potential Pacific Fusion site?

Exh. 4, pg. 5 - Does this mean that "radiological waste brokers" will transport the radiological waste in trucks out of Alameda? Where is this waste disposed?

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Exh. 4, pg. 6 - Would Pacific Fusion consider locating a power plant at Alameda Point?

Resolution, pg. 1 - I would like to see the ENA bifurcated so that PF is granted 12 months to decide if they want to locate this facility in Alameda or the other city they are also negotiating with. (Apparently this ENA is only "exclusive" for Alameda.) That way we don't tie up the property for 2+ years which developers sometimes do to prevent others from acquiring it.

Correspondence: Bill Quirk letter, second to last paragraph, says, "Pacific Fusion must also demonstrate that any radiation is contained within a limited area of the facility and poses no risk to the surrounding community." How will PF do that?

Questions for the City Council 2/18

Exh. 4, pg. 2 - Where would the power plant be built? Is PF contemplating Alameda Point for power plant location?

- We are proposing an R&D facility for Alameda Point. We are not contemplating the location of a future power plant at this time.

So health risk is radiation leak?

- Safety is our top priority. Our facility is designed with multiple layers of containment, and our processes are modeled after established best practices used in medical and research institutions that safely handle radiological materials daily.
 - For added context, our facility uses tritium, a weakly radioactive element (specifically, a beta emitter). It has similar characteristics to products used in hospitals daily for certain types of diagnostic scans, and tritium itself is used as a medical tracer.
- Like any hospital or research facility, we will comply with all requirements set by the California Department of Public Health to ensure there is no risk of unsafe radiation exposure to our employees or the community. The State's licensure process sets strict limits on quantity, storage methods, and containment. These safeguards are designed to protect public health and safety.

Does water from the passive water shield become irradiated? If so, where is water discharged?

- The passive water shield is designed for safety. The deionized water in the water shield does not become activated, and poses no safety risk. The water shield is contained in a closed-loop system within the facility (it is not discharged).

Exh. 4, pg. 4 - PF's fusion process uses lithium. We've seen lithium battery fires. Is there a fire danger associated with this facility?

- Our facility does not use lithium. (At future power plants, we will produce tritium from lithium, but this is not the case for PF's R&D facility under discussion in Alameda.)
- Designing our facility and operations for fire safety is paramount. Like all R&D facilities in the area, we will work closely with the City and County Fire Marshals to ensure we follow all governing fire codes and to ensure that our operational plans are consistent with their first-responder action plans.

Explain "weakly radioactive" and "short half-life." What is tritium's half-life?

- Tritium's half life is 12.3 years. This is short compared to Carbon-14 (^{14}C) with a half-life of 5,730 years.
- 'Weakly radioactive' means low penetration ability. Tritium cannot penetrate human skin (or even a single sheet of paper), and does not self-emit gamma radiation like some radioactive isotopes.

If "fusion does not create any long-lived radioactive waste," does it create any radioactive waste? If so, how and where is this waste disposed?

- Safety is our top priority and our facility will comply with all state and federal regulations with regard to waste management that are designed to prevent any release of radioactive byproducts.
- Pacific Fusion's operations will produce small quantities of low-level activated metal (roughly 200 gallons per month, or one 48"x48" pallet). This waste will be stored in State-approved storage containers and shipped off site in accordance with state-designated procedures.

Are the National Ignition Facility in Livermore, CA and the Z Facility in Albuquerque, NM located in as close proximity to a residential area as the potential Pacific Fusion site?

- The Pacific Fusion Site is approximately 1100 feet from the closest residential area (Central Ave).
- The National Ignition Facility in Livermore is located approximately 850 feet to the nearest residential area.
- The Z Facility in Albuquerque is located approximately 5000 feet from the nearest residential area.

Exh. 4, pg. 5 - Does this mean that “radiological waste brokers” will transport the radiological waste in trucks out of Alameda? Where is this waste disposed of?

- The California Department of Public Health oversees our radiological licensing, ensuring that materials pose no risk to the surrounding community and are properly disposed of — similar to how hospitals and research institutions manage radiological materials.
- Transport of radiological waste is and will be coordinated using strict government standards. The actual transportation will be done by government-approved brokers. The waste will be disposed of at designated waste facilities in accordance with state-mandated protocols.

Where will the tritium be sourced from?

- Tritium will be provided by the Department of Energy.

Exh. 4, pg. 6 - Would Pacific Fusion consider locating a power plant at Alameda Point?

- We are proposing an R&D facility for Alameda Point. We are not contemplating the location of a future power plant at this time.

Resolution, pg. 1 - I would like to see the ENA bifurcated so that PF is granted 12 months to decide if they want to locate this facility in Alameda or the other city they are also negotiating with. (Apparently this ENA is only “exclusive” for Alameda.) That way we don’t tie up the property for 2+ years which developers sometimes do to prevent others from acquiring it.

- Pacific Fusion intends to make a final site selection decision in 2025. Actual schedule will depend on entitlement and permitting schedules, which we intend to pursue as expediently and efficiently as possible in collaboration with the city.

Correspondence: Bill Quirk letter, second to last paragraph, says, “Pacific Fusion must also demonstrate that any radiation is contained within a limited area of the facility and poses no risk to the surrounding community.” How will PF do that?

- Safety is our top priority. California’s Radiologic Health Branch oversees our radiological licensing, ensuring that materials pose no risk to the surrounding community and are properly stored, monitored, and handled safely — similar to how hospitals and research institutions manage radiological materials.
- The licensing process requires a validated plan for safe operations, material storage, byproduct waste management, and system decommissioning. The licensing process also includes ensuring safe operations with tritium, which includes monitoring radiation produced during the fusion process.
- We will work with the state to ensure and demonstrate the safety of our operations, complying with all regulations and best practices for handling radiological materials.