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**NUCLEAR REGULATORY COMMISSION**

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING

ON DRAFT ENVIRONMENTAL ASSESSMENT  
FOR PROPOSED PA'INA HAWAII IRRADIATOR

+ + + + +

HONOLULU, HAWAII

+ + + + +

THURSDAY

FEBRUARY 1, 2007

7:00 P.M.

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P-R-O-C-E-E-D-I-N-G-S

(7:00 p.m.)

1  
2  
3 MR. TORRES: Good evening. My name is  
4 Roberto Torres, and I am the senior health physicist  
5 with the U.S. Nuclear Regulatory Commission in  
6 Arlington, Texas. I would like to welcome and thank  
7 all of you for being here at this meeting tonight.

8 My role tonight will be as a facilitator,  
9 and my responsibility is to assist in making sure that  
10 the information that is presented by the NRC is clear  
11 and responsive and also to assure that everyone who  
12 wants an opportunity to speak tonight has that  
13 opportunity through either question and answers or  
14 comment session. Now, I would like to ask you, if you  
15 have your cell phone, to please put it in the  
16 vibration mode.

17 And with us tonight from the NRC we have  
18 Leonard Wert, senior manager from regulatory in charge  
19 of the licensing action. Anthony Gaines, he's a  
20 senior health physicist and also an inspector. He  
21 performed the review, safety review of the license  
22 application. Myself, Roberto Torres. We also have  
23 Margaret Bupp from the NRC's office of general  
24 counsel, and Matthew Blevins, senior environmental  
25 reviewer and author of the draft environmental

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1 assessment. Also with us is James Durham. He's a  
2 contractor with the Center for Nuclear Waste  
3 Regulatory Analyses, who offered the topical report on  
4 aircraft crash and natural phenomena analysis. Then  
5 in the back of the room is Victor Dricks, our public  
6 affairs officer.

7 Before the start of the meeting, I'd like  
8 to discuss the format of the meeting. The NRC staff  
9 will make several presentations. Those presentations  
10 will take about 30 minutes and that will be followed  
11 by question and answer and comments session. So about  
12 30 minutes of NRC presentation and the remainder of  
13 the time of the meeting will be devoted with  
14 interaction with you, the public.

15 We also have set up a special toll-free  
16 telephone line which members of the public can call  
17 in, and I'm going to step away for a moment after  
18 finishing here and check the line, see who is on the  
19 telephone line.

20 With that I'm going to introduce Len Wert,  
21 who has some opening remarks and he'll make his brief  
22 presentation. Thank you.

23 MR. WERT: Thank you. Good evening.  
24 Thanks again for coming. I know we all have busy  
25 lives and there are a lot of things going on, but this

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1 is an important subject and so we're glad to see --

2 (Audio difficulties.)

3 MR. WERT: As Roberto said, I'm Leonard  
4 Wert. I'm the director of the division of nuclear  
5 material safety for the US Nuclear Regulatory  
6 Commission in the Region IV office in Arlington,  
7 Texas. Can everybody hear? Is that better? Okay.

8 This evening we're holding this public  
9 meeting to discuss the results of the draft  
10 environmental assessment for the Pa'ina Hawaii license  
11 application and to accept oral and written comments.  
12 This draft environmental assessment has been issued as  
13 part the NRC's decision-making process on whether to  
14 issue a license to the applicant, Pa'ina.

15 I'm glad to be back here on this beautiful  
16 island. Some of you might remember that a few of us,  
17 including myself, were here back in August 2005 to  
18 conduct a meeting on the proposed Pa'ina irradiator.  
19 We specifically conducted that meeting early in the  
20 process to allow public involvement and support  
21 openness in the NRC's decision making.

22 The NRC's primary mission is to ensure  
23 that, if the project is approved, it will be built and  
24 operated safely. We also want to involve the public  
25 in our decision-making process.

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1           To that end, we have with us tonight some  
2 of the NRC staff that have been directly involved in  
3 the agency's work on the license application and the  
4 environmental assessment, and they're here to meet  
5 with you to encourage public participation. Also, at  
6 your request, we've set up toll-free phone lines to  
7 permit interested members of the public to participate  
8 in this meeting.

9           In addition to taking comments on the  
10 draft environmental assessment, we also want to hear  
11 your comments on how our meeting has been conducted.  
12 We would appreciate you taking the time to complete  
13 one of our meeting feedback forms that we've made  
14 available. We do use this feedback in our process to  
15 improve the quality of our public meetings. In fact,  
16 we specifically incorporated feedback from the August  
17 2005 meeting into our preparations for this meeting.

18           Moving on to the slides, I want to just  
19 briefly share the meeting objectives with you. We're  
20 going to gather comments on the draft environmental  
21 assessment, we're going to briefly review the NRC's  
22 role in the licensing process, and we're going to  
23 describe the findings of the draft environmental  
24 assessment.

25           We will be answering questions on the

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1 NRC's role in the licensing process during our  
2 discussions tonight; however, we intend to focus  
3 primarily on the environmental assessment.

4 Next slide.

5 The NRC is an independent federal agency,  
6 and we are specifically tasked with licensing and  
7 regulating the nation's civil use of nuclear materials  
8 to ensure adequate protection of public health and  
9 safety, promote the common defense and security, and  
10 protect the environment. We do take these  
11 responsibilities very seriously. And the slide also  
12 shows some of the broad activities that we do in order  
13 to fulfill these regulatory responsibilities.

14 Next slide.

15 This slide shows that the NRC has two  
16 major categories in our review process. The safety  
17 and security review, commonly referred to as the  
18 license technical review, and then the environmental  
19 review. As noted on the slide, we also try to be open  
20 in our regulatory process. This meeting is an  
21 important part of that openness.

22 Now I'll turn it over to Tony.

23 MR. GAINES: Thank you, Len. Good  
24 evening. My name is Tony Gaines. I'm with the NRC  
25 Region IV office out of Arlington, Texas. I'm a

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1 senior health physicist. I'm also a senior inspector  
2 of the materials program there in Arlington. And what  
3 I will be doing is briefly talk about the licensing  
4 and review and inspection process for you tonight.

5 Next slide, please.

6 The licensing review starts off by getting  
7 an application. When we receive an application from  
8 the licensee to do any type of program, what we'll be  
9 talking about is specifically for the type of program  
10 for an irradiator. In this type of program, we're  
11 looking at the application. The things we use to  
12 review the application is 10 CFR Part 36. That's our  
13 regulations. And also our guidance we use to review  
14 an application for an irradiator is NUREG 1556 Volume  
15 6. It has very specific guidance and it's just for an  
16 irradiator. We have different ones for different  
17 types of licensees.

18 Next slide, please.

19 Some of the criteria, there's a lot of  
20 criteria that goes into reviewing a license  
21 application, and some of the criteria that we use for  
22 this type of license is up on the screen. We look at  
23 radiation safety and monitoring program, we'll look at  
24 occupational dosimetry, we'll look at the operating  
25 and emergency procedures, we'll review the source

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1 disposal and transfer, and shielding to protect the  
2 workers and the public.

3 Next slide, please.

4 The licensing process is a two-step  
5 process. And basically you have the preoperational  
6 license. When you issue a license like this for an  
7 irradiator, you would have a preoperational license  
8 that would allow testing, training, dosimetry  
9 assessment and radiation surveys. And then the next  
10 type of license, next step you would do is issue an  
11 operational license after they pass the other ones.  
12 During that other phase, the preoperational phase, if  
13 there's anything that we found out there that we  
14 needed to add to the license conditions, we would add  
15 license conditions for it.

16 Next slide, please.

17 The NRC inspection program consists of the  
18 construction and preoperational inspections. Those  
19 inspections are done when the -- we have people out  
20 there at the same time that they're doing the  
21 construction of this type of license. Our people  
22 would be watching them pour concrete for the  
23 foundation, make sure it was done right. We'd have  
24 people looking at when they build the liner for the  
25 tank, watching them, how they built the liner, if it

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1 was done to specs or not.

2 And then we'd also look at the  
3 preoperational phase, which we talked about earlier on  
4 the licensing, when they're testing stuff to make sure  
5 that everything is done in accordance with how they  
6 said they were going to do it in their licensing  
7 application.

8 After that we have periodic inspections  
9 for different types of licensees. And this type of  
10 licensee would be inspected, approximately, every two  
11 years. And those types of inspections are  
12 performance-based inspections that are focused on  
13 health and safety.

14 That concludes my presentation. I'd like  
15 to turn it over to Matthew Blevins, who will talk  
16 about the environmental assessment for you.

17 MR. BLEVINS: Good evening. I want to  
18 thank you for taking the time to come out this  
19 evening. I think it's important for us to be here,  
20 and I'm interested to hear what each of you have to  
21 say.

22 Next slide, please.

23 As we mentioned, our main goal here  
24 tonight is to listen to your comments. But before we  
25 do that, I want to briefly talk to you about Pa'ina's

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1 proposed action for those of you who may not be  
2 familiar with it. We're going to talk a little bit  
3 NRC environmental review process, and then close up  
4 with how to most effectively communicate with the NRC  
5 after tonight's meeting.

6 Next slide.

7 Pa'ina's proposing to build an underwater  
8 irradiator adjacent to the Honolulu International  
9 Airport. This would be for the purposes of treating  
10 fruits and vegetables to help prevent the spread of  
11 invasive species.

12 The irradiator consists of a very strong  
13 underground pool structure, and the radioactive  
14 cobalt-60 sources are contained at the bottom of that  
15 irradiator pool. The cobalt-60 emits radiation in the  
16 form of photons and that provides the treatment which  
17 neutralizes various insect and plant pathogens. This  
18 makes the produce safe for import or export to the  
19 state of Hawaii.

20 Next slide.

21 Now, as I just mentioned, the irradiator  
22 is a very robust pool structure, and I want to point  
23 out three key design elements. First the sources are  
24 located at the bottom of the irradiator pool, below  
25 ground level or below the surface of the ground.

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1                   Second, the sources are stationary.  
2                   Rather, the fruits and vegetables are raised and  
3                   lowered into the irradiator pool where they receive  
4                   the treatment. This is good, as it means the sources  
5                   are always in what's called the shielded position.

6                   The third aspect is the actual pool design  
7                   consists of two watertight liners. The inner liner is  
8                   made of stainless steel and it's connected by a  
9                   latticework to an outer steel liner. Both of these  
10                  liners are watertight. Now, in between these two  
11                  liners concrete is poured and around the whole -- and  
12                  around both, when they fill the hole, concrete is  
13                  poured. So we have a very robust pool structure.

14                 Now, in addition to those irradiator pool  
15                 design elements, the sealed sources that may be used  
16                 in this irradiator have passed stringent leak-testing  
17                 requirements. Those sources are manufactured using a  
18                 non-dispersible, non-soluble radioactive material.  
19                 And that radioactive material is actually a metal  
20                 slug. That radioactive material is placed in an inner  
21                 stainless steel capsule that's welded and sealed shut.  
22                 That inner capsule is then placed into an outer  
23                 capsule, another stainless steel outer capsule, which  
24                 is also welded and sealed shut. That's what we call  
25                 a double encapsulated sealed source.

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1 Both these sources have to go -- these  
2 sources undergo stringent leak testing: vibration,  
3 puncture, pressure impact and other sorts of testing.  
4 They must be found to be leak-free.

5 Next slide, please.

6 Now, just quickly, I want to show you what  
7 the irradiator will look like from above the ground.  
8 In between the yellow support legs for the overhead  
9 trolley system, you're going to see the two containers  
10 right here. Someone else got it for me. Those two  
11 containers are where the pod is actually lowered down  
12 into the pool, down to the bottom where they receive  
13 the treatment. There are steel guide rails, and you  
14 can't really see them, on the corners. The steel guide  
15 rails keep the containers from moving side to side and  
16 touching any of the sources.

17 The surge tank is here on the left side of  
18 the picture. That surge tank handles the fluctuation  
19 in the water levels as those product containers are  
20 raised and lowered into the pool. It also helps to  
21 catch the water that drips off as the bell moves over  
22 to the last position.

23 In the next series of slides, I'm going to  
24 talk a little bit about the NRC's environmental review  
25 process.

1 Next slide.) 524-2090

2 The environmental assessment serves as the  
3 NRC's documentation of its environmental review. The  
4 EA includes such topics as the proposed action, the  
5 purpose and need, some of the alternatives, the  
6 environmental impacts and the consultations we  
7 conducted.

8 Next slide, please.

9 First I'm going to show you some of the  
10 resource areas that we focused on in preparation of  
11 the draft environmental assessment. These areas were  
12 chosen based on issues raised at the last public  
13 meeting, issues raised during the hearing process, and  
14 other issues that we identified through our review of  
15 the license application. And on the next few slides,  
16 I want to discuss what some of those impacts are.

17 First I want to briefly discuss water  
18 resources. The irradiator itself uses very little  
19 water. It takes about 5300 gallons of water to fill  
20 the irradiator pool. There are no routine discharges,  
21 and the only water added to the pool is to make up for  
22 evaporative losses. The irradiator pool itself has no  
23 drains or other physical connections to the outside or  
24 to the sanitary sewer system.

25 Now, as we just discussed, the pool is

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1 made of two separate, watertight steel liners.  
2 They're surrounded by concrete and all of this helps  
3 to ensure that water isn't able to leak into the  
4 environment.090

5 The second thing is the actual radioactive  
6 material, as we talked about, is a non-dispersible,  
7 non-soluble metal. And additionally, that's in a  
8 doubly encapsulated steel source. This provides  
9 further assurances that the radioactive material can't  
10 leak into the environment.

11 And then finally, the irradiator pool  
12 water itself is continuously monitored by two very  
13 sensitive radiation detectors. At the first sign of  
14 any leakage, the irradiator has to be shut down, the  
15 sources would have to be removed, they would ship  
16 those back to the vendor, and along with the NRC,  
17 Pa'ina would have to come up with a plan to remediate  
18 that facility before they could continue using it.

19 Also, I want to point out that since 1989,  
20 we keep a database of these sources that are going to  
21 be used in this facility, since 1989, there haven't  
22 been any of these sealed sources that have leaked.

23 Now, based on this information, we  
24 concluded that there wouldn't be any significant  
25 impacts to water resources.

1 Next slide.

2 In terms of ecology, irradiation is one  
3 tool useful in the prevention of the spread of  
4 invasive species. The Animal and Plant Health  
5 Inspection Service has passed several regulations  
6 which allow the use of irradiation as a means of  
7 controlling invasive species on various fruits and  
8 vegetables. So the proposed irradiator should have a  
9 positive impact by helping to control invasive  
10 species. Based on this information, we concluded that  
11 the proposed irradiator would not have significant  
12 impacts to ecological resources.

13 Next slide.

14 Now, for transportation, we looked at  
15 radiological impacts from the time the sources are  
16 unloaded at the Port of Honolulu to the time they're  
17 shipped over to the airport. Those sources need to be  
18 replaced every couple of years, and the used sources  
19 are sent back to the manufacturer. Now, for routine  
20 shipments, the maximum dose is very small, .04  
21 millirem per year. That's a very small fraction of  
22 the regulatory limit, which is 100 millirem per year.  
23 That's a maximum dose, not what an average or typical  
24 dose would be.

25 Now, the NRC has previously considered the

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1 transport of these radioactive sources all across the  
2 country in a previous study, and the general  
3 conclusions of that review were that the maximum doses  
4 were within the NRC limits and the average doses were  
5 much smaller than the regulatory limits. And they  
6 found in that report that the risk of transportation  
7 accidents was generally small.

8 Based on this information, we concluded  
9 that the transportation of the cobalt-60 sources to  
10 the irradiator wouldn't present significant impacts.

11 Next slide, please.

12 Now, as you know, radioactive cobalt-60  
13 sources are going to be used in the facility. So we  
14 do a careful assessment of any possible health impacts  
15 from the exposure to radiation. We look at workers at  
16 the facility and any public nearby the facility.

17 The dose rate at the surface of the pool  
18 is well below 1 millirem per hour, and based on  
19 operational practices, it would be hard for a worker  
20 to actually be standing over that pool. As you saw  
21 before, those big product containers sort of move  
22 around. More typically, the worker is standing 10 to  
23 15 feet away as they load those product containers.  
24 And at that distance, the dose is actually  
25 indistinguishable from naturally occurring background

1 radiation. In other words, you can't really measure  
2 it it's so low.

3 Now, members of the public would be even  
4 further away than a worker because we don't allow  
5 members of the public into this facility. Likewise,  
6 members of the public, we wouldn't be able to  
7 distinguish any radiation coming from that facility  
8 from the natural occurring background radiation that  
9 exists.

10 Based on that information, we concluded  
11 that there wouldn't be significant impact to public or  
12 occupational health.

13 Next slide, please.

14 The NRC relied on assistance from the  
15 Center for Nuclear Waste and Regulatory Analyses in  
16 determining the impact from aviation accidents and  
17 various natural phenomenon.

18 For aviation accidents, the center  
19 performed various calculations, taking into account  
20 the types of aircraft, the orientation of the runways,  
21 the number of take offs and landings, the prevailing  
22 wind patterns to determine the probability of an  
23 aviation accident. The calculated probability is  
24 about one accident in every 5,000 years, or stated  
25 more accurately, every year there's about a 1 in 5,000

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1 chance of an accident affecting that facility.

2 Now, several factors make this analysis  
3 conservative. Orientation of the facility around the  
4 runways is one of those examples. In other words,  
5 they don't take into account the location of the  
6 accidents are more along the center line as opposed to  
7 off to the sides, where this facility is located, off  
8 to the side of the runway. And the probability was  
9 also based on the building size as opposed to the  
10 actual irradiator size. So that's one of the reasons  
11 we think this analysis is conservative for boundary.

12 Next slide, please.90

13 Now, the important thing to keep in mind  
14 here, the probability of an airplane hitting the  
15 facility isn't the same as the probability of  
16 radioactivity material being released from that  
17 facility. Remember, the sources are 12 to 18 feet  
18 below ground level. They're not mechanically coupled  
19 to any of those surface structures. The irradiator  
20 pool is also very strong, as we discussed, the  
21 concrete and the steel liners. And the types of  
22 crashes at the airport would be low-angle impact  
23 crashes. So in other words, we don't expect the  
24 airplane to come down into the pool itself.

25 Now, additionally, the water in the

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1 irradiator pool, it would serve two purposes. It  
2 would act to absorb any crash energy that might occur  
3 there, and it would also act as a coolant if a surface  
4 fire was burning on top of it.

5 Based on this information, we concluded  
6 that any potential aviation accident that might affect  
7 that facility wouldn't have significant impact to  
8 public health or safety.

9 Next slide, please.

10 Now, for tsunami, the center performed a  
11 fluid dynamic calculation to calculate the vertical  
12 velocity necessary to pull a cobalt-60 up from the  
13 bottom of the pool. Now, this a little conservative.  
14 As we know, the sources are actually in what's called  
15 a source holder and they're underneath a plenum, but  
16 for the purposes of this analysis, we assume that  
17 they've somehow fallen to the floor. It's a little  
18 more conservative, so they're lying there loose on the  
19 floor.

20 Now, the model assumes that a wave of  
21 water or tsunami, if you will, will pass over the  
22 opening of that irradiator pool. The wave passing  
23 over that opening will create a vortex in that pool.  
24 That vortex has to have enough of a vertical velocity  
25 to pick up that source and bring it to the surface.

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1 Now, the center calculated the vortex would need a  
2 vertical velocity of about 5.2 feet per second. And  
3 what they did is they further calculated it, you get  
4 a 5.2 feet per second in the vertical direction by a  
5 tsunami with a horizontal speed of about 520 feet per  
6 second. And you can imagine, that's a very fast wave.  
7 Now, to put that in perspective, a 33-foot wave at the  
8 shore is only traveling about 43 feet per second. So  
9 as you can see, there's not enough velocity in a 33-  
10 foot tsunami wave to bring those sources up from the  
11 bottom of the pool.

12 So based on that information, we concluded  
13 that any potential tsunamis that might affect the  
14 proposed facility wouldn't have significant impact on  
15 public health or safety.

16 Next slide, please.

17 For hurricanes, the center also  
18 reviewedds. The maximum storm surge from Hurricane  
19 Iniki, which is one of the strongest on record, was  
20 2.6 feet. This storm surge is far less than the  
21 potential tsunami wave we just talked about. The  
22 likelihood of a loss of cobalt-60 from a hurricane  
23 storm surge is considered negligible.

24 Based on that information, we concluded  
25 that there wouldn't be any potential impact to public

1 health or safety.

2 Next slide.

3 Now, our regulations also require the  
4 analysis of alternatives, and at a minimum, a  
5 discussion of a no-action alternative is required.  
6 The no-action alternative in this case is denial of  
7 the license application.

8 The primary impact would be the positive  
9 impacts that would be foregone by expanding the sale  
10 or the expanded sale of limit -- of expanding the  
11 fruit and vegetable distribution from the state of  
12 Hawaii. And there's also some associated benefits  
13 with helping control invasive species that might be  
14 foregone.

15 In connection with this no-action  
16 alternative, the NRC also evaluates other treatment  
17 alternatives. Methylbromide fumigation is limited to  
18 certain commodities at specific temperatures, but, as  
19 we know, methylbromide is being phased out because we  
20 know it's destructive to the earth's ozone layer. So  
21 while there's currently an extension for methylbromide  
22 fumigation, it's expected that the cost of that  
23 treatment is going to go up as the supply of  
24 methylbromide goes down.

25 Now, there are also several different heat

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1 treatment methods that are currently available,  
2 including hot water immersion. This consists of  
3 submerging a fruit in a hot water bath at a specific  
4 temperature and a specific time. Now, this method  
5 isn't approved for papayas, I understand, and it's  
6 also not recommended for other fruits due to  
7 unacceptable fruit damage.

8 Now, it's important to point out the NRC  
9 has no authority to require the use of a different  
10 treatment technology, or can we require a different  
11 site location. We can only approve or approve with  
12 license conditions or deny a license application as  
13 it's presented to us. In other words, we can't force  
14 someone to go and do something else entirely. We can  
15 only make a decision on the safe use of radioactive  
16 materials as it's presented to us. Ultimately, the  
17 decision on whether to issue a license to the Pa'ina  
18 facility is going to be based on the safety and  
19 environmental considerations of the Pa'ina's proposed  
20 action.

21 Next slide, please.

22 Now, of course, as you know, we're  
23 accepting oral and written comments this evening.  
24 Now, if you don't have anything to say this evening,  
25 that's fine, but something may come to you after the

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1 meeting, you may want to add more to the record, or  
2 you may want to go and do some research. That's why  
3 we're accepting comments until next week, February  
4 8th. I think it's important that you understand that  
5 we're going to consider all these comments as we move  
6 forward and prepare the final environmental  
7 assessment. All the comments that we received during  
8 the public comment meeting tonight, the ones we  
9 received before we've gotten here and the ones we  
10 receive after the meeting are going to receive equal  
11 weight.

12 Next slide, please.

13 Now, here's the best way to effectively  
14 submit your comments. Note that docket number, if you  
15 could, maybe somewhere in a subject line. It just  
16 sort of helps the mail get routed to the right person  
17 in a very efficient manner. Now you can either send  
18 it by regular mail at the address listed or send it  
19 the email that's listed right here at the bottom of  
20 the screen. Again, they both will receive the same  
21 weight and same consideration.

22 MR. TORRES: Tony, could you give the  
23 document number for the benefit of the people on the  
24 telephone line, please.

25 MR. GAINES: The document number is 030-

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1 36974, and for the purpose of brevity, if you haven't  
2 -- the email address is nrcrep@nrc.gov.0

3 Now, the next two slides, I want to  
4 briefly tell you where you can get some additional  
5 information. Shown here is a Web site currently --

6 AUDIENCE MEMBER: I'm not done with the  
7 other one yet. Could you put it back?

8 MR. GAINES: We also have these handouts,  
9 too. We can get you a copy of the handout so you  
10 don't have to write all that down, okay?

11 Shown here are Web sites, so, again if  
12 anyone hasn't got those handouts and they've have all  
13 these addresses on them. Shown here's a Web site  
14 where the draft EA and the draft safety report are  
15 currently located. In addition to that we'll be  
16 adding tonight's transcript and all the other public  
17 comments to this Web site.

18 Next slide, please.

19 And this Web site takes you to NRC's  
20 electronic reading room, also called Adams. Basically  
21 this contains all the publicly available documents in  
22 the agency, so what you'll have to do is focus your  
23 search by searching for Pa'ina or that docket number,  
24 but if you're having problems, we have people in the  
25 public document room, that's what PDR stands for,

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1 whose job it is to help you search and find documents.  
2 So if you contact those people, they should hopefully  
3 be able to help you track down any documents you're  
4 looking for. (808) 524-2090

5 Next slide, please.

6 Now, in terms of NRC staff, I want you to  
7 contact Roberto Torres with questions about the  
8 overall licensing and safety review of the facility.  
9 He's taken over for Tony. And contact myself with  
10 questions about the environmental review.

11 Next slide, please.

12 Now, the next steps in the NRC licensing  
13 process. First we have to consider all the comments  
14 we received on the environmental assessment, and then  
15 we're going to issue that environmental assessment.  
16 Tony and Roberto finalize the safety review. If we  
17 come out with a finding of no significant impact and  
18 the safety review doesn't preclude otherwise, Region  
19 IV can go ahead and issue the license. If significant  
20 impacts are found, NRC is required to prepare an  
21 environmental impact statement, and that's a much more  
22 detailed study.

23 Now, that wraps up my presentation and I'm  
24 going to sit down and let Roberto start directing  
25 questions and/or taking comments.

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1 MR. TORRES: Now we've come to the part of  
2 the portion of the meeting specifically set aside for  
3 public interaction. Let's proceed with a question and  
4 answer or a comment session. We ask that you respect  
5 each other's view and refrain from making any comments  
6 on remarks that speakers may express.

7 I will go through the sign-up sheet and  
8 call on people one by one. I will then bring a  
9 microphone to you, so please stay in your seat after  
10 being recognized. Before speaking, please identify  
11 yourself and any group or organization or affiliation  
12 that you belong to, if appropriate, so that the  
13 transcriber can make a note of this for the record.  
14 Yes, this meeting is being transcribed and we plan on  
15 posting a record of this meeting as soon as possible.

16 It is important to speak clearly into the  
17 microphone. Please try to keep your questions or  
18 comments to about three minutes, and we have about 39  
19 individuals who want to speak, plus two more on the  
20 phone. This will support our goal of allowing many  
21 people to speak tonight.

22 Both questions and comments are on the  
23 record and will be considered in the final  
24 environmental assessment. We may not be able to answer  
25 all the questions tonight, that's why we have the

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1 court reporter here so we can review the transcript at  
2 a later date.

3 I'm going to begin by calling on people in  
4 the order in which they signed up for questions, and  
5 then I will proceed with those participants on the  
6 phone.

7 I have here number one, John Kaneko. I'm  
8 going to bring the microphone to you, sir.

9 MR. KANEKO: Okay. I'm going to read  
10 this. My name is John Kaneko. I live in Kaneohe, and  
11 I read the EA and topical reports.

12 I agree with the overall EA conclusion,  
13 but I disagree with the findings of that if licensed,  
14 the irradiator would provide only small benefits. I  
15 think that the -- this greatly undervalues the  
16 environmental benefits, which would include protecting  
17 Hawaii against invasive species, strengthening local  
18 agriculture, thereby maintaining open space and  
19 reducing our dependence on foreign food and even  
20 protecting the earth's ozone layer by displacing the  
21 use of methylbromide.

22 An irradiator could have kept out the  
23 recently introduced red fire ants, stinging nettle  
24 caterpillars and coqui frogs. We already have about  
25 2500 invasive species of insects here and I worry

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1 about what's in the next container.

2 Now terrorism has been raised as a reason  
3 for not permitting the irradiator. Fear mongering and  
4 misinformation aids terrorists and keeps us from  
5 focusing on solutions to greater threats to Hawaii's  
6 unique environment and quality of life. Because we  
7 fear what we don't understand, we need sound  
8 information and not sound bytes. I defer to the NRC  
9 as the authority on nuclear safety and look to them to  
10 inform the public about cobalt-60 and explain how the  
11 NRC works with other agencies that deal with  
12 terrorism.

13 While the EA does not deal with terrorism  
14 specifically, it does evaluate conceivable methods  
15 that might be used by terrorists. These include  
16 airlines crashing right into the facility and the  
17 tremendous forces, similar to those generated by  
18 earthquakes, tsunamis and hurricane storm surges.

19 Including basic information on the EA on  
20 whether or not cobalt-60 is actually of any use to  
21 terrorists would strengthen the EA and settle many of  
22 the fears about this technology. My understanding is  
23 that cobalt-60 cannot be used to make nuclear bombs,  
24 is of low priority for making dirty bombs, and does  
25 not dissolve in water, does make it radioactive and

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1 therefore cobalt-60 is of little use to terrorists.  
2 This should be made clear to the public and to the  
3 terrorist.

4 I intend to keep an open mind and try to  
5 inform myself more about this technology, and I thank  
6 the NRC for holding this meeting and informing the  
7 community about how the proposed irradiator facility  
8 can be operated safely and help to support Hawaii's  
9 sustainable future. Thank you.

10 MR. TORRES: Thank you for your comments.

11 The second person, Lyle Wong.

12 MR. WONG: My name is Lyle Wong. I'm with  
13 the Hawaii Department of Agriculture. I'm head of the  
14 plant industry division and I'm making comments for  
15 the department of agriculture.

16 For the purpose of background, I'd just  
17 like to state that the Hawaii farmers have been  
18 shipping fruit to U.S. mainland markets with  
19 irradiation quarantine treatment for almost 12 years  
20 now. This is not a new technology for Hawaii. The  
21 initial treatments from 1995 to 2000 were done in a  
22 commercial cobalt -- were done in commercial cobalt  
23 irradiators on the U.S. mainland in Chicago and New  
24 Jersey for distribution of that fruit across the  
25 United States. Since August of 2000, growers have been

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1 using an irradiator -- Hawaii's first commercial  
2 irradiator which is located in Keau. That unit is an  
3 electrical source and is not regulated by the Nuclear  
4 Regulatory Commission.

5 The EA and the topical report have  
6 generally confirmed our understanding regarding the  
7 risks associated with this type of unit. We agree  
8 with the findings of the environmental assessment that  
9 the risk with respect to aircraft crashes is very low  
10 and that the impact of tsunamis, hurricanes and  
11 earthquakes are not likely to have a measurable risk  
12 to the facility. Irradiation does not make water in  
13 the pool radioactive nor the food that's treated  
14 radioactive.

15 Now, the concern that we have is that the  
16 community will continue to have concerns that the  
17 facility may be the target of a terrorist act and we  
18 feel that the final environmental impact statement  
19 should have some statement regarding the risks of the  
20 types of mischief that evil can have with a commercial  
21 irradiator. Whether or not it can sustain false --  
22 that there might be foreseeable activities with  
23 respect to terrorists activities.

24 We have interest in using the facility for  
25 both export as well as import of products and for

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1 import, the treatment of cut flowers. We'd like to  
2 make a statement to the public that we're not the only  
3 ones interested in the use of irradiation quarantine  
4 treatment. Mexico has put in two cobalt irradiators  
5 and we had the privilege of watching the mangos come  
6 in from Australia a couple months ago that had been  
7 treated in Australia for shipment to New Zealand.

8 We think the process that we're going  
9 through right now is good. We look forward to a good  
10 science-based review of the findings and for a quick  
11 resolution to the challenges to this facility and we  
12 hope it's positive.

13 MR. TORRES: Thank you. Now we have Mr.  
14 Damian Paul.

15 MR. PAUL: Aloha. My name is Damian Paul.  
16 I'm here tonight as a concerned citizen, father of  
17 eight children, grandfather of eight children that all  
18 live here on Oahu. I'm also here tonight representing  
19 the Hawaii Organic Farmers Association, which I'm a  
20 member of. You may or may not know, but we have over  
21 160 certified organic farms in the state of Hawaii,  
22 and we are growing at 20 percent a year, as we are  
23 nationwide 20 percent a year. And you may or may not  
24 know also under the Federal Organic Law of 2002,  
25 irradiated food is illegal to sell as organic.

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1 I am concerned about the accidents that  
2 irradiated food -- or excuse me, irradiation  
3 facilities have had in the last 30, 40 years. We  
4 actually had an irradiation facility here back in the  
5 1970s that leaked radiation for, I believe it was,  
6 nine years on the front lawn and on the roof before it  
7 was taken care of, and it was all of us, the Hawaii  
8 taxpayers, that picked up the bill to clean up that  
9 irradiation. And just like this meeting started with  
10 equipment malfunctions, we all need to be aware that  
11 equipment at an irradiator facility can malfunction.  
12 It can be a human error, just like there has been in  
13 many irradiation facilities, not only in the United  
14 States, but around the world. And I know these people  
15 are giving really good technical testimony and they're  
16 well educated in their presentation, but remember the  
17 experts said the Titanic could not sink and if we have  
18 an accident here in Hawaii, it will be us, the  
19 taxpayers, who will be cleaning it up.

20 Another concern of mine is the nutritional  
21 value of irradiated food. Irradiation destroys a lot  
22 of the nutrients in food. It destroys a lot of  
23 protein, essential fatty acids, and it's been linked,  
24 actually, to liver cancer, and some chemicals that are  
25 created by irradiated food that are suspected in

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1 causing birth defects.

2 I believe this irradiation facility has  
3 far too many risks, and I know there's a lot of people  
4 here tonight that are part of the Greatest Generation  
5 and you folks did very well without irradiated food.  
6 And for the rest of you, you might want to remember  
7 what Bob Dylan said in the 1960s, and that is "money  
8 doesn't talk, it swears," and I see a lot of people  
9 with their badges on tonight, so I know there's money  
10 behind this facility and this idea, but I'm telling  
11 you folks, you're going down the wrong avenue and you  
12 might want to reconsider having an irradiation  
13 facility in our state. Thank you.

14 MR. TORRES: Thank you for your comments.

15 I have a question for the NRC staff.  
16 Would you like to offer financial assurance on the  
17 Hawaii irradiator at this moment, the reference that  
18 the individual made?

19 MR. GAINES: Would you repeat that  
20 question?

21 MR. TORRES: The individual made reference  
22 to an irradiator that leaked in Hawaii in the 1970s.

23 MR. PAUL: Actually, it was at Fort  
24 Armstrong in 1979. It was a state-run facility, the  
25 Hawaii Development Irradiator. (808) 524-

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2 MS. PAUL: We'd appreciate comment on  
3 that.

4 MR. WERT: I'll try to address it. I  
5 mean, I believe that that's a factual statement. I  
6 believe that that did occur. There was a leaking  
7 irradiator back then. I also know that those sources  
8 that were involved in that irradiator were not the  
9 type of sources that going to be involved in this  
10 facility.

11 I agree with your statement that we always  
12 have to plan for things that are unexpected to happen,  
13 and I believe that the robustness of these sources is  
14 a big step in that direction.

15 MS. PAUL: What's the difference between  
16 what was built then --

17 MR. TORRES: Let me approach you.

18 MS. PAUL: What would the difference  
19 between the irradiator that was built then and this  
20 robust irradiator that you're talking about now be?  
21 And again, you've assured us of the safety and I'm  
22 sure that we were assured of the safety of the  
23 facilitator in the past, so how do you correlate the  
24 assurance of that period with the assurance of this  
25 period? How do you assure us again that there will

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1 not be an accident, as happened then, that we, the  
2 public, were not informed of. I was not aware of an  
3 accident until maybe a year ago, and I was appalled  
4 that we, the public, were not more informed about the  
5 danger of that radioactive leak and that we were told  
6 that being in the vicinity of that leak was the  
7 equivalent of 900 chest X-rays per hour. I would not  
8 have wanted one of my children to be playing around in  
9 that area without any cordoned off partition letting  
10 us know that it was dangerous, and I don't believe  
11 that there was any partition there that kept the  
12 public from knowing how dangerous it was to be in  
13 vicinity. Would you comments on that, please?

14 MR. WERT: Yes, I'll try to do that. I do  
15 not know the details about the particular incident, so  
16 I can't comment on the actions that were taken after  
17 the leak. However, I think that your questions about  
18 what are the differences between that facility and  
19 this proposed facility, that's a very good question.  
20 In fact, if I was sitting in the audience, I would ask  
21 that question.

22 As I mentioned before, the sources that  
23 are going to be used in this facility are much more --  
24 excuse me, much more rigorously tested. They are  
25 tested to extreme temperatures and elevated pressures

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1 and also, as already has been discussed tonight, there  
2 are a form of solid metal. I'm not a hundred percent  
3 sure exactly what source material was in the  
4 irradiator that you're referring to, but they were not  
5 these types of sources.

6 Also, another important change is that in  
7 this facility the licensee has to have an operating  
8 monitor that's very sensitive that operates to monitor  
9 the pool water radiation levels. Then there is also  
10 a requirement that whenever radiation is detected in  
11 the pool water, that the facility has to cease  
12 operation and have to take action to remedy that.

13 I don't know all the facts involved in the  
14 situation that you're referring to, but I believe that  
15 the sources leaked for a period of time, an extended  
16 period of time.

17 MS. PAUL: Nine years.

18 MR. WERT: In other words, the pool was  
19 contaminated for a period time and eventually leaked  
20 to the outside environment. I don't know the details  
21 like whether it was a dual-lined pool and some other  
22 things in the construction that might be different,  
23 but to answer your question, the sources are much more  
24 robustly tested in this facility, and there is a much  
25 more stringent requirement on radiation monitoring of

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1 the water. Does that help?

2 MS. PAUL: No. What does Pa'ina mean in  
3 Hawaiian?

4 MR. TORRES: The question is what does  
5 Pa'ina mean in Hawaii? Please identify yourself.

6 MR. KOHN: Michael Kohn from Pa'ina  
7 Hawaii. It means -- it can mean to share food. I  
8 wanted it to be.

9 MR. TORRES: I have to proceed. I have a  
10 list of people I need to go with. I have James Moy is  
11 the next one.

12 MR. MOY: I'm professor emeritus at the  
13 University of Hawaii. I would like to say a few words  
14 in support of this facility.

15 First, an irradiator with capsules of  
16 cobalt-60 under 18 feet of water and no movement of  
17 the source at any time is a very safe facility. I  
18 speak from my 35 years of experience in managing and  
19 operating such an irradiator on the campus of the  
20 University of Hawaii from 1968 to 2003. I know about  
21 the other problem also. It was just one capsule that  
22 was leaking on the way from the mainland to Hawaii.  
23 It so happened the seawater get into the casts that  
24 carry the cobalt capsule and corroded one capsule and  
25 the leakage was about less than one curie in the pool

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1 water, but they clean it up.

2 I use an irradiator for experiments on all  
3 sorts of tropical fruits, all that are grown here, and  
4 have trained more than 300 researchers and graduate  
5 assistants for the safe operation of the Hawaii  
6 Research Irradiator. During those years, not a single  
7 incident or accident happened. Cobalt-60, as an  
8 earlier speaker point out, is not soluble in water.  
9 It will not make -- contaminate any other water  
10 source, even if the capsule is broken. In fact, every  
11 cobalt is double encapsulated with stainless steel,  
12 high-grade stainless steel.

13 NRC and this environmental assessment has  
14 carefully assessed the potential effects of tsunami or  
15 earthquake on the cobalt sources. And concluded that  
16 the integrity of this source will not be compromised.  
17 When I was managing the research irradiator, I  
18 consulted two experts about the same potential  
19 problems. What they told me is essentially the same  
20 as what NRC has found. It is impossible for anyone to  
21 dive down to the bottom of the pool to try to pry open  
22 the cobalt-60 source of capsules. This is because the  
23 capsules are fastened with a plaque or plaques on the  
24 floor.

25 MR. TORRES: Ten seconds.

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1 MR. MOY: So if a person try to get down  
2 to the bottom, he will be sick and weakened in a few  
3 minutes and cannot get out.

4 So I have claimed that I work on tropical  
5 fruits for all these years, 37 years. I've eaten more  
6 irradiated papaya than anybody else on this planet.  
7 It's practically a Guinness world record. So I fully  
8 support this facility.

9 MR. TORRES: Now, I was listening to a  
10 lady over here speaking and Len speaking and current  
11 modern seal sources, they have to have a seal source  
12 and device registration certificate, meaning that it  
13 goes through some rigorous engineering analysis and  
14 operational data from 1989, according to Matt's  
15 presentation said that the proposed seal sources for  
16 the Pa'ina irradiator, they haven't leaked at all. So  
17 I just wanted to bring that up, ask that we have that  
18 operation of that.

19 MS. PAUL: How can we be sure that if it's  
20 sent over here the same way the original one was sent  
21 over that they won't also accidentally be contaminated  
22 by seawater and have that same corrosion.

23 MR. TORRES: Would you please write --  
24 Victor, can you please give her a card so she can  
25 write her questions so I can move forward. Thanks.

1 The next person is Peter Follett.

2 MR. FOLLETT: I'm Peter Follett. I'm a  
3 research entomologist with the USDA in Hilo, Hawaii.  
4 I work for the agricultural research service there on  
5 the Big Island.

6 I just thought I'd give a little  
7 background on what we do. The unit within USDA that  
8 I'm involved with develops commodity quarantine  
9 treatments. The idea is that we have insects here in  
10 Hawaii that are not found on the mainland or in other  
11 countries, so we develop quarantine treatments so that  
12 we can control those insects in our produce, whether  
13 it's fruits or vegetables or whatever so that we can  
14 export that produce to these other markets.

15 Irradiation is one of the possibilities  
16 for treating this fruit to export. Heat is another  
17 treatment that's been brought up here, cold is another  
18 one, fumigation is another. I've heard people mention  
19 methylbromide several times. We've done very little  
20 methylbromide research here, we've done very little  
21 methylbromide treatment of our Hawaiian produce  
22 because, in general, our tropical fruits don't handle  
23 methylbromide well without showing some types of  
24 damage.

25 For the last ten years or so I've been

1 working on a number of different quarantine treatment  
2 technologies, including irradiation. We currently  
3 have treatments for eleven fruits and five vegetables  
4 to export, irradiation treatments for export. Many of  
5 these fruits and vegetables have alternative  
6 treatments. There are only a couple of examples,  
7 mangos, where we have only irradiation as the  
8 treatment for export. In the other cases, there are  
9 alternatives, such as papaya, we have vapor heat as  
10 well irradiation. Star fruit, we have cold as well as  
11 irradiation. So farmers have a choice.

12 There are a number of advantages to  
13 irradiation. One of the most -- a recent event that's  
14 happened in the last year is the propagation of  
15 generic treatments, which means that we have a generic  
16 treatment of 150 Gy for fruit flies, one of our major  
17 quarantine pests, and 400 Gy for other insects. And  
18 we have a number of other insects that are as  
19 important as fruit flies when it comes to exporting  
20 our produce.

21 So the advantage of that is that we can  
22 very rapidly develop treatments as soon as we know  
23 what pests are found with the commodity without  
24 developing, over years time, heat treatments and other  
25 sorts of treatments for the commodities. So that's an

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1 advantage.

2 The disadvantage, as was brought out, is  
3 that it's not an organic treatment, not considered  
4 organic and, of course, we can't export to Japan and  
5 Europe, but the USDA supports the technology and we'll  
6 continue to do research in irradiation as well as  
7 other commodity treatment technologies.

8 MR. TORRES: Thank you. The next person  
9 is Ron Mulligan.

10 MR. MULLIGAN: The irradiator that's being  
11 proposed in Hawaii is not in the experimental stage.  
12 There's been -- they've been around about 50 years and  
13 there are hundreds in the world, and no one in the  
14 public or the workforce has ever been exposed to  
15 radiation from it. The term "inherently safe" has  
16 been given by the International Atomic Energy Agency,  
17 so why shouldn't Hawaii take advantage of that  
18 technology. We have 25,000 acres right now that are  
19 not in use, agricultural acres, and they could be, and  
20 the markets, we can sell on the mainland if it was  
21 available, and right now we can't ship there because  
22 of that reason, because of those pests. And the  
23 auxiliary effect would be that we can have -- be  
24 slightly more self-sufficient so if there was a  
25 problem in shipping to the mainland or, excuse me, to

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1 Hawaii, we would have more food available for us. And  
2 a lot of the fears of irradiation are not based on  
3 science. It doesn't make food radioactive, but it  
4 does make it safer.

5 MR. TORRES: Thank you very much. The  
6 next person, Ella Manuel.

7 MS. MANUEL: Hi, my name is Ella Manuel.  
8 I'm from the Big Island. I'm a farmer there. As you  
9 can see from my name tag, I am 110 percent support in  
10 Pa'ina Hawaii to get this irradiation on the road so  
11 that we can get rid of all those unwanted visitors  
12 that's coming here. Thank you.

13 MR. TORRES: William Julian.

14 Next person is Alberto Belmes. Alberto.  
15 Did I pronounce your name correctly?

16 MR. BELMES: My name is Alberto Belmes,  
17 and I am a papaya farmer. And I'm farming over 25  
18 years. I am the third largest registered in the state  
19 of Hawaii. I have a 150 acres papaya currently in  
20 producing. In addition, I have 45 acres of citrus and  
21 have five acres of avocado. I fully support the NRC's  
22 EA finding of no significant impacts of the ruling in  
23 favor of issuing the Pa'ina Hawaii LLC license for an  
24 underwater irradiator at the Honolulu airport.

25 I urge you to approve the licensing of the

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1 Pa'ina Hawaii LLC irradiator at the Honolulu airport.  
2 This will provide farmers from the neighbor islands  
3 convenient access to fruit fly quarantine treatment of  
4 their fresh produce bound for the U.S. mainland  
5 markets. In order for the Hawaii farmers to stay  
6 competitive in world markets, we must produce  
7 consistently high quality products at a price that  
8 will keep farming economically viable and sustainable.  
9 The irradiator will make that possible.

10 The irradiation will allow me to bulk  
11 treat ripe papayas that are much desired by consumers.  
12 Farming is my life. It provides income for my family  
13 and my family of other employees. My farm also  
14 supports papaya packing businesses that employed  
15 considerable number of people in the community. Thank  
16 you very much.

17 MR. TORRES: The next individual has  
18 stepped out for a moment. William Julian, is that  
19 you? Welcome back. You prefer to make a statement or  
20 ask a question?

21 MR. JULIAN: Thank you for allowing us to  
22 have these irradiation comment tonight. I came from  
23 the Big Island. I'm the largest papaya grower. I  
24 grow about 2 to 3 million ton a year. Our problem is  
25 Honolulu is limited market and we'd like to export our

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1 fruit to the mainland. They're waiting for our fruit  
2 because Hawaii has the best papaya in the world and we  
3 need this irradiation. Thank you very much.

4 MR. TORRES: The next person is Jimmy  
5 Bernardo.

6 MR. BERNARDO: My name is Jimmy Bernardo  
7 from the island of the Big Island. I have 25 acres,  
8 25 years papaya growers. I fully support the plans  
9 for irradiation. Thank you.

10 MR. TORRES: The next person -- I cannot  
11 make the first name, her last name is Molina. His  
12 name. Please state your full name.

13 MR. MOLINA: My name is Daniel Molina,  
14 papaya farmer for over three years. I live in Kona  
15 where I farm 50 acres of papaya. I fully support of  
16 the NRC EA finding of no significant impact and in  
17 favor of issuing Pa'ina Hawaii LLC license for  
18 underwater irradiator at the Honolulu airport. If  
19 irradiation is approved as treatment for papaya, it's  
20 the only treatment allows us to sell tree-ripened,  
21 high quality papaya, distancing Hawaii papaya from  
22 those produced by the other countries. The influx of  
23 foreign papaya from South and Central America has  
24 eroded the market for Hawaii papaya. It's made it very  
25 difficult for the papaya farmers in Hawaii to compete.

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1                   With the irradiation we can treat papaya  
2                   at its full maturity without compromising quality,  
3                   thereby creating a niche market for our papaya and  
4                   planning to keep my farm economically viable. Papaya  
5                   farming has been the source of support for my family  
6                   and the family that hired, both temporary and  
7                   permanent. I urge you to provide the licensing of  
8                   this irradiation. Thank you.

9                   MR. TORRES: Next individual is David  
10                  Henkin.

11                  MR. HENKIN: Good evening. My name is  
12                  David Henkin, H-E-N-K-I-N. I'm an attorney with  
13                  Earthjustice, and I've been working on this project on  
14                  behalf of concerned citizens of Honolulu.

15                  I think that all of us in the room share  
16                  one desire, which is to make sure that there is a full  
17                  and accurate description of the pros and cons of going  
18                  forward with this facility. We've heard from some  
19                  people that want the economic benefits to be  
20                  emphasized. Well, from our perspective, we'd like to  
21                  make sure that there is a full and accurate  
22                  description of the potential risk to the public safety  
23                  and health of the people of Hawaii, and also a full  
24                  vetting of what some of the alternatives are.

25                  Already tonight we've heard comments from

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1 some individuals who are involved in things having to  
2 do with irradiation. I'd like to address first the  
3 issue of terrorism. Now Professor Moy, I'm not sure  
4 if he's returned, I saw him step out, he mentioned for  
5 35 years he was in charge of the research irradiator  
6 at the University of Hawaii at Manoa. Well, yes, that  
7 was until 2005 when the National Nuclear Security  
8 Administration confiscated his source of cobalt-60  
9 because of his failure to lock the facility and keep  
10 it under alarm. They confiscated it because they  
11 recognized that cobalt-60 is a top target for  
12 terrorists for use in a dirty bomb. And that source,  
13 if I'm not mistaken, was only a one thousand curie  
14 source of cobalt-60, whereas the application under  
15 consideration for the Pa'ina Hawaii facility would be  
16 for up to one million curies of radioactive cobalt.

17 We agree with the people who have said  
18 earlier this evening, perhaps coming from a different  
19 perspective, that there needs to be a full discussion  
20 of the possibility of terrorist-related impacts from  
21 placing a facility with up to a million curies of  
22 radioactive cobalt at the airport, next to active  
23 runways, in the middle of urban Honolulu, and near  
24 strategic and symbolic military targets like Pearl  
25 Harbor. We owe it to ourselves to look at those

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1 things. Now, if a sober analysis proves that there is  
2 no cause for concern, not only from the placement of  
3 the material in that location, but also you've heard  
4 that once every year or two years they will need to  
5 replenish the cobalt-60, bringing new sources to the  
6 facility and taking other sources away when they are  
7 less useful.

8 All those present -- all of those present  
9 opportunities to people who would do us harm, and,  
10 frankly, post-9/11, it is foolish to put your head in  
11 the sand. Now, the Nuclear Regulatory Commission has  
12 failed in the past to look at these risks, and just  
13 last year was told by the 9th Circuit Court that they  
14 must look at those risks. These are not speculative  
15 risks or else Professor Mow would still have his  
16 irradiator and the source would not be taken by  
17 another branch of the federal government because of  
18 the risk it posed to all of us.

19 Now, I've been assured by the NRC's  
20 attorney, Molly Bupp, aloha, Molly, that even though  
21 this meeting officially goes until 9:00, for those  
22 people who want to speak at greater length and put  
23 their comments on the record, that we will extend  
24 beyond 9:00, because, frankly, an hour to have people  
25 stand up, say their name, state if they're for or

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1 against and sit down, doesn't do what this process is  
2 supposed to do. We should look at all the facts and  
3 bring out all the issues.

4 So I'll be happy to cede for the next  
5 person, but I'll be here and I'll appreciate the  
6 opportunity to address other issues that have not been  
7 addressed in this deficient EA later.

8 MR. TORRES: Thank you. Next individual  
9 is Robert Potter.

10 MR. POTTER: My name is Robert Potter. I  
11 consider myself an environmentalist. I'm not just  
12 concerned about environmental concerns. I've tried to  
13 do something about it. Since 1976 I've had a hot  
14 water solar heater on my roof. For 20 years I  
15 commuted regularly to the campus by bicycle. When my  
16 wife and I go walking in the morning, we pick up  
17 litter on the streets and the beaches. But I've  
18 learned not to be panicked by words like "irradiation"  
19 and "terrorism."

20 I have a familiar history of heart  
21 problems. I have twice undergone a heart test called  
22 thallium profusion. In that test radioactive thallium  
23 was injected into my bloodstream. I was put on a  
24 treadmill. I survived. When my mother had thyroid  
25 cancer, I watched my brother, who is a nuclear

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1 medicine specialist, mix a cocktail of radioactive  
2 iodine, I think iodine 131. Mother drank it. She  
3 survived. The thyroid didn't.

4 Radiation is very much a part of our lives  
5 in many, many ways. Don't be afraid of the word. The  
6 Bush Administration has pushed the terrorist button so  
7 much that people are looking for terrorists under the  
8 bed. The aim of terrorists is to scare us so badly  
9 that we won't make intelligent decisions. If we  
10 refuse to make intelligent decisions, to use  
11 irradiation in a wise and safe manner, we let the  
12 terrorists win. Mahalo.

13 MR. TORRES: Alan Takemoto.

14 MR. TAKEMOTO: Thank you. Again, my name  
15 is Alan Takemoto. I'm the executive director of the  
16 Hawaii Farmer Federation. I'm here on behalf of Dean  
17 Okimoto, my president. The Hawaii Farmer is also  
18 affiliated with the American Farmer Federation, our  
19 national organization addressing national issues. The  
20 Farmer is a non-profit organization. We represent  
21 about 1600 farm families throughout this state.

22 The Farm Bureau continues to support  
23 irradiation as a tool to allow all farmers to export  
24 their products out of this state. One of the largest  
25 barriers that our farmers continue to face is the

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1 ability to export and irradiation is a definite tool  
2 that we can use to expand our industry here in Hawaii.  
3 We are looking at millions of dollars that we can  
4 infuse into our economy if we're allowed this  
5 opportunity.

6 Secondly, competition. We are constantly  
7 competing with the global marketplace. Many other  
8 countries are using irradiation as a tool to export  
9 their products to market that Hawaii definitely can  
10 compete with, but we cannot. We have limited  
11 facilities. We need a facility that will provide all  
12 farmers more access to the marketplace.

13 Third, location. Honolulu is the central  
14 point of our product coming in and out of our state.  
15 We believe having a facility here will not only  
16 benefit our Oahu farmers, it will benefit the neighbor  
17 island farmers who can bring their products to  
18 Honolulu and export to various countries and also to  
19 the U.S. mainland.

20 And lastly, I think I'm very pleased to  
21 hear about the report from the NRC that there is  
22 minimal risk. I think the benefits definitely  
23 outweigh the risk. I think we should cross that  
24 street and open the door for our export market for  
25 Hawaii's agricultural industry. Thank you.

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1 MR. TORRES: Andrew Hashimoto.

2 MR. HASHIMOTO: My name is Andy Hashimoto.  
3 I'm the dean of the College of Tropical Agriculture  
4 and Human Resources.

5 And we've, as Dr. Moy indicated, we've had  
6 a cobalt-60 irradiator on campus for over 40 years  
7 without any incident. The report just given that the  
8 reactor or the irradiator was confiscated is not  
9 correct. We asked to decommission the irradiator  
10 because Dr. Moy was retiring and they really were not  
11 doing anymore research in the area. So that's the  
12 reason that we decommissioned the irradiator on  
13 campus.

14 And, actually, they didn't confiscate it.  
15 We really asked them to decommission and at first they  
16 were reluctant to because they -- it's quite a bit of  
17 an expense to do that, but in the end, they  
18 acknowledged that this reactor was initially funded by  
19 them and the source material was given to us by them  
20 and, therefore, there was no response but to take it  
21 back. The report that it was decommissioned because  
22 of any problems with the reactor is totally incorrect.

23 Many produce from Hawaii must be  
24 irradiated before being exported to the rest of the  
25 United States or other countries. There is only one

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1 irradiator located in the state in Hilo, the island of  
2 Hawaii. It costs time, it's cost and time prohibitive  
3 to ship produce from the other islands to Hilo for  
4 irradiation prior to export. Having another  
5 irradiator for redundancy would be advantageous when  
6 one of the irradiators is unavailable for maintenance  
7 or other reasons. An irradiator on the island of Oahu  
8 would greatly increase the export opportunities for  
9 farmers in Hawaii and generate additional agricultural  
10 revenues for the state of Hawaii.

11 I support the construction of the  
12 commercial irradiator near the Honolulu International  
13 Airport by Pa'ina Hawaii LLC because it will be a safe  
14 facility and the irradiator will help the agricultural  
15 economy of the state of Hawaii. The benefits of this  
16 facility far outweigh the risk. Thank you very much.

17 MR. TORRES: For clarification of record  
18 for the court transcriber, reference to a reactor  
19 should be -- or the correct terminology is irradiator.

20 The next person is Ron Darby. Ron Darby.

21 MR. DARBY: I'd just like to say I'm in  
22 favor of the irradiator project for the reasons given,  
23 and I don't have written testimony, but they've  
24 covered those reasons. I'm for the project.

25 MR. TORRES: Thank you. James Fleming.

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1 MR. FLEMING: My name is James Flemming.  
2 I'm a 73-year-old nuclear engineer with a master's  
3 degree in electrical engineering from Stanford  
4 University, and I did postgraduate work in nuclear  
5 engineering. I'm also a kamaaina with a strong  
6 connection to agriculture in Hawaii. My great  
7 grandfather came to Hawaii when it was still a  
8 kingdom. My grandfather started the first planting of  
9 pineapple on Maui, and the plantation that he started  
10 there eventually grew into Maui Land & Pine. So I  
11 know something about pineapple because I grew up on it  
12 myself.

13 My grandfather experimented with raising  
14 tropical crops to diversify agriculture in Hawaii  
15 because he believed Hawaii's dependency on sugar and  
16 pineapple was putting all our eggs in one basket. He  
17 believed that pineapple was a luxury fruit and was  
18 strongly influenced -- the demand for it was strongly  
19 influenced by the economy.

20 Although my ancestors were in agriculture  
21 and my father was in medicine, I went into  
22 engineering. My experience in the nuclear industry  
23 includes four years of design work and then 27 years  
24 handling radioactive material in the industrial  
25 environment in Hawaii. At the shipyard we refuel and

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1 maintain nuclear submarines where I eventually managed  
2 240 engineers and 800 tradespeople. During those 27  
3 years, and I'm still sure it's going on, we never had  
4 a person injured by radioactive material. And this  
5 radioactive material is a lot more than we're dealing  
6 with here. I know at firsthand, with attention to  
7 detail and the design and the construction and the  
8 maintenance of the equipment, and with the training  
9 and frequent retraining or refresher training of  
10 workers and their supervisors that radioactive  
11 material can be safely handled by people in Hawaii.

12 My father -- my forefathers took risks in  
13 developing the economy of Maui and Hawaii. I think we  
14 owe it to people like people who are trying to develop  
15 an irradiator here to support them for diversified  
16 agriculture in Hawaii to not keep all our eggs in one  
17 basket. Thank you very much.

18 MR. TORRES: Galeen Ross. Galeen Ross.

19 Next person is Steve Ferrera.

20 MR. FERRERA: Hello, my name is a Steve  
21 Ferrera. I work with papayas at the University of  
22 Hawaii. I think -- I won't repeat much of what has  
23 been said. I think the benefits far outweigh the  
24 risks. I'd like to make two comments. I just lost --  
25 one of them, I think like the elderly gentleman on the

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1 left here pointed out, we need to become more  
2 comfortable with our nuclear future. This is related,  
3 but not directly, if we're going to address global  
4 warming in any significant way and really do address  
5 it and not have lip service with it, nuclear energy  
6 the use of nuclear power is in our future and we need  
7 to get used to the use of -- being comfortable with  
8 nuclear energy and therefore it's related to this  
9 project.

10 Secondly, I think it's a mistake, as some  
11 people have pointed out there's been mistakes and  
12 problems in the past. It's a mistake to conclude that  
13 we're destined to repeat those problems. I think we  
14 have learned from our past and we continue to evolve  
15 in our methodologies will be better and better going  
16 into the future. Thank you.

17 MR. TORRES: The next person is Rudy  
18 Sibucaao.

19 MR. SIBUCAO: Yes, good evening. I'm Rudy  
20 Sibucaao from the island of Hawaii farmer, and I'm  
21 doing already for 27 years and it's 27 years of trying  
22 to survive as a farmer because of lack of treatment  
23 facility to export our product, and now I think this  
24 is the time for us to help the agricultural industry  
25 and let us all support this irradiator.

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1 MR. TORRES: Mel Jackson.

2 MR. JACKSON: Hi, I'm Mel Jackson,  
3 radiation safety officer, director of product  
4 development and services at the Hawaii Agricultural  
5 Research Center.

6 The Hawaii Agricultural Research Center is  
7 a not-for-profit research institution that is  
8 dedicated to serving all of Hawaii's farmers needs by  
9 conducting research that directly benefits them. We  
10 have seen, over our more than 100-year history, the  
11 devastation to agricultural concerns and the  
12 environment that invasive species and diseases can  
13 inflict and I've worked on a number of projects that  
14 have attempted to control pests and diseases that  
15 threaten Hawaii's farmers' livelihoods.

16 As is the nature of accidentally  
17 introduced invasive species and diseases, they're not  
18 easily recognized for what they are at the point of  
19 entry into the state and so are sometimes overlooked,  
20 despite the keen vigilance and monumental efforts of  
21 the federal plants and animal inspectors. We need  
22 only look at the recent arrivals of the coqui frog and  
23 the Erythrina gall wasp to grasp the difficulties  
24 associated with preventing the spread of undesirable  
25 alien species.

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1                   Now as an example, imagine the devastation  
2                   that would occur to the coffee industry if coffee rust  
3                   disease or coffee variable disease were to enter the  
4                   state. There's a good chance that the Hawaiian coffee  
5                   industry statewide would be put out of business. This  
6                   will happen one day, no doubt, and therefore makes  
7                   efficient elimination of potential pests a very  
8                   pressing need.

9                   There are a number of treatment measures  
10                  that have been tried by the state to eliminate  
11                  potentially devastating pests from incoming  
12                  agricultural products, but at the scale required, none  
13                  have been successful and consequently are not widely  
14                  available today.

15                 In addition to incoming agricultural  
16                 produce, Hawaii's farmers are often severely  
17                 restricted in the geographical areas to which they can  
18                 export agricultural produce because of the fear that  
19                 importing areas will receive produce contaminated with  
20                 pests who will devastate their local agricultural  
21                 economies. In addition, there are many examples where  
22                 Hawaii farm produce does not withstand the long  
23                 transport to distant markets, overripening or rotting  
24                 in transit. If there is a way to increase Hawaii farm  
25                 produce shelf life without reducing it's premium

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1 quality, then an advantage for Hawaii farmers has been  
2 gained. Without crop treatment of some kind, Hawaii's  
3 farmers will continue to suffer from reduced market  
4 opportunities, reduced return on their efforts, and in  
5 many cases, a quality of life marginally above  
6 subsistence.

7 Hawaii Agricultural Research Center has  
8 applauded the commissioning of an environmental  
9 assessment study on the proposed irradiation facility  
10 because it makes the process of picking a site open to  
11 review and public input, as we see here tonight. This  
12 is a vital step in assuring the public the true nature  
13 of such a facility. Whether you agree with irradiation  
14 as a safe or ethical means of dealing with invasive  
15 species or not, the fact is it works, and according  
16 the EA, completed by a third party, it appears to  
17 present no undue safety hazards in its proposed design  
18 format.

19 Therefore, the Hawaii Agricultural  
20 Research Center fully supports the construction of the  
21 Pa'ina facility and strongly recommends, given the  
22 need and the results of the EA, the regulatory  
23 agencies and other parties involved in its planning  
24 and constructions, make haste. Hawaii's farmers are  
25 watching and waiting.

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1 MR. TORRES: Ken Kamiya.

2 MR. KAMIYA: My name is Ken Kamiya. I'm  
3 a papaya farmer from the North Shore of Oahu, farming  
4 for over 35 years.

5 I think the issue of this irradiator is  
6 very simple and basic. If you want more houses, more  
7 people, more asphalt, more concrete, stop the  
8 irradiator. You want more farms, more diversified  
9 agriculture, mangos, lychees, papayas, put the  
10 irradiator in. Thank you.

11 MR. TORRES: Maryrose McClelland.

12 MS. McCLELLAND: My name is Maryrose  
13 McClelland. I was born and raised in Honolulu. I  
14 served in the neighborhood board for 26 years, 14 of  
15 which as chair. Let me address the issue I have.

16 The environmental assessment is a draft.  
17 The DEA is sadly inadequate. There are pages missing  
18 from the DEA. There are no cost-benefits statistics  
19 in the DEA. How can anyone make informed decisions  
20 without complete cost-benefit information? The DEA  
21 does not adequately or seriously study the threat of  
22 a terrorist using a nearby flight training school  
23 aircraft as a means of crashing intentionally into the  
24 proposed plant irradiator. The DEA states the  
25 probability of an aircraft accidentally crashing into

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1 the facility to be 1 in 5,000 years, close quote. The  
2 DEA does not consider the intentional act of crashing  
3 an aircraft into the facility. What was the  
4 probability of two aircraft crashing into the World  
5 Trade Center? Highly improbably, yet it happened.

6 The proposed site is an excellent target  
7 because, number one, it is next to our international  
8 airport. Number two, it is near the flight training  
9 school, which would provide an excellent opportunity  
10 for a terrorist. Number three, it is near military  
11 installations. Number four, it is along the southern  
12 shore of Oahu and is a short distance from the Pacific  
13 Ocean. Number five, it is located in urban Honolulu,  
14 which is the capital city of the state of Hawaii.

15 We are now living in an era where homeland  
16 security situations need to be seriously considered  
17 before making nuclear facility decisions. I urge the  
18 decision makers not to play Russian roulette with the  
19 health and safety of the citizens of Honolulu.

20 The DEA does not address the unique  
21 conditions neighboring and surrounding the proposed  
22 nuclear irradiation site. Oahu is an island which is  
23 susceptible to unique weather conditions, which are  
24 inadequately addressed in the DEA. The DEA dismisses  
25 the tsunami threat with, and I quote, water velocities

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1 for smaller tsunami waves, more typical for the  
2 southern shore of Oahu, would be substantially slower  
3 than for large waves and would likely not even reach  
4 the southern shore of the facility, close quote. The  
5 possibility of a large tsunami wave is very real.  
6 Scientists on the Big Island of Hawaii have predicted  
7 that a large land mass on that island will fall into  
8 the Pacific. A large land mass collapse will generate  
9 an unprecedented 40-plus foot wave crashing into  
10 Oahu's southern shore. This future tsunami danger is  
11 not even considered in the DEA. For those of us who  
12 live here in the islands, it is a very real danger  
13 that needs to be seriously and scientifically  
14 addressed by any seismic or surge assessments at any  
15 shoreline site on the Hawaiian islands.

16 Frankly, Oahu is a small, densely  
17 populated island, which does not need a nuclear-ran  
18 irradiator.

19 I have more than 30 seconds. You didn't  
20 tell me I had a time limit.

21 The Pa'ina Hawaii nuclear plant irradiator  
22 is proposed to be built on state land, state-owned  
23 land. A question to the state decision makers: Why  
24 are you prostituting the public's health and safety  
25 for papaya profits? I urge decision makers to avoid

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1 using state-owned lands for the proposed project. I  
2 urge you not to compromise the health and safety of  
3 the citizens of Oahu merely for short-term minimal  
4 profits. Why hasn't the DEA considered the nonnuclear  
5 plant facilities functioning on the Big Island? I  
6 urge the decision makers to establish a nonnuclear  
7 irradiator facility.

8 MR. TORRES: I don't mean to be  
9 disrespectful, but can you please summarize within the  
10 next 30 seconds, and we're taking written comments.  
11 Written comments will be documented.

12 MS. McCLELLAND: No.

13 I understand that once a year nuclear  
14 material is transported to the site. The DEA does not  
15 elaborate on the potential risks for the Honolulu  
16 community when the nuclear materials are transported  
17 to the site. Why are we risking a possible nuclear  
18 accident to merely provide peak quality plants or  
19 fruits for Asia or Europe? I urge those who are  
20 promoting this project to look beyond their pocket  
21 lining. Remember, public health and safety are more  
22 important than papaya profits.

23 I urge the U.S. Nuclear Regulatory  
24 Commission to do further research and provide the  
25 public and decision makers with a more complete

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1 analysis of the proposed nuclear plant irradiator as  
2 proposed by Pa'ina Hawaii. I believe the DEA was  
3 rushed and is inadequate. More situations need to be  
4 investigated and more questions answered in a possible  
5 environmental impact statement.

6 I urge the decision makers to do what is  
7 pono, which means right, for the sake of the 'aina,  
8 the land, and for the people of Hawaii. Do not allow  
9 a nuclear plant irradiator to be built anywhere here  
10 in Hawaii. Thank you for your consideration.

11 MR. TORRES: Thank you. Matthew Rose.

12 MR. ROSE: Thank you. You have a tough  
13 job tonight, Roberto.

14 MR. TORRES: Well, one of our goals here  
15 is openness. We want to listen to every comment and  
16 that's why we're here.

17 MR. ROSE: I think you have a tough job  
18 tonight, but you're doing it well.

19 My name is Matthew Rose. I can't say I've  
20 been a farmer for years and years. I just started  
21 farming last year. I moved to Oahu from California to  
22 join my father-in-law's company or father-in-law, who  
23 is sitting next to me.

24 I just want to say that I fully support  
25 the installation of this facility. I fully accept the

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1 assessment by the NRC, findings of the NRC as far as  
2 the safety is concerned. And that this facility  
3 really represents to not just myself, but, I think, to  
4 all the papaya growers here access to the mainland  
5 marketplace, which is critical for the future of our  
6 industry in Hawaii. Thank you.

7 MR. TORRES: Bernadette Young.

8 MS. YOUNG: I'm here. I'm Bernadette  
9 Young. I'm also a resident of the area. I'm also a  
10 U.S. citizen.

11 And I want to make things clear to that  
12 man in the front, I don't look under my bed for  
13 terrorists. And also I want to ask you a question,  
14 the professor from the UH said that if anybody dives  
15 underneath the water and goes through the -- that  
16 irradiator will die. So what does that tell you.  
17 It's licken. Something is licken, okay? Okay, I'm  
18 strongly against this Pa'ina irradiator.

19 Last year these people came to our  
20 neighborhood board to present about using the cobalt-  
21 60, dangers which we are aware of. Some of the many  
22 reasons we are against it are it's right in the heart  
23 of downtown Honolulu, the capital of Hawaii. Have  
24 some respect. It's near to various military bases and  
25 housing, such as Hickam Air Force Base, Pearl Harbor,

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1 Fort Shafter and the coast guard. The coast guard is  
2 the one that protects our water from terrorists. And  
3 it's near the international airport and it's near a  
4 tsunami zone.

5 There are other methods of getting rid of  
6 the pests in the papaya, like this gentleman from  
7 Hilo, he say, okay. The hotels and the food industry  
8 should band together and protect themselves against  
9 irradiated food because I don't think the people want  
10 to come to Hawaii to eat foods that irradiated. My  
11 three daughters will not eat anything but organic  
12 fruits and vegetables. They are not housewives. They  
13 are two attorneys and one surgical nurse.

14 And I'm also the chair of neighborhood  
15 board 15. If this thing blows at the airport, I'm  
16 right near the center of it. People from our area  
17 have called and said they don't want this thing in our  
18 area, and they can't come tonight is because this NRC  
19 made this meeting tonight, which is on a work night  
20 and these people work and they can't come to this  
21 meeting. We ask, I asked -- I asked our legislators  
22 to ask these people to where it's nearer to Kalihi and  
23 where our people come and they chose to make it at  
24 this expensive hotel where they can get it really  
25 cheaper at Kapiolani school.

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1 We cannot ask our men and women who are  
2 risking their lives overseas to put their families in  
3 harm's way through this facility. Okay. And then  
4 they should find a cure for the papaya disease first,  
5 like the rings around the papayas. And if you people  
6 have so much papayas, send it to Honolulu. I pay 60  
7 cents a pound for papaya at the commissary, and half  
8 of the time I can't even eat it.

9 You didn't tell me how much time I had,  
10 you know.

11 MR. TORRES: When we established the  
12 ground rules, we said three minutes. I'll allow you  
13 some more time.

14 MS. YOUNG: Our seniors cannot even afford  
15 to buy the papayas in our markets now. There's a  
16 coffee shop in Kalihi that sells the papaya for 4 to  
17 \$6 each, Kahuku papaya, and they're beautiful papayas,  
18 and I won't pay that kind of money.

19 We cannot let a mini Hiroshima and  
20 Nagasaki to happen in our islands. We deserve better.  
21 Nuclear poison lasts from generations to generations,  
22 so I think that is enough already. Oh, actually, our  
23 neighborhood board suggested to the agriculture to  
24 grow vanilla beans, which they're doing, a long time  
25 ago we suggested vanilla beans, understanding it's an

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1 industry, and now we read blueberries, which is  
2 wonderful, but to do this, no, I think, you know,  
3 there's a lot of questions I'm going to ask later on.

4 MR. TORRES: Thank you. Sabrina Swift.

5 MS. SWIFT: My name is Sabrina Swift. I  
6 am an entomologist and an extension specialist at the  
7 University of Hawaii. I also coordinate the  
8 management training program for immigrant farmers on  
9 Oahu and the Big Island.

10 I am a huge supporter of the building of  
11 this irradiator facility in Honolulu, and think, I did  
12 not come about the support because I have financial  
13 stake in this project. Nothing. But I have a major  
14 stake, and that is -- that has to do with the small,  
15 limited resource farmers that I've been helping who  
16 need help with marketing their produce.

17 I was in Boulder, Colorado, a month ago.  
18 I went to Costco to buy fruits and what did I see,  
19 stacks of papaya, and I said to myself, whoa, Hawaii  
20 papayas, how nice. However, when I got to the  
21 packages, I was disappointed. They are papayas from  
22 Brazil. Tallimand brand. Beautiful papayas, good  
23 packaging, good label and so-so in taste. Lucky for  
24 Brazil, but sorry for Hawaii.

25 And we all know the answer to this. Why

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1 is it so? The insects and pests in our beautiful  
2 fruits, despite the measures that our farmers are  
3 doing, do not guarantee that their produce can be  
4 shipped and not rejected at the airport. This is a  
5 huge setback to the efforts, the training program  
6 provided to the farmers to help them increase their  
7 viability and sustainability.

8 As farmers are taught how to increase  
9 production, marketing is also included. I say they  
10 are doing well in the production side, but marketing  
11 is a big problem. Why? Because there is a limitation  
12 of where they can sell their produce. By the way, the  
13 approved irradiator facilities in the U.S. that I have  
14 come about are located -- well, here in Hawaii in  
15 Puna, and hear this, at the airport of Atlanta,  
16 Georgia, at the maritime ports of Gulf Port,  
17 Mississippi, and Wilmington, North Carolina.

18 I also happen to have a list of fresh  
19 fruits and vegetables that Hawaii farmers could grow  
20 and export to Guam and the Pacific islands and --  
21 okay, and other countries, and out of these 117  
22 fruits, 15 need irradiation to sell to the mainland.  
23 Can you imagine if we can grow those crops and send  
24 them away, sell them?

25 There are so many risk, of course, and you

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1 heard a lot of them. Agriculture is a risky business.  
2 Living is risky. My question is: Are those people in  
3 Brazil and in Mississippi and in North Carolina, are  
4 they exposed as much as the people here in Honolulu if  
5 we get this irradiator? Of course there is that  
6 exposure.

7 If the sale of toxic pesticides is  
8 regulated, this irradiation facility will be  
9 stringently regulated, that for a fact I know.

10 Let us just get back to the '60's when  
11 nuclear energy was new, when microwave oven was new.  
12 There was a huge opposition from the public. The same  
13 is true with this irradiator. I mean, we heard it  
14 now. It will be a tremendous service to the farmers,  
15 big and small, and to agriculture of the state if this  
16 irradiator is built. Thank you.

17 MR. TORRES: Robert Speer. Robert Speer.

18 MR. SPEER: Aloha. I'm Robert Speer. I'm  
19 a retired navy captain, and I come tonight to support  
20 the Pa'ina project from a technical sense.

21 I spent 30 years in the navy in the  
22 nuclear submarine force. I had the pleasure and  
23 privilege of commanding two nuclear submarines, and as  
24 such was a nuclear -- licensed nuclear plant operator.  
25 I was trained extensively and examined extensively on

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1 the technical issues which are here tonight, some of  
2 which are here tonight to consider.

3 A great deal of my experience for 30 years  
4 was associated, obviously, with radiation. And  
5 specifically with cobalt-60. I understand what it is.  
6 It's a metal. It is not soluble. It does not fizzle.  
7 It cannot explode. It's impossible. It is radioactive  
8 and it's dangerous from that sense. I'm absolutely  
9 convinced, looking at the technical designs from a  
10 completely thorough engineering process, that the  
11 design and construction of this facility is safe.  
12 Unequivocally. There is not a reason to think other  
13 than that. (808) 524-2090

14 And that would include, in my opinion,  
15 against terrorist attacks. Other than, perhaps,  
16 throwing a huge bomb down into the pool well, and even  
17 that would be improbable, a release of radioactive  
18 material, would still be highly improbable, in my  
19 opinion. And that's based on my engineering and 30  
20 years of experience.

21 I've heard the farmers talk tonight a  
22 great deal about the benefits and I fully endorse  
23 that. Having said that, I think that's one of the  
24 smaller benefits that we will get. Like the gentleman  
25 over here who has had a couple little things happening

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1 with his heart, I so did, too. Five years ago I had  
2 a triple bypass, and I've been on a treadmill with a  
3 thallium stress test a number of times. I've had that  
4 radioactive stuff in my body. I'm happy to say that  
5 when you turn the lights out, I don't glow. It  
6 doesn't work that way.

7           Radioactive materials have concerns that  
8 must be properly attended to. Like this gentleman  
9 also, I have become much more of an environmentalist.  
10 In my two -- my two environmental concerns are global  
11 warming and, here in Hawaii, invasive species. I  
12 applaud the farmers' concerns about the ability to  
13 have better markets, but I have higher concerns about  
14 our own environment here with the invasive species  
15 that have come in, many of which have already been  
16 mentioned.

17           We need to think about multiple uses for  
18 facilities like this. If it were me, I'd be looking  
19 at having ten of these things around the islands to be  
20 able to stop things from coming in. I support the  
21 concept from a technical sense and I hope the approval  
22 is granted. Thank you.

23           MR. TORRES: Mike, Mike DeWeert. Mike.

24           MR. DEWEERT: Yes, here. Thank you.

25 Aloha. I'm a scientist. My name is Mike DeWeert. I'm

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1 an expert on ocean optics. I work in the defense  
2 industry. I've actually chaired conferences on  
3 homeland security, on harbor security.

4 Of all the things that keep me awake at  
5 night worrying about terrorist attacks on Oahu, which  
6 I've helped analyze for NATO, the irradiator doesn't  
7 make the top 20 list.

8 Our Hawaii is not about fear. It's not  
9 about being scared of everything. It's about aloha.  
10 When I -- when my relatives come to visit, one of the  
11 things that I really like to share with them is the  
12 fresh fruit. One of the most amazing things when I  
13 first came here was the variety of fruits and  
14 vegetables in the markets, 20 kinds of bananas it  
15 seems, three kinds of papayas, and the funny little  
16 red fruits that look like fuzzy lychees. Of course  
17 that's rambutan. I just read a few weeks ago that the  
18 United States is considering importing rambutan from  
19 Thailand, irradiated rambutan. Can't import it from  
20 Hawaii. We could be in the position here in Hawaii of  
21 going to Safeway and getting Thai irradiated rambutan  
22 to eat and our farmers can't export it to the  
23 mainland.

24 Preventing this irradiator won't have any  
25 impact on homeland security. I've been there. I've

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1 studied it. It will have a big impact on our farmers  
2 and on our ability to share aloha with the rest of the  
3 world, and I think it would be a shame to not have the  
4 irradiator and share with the rest of the world our  
5 wonderful produce. So thank you.

6 MR. TORRES: Richard Manshardt, Richard  
7 Manshardt.

8 MR. MANSHARDT: Good evening. My name is  
9 Richard Manshardt. I'm a CTAHR employee at the  
10 College of Tropical Agriculture. I'm not an expert in  
11 radiation or irradiators. I'm a horticulturist and my  
12 business is breeding tropical fruits.

13 I've had an opportunity to and privilege  
14 of working with the papaya industry for quite a number  
15 of years. And I know how hard it is to make a living  
16 as a papaya grower. I also know that the irradiator  
17 on the Big Island has been a big help in exporting.  
18 I'm here to support the building of an irradiator in  
19 Honolulu because I think it will be a big help for  
20 tropical fruits in general. We need the export market  
21 to make our local production economic and to help the  
22 people in that industry.

23 I don't need to say that there are no  
24 risks, because I think any technology, any human  
25 endeavor has risks attached to it. The important

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1 concepts are that there are weights of risk and  
2 benefit and I see the benefit of the irradiator being  
3 much greater than the risk. I trust science. I think  
4 the integrity of the researchers and the regulators is  
5 something that we can have confidence in, and I hope  
6 to see the irradiator a reality to help Hawaii in the  
7 future. Thank you.

8 MR. TORRES: The next person is Lorraine  
9 Medina.

10 MS. MEDINA: Yes, I've lived here 40  
11 years. I consider myself, heart and soul, from here.  
12 Anything I would have to say that I've written, and I  
13 will turn in, has been said repeatedly tonight. And  
14 I've also heard a lot of the anger, and I'd like to  
15 address that.

16 I would like to turn over my few minutes  
17 to having the NRC talk about the different sources of  
18 radiation and maybe try to suppress the anger about  
19 having this kind of irradiator. Radiation doesn't  
20 just -- there's many, many, many levels, and perhaps  
21 this is the time to talk about that.

22 MR. TORRES: We have written documentation  
23 that addresses basically different types of radiation  
24 in the front, but this public meeting is for you to  
25 capture your comments, so I will continue calling

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1 people. So I invite you, when you, at the end of the  
2 public meeting, you can go and grab those written  
3 documents that we have, publications, I should say.

4 The next person is Robert Hobday. Can you  
5 please spell it?

6 MR. HOBDAY: H-O-B-D-A-Y, Hobday. I just  
7 wanted to make some comments here.

8 I'm a homeowner. I've been on this island  
9 for 35 years. I'm retired. I have no financial  
10 interests involved in papaya or with whoever is  
11 opposed to these things. I'm speaking entirely for  
12 myself.

13 My focus here is -- in the last 35 years,  
14 I've seen many, many changes on this island. I've  
15 seen it go from an agricultural economy to a more or  
16 less real estate economy. And I still very much yearn  
17 for the beauty of the islands that have been replaced  
18 by concrete and asphalt over the many years here. I  
19 think that one of the things I have to do, have to be  
20 able to do is do something positive for maintaining  
21 the agricultural basis for the company -- for the  
22 island. I want to be able to preserve some beauty  
23 that we see here, the flowers and those kinds of  
24 things, and the only way to do that is to make it  
25 economically feasible for agriculture to maintain

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1       itself here on the island, and the only way that we  
2       can do that is to be able to develop new markets for  
3       our produce and to be able to export all of the things  
4       that we generate here, the beauty and the agricultural  
5       products that we produce on this island.

6               And the only way that we're going to be  
7       able to make it financially feasible or profitable to  
8       cultivate the land is to ship quality produce off the  
9       islands. The only way we can do that is with an  
10       irradiator. It's not so much that we require an  
11       irradiator, although we do in order to import certain  
12       things that we have on the islands. I think everybody  
13       that has come to the islands knows about the  
14       agriculture inspections and being able -- not being  
15       able to import anything green, almost, on the islands.  
16       But in order to produce -- to make it economically  
17       feasible to export to the mainland and other places,  
18       we have to be able to provide irradiated produce here.

19               Now, there are many factions that -- there  
20       are many factions who don't want this thing to happen,  
21       and they've hired lawyers and other people there to  
22       prevent that from happening. I think the last meeting  
23       that we had here there were some that -- actually some  
24       lawyers that actually came and attacked the NRC,  
25       attacked the functions that were actually regulating

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1 this. And I asked a friend of mine why would they do  
2 this, because it doesn't have anything to do with what  
3 we're talking about here? And they said, Well, that's  
4 just the billable hours, if they don't have anything  
5 realistic to say about not being able to provide an  
6 irradiator here, you know, their focus here is to make  
7 -- line their own pockets with money.

8           There are -- I think the thing that I want  
9 to impress more is there's a tremendous amount of fear  
10 mongering that goes on right now. There's a lot of  
11 false information being spread. There's false  
12 information being spread about the poisoning of food,  
13 that irradiation is going to poison the food that  
14 we're going to eat. That's just BS. That's like  
15 saying if you cook a steak and put it in the  
16 refrigerator and eat it the next day that you're going  
17 to burn your lips because it was cooked in heat the  
18 day before. I mean, that's ridiculous.

19           I saw an element on the NRC that says  
20 cobalt-60 can blow up and cause all kinds of problems  
21 with the bases and all of the materials that they have  
22 on there, and cobalt-60 can't blow up at all. So that  
23 whole scenario of affecting the military bases and all  
24 those other kinds of things that we have in here is  
25 just false.

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1 MR. TORRES: Can you please make a general  
2 statement.

3 MR. HOBDAV: Very shortly. I think one of  
4 the biggest things that we have here that I wanted to  
5 address, though, is the terroristic threats, and any  
6 terrorist who would look at an irradiator that's  
7 sitting in the middle of Honolulu Airport with 24-hour  
8 security and two military bases with F-18s driving  
9 around it all day long there, would think of it as a  
10 very, very low priority there for a small piece of  
11 essentially inconsequential cobalt-60, which is  
12 essentially nickel with a --

13 MR. TORRES: I don't mean to be  
14 disrespectful. I need to continue. We have more  
15 people.

16 MR. HOBDAV: I understand.

17 MR. TORRES: I want to be fair.

18 MR. HOBDAV: Let me finish.

19 MR. TORRES: 30 seconds.

20 MR. HOBDAV: The other thing that I want  
21 to address, and I don't think anyone has addressed  
22 thus far, is I speak of accidents and incidents.  
23 Somebody is saying, well, something can always happen.  
24 Yes, something can always happen. The reason I say  
25 accident and incident is because the military, both

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1 Hickam and Pearl Harbor, have units that are called  
2 accident and incident teams, and if by any chance  
3 something were to actually happen with the cobalt-60 -  
4 - with the irradiator there, then these teams could be  
5 on location in a matter of 30 seconds -- probably not  
6 30 seconds -- available to handle those kinds of  
7 things and these kinds of problems, and I think  
8 they're probably more trained to deal with something  
9 far more serious than a cobalt-60 incident there. So

10 -- (808) 524-2090

11 MR. TORRES: Time is up.

12 MR. HOBDAV: It's very safe in terms of  
13 the location, and I thank you very much for your time.

14 MR. TORRES: Larry Anderson.

15 MR. ANDERSON: I'm Larry Anderson. Good  
16 evening. Getting a little bit late.

17 I'm 69 years old. I've had a wonderful,  
18 great career. Part of my life has been flying big  
19 airplanes. I was an air force pilot for 21 1/2 years.  
20 I flew for Mid Pacific. I flew for Discovery Airways.  
21 Unfortunately, both went bankrupt.

22 My connection with Pa'ina is that I do  
23 have a connection. I've been doing the books, tax  
24 returns for Michael. I've discussed this project many  
25 times with him, quizzing him, challenging him and some

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1 of the findings here and convinced myself this thing  
2 is safe and we really, in Hawaii, need that. So I  
3 support it wholeheartedly.

4 I'd like to talk about perceptions and  
5 reality in two different parts of this aviation topic  
6 here: aircraft accidents and aircraft terrorism. The  
7 FAA, believe me, regulates how airports are laid out  
8 and how close buildings are to the runway and the  
9 approaches to runways and that, and Pa'ina is located  
10 on the airport right next to the FAA administrative  
11 building or right close by. So I'm sure there's no  
12 problem as far as this accident goes with the aircraft  
13 hitting it. And the comment was if there was an  
14 accident, it's a flat approach so the plane is going  
15 to go skidding across and wipe off the building, the  
16 top of the building, and highly doubtful that it would  
17 ever damage the structure of the where the irradiator,  
18 cobalt-60 is.

19 Let's talk about terrorism. 9/11 woke  
20 this country up. Think of all the changes that have  
21 taken place now with aircraft terrorism. So let's do  
22 a little scenario here of a terrorist that wants to  
23 put an aircraft as a flying missile onto this  
24 irradiator. First he has to get through the airport  
25 security, and we've all dealt with TSA, you know what

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1 that's like, getting better every day. Then they've  
2 got to get up, after the airplanes taken off, and they  
3 want a fully fueled aircraft, not one that's coming in  
4 from the mainland, so it's probably restricting the  
5 aircraft there. They are to get by the passengers.  
6 Then they have to get by the door, the door has been  
7 reinforced. Then if they get in the cockpit, there's  
8 a good chance the pilot has a gun and if he pulls it,  
9 the guy is dead. There's also a fire axe that he  
10 doesn't want to mess with either. And the pilots have  
11 all been trained for this in the last few years.

12 So there are two things about the target.  
13 If they want to fly into it, a high-speed approach  
14 would be very difficult to hit it, and if they were  
15 going to do that, there's a sub over that has a hole  
16 in it that has a whole lot more radioactive than this.

17 A couple more things. Two sides to  
18 everything. If there was terrorism, the worst thing  
19 that probably could happen is bioterrorism to our food  
20 supply, and if that happens, we'd want not only that  
21 irradiator, but 10 or 15 more around to keep our food  
22 supply available to us. So this terrorism thing works  
23 both ways.

24 I see no risk to this and it's fully  
25 supported without an EIS. Thank you.

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1 MR. TORRES: Robert Paull.

2 MR. PAULL: My name is Robert Paull. I'm  
3 with the College of Tropical Agriculture and Human  
4 Resources. I'm a professor. I am talking tonight as  
5 a private citizen. I am not in any way representing  
6 the university.

7 I am in favor of the licensing of this  
8 irradiator at the Honolulu Airport. Over the past 20  
9 years, I have been involved in food and product  
10 irradiation research, and this irradiator will be a  
11 benefit to Hawaii agriculture. It will allow us to  
12 meet the requirements for insect disinfestation, ship  
13 our products to the outer islands and to the mainland.

14 Tonight many of the people here have  
15 spoken about this, but the second one that I want to  
16 address is another one that's been raised, and that is  
17 the issue of invasive species. Invasive species are  
18 a problem in Hawaii. They are a major issue for  
19 Hawaii's unique ecosystem. A number of examples have  
20 been given tonight. These species are often carried  
21 unknowingly by passengers, but also they appear in  
22 shipments coming into the state, and we have had a  
23 number of alternatives, a number of cases recently of  
24 these shipments coming in with new insects.

25 The alternatives to the irradiation is

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1 pretty much methylbromide, either that or the product  
2 has to be taken back out of the state. Methylbromide,  
3 as you've been told, is an ozone-depleting chemical,  
4 more and more difficult to obtain. Currently,  
5 importing organic products are, in fact, a major cause  
6 of a lot of the interjections that have been taking  
7 place, and this has become a major issue for the  
8 department of agriculture.

9 We have been told that other methods  
10 should be developed, and I can assure you we've tried  
11 over the last 40 years, 50 years to find other  
12 alternative methods. Irradiation offers another  
13 approach, which we have used in many cases, and it is  
14 something we need as well as the current methods of  
15 hot water and chilling.

16 Others will tell you that there's small  
17 economic benefits. People will say that they're leery  
18 of eating irradiated food. Environmental assessment  
19 of disaster is inadequate. In most of these we don't  
20 get any additional assessment. We don't get any  
21 scientific data to support that. What we get is a  
22 belief, and it's this belief which is the main  
23 problem. The belief may be deeply held, but the  
24 belief is really not one that is necessarily something  
25 that I'm trying to change tonight. I will change my

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1 mind on scientific data, but I don't know whether I  
2 can convince someone who has a belief-based system  
3 that this is, in fact, a terrible problem. The  
4 beliefs are, as I said, probably deeply held and often  
5 these are fanned by very unbalanced fear-based  
6 campaigns.

7 The irradiator is important to Hawaii both  
8 economically and to protect our environment. The  
9 failure to support this licensing has been presented  
10 in the application and it's supported by the draft  
11 environmental assessment. I support the NRC's  
12 approval of the licensing of this facility. Thank you.

13 MR. TORRES: Darryn, last name N-G.

14 MR. NG: My name is Darryn Ng. I'm from  
15 the outer islands. I'm not from the mainland. I born  
16 and raised in Honolulu. I am 46 years old, and I'm  
17 from the South Shore.

18 I fish on the South Shore. I surf there  
19 35 years, and, you know, but letting this facility be  
20 built, you just opening the doors for other facilities  
21 to be built. Just like Aloha Tower, when they develop  
22 over there, you know, started off with one small  
23 building and then other stuff started to get built.  
24 Next thing you know, you like go fish over there, no  
25 can fish. The guy with the badge going come. Get out

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1 of the -- you know, cannot come on the property. So  
2 by letting this facility be built, you know, if other  
3 people gonna like fish over there, you know, it's just  
4 a matter of time before the guy with the badge going  
5 to say, hey, you guys cannot come around here. And  
6 they get regattas, canoe regattas, they hold down  
7 canoe paddling.

8 And if you guys was to bring this in  
9 Waianae, I'm pretty sure the Waianae people, they  
10 wouldn't allow this. You would see this whole room  
11 full. And, you know, this ain't the mainland. People  
12 over here, ocean people, you know, we rely on the  
13 ocean. If no more the ocean, then we cannot come to  
14 the beaches like that, we just going to fall apart.  
15 And I'm sorry if I hurt anybody feelings by talking  
16 like this, you guys from the outer islands, you guys  
17 from the mainland. And my wife went and write one  
18 letter, so I got to read them.

19 To whom it may concern. But I guess  
20 that's all you guys holding the badges. You know, you  
21 guys come here and you guys put on badges and make us  
22 all separated. That's not right. You guys should take  
23 off the badges.

24 I'm sorry that I'm unable to attend this  
25 meeting, but I feel this is an issue, such a serious

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1 issue, the threat to health and welfare of our  
2 community. And I want the opposition -- I want my  
3 opposition to the project to be heard. I am very  
4 concerned about these plans to have an irradiation  
5 plant be built near the airport and am totally against  
6 the project. I find it extremely worrisome, having a  
7 building that stores radioactive material be built  
8 anywhere in our state. Having this building situated  
9 at this airport and in close proximity to an active  
10 runway is total lunacy.

11 I also feel that this is not a natural or  
12 safe way to rid our fruits and vegetables of bugs.  
13 Radiation, how good can this be for our bodies? Don't  
14 they use radiation for cancer patients? Would it or  
15 could it cause cancer in us by eating foods that were  
16 irradiated? It worries me.

17 My family and I go to the beach  
18 frequently. We were swim, boat and fish in the area  
19 adjacent to Sand Island, which is close proximity to  
20 the irradiation plant. I would not feel safe knowing  
21 that the irradiator is near the area and the potential  
22 for accidents, leaks, spills, et cetera. It's a very  
23 real concern. What would be the long-term impacts of  
24 my children, the ocean, the 'aina and the environment?

25 In closing, I do not see any benefits to

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1 our state and our people with this project. I do see  
2 some serious threats to the health and welfare of our  
3 keiki and our environment should this irradiation  
4 plant be allowed to be built and to operate. Please  
5 leave things as they are.

6 And in closing is, all you guys talk, you  
7 guys get 25 acres big land on the outer islands, take  
8 one acre and put them inside there maybe. Aloha.

9 MR. TORRES: Thank you. Tom Sebas.

10 MR. SEBAS: Yes. Why do we need this?  
11 Since it's proven the food irradiation kills all  
12 living enzymes, the molecular structure of food is  
13 changed. Anyone can Google this subject and read eggs  
14 tastes different. Food is not the same. Irradiated  
15 food is not organic. This means something. It is not  
16 good to eat. Why threaten a billion-dollar tourist  
17 business so some papayas can be zapped?

18 The location at the airport is not  
19 logical. Why not put on -- put it on a low population  
20 island, not somewhere that has millions of people  
21 nearby.

22 This is a typical pro-business, don't-  
23 worry crowd. It's always about the money. Everyone  
24 Google the pros and cons. I spoke to some supporters  
25 who did zero research.

1 My main concern is the lack of nutritional  
2 value of zapped food. Who tests the food after  
3 irradiation? Does the USDA?

4 By the way, NRC, how many of these are  
5 located at airports in the U.S.A.? Say no to this  
6 location. Question: What type is on the Big Island?  
7 I think it is not the same as this one. I believe it  
8 is non-nuclear. Say no to nuking food. That's it.

9 MR. TORRES: Thank you very much.

10 MR. BLEVINS: Roberto, can we get to the  
11 people on the phone line here?

12 MR. TORRES: I think the people on the  
13 phone are --

14 MR. BLEVINS: I think we'd like to get to  
15 those people.

16 MR. TORRES: 38 and 39. Is Paulina  
17 Schleifer on the phone?

18 MS. SCHLEIFER: Yes, I am.

19 MR. TORRES: Do you have a question or a  
20 statement to make?

21 MS. SCHLEIFER: I have a short statement  
22 to make.

23 MR. TORRES: Go ahead.

24 MS. SCHLEIFER: I'd first like to -- I  
25 didn't have a statement when I started, I was just

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1 listening in, but now that I've listened to other  
2 people's points of views and responses, I have to say  
3 there's this huge lack of research being done by  
4 people who are making comments.

5 First of all, you can go to the American  
6 Cancer Society Web site, and right there they've got  
7 frequently asked questions, do irradiated foods cause  
8 cancer, and the American Cancer Society will tell you,  
9 no, it does not.

10 And as far as like the healthiness of  
11 foods being irradiated, I mean just in general food-  
12 borne illness can be prevented in many ways by  
13 irradiation and food-borne illness causes  
14 approximately 76 million illnesses, 325,000  
15 hospitalizations, and 5,000 deaths each year. That in  
16 itself tells you it's a lot better than the small  
17 risks that people are talking about taking.

18 I currently live in Omaha, Nebraska, and  
19 I'm a former Hawaii resident. Boy, do I miss Hawaii's  
20 fresh fruit, and no matter where I've been since we've  
21 left Hawaii, the fruits are coming from Mexico and  
22 from Brazil and just doesn't match up, and I think  
23 that it would be so beneficial for this license to go  
24 through for people like me from Hawaii who still want  
25 to feel the aloha on the mainland but can't because

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1 there's no irradiation. So I throw my support in that  
2 direction.

3 MR. TORRES: Thank you very much. Is  
4 Seratha Conroy on the phone?

5 MS. CONROY: Yes, I am. I just have a  
6 question. I'm wondering what happens, the food, like  
7 organic foods, if we have -- I'm sure there's lots of  
8 products that are shipped in from the mainland that  
9 are organic that come in and they're then zapped by  
10 radiation, then what happens to organic foods? Are we  
11 just left with this small amount of locally organic  
12 grown foods just from the islands? What happens to  
13 all that? I mean organics will be cut down so much if  
14 this happens.

15 MR. TORRES: We --

16 MS. CONROY: Is that what happens? We're  
17 just limited now to just basically Oahu organic foods  
18 because even inter-island ships then that will also be  
19 put into the irradiator.

20 MR. TORRES: Matthew Blevins is going to -  
21 -

22 MR. BLEVINS: You may have to more fully  
23 address this in the final assessment. I'm not aware  
24 of the import requirements from the mainland to the  
25 state of Hawaii. In other words, I'm not aware that

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1 all fruits or vegetables that are imported are  
2 required to be irradiated.

3           Primarily, I think, this is intended to  
4 treat exports to the mainland to prevent invasive  
5 species, so I don't know if that helps, but we can  
6 certainly look into that and provide more information.

7           MR. PAUL: I'm actually an organic farm  
8 inspector since 1994, and I can assure you --

9           MR. TORRES: Please identify yourself.

10           MR. PAUL: My name is Damian Paul. And I  
11 am an organic farm inspector trained, and I trained  
12 other organic farm inspectors with the Hawaii Organic  
13 Farmers Association, and as I mentioned earlier, the  
14 federal organic law of October 2002 strictly makes it  
15 illegal to irradiate any organic food and sell it as  
16 such. And any imported organic food into the state of  
17 Hawaii, I can assure you is not irradiated. It's  
18 against the federal law and it's a \$10,000 fine if you  
19 get caught.

20           MR. TORRES: Thank you. Do we have  
21 anybody else on the phone?

22           MS. BUPP: The Hawaii Department of  
23 Agriculture might be able to speak to this as well.

24           MR. WONG: There's no requirement to  
25 irradiate anything that's coming into the state of

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1 Hawaii. The problem with organic is that if you do  
2 irradiate it's not organic anymore. The problem with  
3 the organic products that are coming into the state is  
4 that they are higher risk of bringing in pests, and so  
5 the importer would have a choice. The importer could  
6 have that product shipped back to the mainland or be  
7 destroyed, or to be treated by irradiation and sold as  
8 any other agriculture product.

9 MR. TORRES: Please state your name again.

10 MR. WONG: Lyle Wong with the department  
11 of ag.

12 MR. TORRES: Next person on the list is  
13 Orlando Manuel. We have about four more people to go.

14 MR. MANUEL: My name is Orlando Manuel.  
15 I'm a papaya grower on the Big Island. This meeting  
16 is very important to me. Therefore, I sacrificed two  
17 days of my time to be here tonight. I'm here in great  
18 support of Pa'ina Hawaii.

19 First of all, as a farmer, my greatest  
20 concern is the unwanted visitors that come to the  
21 island every year. Some of these visitors are so bad  
22 that it has cost farmers more money and, most of all,  
23 human exposure to pesticides in order to fight them.  
24 Pa'ina Hawaii can help solve this problem of invasive  
25 species.

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1 Earthjustice, the farmers and down to the  
2 consumers, will thank you if you let -- allow Pa'ina  
3 Hawaii to move forward without delay. We cannot  
4 afford any more pests here in the islands. We have  
5 more than we can handle.

6 Secondly, Pa'ina will allow me to pick and  
7 pack premium tree-ripened papayas and also give me the  
8 opportunity to ship and sell my own product to the  
9 mainland market. I'm confident that the consumer will  
10 prefer this fruit, tree-ripened fruit, than this, the  
11 green fruit.

12 In conclusion, I recently had the  
13 opportunity to attend a conference with farmers from  
14 different countries. And one farmer said, and I quote,  
15 "We, the farmers, feed the world, but we also need  
16 help." In this case, Earthjustice, let Pa'ina Hawaii  
17 move forward so they can honor its commitment to  
18 accommodate small farmers and others to its facility.  
19 Thank you.

20 MR. TORRES: The next person is Allison  
21 Imrie.

22 MS. IMRIE: Good evening. I'll keep it  
23 short. It's getting late.

24 My name is Allison Imrie. I'm on the  
25 faculty at the University of Hawaii. I'm in the

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1 medical school. I'm a virologist and I work with  
2 viruses which are pathogenic to humans. My lab uses  
3 many things to work with these viruses, including  
4 carcinogenic chemicals and we use radiation as another  
5 tool.

6 So for several years I used the irradiator  
7 on the campus that Dr. Moy managed, and I can say that  
8 it was a very well managed, it was very robust system,  
9 we never felt unsafe working with it. We never had  
10 any problems. And I was sad that the facility was  
11 decommissioned eventually.

12 So from my perspective as a researcher,  
13 radiation is just another tool that you have at your  
14 disposal, and as with any other tool, there are risks,  
15 but you manage these risks carefully by paying  
16 attention to the guidelines. And I guess if you want  
17 to spend your energies anywhere, my feeling is that  
18 you spend them making sure the guidelines and rules  
19 and regulations are followed.

20 So I support this facility and it's a  
21 valuable resource for researchers like myself. Thank  
22 you.

23 MR. TORRES: The next person is -- the  
24 affiliation is Kahea. First name is Cha. Please  
25 state your name.

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1 MS. SMITH: My name is Cha Smith. I'm  
2 with Kahea, The Hawaiian Environmental Alliance.

3 I have some concerns about the actual --  
4 the DEA, the draft environmental assessment, because  
5 I actually read it and feel that there's many problems  
6 with it, and basically that it's deeply flawed in its  
7 lack of assessment of many problems. It fails to meet  
8 NEPA's basic requirements to identify some of the  
9 potential problems and omits key data and doesn't  
10 address viable alternatives that are in existence.

11 One of the things that I think is the most  
12 important issue that's come up tonight is economic  
13 situation with farmers here is very -- the farmers  
14 here are really struggling to survive and to find  
15 markets. And one of the problems that I see with  
16 irradiators and the reason that the last irradiator  
17 failed was that it was in financial ruin because they  
18 could not find markets for irradiated food. And this  
19 is what I fear, is that the farmers here are being set  
20 up because if there are not markets for irradiated  
21 food and you guys are putting all your eggs in that  
22 basket, it's really, really a problem.08) 524-2090

23 I'd like to see us really look at this  
24 serious problem and the serious economic risks  
25 involved with irradiated food. It doesn't really

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1 matter how safe it is because the public's perception  
2 is they don't want to eat irradiated food, that does  
3 have -- there have been many tests done, there has  
4 been a lot of data collected on the impacts to  
5 nutrition and to the actual food product, the texture,  
6 the smell of the food, the different aspects of the  
7 food are transformed from irradiation. It is not the  
8 same food. It is not fresh fruit. People will not  
9 see irradiated fruit from Hawaii as fresh fruit. And  
10 that's an image that is going to be really difficult  
11 to overcome, if not impossible.

12 So I really feel like, you know, I mean,  
13 Kahea has worked for the protection of lands. We  
14 really have a lot of respect for the farmers here in  
15 Hawaii, know that you guys work hard, and we really  
16 don't want to see this product, this project end in a  
17 financial disaster for you, because you're the ones  
18 that are going to eat it. And so I think that let's  
19 take some time and really assess can these foods be  
20 marketed in the U.S. and beyond. You know they can't  
21 be marketed in Japan, we know that Europe won't take  
22 them. So, you know the U.S. is what's left.

23 So I think that there's -- I mean, I'd  
24 like to see some really in-depth assessment of the  
25 risks of that, and as a result, there needs to be a

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1 full environmental impact statement done on this  
2 project. Thanks very much.

3 MR. TORRES: Thank you. The next person  
4 is Richard Knox.

5 MR. KNOX: My name is Richard Knox. I'm  
6 a retired nuclear physicist. Worked at least 20 years  
7 in the industry with nuclear reactors, accelerators,  
8 and dealt with sources of a variety of danger.

9 I really empathize with farmers, and I  
10 empathize with the other viewpoints that have been  
11 expressed here tonight, and I think the last lady  
12 really voiced many of my concerns, and that we -- you  
13 don't really have an exhaustive idea of what  
14 irradiation does to food. We hear that it's safe,  
15 we've all probably eaten some from different nations  
16 that's imported here.

17 But I think we need some kind of extensive  
18 report on that, what it actually does to food. It  
19 would be nice if irradiation would just knock a fly  
20 off of the food and not do any damage subterraneanly  
21 to the food, but we know that -- when medical science  
22 eliminates cancers, tumors from our bodies, that there  
23 is superficial damage to surrounding tissues. And if  
24 you're doing this in a homogenous environment of  
25 radiation, you're not pinpointing it as you do in

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1 medical science with that cancer. You're irradiating  
2 a block of material in a mass production style.

3 And I think in terms of scenarios,  
4 possible scenarios for terrorists' action, even though  
5 cobalt-60 is a solid metal and it's basically inert,  
6 except that it's a radioactive isotope, obviously,  
7 it's emitting gamma rays, we have to be concerned that  
8 if anyone does by any means get ahold of it, break  
9 through those canisters, that they will be exposed, as  
10 they say, a certain death, but you don't die right  
11 away. Radiation poisoning, you can go on for several  
12 hours and if you're in a suicide attempt, you can live  
13 for several hours, even in very intense radiation,  
14 because it has to be ingested and it has to do its  
15 damage. It takes time to do that.

16 But I think that if they attain this  
17 source, it can be ground to a powder, and if it  
18 becomes a dust, every one of those dust particles,  
19 whether visible or not, particularly if they're  
20 invisible, can do damage because they're all miniature  
21 sources of gamma rays. And so if they obtain the  
22 source itself, terrorists in particular, and they form  
23 a dust of it, spread it to the air, it can do quite a  
24 bit of damage from the gamma rays.

25 So I think if we have a severe earthquake,

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1 say level Richter scale 8 or 9, and all the water  
2 drains out of the pool, then it might be more than  
3 just the immediate personnel that might be exposed to  
4 this high-level radiation, but it's how you handle  
5 that.

6 So those are the potential problems I see.  
7 But I do empathize with both viewpoints being  
8 expressed today, so I'm kind of mixed in my decision.

9 MR. TORRES: Thank you. The next person  
10 is Brett Podoski.

11 MR. PODOSKI: Thank you. My name is Brett  
12 Podoski, spelled P-O-D-O-S-K-I. I'm representing the  
13 U.S. Food and Drug Administration here in Honolulu.

14 I'd just like to say for the comment for  
15 the record that irradiation is an innovative food  
16 processing treatment technology. The application of  
17 irradiation on food products has a history of being  
18 safe, effective, and wide ranging in its uses and  
19 applications.

20 I think to the comment earlier, there was  
21 an issue about what research had been done. I believe  
22 back in 2001 the FDA had contracted with the Institute  
23 of Food Technologists, the IFT, to develop a task  
24 force for looking at new, innovative, alternative  
25 processing technologies, of which irradiation was one.

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1 And that document is still publicly available on FDA's  
2 Web site at www.fda.gov. Thanks again.

3 MR. TORRES: Thank you. Now, at the  
4 beginning of the question and answer and comment  
5 session I passed you over. You had a question? You  
6 want to now take this opportunity to make your  
7 question or comment?

8 MS. PAUL: Well, I'd like to -- my name is  
9 Karen Paul, and I'd like to say that in listening to  
10 the comments on -- by the gentleman with the heart  
11 problem and the gentleman who worked on submarines for  
12 many years, the thyroid gland is ultra sensitive to  
13 any form of radiation, and your thyroid gland  
14 modulates how your body uses cholesterol, and if the  
15 thyroid gland is harmed that cholesterol can build  
16 plaque deposits and actually harm the heart.

17 So we want to be very careful about the  
18 exposure to any form of radiation. You can go back to  
19 a book called Hyperthyroidism - The Unsuspected  
20 Illness by Dr. Barnes, and if you do in-depth research  
21 on this, you can find that there are a lot of health  
22 problems that were mentioned tonight that are directly  
23 related back to radiation exposure.

24 And as far as this gentleman's comment on  
25 his mother swallowing radioactive iodine, there are

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1 other ways to solve thyroid problems than swallow  
2 radioactive iodine, and I can well imagine that your  
3 mom probably had many more health problems after  
4 swallowing that radioactive iodine, so just because  
5 something appears to be a temporary remedy on the  
6 surface, when one looks a little bit closer, the  
7 repercussions of using dangerous radioactive  
8 treatments can be seen to be not so beneficial in the  
9 long run.

10 We know years ago doctors used radiation  
11 to radiate people's thymus glands and supposedly that  
12 was a way to support health, but we came to find that  
13 in actuality it damaged human health. Radiation was  
14 also used to treat acne, and just because that was the  
15 accepted mode of treatment at that time did not make  
16 it safe and effective, and we do know that there are  
17 a lot of people that suffered the repercussions of  
18 that exposure to radiation.

19 So just because something is temporarily  
20 told to us to be safe and effective does not mean, in  
21 the long term, that it pans out to truly be that way.  
22 So we need to do a little bit more broad scope  
23 investigation of the dangers of these things, and I  
24 encourage you to do that because heart problems,  
25 cholesterol plaquing of the arteries can be very

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1 closely associated with thyroid problems. So do your  
2 homework.

3 MR. PAUL: Can I make one comment real  
4 quick?

5 MR. TORRES: Thank you. We have five  
6 about minutes. The hotel made a concession and allow  
7 us, so --

8 MR. PAUL: My name is Damian Paul. This  
9 gentleman was mentioning about the FDA and determining  
10 the safety of irradiated foods. The FDA reviewed 441  
11 toxicity studies to determine the safety of irradiated  
12 foods, and Dr. Marcia Van Gammart, team leader in  
13 charge of new food additives at the FDA and the  
14 chairperson of the committee in charge of  
15 investigating the studies, testified that all 441  
16 studies were flawed. This came from the person within  
17 the FDA.

18 MR. TORRES: Thank you. Does anyone else  
19 other than that want to make a comment? One, two,  
20 three persons.

21 MR. WERT: We're going to have to make the  
22 comments very short or we're going to lose the room.

23 MR. TORRES: Again, we have until February  
24 8th to submit written comments.

25 MS. TOWNSEND: My name is Marti Townsend.

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1 I'm with the Kahea, Hawaii Environmental Alliance.

2 I am very concerned. I, too, read the  
3 draft environmental assessment. It didn't take much.  
4 It was only 12 pages. And I'm very concerned that  
5 we're making a decision about bringing nuclear  
6 material to Hawaii based on 12 pages of assessment.  
7 I mean, that's shorter than a high school research  
8 paper. Come on. Let's think about it. If there  
9 actually was an accident or intentional something  
10 happened and the future generations had to live with  
11 our decision of bringing a nuclear facility to the  
12 Honolulu Airport, at least let them look back upon us  
13 and know we made the decision to bring it here based  
14 on more information than 12 pages.

15 That's why I'm in strong, strong support  
16 of a full environment impact statement. This has to  
17 be more thoroughly, carefully assessed. As Mr. Potter  
18 said, we have to make an informed decision here, and  
19 there are way too many things left unanswered.  
20 Obviously issues of terrorism and safety are serious.  
21 People have brought it up repeatedly here, and it's  
22 the NRC's responsibility to address those.

23 And I agree with the economics as well.  
24 We need to look into the other irradiators that have  
25 collapsed financially and have led to ruin of many

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1 farming markets.

2 On a personal note, I spend twice as much  
3 per pound buying organic food than any other food. If  
4 you want to make some money, go organic. You know,  
5 the number one thing I spend on my family budget is  
6 organic foods, and if we want to -- if you really want  
7 to do something to make money, that's the place to do  
8 it because we're concerned about our health.

9 MR. TORRES: I don't mean to be  
10 disrespectful. We really ran out of time, and we have  
11 three individuals I'm going to acknowledge. You will  
12 be the last, but after the meeting we're going to stay  
13 here and we can have one-on-one conversations.

14 MS. KIMURA: I just have a couple of short  
15 questions. My name is Amy Kimura. I have a couple of  
16 short questions.

17 One is, what eventually happens to the  
18 5,000 gallons of water that are in the irradiator. I  
19 imagine you have to change them when you change the  
20 cobalt and what's done with that water?

21 MR. TORRES: If you keep asking all these  
22 questions, they will be documented and we will  
23 evaluate them.

24 MS. KIMURA: The other question is, I  
25 don't understand why, when I heard so many Big Island

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1 papaya farmers testify here tonight, why the  
2 irradiator is not located there where they're located,  
3 instead of here where there aren't -- there don't seem  
4 to be as many papaya farmers?

5 MR. TORRES: Thank you very much.

6 Well, I want to thank you. We really ran  
7 out of time, so, Len.

8 MR. WERT: We really do need to close the  
9 meeting. I'm sorry for the late hours, but I do think  
10 it's very important for us to hear everybody's  
11 comments so we tried our best to do that. We know  
12 this is an important matter. I hope that our  
13 discussions here tonight have assured you that the NRC  
14 is dedicated to accomplishing our primary purpose and  
15 that is to make sure if this facility is constructed  
16 and operated that it's done so safely.

17 I want to reiterate that we will consider  
18 all the information that you've provided tonight, or  
19 if you send it in to us later, before we issue the  
20 final version of the environmental assessment. Thank  
21 you and good night.

22 (Meeting concluded at 9:34 p.m.)

23

24

25

CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Draft EIS for Pa'Ina Hawaii Irradiator - Public Meeting

Docket Number: (Not applicable)

Location: Honolulu, Hawaii

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

  
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