

Mancini, Thomas R.

October 23, 2017

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IN THE UNITED STATES DISTRICT COURT FOR THE
DISTRICT OF UTAH CENTRAL DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

vs.

Civil No: 2:15-cv-00828-DN-EJF

RAPOWER-3, LLC, INTERNATIONAL
AUTOMATED SYSTEMS, INC., LTBI,
LLC, R. GREGORY SHEPARD,
NELDON JOHNSON, and ROGER
FREEBORN,

Defendants.

DEPOSITION OF THOMAS R. MANCINI

October 23, 2017

9:01 a.m.

201 3rd Street, Northwest, Suite 900
Albuquerque, New Mexico

PURSUANT TO THE FEDERAL RULES OF CIVIL
PROCEDURE, this deposition was:

TAKEN BY: MR. DENVER C. SNUFFER, JR.
Attorney For Defendants

REPORTED BY: Peggy Jo Gonzales, RMR, CCR #145
(9013L-PJ)

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1 to the -- could you repeat the question? I'm not
2 sure I understood.

3 Q. Yeah, the R&D community to furnish the next
4 generation of components for solar concentrators and
5 thermal receivers, would you agree with that
6 proposition?

7 A. Not --

8 MR. MORAN: Objection, vague. R&D
9 community is undefined.

10 A. It's not just the R&D community. They'll
11 look anywhere for the next potential breakthrough, as
12 will any industry who -- who's really out there
13 trying to work on the cutting edge.

14 Q. Okay. I believe you've already mentioned
15 that you witnessed a wooden board catch fire during
16 one of your visits to the IAS site.

17 A. That's correct.

18 Q. Was that in January or April?

19 A. I think it was both.

20 Q. Okay. Would you agree that the Fresnel
21 lenses, therefore, do generate concentrated solar
22 heat?

23 MR. MORAN: Objection, vague. Concentrated
24 solar heat is undefined.

25 A. They don't generate concentrated solar

1 **heat. They take the sun's energy and focus it.**

2 Q. Okay. So the IAS system includes lenses
3 that concentrate solar heat?

4 **A. That's correct.**

5 Q. Would you agree that lenses that
6 concentrate solar heat are no longer in the R&D stage
7 because they succeed in concentrating solar heat?

8 **A. No.**

9 Q. Would you agree that the lenses could heat
10 a coil?

11 **A. For what application?**

12 Q. For any application.

13 **A. Well, it would depend on the application.**
14 **They might not be able to -- I mean, you've got to**
15 **design it so that you heat the right amount of**
16 **material.**

17 MR. MORAN: Objection, Counsel, what do you
18 mean by coil? The question is vague.

19 Q. Would you agree that the lenses could heat
20 water?

21 **A. How would you do that? I don't --**
22 **potentially, yes, but what are you using -- you mean,**
23 **just focus them on water?**

24 Q. Yes.

25 **A. Yeah, they'd probably heat it a little bit.**

1 Q. Okay. Mr. Snuffer asked you some questions
2 about what documents you reviewed in addition to the
3 documents that you list at the back of your report,
4 do you recall that --

5 A. Yes.

6 Q. -- question? Did you also read and review
7 Neldon Johnson's response to your expert report?

8 A. Oh, I did, yes. That's another document.

9 Q. Okay. Last question, Dr. Mancini, are you
10 familiar with the term process heat?

11 A. I am.

12 Q. What does the term process heat mean to
13 you?

14 A. Well, it typically means using heat from
15 the sun, solar process heat -- and I assume we're
16 talking about solar. Is that correct?

17 Q. However you understand the term process
18 heat.

19 A. Well, process heat just generically means
20 any heat you provide to a process in any application,
21 whether it's water heating or part of a chemical
22 plant where you have to heat -- heat some of the
23 inlet streams in order to cause a particular chemical
24 reaction to occur, or anything like that. The more
25 general term that's been used or discussed relative

1 to this case has been solar process heat, and that to
2 me means that you're using the heat in some way to
3 accomplish some function or application.

4 I've actually worked on a couple of process
5 heat projects, for example, in the potash industry
6 where we were exploring the opportunity to heat some
7 of the potash that was being mined in order to
8 accelerate some of the processes in creating the
9 fertilizer. So that would be an example of process
10 heat.

11 Another example of process heat would be
12 there was a demonstration of a -- of a central
13 receiver plant where steam was injected underground
14 to help release -- essentially raise the temperature
15 of an oil shell reservoir and increase its
16 production. So that would be another example of what
17 I would call process heat.

18 Another example that I actually referenced
19 in my report was the Bleyle Plant at Shenandoah,
20 Georgia, where heat was used in an application in a
21 laundry. So that's my understanding of what process
22 heat projects are.

23 Q. And is it fair to say -- and I'm just
24 judging from the examples that you just gave -- that
25 the term process heat means that the heat you're

1 obtaining -- the heat -- the process heat is used for
2 some other ancillary purpose?

3 A. Yeah, they're -- there's an application for
4 it. You wouldn't -- you wouldn't collect the heat if
5 you didn't have a use for it. The -- it's a
6 difficult area because it's -- you're dealing with a
7 couple of things. You're dealing, number one, with
8 usually existing plants and processes, so you run
9 into a lot of things like can you actually put solar
10 collectors anywhere nearby to actually do it. It's a
11 very low temperature process in most cases because
12 you're not -- you're not trying to produce power or
13 anything in most cases. You're just trying to
14 provide heat for a process, and so you're competing
15 with extremely low cost natural gas or in some cases
16 you're competing with processes in chemical plants
17 where they burn excess product or excess waste
18 materials to achieve process heat. So it's never
19 really become something that anybody has ever --
20 there's no system for it because it's got to be
21 designed for the specific application and it's got to
22 fit the particular location, so it's not like you can
23 have one -- one design fits all or that sort of
24 thing. So it's never really found a home, and, in
25 fact, I haven't heard much about it for the last 20

1 years. It's something that came up back during the
2 '70s -- '60s, '70s and maybe into the '80s a little
3 bit, but just too low a temperature. Using solar
4 concentrators, you pay money to get that concentrated
5 source of heat, and so you need to find applications
6 that give you a high value product and energy as
7 close as you can get there.

8 Q. So based on your understanding of what
9 process heat is, does it involve more than simply
10 generating heat, that you have to do something with
11 the heat in order to have solar process heat?

12 A. Well, I mean that's the whole point.

13 Q. Okay.

14 A. I mean, that's the only reason you do it --

15 Q. Okay.

16 A. -- you have to have an application.

17 MR. MORAN: I have nothing...

18 EXAMINATION

19 BY MR. SNUFFER:

20 Q. I just want to follow up on that last
21 point. Is it your view that you cannot generate
22 solar process heat during an R&D phase?

23 MR. MORAN: Objection, R&D phase is
24 undefined.

25 A. I don't understand the question.

1 Q. Yeah, when you're doing research and
2 development, is it your position that it is
3 impossible to produce process heat from solar energy
4 if the research and development is focusing on just
5 producing concentrated solar heat?

6 A. I'm sorry, but I still don't -- if you were
7 doing an R&D project and you -- as part of that
8 process you had some excess heat that you could heat
9 water with maybe and use for -- for -- maybe it's
10 your lavatory on-site or something, I'd consider that
11 a process heat application and perfectly acceptable
12 during an R&D project. I have no problem with that.

13 Q. Okay.

14 A. No, I don't think that has anything to do
15 with it.

16 Q. Okay. Thank you.

17 MR. SNUFFER: That's it.

18 MR. MORAN: Yes, you have the opportunity
19 to read and sign the transcript. You do want to read
20 and sign, right?

21 THE WITNESS: I have to read and sign the
22 whole transcript right now?

23 MR. MORAN: Not right now. Madame court
24 reporter will send you a copy, or send it to us and
25 we'll get it to the doctor.

1 MR. SNUFFER: I want an electronic copy.
2 PDF copies of the exhibits, and color would be
3 helpful.

4 (The deposition concluded at 2:03 p.m.)

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17 Defendants.

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19 CERTIFICATE OF COMPLETION OF DEPOSITION

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21 I, PEGGY JO GONZALES, New Mexico CCR #145, DO
22 HEREBY CERTIFY that on October 23, 2017, the
23 deposition of THOMAS R. MANCINI was taken before me.

24
25 I FURTHER CERTIFY that copies of this

1 certificate have been mailed or delivered to all
2 Counsel, and parties to the proceedings not
3 represented by counsel, appearing at the taking of
4 the deposition:

5
6 I FURTHER CERTIFY that examination of this
7 transcript and signature of the witness was requested
8 by the witness and all parties present.

9
10 I FURTHER CERTIFY that I did administer the oath
11 to the witness herein prior to the taking of this
12 deposition; that I did thereafter report in
13 stenographic shorthand the questions and answers set
14 forth herein, and the foregoing is a true and correct
15 transcript of the proceeding had upon the taking of
16 this deposition to the best of my ability.

17
18 I FURTHER CERTIFY that I am neither employed by
19 nor related to nor contracted with (unless excepted
20 by the rules) any of the parties or attorneys in this
21 case, and that I have no interest whatsoever in the
22 final disposition of this case in any court.

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