

Composite Exhibit 6

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

ANDREA ROSSI and LEONARDO
CORPORATION,

Plaintiffs,

VS.

No. 1:16-cv-2119-CMA

THOMAS DARDEN; JOHN T. VAUGHN;
INDUSTRIAL HEAT, LLC; IPH
INTERNATIONAL B.V.; and
CHEROKEE INVESTMENT PARTNERS,
LLC,

Defendants.

INDUSTRIAL HEAT, LLC and IPH
INTERNATIONAL B.V.,

Counter-Plaintiffs,

vs.

ANDREA ROSSI and LEONARDO
CORPORATION,

Counter-Defendants,

and

J.M. PRODUCTS, INC.; HENRY
JOHNSON; FABIO PENON; UNITED
STATES QUANTUM LEAP, LLC;
FULVIO FABIANI; and JAMES
BASS,

Third-Party Defendants.

HIGHLY CONFIDENTIAL

Videotaped Deposition of JOSEPH ALAN MURRAY
(Taken by Plaintiff)
Raleigh, North Carolina
Friday, February 17, 2017

Reported in Stenotype by
Lauren M. McIntee, RPR
Transcript produced by computer-aided transcription

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| <p>1 APPEARANCES</p> <p>2 ON BEHALF OF THE PLAINTIFF:</p> <p>3 John M. Annesser</p> <p>4 Brian Chaiken</p> <p>5 Perlman, Bajandas, Yevoli & Albright, PL</p> <p>6 283 Catalonia Avenue, Suite 200</p> <p>7 Coral Gables, Florida 33134</p> <p>8 (305) 377-0086</p> <p>9 Jannesser@pbylaw.com</p> <p>10 Bchaiken@pbylaw.com</p> <p>11 ON BEHALF OF DEFENDANTS:</p> <p>12 Christopher Lomax</p> <p>13 Jones Day</p> <p>14 Brickell World Plaza</p> <p>15 600 Brickell Avenue, Suite 3300</p> <p>16 Miami, Florida 33131</p> <p>17 (305) 714-9700</p> <p>18 clomax@jonesday.com</p> <p>19 ON BEHALF OF THIRD-PARTY DEFENDANTS J.M. PRODUCTS, INC.,</p> <p>20 HENRY JOHNSON, and JAMES BASS:</p> <p>21 Francisco J. León de la Barra (Via telephone)</p> <p>22 Aran, Correa & Guarch, P.A.</p> <p>23 225 University Drive</p> <p>24 Coral Gables, Florida 33134</p> <p>25 (305) 665-3400</p> <p>26 fleon@acg-law.com</p> <p>27 ON BEHALF OF THIRD-PARTY DEFENDANTS FULVIO FABIANI, AND</p> <p>28 UNITED STATES QUANTUM LEAP, LLC:</p> <p>29 Rudolfo Nuñez (Via telephone)</p> <p>30 Rudolfo Nuñez, P.A.</p> <p>31 255 University Drive</p> <p>32 Coral Gables, Florida 33134</p> <p>33 (305) 665-3400</p> <p>34 rnunez@acg-law.com</p> <p>35 ALSO PRESENT:</p> <p>36 MR. MICHAEL KIRBY, CLVS</p> <p>37 DR. ANDREA ROSSI</p> | <p>1 VIDEOTAPED DEPOSITION OF JOSEPH ALAN MURRAY, a</p> <p>2 witness called on behalf of Defendant, before Lauren M.</p> <p>3 McIntee, Registered Professional Reporter and Notary</p> <p>4 Public, in and for the State of North Carolina, at</p> <p>5 CaseWorks Court Reporting, 3509 Haworth Drive, Suite</p> <p>6 403, Raleigh, North Carolina, on Friday,</p> <p>7 February 17, 2017, commencing at 8:50 a.m.</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> |
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| <p>1 INDEX OF EXAMINATIONS</p> <p>2 By Mr. Annesser. Page 6</p> <p>3 By Mr. León. Page 349</p> <p>4 By Mr. Nuñez. Page 350</p> <p>5</p> <p>6 INDEX OF EXHIBITS</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> | <p>1 THE VIDEOGRAPHER: We're on the record at</p> <p>2 8:51 a.m. This is the videotaped deposition of</p> <p>3 Joseph Murray in the matter of Andrea Rossi, et al,</p> <p>4 versus Thomas Darden, et al. This deposition is</p> <p>5 being held in the offices of CaseWorks at 3509</p> <p>6 Haworth Drive, Suite 403, in Raleigh, North Carolina</p> <p>7 27609 on February 17, 2017. The court reporter is</p> <p>8 Lauren McIntee. The videographer is Michael Kirby,</p> <p>9 both with Caseworks. Would counsel please introduce</p> <p>10 themselves.</p> <p>11 MR. ANNESSER: John Annesser and Brian</p> <p>12 Chaiken on behalf of the Plaintiffs.</p> <p>13 MR. LOMAX: I'm Christopher Lomax on behalf</p> <p>14 of the Defendants.</p> <p>15 THE VIDEOGRAPHER: And would the court</p> <p>16 reporter please swear in the witness.</p> <p>17 MR. NUÑEZ: Hello there. This is Rudy</p> <p>18 joining in.</p> <p>19 MR. ANNESSER: Thank you, Rudy. We've</p> <p>20 already begun.</p> <p>21 MR. NUÑEZ: Okay.</p> <p>22 MR. ANNESSER: Please place us on mute.</p> <p>23 MR. NUÑEZ: I thought it was 9:00 though,</p> <p>24 right?</p> <p>25 MR. ANNESSER: Yes, but we, we decided to</p> |

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| <p style="text-align: right;">Page 62</p> <p>1 over and test it again?</p> <p>2 A. Well, because Mr. Darden was, wanted us to</p> <p>3 drive to the end, that if there was even one percent</p> <p>4 chance that that one measurement he did was correct,</p> <p>5 then let's get to the bottom of it. And there was a big</p> <p>6 language barrier. So what we did was we had him, after</p> <p>7 we were able using all of his information, able to</p> <p>8 reproduce it or not able to reproduce it, what we had</p> <p>9 him do was we had him to come over and use one of his</p> <p>10 reactors in our facility to see if there was something,</p> <p>11 some nuance difference that we just weren't getting, and</p> <p>12 then try to reproduce it. But we were not able to get</p> <p>13 it to work even with him there.</p> <p>14 Q. Would you say that it is essential to work</p> <p>15 with the inventor in order to make sure that you're</p> <p>16 getting absolutely everything to attempt to replicate</p> <p>17 these tests?</p> <p>18 A. In my opinion, yes. I mean if, these are</p> <p>19 very nuanced and subtle areas. And so if you don't have</p> <p>20 access to, to these people, it's very difficult to</p> <p>21 really understand all of the, the small nuance</p> <p>22 differences.</p> <p>23 Q. Did you ever try to reproduce or test an</p> <p>24 E-Cat device designed by Dr. Rossi?</p> <p>25 A. I did not.</p> | <p style="text-align: right;">Page 63</p> <p>1 Q. So you've never tested an E-Cat device?</p> <p>2 A. We created a device that was as close as</p> <p>3 possible to the best of our ability without, without the</p> <p>4 ability to communicate with Mr. Rossi. We, we did the</p> <p>5 best we could. So we created some reactors that were</p> <p>6 similar to some of the reactors that he had tested at</p> <p>7 the Triangle Drive facility before I was part of</p> <p>8 Industrial Heat, and we tested those systems.</p> <p>9 Q. Okay. Now, you said a couple things there I</p> <p>10 want to ask you about. You said with no communication</p> <p>11 with Dr. Rossi?</p> <p>12 A. Uh-huh.</p> <p>13 Q. Why didn't you have communication with</p> <p>14 Dr. Rossi?</p> <p>15 A. Well, so when I came on board, so in June of</p> <p>16 2000 -- let me get the year right -- 15, Industrial Heat</p> <p>17 was, had just received their funding. I don't know if</p> <p>18 it was in April or May. They had received funding, and</p> <p>19 they were in negotiations for several other investments.</p> <p>20 And so those were ongoing, and the lawyers, you know,</p> <p>21 not to say anything bad about lawyers, but the lawyers</p> <p>22 were doing their thing. And so they were taking a long</p> <p>23 time to kind of get to the point where we could really</p> <p>24 engage and work with the various groups.</p> <p>25 So in June of 2015 Tom Darden and John</p> |
| <p style="text-align: right;">Page 64</p> <p>1 Mazzarino asked me to look at in detail what Mr. Rossi</p> <p>2 was doing. So I took all the information that, that</p> <p>3 they could provide me, and it was insufficient</p> <p>4 information incidentally. There were, there were no</p> <p>5 red-line drawings of the plant. There were no details.</p> <p>6 And on top of that, this is another kind of detail, Tom</p> <p>7 Darden was the keeper of the trade secrets. Nobody else</p> <p>8 knew anything about the details of the fuel technology.</p> <p>9 So what we did was we focussed on the heat</p> <p>10 transfer and the coefficient of performance as they had</p> <p>11 been defined so that we could figure out if we could</p> <p>12 replicate it. Because Tom and John insisted that if</p> <p>13 there's even one percent chance he's right, they want to</p> <p>14 move ahead and figure out how to do this.</p> <p>15 So in 2000 -- June of 2015 I went through</p> <p>16 everything I could find. And, and there were some</p> <p>17 commissioning reports I think they were from Mr. Penon.</p> <p>18 And I was going through those, and there were a lot of</p> <p>19 typos and errors, and so that was concerning. And so I</p> <p>20 developed a whole bunch of questions. Like, for</p> <p>21 example, in the commission report they had the flow rate</p> <p>22 in the system was 36,000 -- let me think of the unit --</p> <p>23 kilograms per day, day after day after day, which I</p> <p>24 thought was suspicious, but in the body of the text he</p> <p>25 had written 3,600.</p> | <p style="text-align: right;">Page 65</p> <p>1 So I thought, oh, 3,600 would be a lot more</p> <p>2 logical. It was kind of consistent with what everybody</p> <p>3 was describing as the coefficient of performance, those</p> <p>4 types of things. So I thought, okay, well, maybe</p> <p>5 there's an error there. Maybe it's just a simple typo.</p> <p>6 I mean somebody could have transposed a number. That's</p> <p>7 not a big deal. Things happen.</p> <p>8 So we went through all of that. And I was</p> <p>9 looking at it. I just couldn't figure it out because I</p> <p>10 couldn't figure out where, in a thermodynamic sense</p> <p>11 where the various sensors were. Because you have to</p> <p>12 have the pressure and the temperature and the volume or</p> <p>13 mass flow rate of the condensate return, and you need</p> <p>14 the pressure and the temperature and the volume or mass</p> <p>15 flow rate of the steam to, to measure the system.</p> <p>16 Q. I'm going to stop you for just a minute.</p> <p>17 A. Okay.</p> <p>18 Q. We will get into that. I'm going to give you</p> <p>19 plenty of --</p> <p>20 A. Okay.</p> <p>21 Q. -- opportunity to tell me about it.</p> <p>22 A. Okay.</p> <p>23 Q. But I want to go back to the testing that you</p> <p>24 did.</p> <p>25 A. Okay.</p> |

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| <p>Page 66</p> <p>1 Q. Okay. So the question again was why you had 2 no communication with Dr. Rossi. 3 A. Right. So that was where I was getting to. 4 So at the end of that analysis -- thanks for reminding 5 me because I'm out in the weeds. At the end of that 6 analysis I just couldn't make heads or tails of what was 7 going on, so JT Vaughn and Tom Darden and John Mazzarino 8 said you need to go down and meet with Mr. Rossi, 9 understand what he's doing, look at the plant. He said 10 if we don't have the documentation, at least you can 11 look at the plant and understand what's going on. I 12 said fine, I'll go down and meet with Dr., with 13 Mr. Rossi. 14 So in July of 2015 we were going to fly down 15 and visit him. And I don't know exactly what happened, 16 but JT had informed Mr. Rossi we were coming down and 17 he, he said I couldn't come to the building. So that 18 kind of put up a big barrier. And so subsequently what 19 we did was we, I engaged with Barry West, and Barry West 20 was on leave or vacation. I think it was in August time 21 frame. He would, I think he would work five weeks and 22 take a week off or maybe work four and take two. I 23 don't remember what the details were, but he was back up 24 in North Carolina, and I met with him to get some 25 details to try to figure out what was going on.</p> | <p>Page 67</p> <p>1 Q. Okay. Now, going back for just a minute to 2 your testing. Well, first of all, in that time period, 3 and I understand JT Vaughn sent an e-mail to Dr. Rossi 4 as you explained. Did you ever send an e-mail to 5 Dr. Rossi? 6 A. I don't believe I ever did, no. 7 Q. Did you ever introduce yourself to Dr. Rossi? 8 A. First time I met him was actually the day 9 that you and I were at the plant for the first time. 10 Q. Okay. Did you have any preconceived notions 11 about Dr. Rossi when you met him? 12 A. Yeah. I would say yes, I did. 13 Q. And what were those notions? 14 A. Mr. Darden, Tom Darden and John Mazzarino, 15 they engaged with me directly and said, look, you just 16 have to be aware that he's very deceptive, and you just 17 have to be careful with that. And I said I'm only about 18 the data -- 19 Q. When did they tell you that? 20 A. -- and so. I think after the meeting was 21 canceled in July, that, about that time frame. 22 Q. Did they tell you that that meeting was 23 likely not going to go over well with Dr. Rossi? 24 MR. LOMAX: Objection to the form of the 25 question.</p> |
| <p>Page 68</p> <p>1 A. I don't, what -- 2 Q. Did they ever tell you that, you know, just 3 them even suggesting that you come down is probably 4 going to upset Dr. Rossi? 5 MR. LOMAX: Objection to the form of the 6 question. 7 A. I, I don't know. I, I would have anticipated 8 that, based on their relationship as it was kind of 9 presented to me, that, you know, there would be some, 10 some reception actually at that time, because Mr. Darden 11 and others were taking other people down there to look 12 at the plant and talk to them, and so I thought I was 13 just going to be another person to visit. 14 Q. Okay. 15 A. So. 16 Q. Did they ever tell you he would be upset by 17 your visit, but, you know, to do it anyways? 18 MR. LOMAX: Objection to the form of the 19 question. 20 A. I don't recall, but they may have. They may 21 have indicated that. It may have been after though 22 that, once he actually said you can't come in. I don't 23 remember the exact time line that all of that happened. 24 Q. Now, just back for a second with Mr., and I'm 25 sorry, Dr. Mizuno. So is it your belief that his</p> | <p>Page 69</p> <p>1 testing protocol that was undertaken at his lab in Japan 2 was faulty? 3 A. I believe that the test protocol that he 4 executed in Japan prior to us being able to go in and 5 inspect what he was doing did have errors and, and 6 problems, yes. 7 Q. To your knowledge, did Industrial Heat invest 8 in Dr. Mizuno's technology? 9 A. To my knowledge I believe, and I'm not deep 10 into this, my understanding is that we paid him kind of 11 a monthly stipend to, to support his research and 12 development activities. 13 Q. To your knowledge, has Industrial Heat sued 14 him? 15 A. I am not aware of that, no. 16 Q. All right. Now, sir, taking a large step 17 back from what we've been discussing. When did you 18 first come into contact with Industrial Heat? 19 A. When did I first come into contact with 20 Industrial Heat or with the personnel associated with 21 Industrial Heat? 22 Q. Well, let's go ahead and say the personnel. 23 A. Okay. So I met Dewey Weaver -- 24 THE VIDEOGRAPHER: Mr. Murray. 25 THE WITNESS: Oh, I'm sorry. Sorry about</p> |

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| <p style="text-align: right;">Page 82</p> <p>1 medical benefits renew -- I use a HSA medical plan, and</p> <p>2 they renew at the beginning of the year. And so when I</p> <p>3 left Ultra I was in the middle of a, kind of a plan</p> <p>4 year. And my daughter was sick. She needed some</p> <p>5 surgery, and I didn't want to mess with the insurance.</p> <p>6 So I just said, look, let me just consult until the end</p> <p>7 of the year, and then we'll convert to an employee at</p> <p>8 the end of the year when the medical plans turn over.</p> <p>9 Q. Now, as a consultant were you given a title</p> <p>10 within the company?</p> <p>11 A. Because the intention was for me to</p> <p>12 transition to a full-time employee, yeah. My title was</p> <p>13 Vice President of Engineering.</p> <p>14 Q. So you were Vice President of Engineering</p> <p>15 from day one?</p> <p>16 A. Kind of from the beginning, yeah.</p> <p>17 Q. I'm going to show you a document, sir, that</p> <p>18 we'll mark as Exhibit 2.</p> <p>19 (Whereupon, Exhibit 2 was marked for</p> <p>20 identification.)</p> <p>21 Q. Have you seen this document before, sir?</p> <p>22 A. One second. Let me see. Yes, I actually</p> <p>23 think I prepared this document.</p> <p>24 Q. Okay. Now looking, sir, the, the date on the</p> <p>25 front of this document appears to be January 2016?</p> | <p style="text-align: right;">Page 83</p> <p>1 A. Uh-huh.</p> <p>2 Q. Okay. What I'd like you to turn to -- and</p> <p>3 I'm sorry. This document is a document with a bates</p> <p>4 number IH00053931. I'll ask you to turn to the sixth</p> <p>5 page of the document with the bates number IH00053936.</p> <p>6 A. Uh-huh.</p> <p>7 Q. There is an organizational structure there?</p> <p>8 A. Uh-huh.</p> <p>9 Q. And it lists engineering, J Murray. Is that</p> <p>10 you?</p> <p>11 A. Yes.</p> <p>12 Q. Okay. And it has categories in which I</p> <p>13 believe you're responsible: Development, integration</p> <p>14 and tests, data management, project management, modeling</p> <p>15 and simulation?</p> <p>16 A. Yes.</p> <p>17 Q. Okay. What development did you do for the</p> <p>18 company?</p> <p>19 A. We developed data acquisition systems and</p> <p>20 replication reactor systems. We developed calorimetry</p> <p>21 systems. We developed a wide range of test assets. We</p> <p>22 developed databases to archive and store all of the</p> <p>23 information from every test that we did. I don't know.</p> <p>24 Just broad range of development activities.</p> <p>25 Q. Didn't those exist before?</p> |
| <p style="text-align: right;">Page 84</p> <p>1 A. No, not to, not to my knowledge.</p> <p>2 Q. Did they have any systems in place when you</p> <p>3 joined them in May or June of 2015?</p> <p>4 A. This, this was for the new facility. So</p> <p>5 we -- I don't recall when they got the lease on the new</p> <p>6 facility. I think it was about August or maybe</p> <p>7 September of 2015. So what we were doing is setting up</p> <p>8 this entire new organization in the new facility. And</p> <p>9 so these systems, I -- not that I'm aware of. I don't</p> <p>10 know what they really had at Triangle Drive. I know</p> <p>11 they did, they were doing some electrolytic system</p> <p>12 testing at Triangle Drive at that time. I had gone over</p> <p>13 there one or two times, but I wasn't really too versed</p> <p>14 in what they were doing.</p> <p>15 Q. Okay. Integration and tests, what was that?</p> <p>16 A. So integration and tests is actually taking</p> <p>17 the development assets, bringing them together and</p> <p>18 executing test programs using those. So the integration</p> <p>19 is kind of a validation procedure for the infrastructure</p> <p>20 that lives over top of, for example, a reactor or we had</p> <p>21 chambers and other equipment. So we were integrating</p> <p>22 all that equipment together, and then we were testing it</p> <p>23 and validating it to make sure that it was operating as</p> <p>24 we had specified in the development phase.</p> <p>25 Q. So that wouldn't be the testing and</p> | <p style="text-align: right;">Page 85</p> <p>1 evaluation of the underlying LENR technology? And by</p> <p>2 LENR do you understand what I mean?</p> <p>3 A. Yes, I do.</p> <p>4 Q. Low energy nuclear reaction?</p> <p>5 A. Uh-huh. It would be, in fact, a combination</p> <p>6 of testing of the equipment and infrastructure necessary</p> <p>7 to test those reactors as well as the test of those</p> <p>8 reactors --</p> <p>9 Q. Yeah.</p> <p>10 A. -- when it was appropriate and when we got to</p> <p>11 that point.</p> <p>12 Q. Data management?</p> <p>13 A. So in my experience, many companies fail to</p> <p>14 adequately archive and manage data. So what we were</p> <p>15 doing is we put a very robust plan in place to store and</p> <p>16 archive the data and metadata associated with tests so</p> <p>17 we could reproduce it.</p> <p>18 Q. Okay. Project management?</p> <p>19 A. Over --</p> <p>20 Q. Is that anything other than the common term,</p> <p>21 project management, overseeing all these projects?</p> <p>22 A. It's project management.</p> <p>23 Q. Modeling and simulation?</p> <p>24 A. Right. So we, we attempted to model and</p> <p>25 simulate as many of the systems as we could so we could</p> |

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| <p style="text-align: right;">Page 114</p> <p>1 what the model of the flow meter is. We need to know 2 the type. We need to know what flow meter is on the 3 condensate line, what flow meter is on the steam side. 4 We needed all that information. 5 Q. Did you, did you look at the, the test plan? 6 A. I did, yes. 7 Q. Okay. And that didn't indicate anything to 8 you? 9 A. At some point along the way after the fact 10 once, once I actually got my eyes on what they were 11 doing down in the plant in February of 2015 when we were 12 there on that, those two days and I saw what they were 13 doing, I went back and scoured through all the 14 documents. And there was a document where they had a 15 bullet line of what the flow meter was -- 16 Q. Okay. 17 A. -- on the condensate line, but I had not seen 18 that before that. 19 Q. So they had that though? 20 A. There was a -- 21 Q. That was information that Industrial Heat 22 had? 23 A. There was a document that had that, yes. 24 Q. Okay. And you hadn't seen that before? 25 A. I had not noticed it, no.</p> | <p style="text-align: right;">Page 115</p> <p>1 Q. Okay. But Industrial Heat had it. It wasn't 2 a secret. It wasn't -- 3 A. That's right. 4 Q. Okay. Now, you're dealings with Mr. Fabiani, 5 did he ever tell you that he felt like he was between a 6 rock and a hard spot, you know, sitting there between 7 Industrial Heat and Dr. Rossi? 8 A. Yes. Yes. 9 Q. Okay. Do you have any reason to believe that 10 that wasn't the case? 11 A. No. He described his relationship with 12 Mr. Rossi when he was at Jones Day with us. He 13 described his relationship as he, he was very close to 14 Mr. Rossi's wife. I don't recall her name. He, he 15 described it as she was kind of like a sister or a 16 mother to me, and that he felt like he was really in a 17 hard spot because he couldn't do anything without being 18 under the scrutiny of Mr. Rossi. 19 Q. Did he ever tell you that Dr. Rossi was very 20 disappointed in him because he thinks that he is an IH 21 spy? 22 A. I don't recall those exact words, no. 23 Q. Okay. I'll show you a document that we'll 24 mark as Exhibit 4. It bears the bates number 25 IH00087145.</p> |
| <p style="text-align: right;">Page 116</p> <p>1 (Whereupon, Exhibit 4 was marked for 2 identification.) 3 MR. LOMAX: Thank you. 4 Q. Do you recall receiving this e-mail, sir, 5 which was sent by Mr. Fabiani to yourself on April 25, 6 2016? 7 A. Yes. 8 Q. And do you recall him telling you that he is, 9 I think the words he used is between the hammer and 10 anvil? 11 A. I don't recall the specific e-mail, but yeah, 12 I mean this, this looks like almost the same as what he 13 described when we met before this at Jones Day. 14 Q. And isn't it true, sir, that Industrial Heat 15 refused to pay him for his last invoice? 16 MR. LOMAX: Objection to the form of the 17 question. 18 A. Okay. Mr. Fabiani committed to delivering to 19 us a final report that he was preparing. And so when we 20 met with him in, at Jones Day prior to this, he said the 21 next day he would produce two things; all of the data 22 that he had collected, and he would produce a final 23 report with all of the details of what he had done 24 during the one-year period. And, and we said as soon as 25 you do that, we'll release your final payment and we'll</p> | <p style="text-align: right;">Page 117</p> <p>1 go from there. And the next day he said he would not 2 release that information, and then we began a dialogue 3 of continually not getting the information. 4 Q. That, that information, I'm sorry, that final 5 payment was already past due, was it not? 6 A. I have no idea. 7 Q. Okay. Now, Mr. Fabiani sent reports on a 8 regular basis to Industrial Heat, did he not? 9 MR. LOMAX: Objection to the form of the 10 question. 11 A. I am not -- 12 MR. ANNESSER: What's the objection? 13 MR. LOMAX: It's leading. 14 MR. ANNESSER: He's an opposing party 15 witness, Chris. 16 MR. LOMAX: It's just my objection for the 17 record. 18 MR. ANNESSER: Okay. Thank you. 19 BY MR. ANNESSER: 20 Q. Go ahead, sir. 21 A. Can you repeat the question? 22 Q. Yes. Isn't it true that Mr. Fabiani sent 23 regular updates and reports to Industrial Heat? 24 A. I'm not sure. Those in my, in my best 25 judgment would probably have gone to JT Vaughn.</p> |

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1 Q. Okay. Were they ever shown to you?

2 A. Not that I recall.

3 Q. Would those have been helpful to you in your

4 replication efforts?

5 A. I don't know what the content of the, the --

6 Q. If --

7 A. -- reports were.

8 Q. If he sent reports regarding the amount of

9 power used or water flow, or anything for that matter?

10 A. No, I don't believe those would be valuable

11 relative to the replication efforts.

12 Q. But --

13 A. It would have been useful information

14 relative to understanding what was happening in that

15 facility.

16 Q. Did you ever ask JT Vaughn for anything that

17 they received?

18 A. I don't recall.

19 Q. Power usage reports from Mr. Fabiani?

20 A. Actually, yeah, I recall at some point,

21 probably after the test was complete, getting a PDF file

22 with a spreadsheet. I mean I have a vague recollection

23 of this, but subsequent to that, when we met at Jones

24 Day Mr. Fabiani provided us with a series of

25 spreadsheets and data that we actually analyzed.

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1 received it now, but at that point we had not received

2 it.

3 Q. So you haven't analyzed that now?

4 A. I'm sorry?

5 Q. You haven't analyzed the additional data that

6 he's given you?

7 A. I don't know if we've received it.

8 Q. So you don't recall ever seeing monthly,

9 monthly spreadsheets?

10 A. No. I, I received monthly spreadsheets from

11 Mr. Fabiani when we met at Jones Day, and we analyzed

12 that data. And at some point probably in the first, you

13 know, first part of 2016, maybe after the test,

14 somewhere thereabouts there were some spreadsheets that

15 were in PDF form that were shared with us.

16 Q. And that meeting was in 2016 after the test

17 was --

18 A. Completed, yeah. I think it was in March. I

19 would have to look back to see when I flew down to

20 Miami.

21 Q. So you never received monthly spreadsheets --

22 A. Before.

23 Q. -- before that from anyone?

24 A. Not that I'm aware of.

25 Q. Did you receive --

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1 Q. Okay. Have those spreadsheets and data been

2 provided do you know in discovery?

3 A. Yes, I believe they have. I should say we

4 have provided them to Jones Day. What they provide I, I

5 don't know.

6 Q. Okay. So when Mr. Fabiani met with you, was

7 it with Jones Day or without Jones Day?

8 A. With Jones Day.

9 Q. Okay. What was discussed at that meeting?

10 A. He had, he had indicated that he had a lot of

11 data and that he would share that data with us. So

12 initially we were just having small talk, you know. He

13 kind of -- introduction. We had never really formally

14 met in a, a less kind of stressful environment. So we

15 chatted. He kind of gave me a little bit of his

16 background. I gave him a little bit of my background.

17 He was familiar with some of my defense background, and

18 I was familiar with some of the work that he had done in

19 Israel.

20 So we had small talk, and then we had a

21 discussion about what he had done and the data that he

22 would provide us, and he gave us a little bit of

23 information. He gave us some, several spreadsheets, and

24 then subsequently he made a commitment to give us

25 additional data that we, actually I don't know if we've

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1 A. Oh, there were the monthly or -- the reports

2 that Mr. Penon had submitted, I don't know if they were

3 monthly or quarterly. And from time to time I would get

4 those updates, and we would look at those. That's the

5 ones that I was describing as units were changing and

6 there were some, you know, things that we had to be

7 careful with.

8 Q. So I know I asked you this before, but I need

9 you to refresh my recollection. When is the first time

10 that you saw the test plan for the test being performed

11 by Mr. Penon?

12 A. Probably, you know, it's hard to know which

13 one. I saw a commissioning report. That's what I

14 reviewed along with the, all of the information that was

15 available at that point in June of 2015. The test plan,

16 kind of the precursor to that, I think it was kind of

17 incorporated in it, but it wasn't exactly the same.

18 These things, the reports kind of changed over time.

19 Q. Okay.

20 A. So I don't really know exactly when I saw the

21 test plan, but I know that after we went on the 15th and

22 16th and I saw the flow meter, I went back and scoured

23 through all the documents I could find, and then I found

24 a document that had a reference to a flow meter in it.

25 Q. Okay. And what was that document, if you

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| <p style="text-align: right;">Page 126</p> <p>1 been down there?</p> <p>2 A. I think he had when they were setting up the</p> <p>3 plant, yes.</p> <p>4 Q. Did you ask him about his trip down there or</p> <p>5 how things were set up?</p> <p>6 A. Yes.</p> <p>7 Q. And you still didn't know the configuration?</p> <p>8 A. No.</p> <p>9 Q. Did he ever try to come back down --</p> <p>10 A. I am not --</p> <p>11 Q. -- to your knowledge?</p> <p>12 A. -- aware. I am not aware.</p> <p>13 Q. So why would Dr. Rossi -- or why would he say</p> <p>14 he'll start getting worked up now?</p> <p>15 MR. LOMAX: Object --</p> <p>16 Q. You said you, you said you took that to mean</p> <p>17 that he didn't want you coming down?</p> <p>18 A. Yes.</p> <p>19 Q. Well, so you knew that before --</p> <p>20 A. No, no, no. He sent --</p> <p>21 Q. -- he even asked?</p> <p>22 A. I believe he sent this e-mail --</p> <p>23 Q. Two minutes after the original e-mail.</p> <p>24 A. -- after, he sent that e-mail to me saying,</p> <p>25 well, he's going to start getting worked up now.</p> | <p style="text-align: right;">Page 127</p> <p>1 Q. He sent, no, he sent an e-mail --</p> <p>2 A. Yeah.</p> <p>3 Q. -- to Dr. Rossi, July 13, 2015, at 9:10 a.m.?</p> <p>4 A. Yes.</p> <p>5 Q. Two minutes later at 9:12 a.m. on July 13,</p> <p>6 2015, he sent you an e-mail saying, "All right. He'll</p> <p>7 start getting worked up now. Should be a fun trip."</p> <p>8 A. Uh-huh.</p> <p>9 Q. Did, did he tell you beforehand that he would</p> <p>10 get worked up and oppose you coming?</p> <p>11 A. I think everybody thought that me, being an</p> <p>12 engineer, coming down to inspect the plant was going to</p> <p>13 cause Mr. Rossi some concern.</p> <p>14 Q. T. Barker Dameron is an engineer, isn't he?</p> <p>15 A. He is.</p> <p>16 Q. He was never refused access, was he?</p> <p>17 A. I am not aware.</p> <p>18 Q. T. Barker Dameron worked with Dr. Rossi for</p> <p>19 some time?</p> <p>20 A. Uh-huh.</p> <p>21 Q. Are you aware of any problems with that?</p> <p>22 A. No, I'm not aware.</p> <p>23 Q. Okay. Any reason to believe that Dr. Rossi</p> <p>24 knew anything about you, Joe Murray?</p> <p>25 A. I don't know. I, I believe that at some</p> |
| <p style="text-align: right;">Page 128</p> <p>1 point Tom Darden indicated that he was hiring an</p> <p>2 engineering team and that they were bringing, ramping up</p> <p>3 Industrial Heat. I don't know if they shared that</p> <p>4 information with Mr. Rossi though.</p> <p>5 Q. Okay. Well, it certainly appears that JT</p> <p>6 Vaughn knew that Dr. Rossi would get upset by that</p> <p>7 suggestion.</p> <p>8 A. Of bringing somebody new in the plant?</p> <p>9 Q. Yeah.</p> <p>10 A. It appears that way, yes.</p> <p>11 Q. And Dr. Rossi didn't know you from Adam at</p> <p>12 that point in time. And specifically at that point in</p> <p>13 time isn't it true that you weren't even an employee of</p> <p>14 Industrial Heat?</p> <p>15 A. No. I was --</p> <p>16 Q. You were a consultant?</p> <p>17 A. -- working as a consultant, that's correct.</p> <p>18 Q. Okay. So at that point in time you knew as</p> <p>19 of two minutes after they sent that e-mail, before</p> <p>20 Dr. Rossi ever responded, that it was going to be a</p> <p>21 problematic situation?</p> <p>22 A. According to what JT sent me, yes.</p> <p>23 Q. That was the intent of this original e-mail,</p> <p>24 wasn't it?</p> <p>25 MR. LOMAX: Objection to the --</p> | <p style="text-align: right;">Page 129</p> <p>1 Q. To create a problem?</p> <p>2 MR. LOMAX: Objection to --</p> <p>3 A. Absolutely not.</p> <p>4 MR. LOMAX: Excuse me. Objection to the form</p> <p>5 of the question.</p> <p>6 MR. ANNESSER: What's the objection?</p> <p>7 MR. LOMAX: You asked him was the intent of</p> <p>8 the e-mail to --</p> <p>9 MR. ANNESSER: If he knows.</p> <p>10 Q. Go ahead, sir.</p> <p>11 A. Absolutely not. The intent was for me to go</p> <p>12 down to the plant, inspect the plant, figure out what</p> <p>13 was going on, and then try to understand the, the</p> <p>14 content of the reports.</p> <p>15 Q. Now, it says, "I have booked a flight down</p> <p>16 Tuesday afternoon."</p> <p>17 A. Uh-huh.</p> <p>18 Q. So you booked the flight. You, you guys</p> <p>19 booked your flight before even telling Dr. Rossi, hey,</p> <p>20 we'd like to bring Joe Murray down?</p> <p>21 A. Yeah. I think, I think that the, the</p> <p>22 Industrial Heat people booked the flight, yes.</p> <p>23 Q. Okay. To your knowledge, did anyone call and</p> <p>24 say, hey, Andrea, we got this new guy, he's great, Joe</p> <p>25 Murray, he's on board, he's our VP of Engineering, we'd</p> |

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1 like to bring him down, prior to this e-mail?
 2 A. I have no idea.
 3 Q. Okay. How did Dr. Rossi respond to this
 4 e-mail, Mr. Vaughn's original e-mail?
 5 A. The trip was canceled. I was not going to be
 6 allowed into the facility.
 7 Q. How did Dr. Rossi respond?
 8 A. I, I don't recall.
 9 Q. Do you know if it was canceled because of
 10 Dr. Rossi?
 11 A. It was canceled because I was not going to be
 12 allowed into the facility.
 13 Q. By who?
 14 A. By Mr. Rossi.
 15 Q. Did you ever speak with Mr. Rossi about that?
 16 A. I did not.
 17 Q. Did you ever reach out to him at any point
 18 before or after that and say -- you know, by, by mid
 19 July when that e-mail was sent, you had been working
 20 May, June, so two and a half months with Industrial
 21 Heat?
 22 A. Uh-huh.
 23 Q. As the head of engineering? Or, I'm sorry,
 24 the Vice President of Engineering?
 25 A. Uh-huh.

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1 opportunity, go down, look at the plant, try to figure
 2 out what's going on, and move forward. The instruction
 3 was if there is even one percent or a half a percent
 4 chance that this works, we want to know so we can move
 5 forward.
 6 Q. Well, I absolutely understand you want to do
 7 your, your investigation. So after Dr. Rossi originally
 8 said no to you coming to the plant, did you follow up at
 9 all? Did you say, hey, why don't I, you know, why don't
 10 I give him a call?
 11 A. No.
 12 Q. You don't --
 13 A. I was never introduced to him.
 14 Q. Okay. Is there a reason? I mean --
 15 A. Not that I'm aware of.
 16 Q. Do you know of any reason why this Dr. Rossi
 17 that you've never met would dislike you so much to say,
 18 no, you can't come?
 19 A. Not that I'm aware of.
 20 Q. That didn't bother you at all?
 21 A. We had numerous things moving at the same
 22 time, lots of different activities. So it was just one
 23 of the things.
 24 Q. Do you know of any attempts whatsoever after
 25 that to have you come down?

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1 Q. And you never reached out to Dr. Rossi and
 2 said, hey, nice to meet you, I'm really interested in
 3 your work, we should talk?
 4 A. No.
 5 Q. Is there a reason?
 6 A. There was no contact. I wasn't provided
 7 information. I, I think at some point I said, hey,
 8 should I send an e-mail, but.
 9 Q. And what did they say?
 10 A. As far as I know, I never did send an e-mail.
 11 Q. Who did you ask that to?
 12 A. I think John Mazzarino, Tom Darden, and JT
 13 Vaughn. I think. Is my recollection.
 14 Q. Are you aware that Mr. T. Barker Dameron had
 15 been instructed not to confer with Dr. Rossi?
 16 A. No, I was unaware of that.
 17 Q. Were you ever given that instruction?
 18 A. Not that I'm aware of.
 19 Q. Okay. So you were never told not to contact
 20 Dr. Rossi?
 21 A. Uh-huh.
 22 Q. You just elected never to talk with him?
 23 A. No. We were working on multiple different
 24 initias at the same time. And so I was instructed to
 25 analyze all the data we have; if we have the

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1 A. Not that I'm aware of, not until 2016.
 2 Q. Now, after that you said -- how long after
 3 that e-mail was sent did you meet with Mr. West?
 4 A. I think in August is my recollection.
 5 Q. So a month or so after?
 6 A. Yeah. Two to four weeks later, yes.
 7 Q. Okay. Was, was that meeting because an
 8 attorney told you --
 9 A. No.
 10 Q. -- to have that meeting by any means?
 11 A. I was trying to, you know, as part of the
 12 effort of all of these different activities and hiring
 13 people and getting the facility organized, I was trying
 14 to get a handle on all the different projects. And, and
 15 it was suggested, hey, Barry's down there working, talk
 16 to Barry and get, get whatever information you can from
 17 Barry. And so T. Barker and I -- Barry was back on one
 18 of his leave. And T. Barker and I went and had lunch
 19 with him down at the beach.
 20 Q. So that wasn't, that meeting wasn't in
 21 preparation for litigation, was it?
 22 A. Not that I'm aware of.
 23 Q. I'm going to show you, sir, a document which
 24 we'll mark as Exhibit 6.
 25 (Whereupon, Exhibit 6 was marked for

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| <p style="text-align: right;">Page 142</p> <p>1 situation.</p> <p>2 Q. Did, did you ask him about the facts or</p> <p>3 circumstances around that threat?</p> <p>4 A. Not really.</p> <p>5 Q. Problem I've got is we did speak with</p> <p>6 Mr. West. And as far as his relationship with</p> <p>7 Mr. Fabiani, it was all flowers and sunshine. So what</p> <p>8 I'm trying to understand is why this would appear in</p> <p>9 your report if Mr. West didn't indicate that to us.</p> <p>10 A. I just documented what he said.</p> <p>11 Q. So you have no independent knowledge of that?</p> <p>12 A. No.</p> <p>13 Q. And you have --</p> <p>14 A. Only what he said.</p> <p>15 Q. -- none of the facts or circumstances behind</p> <p>16 that?</p> <p>17 A. No.</p> <p>18 Q. So based on your understanding, do you have</p> <p>19 any reason to believe that Mr. Fabiani and Dr. Rossi</p> <p>20 were colluding to skew the results of this test?</p> <p>21 A. No.</p> <p>22 Q. What about Dr. Rossi and Mr. Barry West?</p> <p>23 A. Not as far as I'm aware.</p> <p>24 Q. Now, sir, you started drafting a report to</p> <p>25 undermine the testing protocol used by Dr. Penon, did</p> | <p style="text-align: right;">Page 143</p> <p>1 you not?</p> <p>2 A. I never prepared any report to undermine</p> <p>3 anything. I prepared a report on a review of the</p> <p>4 documents that I was provided.</p> <p>5 (Whereupon, Exhibit 7 was marked for</p> <p>6 identification.)</p> <p>7 Q. I show you, sir, a document marked as Exhibit</p> <p>8 Number 7. Have you seen this document before, sir?</p> <p>9 A. Not in this form. It looks, it looks</p> <p>10 familiar, but it doesn't seem like it's complete.</p> <p>11 Q. Did you prepare this document, sir?</p> <p>12 A. It appears to be part of a document that I</p> <p>13 prepared.</p> <p>14 Q. Well, it says that it's an appendix. Is</p> <p>15 there a larger document?</p> <p>16 A. Well, this was after the test, so I would</p> <p>17 imagine that there is more to this document, yes.</p> <p>18 Q. Do you know why it hasn't been produced?</p> <p>19 A. I have no idea.</p> <p>20 Q. Who asked you to prepare this document?</p> <p>21 A. After the visit on the 20 -- I'm sorry, on</p> <p>22 the 16th and 17th, Mr. Chris Pace of Jones Day asked</p> <p>23 me --</p> <p>24 Q. 16th and 17th of?</p> <p>25 A. I'm sorry. Of February of 2016.</p> |
| <p style="text-align: right;">Page 144</p> <p>1 Q. Thank you.</p> <p>2 A. I have to be careful.</p> <p>3 MR. LOMAX: I'm going to instruct you not to</p> <p>4 divulge conversations you had with counsel.</p> <p>5 THE WITNESS: Okay.</p> <p>6 A. I was instructed to write down all of my</p> <p>7 notes and information about what I had observed.</p> <p>8 Q. Who instructed you?</p> <p>9 A. Counsel.</p> <p>10 Q. Counsel for Industrial Heat?</p> <p>11 A. Yes.</p> <p>12 Q. I'm sorry. You were instructed to write down</p> <p>13 your notes and everything that you had observed?</p> <p>14 A. Yes.</p> <p>15 Q. Is there a more complete report other than</p> <p>16 this?</p> <p>17 A. I believe that, you know, based on what's in</p> <p>18 here, there's lots of redactions and at least the front</p> <p>19 matter is removed. I'm still going through it, but</p> <p>20 yeah, there's a lot of redaction.</p> <p>21 Q. Do you know why it would be redacted?</p> <p>22 MR. LOMAX: Objection to the form of the</p> <p>23 question.</p> <p>24 A. Because I prepared it for Industrial Heat's</p> <p>25 attorneys.</p> | <p style="text-align: right;">Page 145</p> <p>1 Q. Is it your understanding it would be used for</p> <p>2 litigation?</p> <p>3 A. Probably. If the litigation were to, to</p> <p>4 happen.</p> <p>5 Q. Does any of this form the basis of your</p> <p>6 opinions in this case?</p> <p>7 A. Yes. These were my observations from what I</p> <p>8 had seen on those days.</p> <p>9 Q. And do you reference these documents, or did</p> <p>10 you refer to them in preparing your expert disclosure?</p> <p>11 A. I don't believe I did at all.</p> <p>12 Q. So you did this great body of work and never</p> <p>13 referenced it?</p> <p>14 A. No, I don't think I did at all. In fact, I</p> <p>15 think this is the first time I've looked at it in at</p> <p>16 least 10 or 11 months.</p> <p>17 Q. Okay. Looking at -- I'm sorry. For the</p> <p>18 record, this is a document marked or bates stamped</p> <p>19 IH00120031. If you look at Page 4 of 39 of this</p> <p>20 document.</p> <p>21 A. Oh, same one 4?</p> <p>22 Q. Yes, sir.</p> <p>23 A. Uh-huh.</p> <p>24 Q. On the first paragraph, second sentence in</p> <p>25 you say, "As far as we can tell, none of the sensor data</p> |

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| <p style="text-align: right;">Page 146</p> <p>1 were logged digitally to an archive as required in the</p> <p>2 FFTP."</p> <p>3 A. Figure A2.</p> <p>4 Q. I believe it refers to temperature and volume</p> <p>5 flow rate of the return condensate and measurements of</p> <p>6 the input powder.</p> <p>7 THE VIDEOGRAPHER: Six minutes.</p> <p>8 Q. Do you see that sentence, sir?</p> <p>9 A. Yes.</p> <p>10 Q. Okay. What is the FFTP?</p> <p>11 A. It's the Fabio Penon test plan.</p> <p>12 Q. Okay. Do you know, sitting here today,</p> <p>13 whether any of the sensor data was logged digitally?</p> <p>14 A. The test, the data that I was talking about</p> <p>15 here was the volume flow meter on the volume condensate</p> <p>16 return line and the pressure transducer. As far as I'm</p> <p>17 aware, the information in the report was not logged</p> <p>18 digitally. I know that the flow meter was not logged</p> <p>19 digitally because Mr. Penon and Mr. Rossi, as we did the</p> <p>20 exit interview that day, indicated that they had never</p> <p>21 hooked up that interface.</p> <p>22 Q. Does it have an interface that could read</p> <p>23 digitally?</p> <p>24 A. Yes.</p> <p>25 Q. Okay. That particular flow meter?</p> | <p style="text-align: right;">Page 147</p> <p>1 A. Yes.</p> <p>2 Q. What about the input power? Is that logged</p> <p>3 digitally?</p> <p>4 A. That was logged to the power analyzer. So --</p> <p>5 Q. So that was logged?</p> <p>6 A. Yeah. It was not clear who logged it because</p> <p>7 the data between Mr. Penon and Mr. Fabiani are virtually</p> <p>8 identical. So it was not clear who was logging it or</p> <p>9 how it was being logged since Mr. Fabiani was not there</p> <p>10 continuously, how it was turned over. There, there's a</p> <p>11 limit to how long you can log. Who was doing that, who</p> <p>12 was resetting it, who was collecting that data was not</p> <p>13 clear.</p> <p>14 Q. Okay. Now, looking just below that,</p> <p>15 Number 2, it says, "Temperature and pressure were</p> <p>16 measured. Note that the temperature data logger and</p> <p>17 sensor had expired calibrations."</p> <p>18 A. Uh-huh.</p> <p>19 Q. When did they expire?</p> <p>20 A. They expired I believe, I would have to look</p> <p>21 back at the pictures, but they expired in January or</p> <p>22 February of 2016.</p> <p>23 Q. So it was expired by less than a month?</p> <p>24 A. About a month, yeah.</p> <p>25 Q. How long are those calibrations good for?</p> |
| <p style="text-align: right;">Page 148</p> <p>1 A. One year.</p> <p>2 Q. Okay. So if it was a year-long test, by the</p> <p>3 time it's hooked up on the plant, that's to be expected,</p> <p>4 isn't it?</p> <p>5 A. No, it's not.</p> <p>6 Q. How do you --</p> <p>7 A. When --</p> <p>8 Q. How do you do a 400-day test with an</p> <p>9 instrument that is calibrated every year without it</p> <p>10 expiring unless you swap it out, send it off somewhere</p> <p>11 for new calibration?</p> <p>12 A. So when you design a plant like this, there</p> <p>13 are really two things you do. For example, on a</p> <p>14 temperature sensor you would put dual redundant</p> <p>15 temperature sensors in a, a bung. There would be a bung</p> <p>16 hole in the pipe. You would screw it in. You would put</p> <p>17 the sensor into it, and you log both sensors. And then</p> <p>18 when it's coming to an intermediate point in the test,</p> <p>19 you can remove one of the sensors while the other</p> <p>20 continues to log and you can take that sensor, have it</p> <p>21 recalibrated and its logger recalibrated, and then you</p> <p>22 put that system, you put that back in while both are</p> <p>23 still --</p> <p>24 (Conference call interruption.)</p> <p>25 A. So you would, you would install dual. You</p> | <p style="text-align: right;">Page 149</p> <p>1 would remove the one, have it calibrated while the other</p> <p>2 one is operational, put that first one back in, remove</p> <p>3 the second one and have it calibrated and then place it</p> <p>4 back in the system. It's a standard technique for, for</p> <p>5 systems, high availability systems.</p> <p>6 Q. Okay. And that would be set forth in the</p> <p>7 test plan generally?</p> <p>8 A. Typically, it would be set forth in a test</p> <p>9 plan.</p> <p>10 Q. Okay.</p> <p>11 A. And procedure. Actually, in the system</p> <p>12 design.</p> <p>13 Q. And in fact, that was one of your complaints</p> <p>14 of Dr. Mizuno's work, was that he changed out some of</p> <p>15 the equipment --</p> <p>16 A. Absolutely.</p> <p>17 Q. -- in the middle of the test?</p> <p>18 A. Yeah.</p> <p>19 Q. Okay. Now, you say, "Also, the volume flow</p> <p>20 rate sensor was operated below the minimum operational</p> <p>21 threshold of the device throughout the entire test</p> <p>22 period."</p> <p>23 A. Yes.</p> <p>24 Q. Okay. We'll talk about that more later. I</p> <p>25 will come back to it. I promise.</p> |

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| <p style="text-align: right;">Page 190</p> <p>1 A. I have no idea what it was.</p> <p>2 Q. Or for --</p> <p>3 A. It was not on the facility. It was not at</p> <p>4 the facility.</p> <p>5 Q. Or for testing?</p> <p>6 A. I have no idea what their plan was.</p> <p>7 Q. Do you know if that equipment was ever</p> <p>8 certified?</p> <p>9 A. What equipment?</p> <p>10 Q. The equipment used for this test, any of it.</p> <p>11 A. You know what, this week there were a bunch</p> <p>12 of documents that came through, but they were all, some</p> <p>13 of them were in Italian, so I didn't have a chance to</p> <p>14 review them.</p> <p>15 Q. Okay.</p> <p>16 A. But just to continue here. If we look at</p> <p>17 this, the other sensors that are reported here in the</p> <p>18 plant start-up are still different than the sensors that</p> <p>19 are shown here in this list. So we have a HT --</p> <p>20 HSTC-TT-TI-24S. That's there. Okay. That's a digital</p> <p>21 thermometer.</p> <p>22 Q. Okay.</p> <p>23 A. From Omega. And we have a TC-T-NPT-U-72-SMP,</p> <p>24 which is the sensor, which is not identified here.</p> <p>25 Q. I believe it is.</p> | <p style="text-align: right;">Page 191</p> <p>1 A. I'm sorry. Actually down below it is. If</p> <p>2 you look at the, the TU-T-NTP-U-72, that is over here on</p> <p>3 the Omega steam pressure measurement.</p> <p>4 Q. Yeah.</p> <p>5 A. I'm sorry, steam temperature measurement.</p> <p>6 And then we look for the Keller LEO 1 steam pressure.</p> <p>7 Q. Where do you see the Keller LEO 1?</p> <p>8 A. In the plant start-up.</p> <p>9 Q. Okay.</p> <p>10 A. That's the pressure sensor that Mr. Penon</p> <p>11 indicated was used for making pressure measurements.</p> <p>12 Q. I'm sorry.</p> <p>13 A. I'm sorry. Yeah, we're crossing documents</p> <p>14 here, so.</p> <p>15 MR. LOMAX: It's probably better if you</p> <p>16 reference the page.</p> <p>17 A. I'm sorry. Let me reference the page. So on</p> <p>18 IH00011098, the digital, the third bullet down is</p> <p>19 digital manometer Keller --</p> <p>20 Q. Okay.</p> <p>21 A. -- Type LEO 1 with a certificate. And the</p> <p>22 issue date, interesting enough, a full month after the</p> <p>23 test started they added on another sensor, which is</p> <p>24 fine. There's a redundancy there. So to your point,</p> <p>25 that's a good thing. The only problem is that it's not</p> |
| <p style="text-align: right;">Page 192</p> <p>1 appropriate for this application.</p> <p>2 Q. The, the second one?</p> <p>3 A. The digital manometer, that's correct.</p> <p>4 Q. Okay. But the first one was?</p> <p>5 A. Yeah. We don't know where the -- this is the</p> <p>6 device that Dr. Penon indicated was used to capture the</p> <p>7 pressure data for the system. So I'm not saying that he</p> <p>8 was lying or misleading me or anything else. I'm just</p> <p>9 saying that these sensors were not appropriately</p> <p>10 selected. They were not appropriately sized, that</p> <p>11 collectively some of these sensors were not</p> <p>12 appropriately selected or sized for this system.</p> <p>13 Q. Sir, and I understand that you take issue</p> <p>14 with the test plan in this case.</p> <p>15 A. Yes.</p> <p>16 Q. I understand that and it certainly could have</p> <p>17 been more robust, but this was no secret. This is</p> <p>18 information that --</p> <p>19 A. Absolutely.</p> <p>20 Q. -- Industrial Heat had?</p> <p>21 A. Absolutely.</p> <p>22 Q. Okay.</p> <p>23 A. I, I fault everybody. I think it was poor</p> <p>24 engineering and just overall an inappropriate way to do</p> <p>25 it.</p> | <p style="text-align: right;">Page 193</p> <p>1 Q. We can agree on something.</p> <p>2 A. That's, that's for sure.</p> <p>3 Q. Fault everybody. All right. Do you feel</p> <p>4 that Mr. Penon has hidden any information from you?</p> <p>5 A. No.</p> <p>6 Q. Okay. Do you --</p> <p>7 A. I think he's been quite transparent.</p> <p>8 Q. Do you feel Mr. Fabiani has hidden any</p> <p>9 information from you?</p> <p>10 A. Yes, I do.</p> <p>11 Q. What information?</p> <p>12 A. Well, he committed to providing us data that</p> <p>13 he said he had encrypted and stored on a server in</p> <p>14 Russia, and he committed to providing us with a final</p> <p>15 report. And so I feel that he was not being transparent</p> <p>16 with us in providing us the information in a timely way.</p> <p>17 Q. Has he provided those now?</p> <p>18 A. I don't know. I, I'm, really I'm not -- I</p> <p>19 saw --</p> <p>20 MR. LOMAX: Objection to --</p> <p>21 A. I'm not sure what they provided.</p> <p>22 MR. LOMAX: -- to the extent it gets in to</p> <p>23 communications with counsel.</p> <p>24 Q. You have never seen them?</p> <p>25 A. I have seen -- I have not reviewed the</p> |

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| <p style="text-align: right;">Page 194</p> <p>1 detailed data. I have seen a couple of files. I</p> <p>2 haven't reviewed them, but I have never seen a final</p> <p>3 report by Mr. Fabiani.</p> <p>4 Q. Was he engaged to do a final report?</p> <p>5 A. Yes. And he said he was producing a final</p> <p>6 report. He had it almost complete. He was doing a</p> <p>7 final few things, and he was going to provide that to us</p> <p>8 in about March of 2016. I gotta get my years right.</p> <p>9 Q. In the work that you do, sir, when the new</p> <p>10 client comes in, do you tell them how much the project</p> <p>11 is going to cost?</p> <p>12 A. Uh-huh.</p> <p>13 Q. Do they pay you something before you begin</p> <p>14 work?</p> <p>15 A. No.</p> <p>16 Q. They don't?</p> <p>17 A. No.</p> <p>18 Q. It's a bill as you go?</p> <p>19 A. Most of the work that I do is with Department</p> <p>20 of Defense, and they have very rigorous accounting and</p> <p>21 payments terms.</p> <p>22 Q. Okay.</p> <p>23 A. In almost every, in almost every aspect.</p> <p>24 Q. And you're pretty secure you're going to get</p> <p>25 paid. It's the government, right?</p> | <p style="text-align: right;">Page 195</p> <p>1 A. Yeah.</p> <p>2 Q. It may not be fast, but it's --</p> <p>3 A. Yeah.</p> <p>4 Q. -- going to come.</p> <p>5 A. Sometimes they're fast, yeah. And I often</p> <p>6 work for other companies, and most of the time the, the</p> <p>7 payment terms are paid when paid or paid within a</p> <p>8 certain number of days when paid.</p> <p>9 Q. Okay. Have you ever worked for a customer or</p> <p>10 a client that you did work for and then they didn't pay</p> <p>11 you?</p> <p>12 A. Yes.</p> <p>13 Q. Okay. Did you continue doing work for them?</p> <p>14 A. In some cases, yes.</p> <p>15 Q. And others no, right?</p> <p>16 A. In others no, yes.</p> <p>17 Q. Okay. And that's because they hadn't paid</p> <p>18 you?</p> <p>19 A. Yeah. It depends on the circumstances. It</p> <p>20 depends on who it is and what the circumstances are</p> <p>21 relative to the ultimate customer.</p> <p>22 Q. You can understand why somebody wouldn't want</p> <p>23 to do more work for you if you hadn't paid, right?</p> <p>24 A. I would think that would be reasonable.</p> <p>25 Q. Now, Mr. Penon, you, you sent him a series of</p> |
| <p style="text-align: right;">Page 196</p> <p>1 questions I guess or issues with the test data that you</p> <p>2 observed; is that correct?</p> <p>3 A. Yes.</p> <p>4 Q. How did he respond to you?</p> <p>5 A. My recollection is that I sent that data to</p> <p>6 him before the final report was issued. And he did, I</p> <p>7 don't believe he responded to my questions, but then he</p> <p>8 issued the final report just some days later. Maybe, I</p> <p>9 don't know, maybe it was a week or two later. I don't</p> <p>10 recall exact dates.</p> <p>11 Q. Do you recall him telling anyone at</p> <p>12 Industrial Heat or yourself that he has been available</p> <p>13 to Industrial Heat and the Leonardo Corporation to</p> <p>14 answer questions throughout the course of the test and</p> <p>15 at the end of the validation; in fact, he answered your</p> <p>16 questions and that the final report had concluded his</p> <p>17 work?</p> <p>18 MR. LOMAX: Objection to the form of the</p> <p>19 question.</p> <p>20 A. It sounds familiar, yes.</p> <p>21 Q. Okay. Do you know if he was engaged or</p> <p>22 offered more money to answer additional questions that</p> <p>23 you had?</p> <p>24 A. I have no idea.</p> <p>25 Q. Okay. Sir, I'm going to kind of jump a big</p> | <p style="text-align: right;">Page 197</p> <p>1 step back from where we've been at for a minute.</p> <p>2 A. Okay.</p> <p>3 Q. In the beginning of this deposition you</p> <p>4 mentioned two publications that were part of your</p> <p>5 masters program?</p> <p>6 A. Yes.</p> <p>7 Q. But you don't recall the names of those right</p> <p>8 now?</p> <p>9 A. No, I don't.</p> <p>10 Q. Okay. Have you published anything else</p> <p>11 within the last 15 years?</p> <p>12 A. Yes. There were publications associated with</p> <p>13 my PhD research. I have presented data which was</p> <p>14 ultimately published to multiple NDIA, National Defense</p> <p>15 Industry Association, conferences and proceedings on --</p> <p>16 slow down?</p> <p>17 Q. I'm sorry. You presented data to them, or</p> <p>18 you formed a publication? I --</p> <p>19 A. I --</p> <p>20 Q. What I'm looking for is any document that's</p> <p>21 going to list you as the author.</p> <p>22 A. So I, I was requested to present to a</p> <p>23 conference proceeding, and then subsequently they</p> <p>24 produced those. So they were NDIA presentations and</p> <p>25 numerous technical reports and final reports for</p> |

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| <p style="text-align: right;">Page 214</p> <p>1 before I saw the final report after the information came</p> <p>2 here.</p> <p>3 Q. Now, the reports you, you referred to</p> <p>4 Exhibit --</p> <p>5 A. Exhibit --</p> <p>6 Q. -- Number 8?</p> <p>7 A. Yes.</p> <p>8 Q. Those reports had been provided to Industrial</p> <p>9 Heat before. He was just sending them to you again?</p> <p>10 A. May, may very well have been.</p> <p>11 Q. Okay. Did you ever see them before that</p> <p>12 time?</p> <p>13 A. I don't know which of these. I've certainly</p> <p>14 seen parts of these. Yeah, I don't know if I've seen</p> <p>15 them all. I may have seen them all. I may have only</p> <p>16 seen a subset of them.</p> <p>17 Q. And I'm sorry, sir. The date of that e-mail</p> <p>18 was?</p> <p>19 A. The e-mail from Fabio Penon was</p> <p>20 February 23rd.</p> <p>21 Q. When did you formulate an opinion as to the</p> <p>22 accuracy of the Penon reports?</p> <p>23 A. I formulated an opinion about the accuracy of</p> <p>24 the flow meter on the 16th or, I'm sorry, not the 16th.</p> <p>25 The 17th of February, the second day of testing when we</p> | <p style="text-align: right;">Page 215</p> <p>1 were at the airport.</p> <p>2 Q. You formed an opinion right there on the</p> <p>3 spot?</p> <p>4 A. Yeah. I looked, I, I was surprised by the</p> <p>5 flow meter itself. And so we took pictures of the flow</p> <p>6 meter and its certification label.</p> <p>7 Q. Sure.</p> <p>8 A. And when we went to the airport, I looked it</p> <p>9 up and I downloaded the, the data sheet from the</p> <p>10 manufacturer. And I looked at it, and it sure enough</p> <p>11 said that the minimum flow rate was 1.6 meters cubed per</p> <p>12 hour. And I was, did the math, and I was like, you</p> <p>13 know, all these measurements are below the minimum</p> <p>14 operating flow rate of the meter. So I was concerned at</p> <p>15 that point and saying this is a problem.</p> <p>16 Q. Well, there's a difference between being</p> <p>17 concerned and forming an opinion that the entire test</p> <p>18 was bogus. Would you agree?</p> <p>19 A. Yeah, I didn't say the entire test was bogus.</p> <p>20 I was specifically talking about the, the, the validity</p> <p>21 of the flow meter.</p> <p>22 Q. Do you believe the entire test was bogus?</p> <p>23 A. How do you mean -- what does bogus mean?</p> <p>24 Q. I don't know. Did you think the whole thing</p> <p>25 was either fraudulent or so poorly done that it couldn't</p> |
| <p style="text-align: right;">Page 216</p> <p>1 possibly give an accurate result?</p> <p>2 A. I think that the, the test, inclusive of</p> <p>3 Industrial Heat and Leonardo Corporation, was so poorly</p> <p>4 designed that you couldn't get an accurate result from</p> <p>5 it, yes.</p> <p>6 Q. Okay. Did you blame that on one side or</p> <p>7 another?</p> <p>8 A. At that time I was probably frustrated and</p> <p>9 concerned about Leonardo Corporation's position. I was</p> <p>10 very frustrated that we couldn't see the full system</p> <p>11 when I was at the factory, but as I went through this, I</p> <p>12 feel like all parties are complicit in this mess. And</p> <p>13 I've said that, too.</p> <p>14 Q. Because of the test plan?</p> <p>15 A. Because of the overall construction of the</p> <p>16 system and how it was put together and how it was</p> <p>17 instrumented and how it was operated, and the lack of my</p> <p>18 ability to actually get in there and see things.</p> <p>19 Q. Okay. Now, so as of March 2016 you had not</p> <p>20 done the water flow analysis yet to see if there would</p> <p>21 actually be a higher error rate with a decreased water</p> <p>22 flow?</p> <p>23 A. Well, we did not do flow analysis to</p> <p>24 determine a higher error rate or not. What we did was</p> <p>25 we looked at the flow meter from what happens when you</p> | <p style="text-align: right;">Page 217</p> <p>1 operate it outside of a valid regime, right. If you're</p> <p>2 operating outside of the defined operating parameters,</p> <p>3 then we just wanted to find out what would be happening.</p> <p>4 Why would, why did we see the corrosion line inside the</p> <p>5 flow meter? Why did these things exist? I'm trying to</p> <p>6 understand what the test was telling us.</p> <p>7 Q. Okay. And we'll get into that in a little</p> <p>8 bit more detail, but at that time you had already</p> <p>9 determined that the report was, Penon's report was</p> <p>10 completely bogus?</p> <p>11 A. At which, which time?</p> <p>12 Q. March 29, 2016, prior to undertaking the</p> <p>13 water flow meter analysis?</p> <p>14 A. Yeah. I, well, I had res, I would say I had</p> <p>15 strong reservations about the validity of the flow meter</p> <p>16 data.</p> <p>17 Q. In fact, you called it bogus?</p> <p>18 A. Yeah, possibly.</p> <p>19 (Whereupon, Exhibit 9 was marked for</p> <p>20 identification.)</p> <p>21 Q. You did. I'm going to show you a document</p> <p>22 we'll mark as Exhibit 9, bates stamped IH00087309. You</p> <p>23 know what, this appears to be different than the one</p> <p>24 that I've got here. Hold on. Let me take that back.</p> <p>25 A. Oh, I'm sorry.</p> |

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| <p style="text-align: right;">Page 250</p> <p>1 the data that was provided under subpoena.</p> <p>2 Q. So all of the input was done by Industrial</p> <p>3 Heat employees?</p> <p>4 A. Yes.</p> <p>5 Q. So you've got both of those in, and how did</p> <p>6 you compare them using these programs? Was there a</p> <p>7 complex analysis, or was it just plotting these out into</p> <p>8 a graph?</p> <p>9 A. So first, well, there was also a third piece</p> <p>10 of data. That was the data provided by Fabio Penon. He</p> <p>11 provided that, that data in, again in March/April time</p> <p>12 frame he gave us files. I kind of described that</p> <p>13 earlier.</p> <p>14 Q. Mr. Penon did?</p> <p>15 A. I'm sorry. Fulvio Fabiani provided us files.</p> <p>16 And so we, we looked at that, that data. Fulvio</p> <p>17 Fabiani's data actually had two measurements for each</p> <p>18 day. He had a measurement at, I believe the numbers</p> <p>19 were 10:30 a.m. and 10:30 p.m. Mr. Penon's data -- I</p> <p>20 have to be careful, make sure these names are right --</p> <p>21 Mr. Penon's data was actually only once per day. It was</p> <p>22 at I believe 10:30 p.m. each day. And the data from</p> <p>23 Florida Power and Light was each day at midnight.</p> <p>24 So what we did is we went back and we</p> <p>25 cross-referenced it and made comparisons on a daily</p> | <p style="text-align: right;">Page 251</p> <p>1 basis and made, to make sure that we were comparing</p> <p>2 apples to apples. And then we plotted the data and took</p> <p>3 the differences between the various data sets and</p> <p>4 checked the integrity between Penon and Fabiani's data</p> <p>5 and then checked the comparisons against Florida Power</p> <p>6 and Light.</p> <p>7 Q. Okay. So let's look at Exhibit A of</p> <p>8 Exhibit 11, which you should have in front of you.</p> <p>9 A. Okay.</p> <p>10 Q. Is that, sir, the comparison that you did?</p> <p>11 A. This is part of the comparison, yes.</p> <p>12 Q. Okay. I only see two lines here, one green</p> <p>13 and one red.</p> <p>14 A. Underneath it you can see a few points where</p> <p>15 Mr. Fabiani -- I'm sorry. We gotta look at the colors</p> <p>16 here. It's hard to see at this scale. Mr. Fabiani's</p> <p>17 data diverges from Mr. Penon's data. You can see right</p> <p>18 about here, and you can see down here. So there were</p> <p>19 very little divergence between Mr. Fabiani and</p> <p>20 Mr. Penon's data. In fact, I would, I would argue they</p> <p>21 were the same exact data.</p> <p>22 Q. Okay. The same exact?</p> <p>23 A. Except for these points where they diverge.</p> <p>24 Because Mr. Fabiani's data, as I said, had two data</p> <p>25 points per day where Mr. Penon's data only had one.</p> |
| <p style="text-align: right;">Page 252</p> <p>1 Q. Okay.</p> <p>2 A. And so they --</p> <p>3 Q. So that would be consistent with the data</p> <p>4 points or the data being measured being accurate,</p> <p>5 correct?</p> <p>6 A. It would certainly be consistent with the</p> <p>7 data being measured coming from the same device.</p> <p>8 Q. Any reason to believe that either one of them</p> <p>9 have manipulated the results?</p> <p>10 A. No.</p> <p>11 Q. Okay. So the green line is FP&L?</p> <p>12 A. Yes.</p> <p>13 Q. All right.</p> <p>14 A. Florida Power and Light, yes.</p> <p>15 Q. And for the vast majority of this, the green</p> <p>16 line is higher than the red line?</p> <p>17 A. That's correct.</p> <p>18 Q. So the amount of power supplied by FP&L</p> <p>19 substantially exceeds the amount of power that was</p> <p>20 recorded going into this device?</p> <p>21 A. Yes, yeah.</p> <p>22 Q. Is that odd to you?</p> <p>23 A. No. You would imagine that a facility like</p> <p>24 this, the actual reactor system would absorb some power,</p> <p>25 but you would imagine that there are also some, some</p> | <p style="text-align: right;">Page 253</p> <p>1 lights and the fan in the bathroom. There were a few</p> <p>2 air conditioners around there. There was an office in</p> <p>3 the front that I imagine would have heat and air</p> <p>4 conditioning. So you would expect that Florida Power</p> <p>5 and Light numbers would be higher than the numbers that</p> <p>6 Mr. Penon and Mr. Fabiani measured. That would be a</p> <p>7 reasonable expectation.</p> <p>8 Q. Florida Power and Light's measurements, how</p> <p>9 were those taken?</p> <p>10 A. They were taken with a smart meter located on</p> <p>11 the, on the building.</p> <p>12 Q. What type of smart meter?</p> <p>13 A. The smart meter that's approved by the State</p> <p>14 of Florida.</p> <p>15 Q. You know it's approved by the State of</p> <p>16 Florida?</p> <p>17 A. Yes.</p> <p>18 Q. How?</p> <p>19 A. I looked at the Florida Public Works</p> <p>20 Commission website to find out if these things were</p> <p>21 approved and how they were approved. And they indicate</p> <p>22 that for investor-owned utilities, that they have</p> <p>23 approval and then they give you a link to Florida Power</p> <p>24 and Light, and in Florida Power and Light's data they</p> <p>25 give the full description of how they implemented these</p> |

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| <p style="text-align: right;">Page 254</p> <p>1 programs and what the options are for the programs.</p> <p>2 Q. When was the FP&L device last calibrated?</p> <p>3 A. I have no idea.</p> <p>4 Q. Do you know if it's been three years?</p> <p>5 A. No idea.</p> <p>6 Q. Four years?</p> <p>7 A. I have, still have no idea.</p> <p>8 Q. Okay. So you, you have absolutely no</p> <p>9 information with respect to whether their data is</p> <p>10 accurate or not?</p> <p>11 A. What I know is that they provided it under</p> <p>12 subpoena. They may or may not be accurate.</p> <p>13 Q. Okay. So you don't have any reason to</p> <p>14 believe that we should rely on those results as opposed</p> <p>15 to the results of Mr. Penon or Mr. Fabiani; is that</p> <p>16 correct?</p> <p>17 A. I disagree with that. I, I would say that we</p> <p>18 have to at least look at this and understand why, why</p> <p>19 would it be this way. And so my view is that if, if a</p> <p>20 company like Florida Power and Light provides data under</p> <p>21 subpoena, there would be an expectation that they would</p> <p>22 provide, would provide proper and accurate data, and</p> <p>23 it's a reasonable way to check the facility. We did</p> <p>24 this, I did this kind of anticipating that Florida Power</p> <p>25 and Light would always be higher than the measurements</p> | <p style="text-align: right;">Page 255</p> <p>1 that were made here.</p> <p>2 Q. Okay. And, and the vast majority of the time</p> <p>3 here they are?</p> <p>4 A. Yes.</p> <p>5 Q. With very few exceptions, in fact. And one</p> <p>6 exception is between November and December 2015?</p> <p>7 A. Yes.</p> <p>8 Q. And during that period it, it appears that</p> <p>9 the power usage drops by the FP&L measurements, right?</p> <p>10 A. The FP&L measurement drops, yes, below the</p> <p>11 measurements provided by Mr. Penon and Mr. Fabiani.</p> <p>12 Q. Do you know why that would be?</p> <p>13 A. I have no idea.</p> <p>14 Q. Do you know if it's accurate? Do you know</p> <p>15 if, perhaps, there is a problem with the device, the</p> <p>16 measuring device?</p> <p>17 A. I have no information other than the data</p> <p>18 that was provided in the subpoena by Florida Power and</p> <p>19 Light.</p> <p>20 Q. Okay. So you have no reason to believe that</p> <p>21 that information is more accurate than the measurements</p> <p>22 taken by Penon and/or Fabiani, correct?</p> <p>23 A. No, other than the fact that it's a Florida</p> <p>24 utility, and they are regulated. I would think that --</p> <p>25 Q. Do regulated Florida utilities ever have</p> |
| <p style="text-align: right;">Page 256</p> <p>1 device malfunctions?</p> <p>2 A. Oh, absolutely. Absolutely. In fact, I</p> <p>3 believe in this facility they actually replaced a smart</p> <p>4 meter at some point earlier in the year.</p> <p>5 Q. Why do you believe that?</p> <p>6 A. Because the registration number of the meter</p> <p>7 in the subpoenaed data changed.</p> <p>8 Q. When was that?</p> <p>9 A. I don't recall. It was earlier in the year.</p> <p>10 I would say sometime maybe in the May or June time</p> <p>11 frame.</p> <p>12 Q. Okay. Do you know if it was hooked up</p> <p>13 correctly when it was replaced?</p> <p>14 A. I do, I do not.</p> <p>15 Q. Okay. So what you've got here is just a</p> <p>16 comparison side by side of the two number sets. Is</p> <p>17 there anything scientific about that other than looking</p> <p>18 at it?</p> <p>19 A. It's, it's very alarming to see a drop. I</p> <p>20 mean in general when you see this, you see a very, very</p> <p>21 consistent amount of power being absorbed by the reactor</p> <p>22 system. And when the reactor system has a major drop</p> <p>23 like here in the, let's say between July and August you</p> <p>24 see a drop off, which I think corresponds to the data</p> <p>25 that says, hey, we had some, some reactors go offline,</p> | <p style="text-align: right;">Page 257</p> <p>1 you see that drop. That makes sense. And then sometime</p> <p>2 in October they brought all of the units back online and</p> <p>3 the power goes up.</p> <p>4 So all of the trends seem to be consistent</p> <p>5 except for this period of time when, in about from</p> <p>6 middle of November to the beginning of December where</p> <p>7 you have a power level absorbed into the building lower</p> <p>8 than the measured. So that would give -- to me, there</p> <p>9 are three potential explanations. Number one, Florida</p> <p>10 Power and Light could be wrong. Number two, the</p> <p>11 measurements made by Fabiani and Penon could be wrong.</p> <p>12 And number four or -- I'm sorry, number three, the data</p> <p>13 could have been manipulated. On either part, on either</p> <p>14 party.</p> <p>15 Q. Do you have any evidence that the data has</p> <p>16 been manipulated --</p> <p>17 A. No, I don't.</p> <p>18 Q. -- by either one?</p> <p>19 A. Not by Florida Power and Light or by Fabiani</p> <p>20 or Penon.</p> <p>21 Q. Okay. So you have no evidence of</p> <p>22 manipulation. So what are you opining to specifically</p> <p>23 here?</p> <p>24 A. Specifically, in this period it was, it was</p> <p>25 determined by Mr. Penon that the measurements, the</p> |

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| <p style="text-align: right;">Page 258</p> <p>1 absorption of power was accurate and reflected what was</p> <p>2 happening in the reactors. But if, in fact, Florida</p> <p>3 Power and Light indicates that their data is valid in</p> <p>4 the data provided under subpoena, then it would be</p> <p>5 impossible for them to absorb more power than Florida</p> <p>6 Power and Light provided.</p> <p>7 Q. Now, you keep saying data provided under</p> <p>8 subpoena, as if that makes it more accurate. It's the</p> <p>9 measuring equipment that makes it more accurate or not,</p> <p>10 correct?</p> <p>11 A. Sure.</p> <p>12 Q. Not whether it was voluntarily provided or</p> <p>13 under subpoena?</p> <p>14 A. Uh-huh.</p> <p>15 Q. Correct?</p> <p>16 A. Yeah. My view is that if, if a, if a person</p> <p>17 is providing data under subpoena, they're going to</p> <p>18 probably provide the best possible data they have. We</p> <p>19 also know that Florida Power and Light has hourly</p> <p>20 measurements for this facility, and we have not received</p> <p>21 that data.</p> <p>22 Q. Okay. But you don't know whether it was</p> <p>23 measured correctly or not at that point in time. All</p> <p>24 you can tell based on this is that there is a</p> <p>25 difference?</p> | <p style="text-align: right;">Page 259</p> <p>1 A. Yeah. I don't know whether or not any of</p> <p>2 these lines were measuring correctly at that time.</p> <p>3 Q. Okay. So what I'm, what I'm trying to</p> <p>4 determine, because you're, you're giving an opinion as</p> <p>5 to this, is I can see this as well as you can. I can</p> <p>6 see this graph.</p> <p>7 A. Right.</p> <p>8 Q. I can see the, the lines where they drop</p> <p>9 below the Penon number and, which would indicate that if</p> <p>10 the FP&L measurements was right, it was supplying less</p> <p>11 power than the power going into the unit. Okay. But</p> <p>12 other than that, is there anything scientific that we</p> <p>13 had to apply, any methodology to apply to, to create</p> <p>14 this graph?</p> <p>15 A. This is just a summary graph. And I think</p> <p>16 there's, might be another plot in this --</p> <p>17 Q. There is. And we'll --</p> <p>18 A. -- Exhibit B.</p> <p>19 Q. And we'll get to that one.</p> <p>20 A. Yeah, so there were a series of analyses that</p> <p>21 I completed. And we looked at the baseline power of the</p> <p>22 building, and that gets to, more to the opinion. This</p> <p>23 is just the raw data comparison. And if the raw data</p> <p>24 showed that there was no period, then I think we could</p> <p>25 have said it's potentially a reasonable expectation.</p> |
| <p style="text-align: right;">Page 260</p> <p>1 But this is a problem, and these areas down here are a</p> <p>2 problem. What they're indicating is that nothing else</p> <p>3 in the building is absorbing power, only the reactor,</p> <p>4 and that's simply not realistic.</p> <p>5 Q. And as you said, there's one of three</p> <p>6 options. Either FP&L is wrong, Penon and Fabiani are</p> <p>7 wrong, or there's manipulation on the data?</p> <p>8 A. On, on the part of some party, yes.</p> <p>9 Q. Okay. So basically one or the other is</p> <p>10 incorrect, and then the third option is that it was</p> <p>11 intentionally incorrect?</p> <p>12 A. Right, by somebody.</p> <p>13 Q. By somebody?</p> <p>14 A. That's right.</p> <p>15 Q. Okay. But you don't know which one is which?</p> <p>16 A. No.</p> <p>17 Q. Okay. So your opinion is simply that this is</p> <p>18 an area of concern where it drops below and the other</p> <p>19 areas where it drops below slightly are --</p> <p>20 A. In the context of this one plot, yes.</p> <p>21 Q. Okay. Now, the measurements taken by FP&L</p> <p>22 were taken at what time?</p> <p>23 A. Midnight.</p> <p>24 Q. Midnight. The measurements taken by Engineer</p> <p>25 Penon were what time?</p> | <p style="text-align: right;">Page 261</p> <p>1 A. Well, he was only in the facility I believe</p> <p>2 four times. So I would imagine he only collected the</p> <p>3 data. He didn't actually take the measurements. So</p> <p>4 that's why I believe that Fabiani actually collected the</p> <p>5 data in the logs and provided that to Mr. Penon.</p> <p>6 Q. That's your belief?</p> <p>7 A. It is my belief, yes.</p> <p>8 Q. Okay. Do you know what data Mr. Penon</p> <p>9 received directly?</p> <p>10 A. How would Mr. Penon receive data directly?</p> <p>11 Q. It's called the internet.</p> <p>12 A. Really? No, I have no idea what data. I</p> <p>13 would be interested to see. So he --</p> <p>14 Q. Do you know if he did?</p> <p>15 A. I do not.</p> <p>16 Q. Do you know if he had a computer on site?</p> <p>17 A. I believe that there were computers on site</p> <p>18 that were collecting data from, from the instruments,</p> <p>19 yes.</p> <p>20 Q. Okay. Do you know if one of those was</p> <p>21 Mr. Penon's, or Dr. Penon's I should say?</p> <p>22 A. I do not.</p> <p>23 Q. Okay. Now, now you said that FP&L's data was</p> <p>24 recorded at midnight?</p> <p>25 A. Yes.</p> |

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| <p style="text-align: right;">Page 278</p> <p>1 Q. How long?</p> <p>2 A. Oh, I don't remember. There were, I don't</p> <p>3 know. There was quite a bit of time that they provided</p> <p>4 data for.</p> <p>5 Q. I don't, I don't have that either.</p> <p>6 A. Yeah.</p> <p>7 Q. Wouldn't you agree with me that during the</p> <p>8 summer in Florida power usage is going to be</p> <p>9 substantially higher than the winter time?</p> <p>10 A. Could be, yeah, but that would only make this</p> <p>11 worse. We try to draw a very conservative estimate. So</p> <p>12 if more and more power was going to more and more things</p> <p>13 outside of that, that would only make it worse because</p> <p>14 that line would draw up. Because let's say you had an</p> <p>15 air conditioner in the office space up front. If you</p> <p>16 were, had the air conditioner running, let's say 12</p> <p>17 hours a day to keep the office space cool, then that</p> <p>18 would actually increase the amount of power that was</p> <p>19 going to --</p> <p>20 Q. Well, sir, sir, you've attributed, and I, you</p> <p>21 know, for the most part the line of FP&L minus Penon or</p> <p>22 FP&L minus Penon 3-day rolling average is above that</p> <p>23 line with the exception of a few points of your average</p> <p>24 power.</p> <p>25 A. Right.</p> | <p style="text-align: right;">Page 279</p> <p>1 Q. Or your baseline power as you defined it.</p> <p>2 During the month of November to December 2015, what were</p> <p>3 the temperatures outside?</p> <p>4 A. Oh, I don't know. Florida, I'd guess</p> <p>5 probably in the 70s or 80s maybe.</p> <p>6 Q. Did you look?</p> <p>7 A. Actually, in the simulation data we used the</p> <p>8 NOAA published average temperatures to figure that out.</p> <p>9 Q. Simulation data, what simulation data?</p> <p>10 A. I'm sorry. That's a different part of</p> <p>11 the --</p> <p>12 Q. We'll --</p> <p>13 A. -- what we'll talk about later.</p> <p>14 Q. Okay. We'll get to that, but so you don't</p> <p>15 know what the energy usage would have been at that time</p> <p>16 for the building? In any year for that matter?</p> <p>17 A. No. What we would do is just to look at the</p> <p>18 average of how much the building absorbed, but what we</p> <p>19 should say is that anytime that the number is below</p> <p>20 zero, it would indicate that there's an error somewhere</p> <p>21 either with Florida Power and Light or with Mr. Penon's</p> <p>22 data.</p> <p>23 Q. Based on your average, but your average --</p> <p>24 A. No, no, no. Oh, I'm sorry, the 3-day</p> <p>25 average, yes.</p> |
| <p style="text-align: right;">Page 280</p> <p>1 Q. But your average applies -- I'm sorry. I'm</p> <p>2 looking at your baseline --</p> <p>3 A. Yeah.</p> <p>4 Q. -- power.</p> <p>5 A. So there are, I need to be careful. There</p> <p>6 are two things -- it's, it's actually energy per day.</p> <p>7 There are two things being shown here. There is a line,</p> <p>8 a dotted line shown at zero, right, meaning that</p> <p>9 anything below zero is, is indicative of the power</p> <p>10 absorbed by the reactor being higher than the power</p> <p>11 available from Florida Power and Light, and that's a</p> <p>12 problem. And why, and as I said, whether it's a problem</p> <p>13 with Florida Power and Light or with Penon's</p> <p>14 measurements or something else, we don't know at this</p> <p>15 point.</p> <p>16 Then the other line is, if you consider that</p> <p>17 the building, which is the explanation in this previous</p> <p>18 plot, the explanation for the difference between what</p> <p>19 Penon and Fulvio Fabiani measured and what Florida Power</p> <p>20 and Light said they delivered, that difference would be</p> <p>21 the amount of power used outside of the reactors for</p> <p>22 whatever purpose.</p> <p>23 Q. Okay.</p> <p>24 A. Office, whatever. So that difference right</p> <p>25 there is reflective of the nominal power absorbed in, in</p> | <p style="text-align: right;">Page 281</p> <p>1 the building. But what we did was instead of using</p> <p>2 that, because that's really difficult to say because we</p> <p>3 don't know if, what was going on over in JM Products.</p> <p>4 What we did is we just looked at the windows outside of</p> <p>5 those periods of time to establish a very conservative</p> <p>6 number and drew that very conservative number on this.</p> <p>7 And so that's indicative of that number that I just</p> <p>8 described. Does that make sense?</p> <p>9 Q. To be honest, not really.</p> <p>10 A. Okay.</p> <p>11 Q. But I, I'm not going to ask you to do it</p> <p>12 again.</p> <p>13 A. Okay.</p> <p>14 Q. The cumulative energy absorption, FP&L minus</p> <p>15 Penon, what does that tell you?</p> <p>16 A. So what we're doing is for each one of these</p> <p>17 data points --</p> <p>18 Q. I'm going to back you up for a second. What</p> <p>19 conclusion were you able to draw from --</p> <p>20 A. Again --</p> <p>21 Q. -- that graph?</p> <p>22 A. -- this was included in here. The, the only</p> <p>23 area of concern is actually right here where the</p> <p>24 cumulative energy is actually decreasing in that period</p> <p>25 of time. So there's a slight decrease in the cumulative</p> |

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| <p style="text-align: right;">Page 282</p> <p>1 energy when you compare Florida Power and Light to</p> <p>2 Penon, which indicates that one of those measurements is</p> <p>3 clearly in error because you can't give energy back.</p> <p>4 Q. But you don't know which one?</p> <p>5 A. No, we don't.</p> <p>6 Q. So what does this, what does this tell you</p> <p>7 other than there's an error in one of the measurements?</p> <p>8 A. What this tells us is anywhere that the value</p> <p>9 is below zero is a, is an impossibility in the case</p> <p>10 where the measurements are correct. If the measurements</p> <p>11 are incorrect, then that may be described by an error in</p> <p>12 the data.</p> <p>13 Q. Okay. So it says that there is an error in</p> <p>14 the data, whether manipulated or --</p> <p>15 (Conference call interruption.)</p> <p>16 Q. So sir, that just tells you that there's an</p> <p>17 error, there's an error or inaccuracy in one of the data</p> <p>18 sets, correct?</p> <p>19 A. Yes.</p> <p>20 Q. Okay.</p> <p>21 A. I think that's fair to say, yes.</p> <p>22 Q. So you've got two data sets that report one</p> <p>23 thing consistently, fairly equivalent to each other, and</p> <p>24 one data set that is different. And of those three data</p> <p>25 sets, at least one of them is incorrect?</p> | <p style="text-align: right;">Page 283</p> <p>1 A. I would agree with that, yes.</p> <p>2 Q. Okay. But you don't know which one?</p> <p>3 A. No, not at this point.</p> <p>4 Q. And the investigation you've done doesn't</p> <p>5 tell you whether it was Penon's or FP&L's or Fabiani's?</p> <p>6 A. Penon, FPL -- yes.</p> <p>7 Q. Okay. How did you decide on what data to</p> <p>8 review?</p> <p>9 A. In what context? What are you --</p> <p>10 Q. In, in doing this analysis.</p> <p>11 A. Oh, in this?</p> <p>12 Q. Yes.</p> <p>13 A. I took the, the data from the final report.</p> <p>14 I took the data that Fulvio Fabiani had provided us, and</p> <p>15 then I took the data from the, the Florida Power and</p> <p>16 Light subpoena. That data were the only sources that I</p> <p>17 was aware of for power absorption data.</p> <p>18 Q. Okay. Who provided you that data?</p> <p>19 A. These three sources of data? Well, I</p> <p>20 received a copy of the final report from I, I believe I</p> <p>21 may have even been on the distribution from Mr. Penon.</p> <p>22 The data from Fulvio Fabiani was what he provided when</p> <p>23 he met with us in Jones Day office. And the Florida</p> <p>24 Power and Light data was provided to me by counsel.</p> <p>25 Q. So ultimately based on the graphs that you</p> |
| <p style="text-align: right;">Page 284</p> <p>1 did here, you came to the conclusion that the results</p> <p>2 were at odds with the amount of power reported between</p> <p>3 the three measuring entities, we'll call them?</p> <p>4 A. Yes.</p> <p>5 Q. But you make no opinion as to why they're at</p> <p>6 odds?</p> <p>7 A. Not at this point.</p> <p>8 Q. Okay. Your next opinion stated, sir, is</p> <p>9 that, "Mr. Murray compared these numbers to the actual</p> <p>10 power provided by FP&L to the Doral location and found</p> <p>11 numerous inaccuracies" -- I'm sorry. That's part of the</p> <p>12 same one.</p> <p>13 A. Which, which, what's the --</p> <p>14 Q. Okay.</p> <p>15 A. -- document number on that one?</p> <p>16 Q. That is 11.</p> <p>17 A. Oh, it's this one. I'm sorry.</p> <p>18 Q. Yes, your report. I'm sorry. The second</p> <p>19 part was, "Mr. Murray also compared Penon and Fabiani's</p> <p>20 data to the historical average amount of power data."</p> <p>21 Is that what we were discussing?</p> <p>22 A. Yes.</p> <p>23 Q. That red line?</p> <p>24 A. Yes.</p> <p>25 Q. And what did that tell you?</p> | <p style="text-align: right;">Page 285</p> <p>1 A. That just said if we, if we had a</p> <p>2 conservative estimate for the, the amount of absorption</p> <p>3 into the building for other purposes besides the</p> <p>4 reactor, that, in fact, there were many more days where</p> <p>5 the measurements were below, but again it's the same</p> <p>6 problem. If Florida Power and Light's data was</p> <p>7 inaccurate, then it's, it's, there are equal probability</p> <p>8 of which source of data was incorrect.</p> <p>9 Q. Okay. So it doesn't tell you one way or</p> <p>10 another whether there's been manipulation or, or</p> <p>11 otherwise with respect to any set of data?</p> <p>12 A. No.</p> <p>13 Q. Your next opinion states that you "compared</p> <p>14 the reported power input to the E-Cat plant reported by</p> <p>15 Penon against the reported coefficient of power, COP,</p> <p>16 reported by Penon as reflected in Exhibit C." Let's</p> <p>17 look at Exhibit C for a moment. And in doing so,</p> <p>18 "Mr. Murray will testify that there is no logical reason</p> <p>19 why the COP should be changing inversely to the amount</p> <p>20 of power inputted given the same E-Cat plant was used</p> <p>21 throughout the guaranteed performance test." I'm sorry,</p> <p>22 what was the, the formula for COP calculation?</p> <p>23 A. It was I believe based on our reproduction of</p> <p>24 the final report data, it was the energy out over the</p> <p>25 energy in, or power out over power in on a per day</p> |

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| <p style="text-align: right;">Page 310</p> <p>1 Q. Which --</p> <p>2 A. -- the flow is actually pretty amazing how</p> <p>3 much flow there was in the room. So because there was a</p> <p>4 wall, there was a half wall, I don't know if you recall,</p> <p>5 but there was a half wall. And so you heat, you cause</p> <p>6 this flow. The flow comes up and collapses, and it</p> <p>7 rolls back over. So that was the basis of our</p> <p>8 assumptions for our simulation, was that the vent was</p> <p>9 open. So air could go out the top, but the doors were</p> <p>10 closed, like when we were there on that day in February.</p> <p>11 Q. So you didn't run a simulation with the doors</p> <p>12 open?</p> <p>13 A. The doors weren't open when we were there.</p> <p>14 Q. But you do realize they open and did --</p> <p>15 A. Yeah.</p> <p>16 Q. Did you ask anyone there whether they were</p> <p>17 open the majority of the time that it was running?</p> <p>18 A. No. Because --</p> <p>19 Q. It was just --</p> <p>20 A. -- we were just looking at it, why,</p> <p>21 specifically I was looking at why wasn't it hotter and</p> <p>22 more uncomfortable in the building when we were there</p> <p>23 when it was dissipating all this out.</p> <p>24 Q. Were there ventilation fans?</p> <p>25 A. I'm sorry?</p> | <p style="text-align: right;">Page 311</p> <p>1 Q. Ventilation or, I'm sorry. Were there, were</p> <p>2 there fans --</p> <p>3 A. Yeah.</p> <p>4 Q. -- to move air?</p> <p>5 A. There were two fans located kind of at the</p> <p>6 aft end of the building, kind of the, the rollup door</p> <p>7 side of the building.</p> <p>8 Q. Yeah.</p> <p>9 A. They were not operational when we were there</p> <p>10 either.</p> <p>11 Q. Okay. But did you work those into the</p> <p>12 simulation?</p> <p>13 A. No, because they weren't in operation when we</p> <p>14 were there.</p> <p>15 Q. Just for that short period while you were,</p> <p>16 did you ask anyone whether those were normally in</p> <p>17 operation --</p> <p>18 A. Yeah, actually we did.</p> <p>19 Q. -- during the --</p> <p>20 A. We asked Fulvio Fabiani if they were.</p> <p>21 Q. What did he say?</p> <p>22 A. He said from time to time they were on, yes.</p> <p>23 Q. Okay. But how often is from time to time?</p> <p>24 A. You would have to ask Fulvio Fabiani.</p> <p>25 Q. What was the air transfer rate in that</p> |
| <p style="text-align: right;">Page 312</p> <p>1 building?</p> <p>2 A. Meaning, what do you mean?</p> <p>3 Q. Like how often did the air circulate through?</p> <p>4 A. You mean vented outside and fresh air coming</p> <p>5 in or?</p> <p>6 Q. Yeah, absolutely.</p> <p>7 A. We, I made an assumption about the building,</p> <p>8 and so I have no idea.</p> <p>9 Q. What was the assumption you made?</p> <p>10 A. The assumption was that there was a vent at</p> <p>11 the top and --</p> <p>12 Q. Just one?</p> <p>13 A. The, yes. The, where the vent hole was</p> <p>14 above, and that it was just heating of that room.</p> <p>15 Q. Okay. If there was a second vent, would</p> <p>16 that, would that change your calculations?</p> <p>17 A. Yeah. It would change the heating, yes.</p> <p>18 Q. And if the doors were open, that would change</p> <p>19 the calculations as well --</p> <p>20 A. Yes.</p> <p>21 Q. -- for your simulation?</p> <p>22 A. Yeah. But they weren't there when I was</p> <p>23 there.</p> <p>24 Q. What about if the fans were on? Would that</p> <p>25 change your calculations?</p> | <p style="text-align: right;">Page 313</p> <p>1 A. For some of the convection, yeah. It would</p> <p>2 actually change the calculation somewhat, yes.</p> <p>3 Q. How large were the bay doors?</p> <p>4 A. I would have to look in the simulation. I</p> <p>5 believe that they were approximately 10 feet wide and</p> <p>6 about 14 feet high, but that was an approximation.</p> <p>7 Q. Okay. What was the construction of the</p> <p>8 building?</p> <p>9 A. Cement. So there were concrete walls, and</p> <p>10 there were concrete ceiling modules with a kind of beam</p> <p>11 structure.</p> <p>12 Q. Do all types of concrete absorb the same</p> <p>13 amount of energy, same amount of heat?</p> <p>14 MR. LOMAX: Objection to the form of the</p> <p>15 question.</p> <p>16 A. No. All concrete is not identical.</p> <p>17 Q. Okay. So did you make any specific notation</p> <p>18 as to the type of concrete?</p> <p>19 A. Yeah. We used the average for concrete for</p> <p>20 the material, and we also used the average temperature</p> <p>21 for that region from NOAA, and we used the average wind</p> <p>22 flow velocity on the outside of the building.</p> <p>23 Q. Were there any windows in the building?</p> <p>24 A. There were no windows in the back section</p> <p>25 that I had access to.</p> |

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| <p style="text-align: right;">Page 314</p> <p>1 Q. Okay. What about the front section?</p> <p>2 A. There appeared to be some windows in the</p> <p>3 office area.</p> <p>4 Q. In the office area, so downstairs?</p> <p>5 A. Well, there were some windows in the front,</p> <p>6 and there may have been some windows up above as well.</p> <p>7 I was never in the office area.</p> <p>8 Q. Do you know what was up on the second floor?</p> <p>9 A. Huh-uh.</p> <p>10 Q. Okay. What about a heat exchanger? Did you</p> <p>11 see the heat exchanger?</p> <p>12 A. We were not given access to anything on the</p> <p>13 other side of the wall.</p> <p>14 Q. Okay. Now, if there was a heat exchanger</p> <p>15 there, would that affect your calculations or</p> <p>16 simulation?</p> <p>17 A. That's why we actually did a 10 percent waste</p> <p>18 heat calculation, the 100-kilowatt calculation. Because</p> <p>19 if we just gave the benefit of the doubt that maybe</p> <p>20 there was some mechanism that we were not privy to</p> <p>21 dissipating most of that heat, you would still have</p> <p>22 losses in the system and you would still have to get</p> <p>23 that heat out. So what we assumed, which actually was a</p> <p>24 very generous assumption, was that in the case of the</p> <p>25 100 kilowatt, that the, a 10 percent waste heat was</p> | <p style="text-align: right;">Page 315</p> <p>1 actually a very modest number compared to the 1,000</p> <p>2 kilowatt plant waste heat.</p> <p>3 Q. What temperature was the, the room at 100</p> <p>4 kilowatts?</p> <p>5 A. So what I did was I drew section lines along</p> <p>6 two locations. I drew a line directly down the path</p> <p>7 through the door that went from the front to the back,</p> <p>8 and then I drew a line up above. And on those lines I</p> <p>9 showed the temperature at each one of the fine element</p> <p>10 points. And the temperature ranged from about 55</p> <p>11 degrees Celsius up to about 68 degrees Celsius along</p> <p>12 those two lines and in the section line.</p> <p>13 There were other places where it was all the</p> <p>14 way up at 100 degrees C, but I felt like, you know, that</p> <p>15 was the area where most people were operating and</p> <p>16 working, so that would be the area to be concerned with.</p> <p>17 Q. Do you know what the specifications of the</p> <p>18 heat exchanger were?</p> <p>19 A. I was -- which heat exchanger?</p> <p>20 Q. The heat exchanger used at the facility.</p> <p>21 MR. LOMAX: Objection to the form of the</p> <p>22 question.</p> <p>23 A. I don't, I don't have any information about a</p> <p>24 heat exchanger in the facility.</p> <p>25 Q. Okay. And so you didn't use any of that</p> |
| <p style="text-align: right;">Page 316</p> <p>1 information in preparing your simulation?</p> <p>2 A. Well, it wasn't provided, yeah, so I don't</p> <p>3 have that information.</p> <p>4 Q. Okay. So you, you only performed a</p> <p>5 simulation assuming one vent, closed doors --</p> <p>6 A. Uh-huh.</p> <p>7 Q. -- no heat exchanger?</p> <p>8 A. Well, I mean so here's the, we have to be</p> <p>9 careful when we say no heat exchanger. I assumed that</p> <p>10 there must have been some mechanism to dissipate a good</p> <p>11 amount of the heat because there was no, clearly there</p> <p>12 was no work being done in the system because there was</p> <p>13 no pressure, right. The pressure was reported at zero</p> <p>14 continuously throughout the test. So there was no work</p> <p>15 being completed.</p> <p>16 So if you consider that, I said, well, let's</p> <p>17 just give them the benefit of the doubt and say 90</p> <p>18 percent of the heat they were able to get rid of in some</p> <p>19 way. Maybe that was your heat exchanger. Maybe that</p> <p>20 was something else, but there were still losses in the</p> <p>21 system. So the rest of that heat I said was, well,</p> <p>22 let's try 10 percent, and then let's try 25 percent, and</p> <p>23 let's try 50 percent, different levels of efficacy of a</p> <p>24 heat exchanger, and then do the simulations and look at</p> <p>25 it and see what the temperature was.</p> | <p style="text-align: right;">Page 317</p> <p>1 So I was surprised to see that the</p> <p>2 temperature in the simulation would reach as high as it</p> <p>3 did even at 100 kilowatts, but then I reflected back on</p> <p>4 the fact that it's Florida. It's pretty darn hot.</p> <p>5 There was no air conditioning in the building other than</p> <p>6 the air conditioner for the small ISO container lab.</p> <p>7 And furthermore, the -- sorry there -- the, so, I lost</p> <p>8 my train of thought with that.</p> <p>9 Q. What exterior or, exterior air temperature</p> <p>10 did you presume if you were --</p> <p>11 A. 25 degrees Celsius.</p> <p>12 Q. Which is what Fahrenheit?</p> <p>13 A. I don't know. You would have to do the</p> <p>14 calculation. Say about 80. Approximately.</p> <p>15 Q. You don't know what the losses were on the</p> <p>16 heat exchanger, do you? You're just --</p> <p>17 MR. LOMAX: Objection.</p> <p>18 A. I've --</p> <p>19 Q. -- making an assumption?</p> <p>20 A. I, I've, I don't know.</p> <p>21 Q. Okay.</p> <p>22 A. I didn't know about any heat exchanger.</p> <p>23 Q. Okay.</p> <p>24 A. So for the fourth time, I'm not aware of any</p> <p>25 heat exchanger.</p> |

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| <p style="text-align: right;">Page 350</p> <p>1 Products, Inc., Henry Johnson, and James Bass. I only 2 have a couple of questions for you. To start, did you 3 ever meet Mr. Henry Johnson? 4 A. I have not. 5 Q. You have not. Great. Have you ever spoken 6 with him on the phone or via e-mail? 7 A. I have not. 8 Q. Okay. Have you ever met Mr. James Bass? 9 A. I have not. 10 Q. You have not. Have you ever spoken with him 11 via telephone or e-mail? 12 A. I have not. 13 MR. LEÓN: Okay. That's all the questions I 14 have. Go ahead, Rudy. 15 THE WITNESS: That was easy. I like that. 16 MR. NUÑEZ: All right. 17 EXAMINATION 18 BY MR. NUÑEZ: 19 Q. Good afternoon, Mr. Murray. My name is Rudy 20 Nuñez. We also met the other day at Dr. Rossi's 21 deposition. Can you hear me clearly through the 22 speakerphone? 23 A. Yes. 24 Q. All right. You let me know if you have any 25 problems or trouble hearing. Okay?</p> | <p style="text-align: right;">Page 351</p> <p>1 A. Okay. 2 Q. All right. As you testified, you know, 3 several times today, you brought up Mr. Fabiani. I 4 represent Fulvio Fabiani and his company, an LLC by the 5 name of United States Quantum Leap. I certainly don't 6 have the time to go back through all that you've done 7 that I would want to, but I did want to, you know, touch 8 on a few points to kind of maybe clear up some questions 9 I had. 10 Let me ask you. When, when you first came on 11 board with Industrial Heat with regards to Dr. Rossi's 12 technology, E-Cat, and the plant, what were you told at 13 the start about Mr. Fabiani? 14 A. I was told that Fulvio Fabiani was a close 15 family friend of Mr. Rossi's wife. I, I believe her 16 name is Maddalena, and that she was, you know, a close, 17 almost like a mentor of his, and that Fulvio had worked 18 with, with Mr. Rossi in Italy and on other activities. 19 I also learned that he was a, an avid pinball machine 20 both repairman and developer. 21 Q. Anything else? 22 A. Other than he had developed some hardware 23 devices for the, the reactor system. And I don't, I 24 don't remember the exact nature of that. And that he 25 had spent a lot of time in, in Raleigh.</p> |
| <p style="text-align: right;">Page 352</p> <p>1 Q. What were you told about his work 2 performance, if anything? 3 A. That he, you know, he showed up, but you 4 know, he was just kind of a participant in the data 5 collection and, at the plant. He was kind of like 6 Dr. -- or Mr. Rossi's kind of assistant, if you will, or 7 technical assistant, kind of helping him out in the 8 facility. 9 Q. Did anyone make any comments to you or talk 10 to you about any concerns they had with him? 11 A. I think there was, there was a, a modest 12 level of concern with how close he was with Mr. Rossi 13 relative to just, you know, the close relationship and 14 whether or not he would be fully -- fully disclose 15 everything to us, but I think the only thing that he 16 hasn't disclosed as far as I'm aware is the actual final 17 report and, and I think maybe he has produced some data. 18 I haven't looked at it though. So it was only a 19 question of if he would release all of the data. 20 Q. So to your understanding, the only thing he 21 didn't do was turn over that final report? 22 A. I believe that's, that's correct, yes. 23 Q. And I think the raw data too. I don't want 24 to, you know, I'm not trying to trip you up or anything. 25 A. Right, no, no, no. Yeah, I think the raw</p> | <p style="text-align: right;">Page 353</p> <p>1 data, he indicated that there was raw data stored on a 2 server in Russia that was encrypted and he had to, he 3 put it there for safekeeping, and I believe that that 4 data has been released only maybe in the last few days. 5 I, I have not looked at it. I haven't seen it. I 6 haven't inspected it, but I believe that it has been 7 released in the last few days. But I have not seen a 8 final report, and I don't know anything about, you know, 9 if a final report was actually produced. 10 Q. All right. Now, getting back to, I was 11 asking you about conversations and concerns. And again 12 I don't want to put words in your mouth, but correct me 13 if I'm wrong that it seemed like you had heard that 14 there may be concerns about what he was, how honest he 15 was being with Industrial Heat. Is that a fair way to 16 phrase it? 17 A. I would say that the concern was about his 18 allegiance and his close relationship with Mr. Rossi 19 rather than -- that's how I would characterize it. 20 Q. Okay. And do you think, was that something 21 that was knew over time or would they knew that from the 22 beginning? 23 A. I -- 24 Q. I should say -- let me strike that. 25 Was that a new concern or a concern that they</p> |

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1 THE WITNESS: Chris, you weren't there, were
 2 you?
 3 A. No. I think it was --
 4 MR. LOMAX: I guess I, I can't answer, but.
 5 A. Yeah, I'm sorry. I'm sorry. Yeah, I
 6 believe, to the best of my recollection it was just the
 7 three of us.
 8 Q. Were, were any, was anything offered to
 9 Mr. Fabiani for him to turn over the remaining report
 10 and data that he ended up claiming was due?
 11 A. Well, Mr. Fabiani actually offered up, he
 12 said, look, I'm writing this final report and I have all
 13 this data. And I don't mean the specific details, but
 14 he said we sampled data for specific things, I don't
 15 know if it was every 10 seconds or 5 seconds, throughout
 16 the entire test period using his system.
 17 And he said he was completing a final report
 18 for Industrial Heat. And we said, great. And I believe
 19 that there was even a discussion of potentially trying
 20 to have him help with other aspects, but I don't recall
 21 the, the details of that. My, really I was interested
 22 in the data and interested in the final report to find
 23 out what was going on, because I had hadn't seen any
 24 details of how all this stuff was collected and pulled
 25 together.

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1 what were you told either before or, you know, at the
 2 meeting by the Industrial Heat people of the purpose of
 3 that meeting with Mr. Fabiani?
 4 A. This is my recollection going back to that
 5 time, but my recollection was that Fulvio had this data.
 6 We had requested data. And so we were going to meet
 7 with him to find out how we get a copy of the data and
 8 then pay him the final payment that was offer -- you
 9 know, that was due him. And so we actually went down
 10 there with the intention of, of doing that.
 11 And so, and I, I don't recall if on the first
 12 day he didn't have the data and then he went and he got
 13 the data, some of the data, the spreadsheets on the next
 14 day. And then he said he would deliver the final report
 15 and some of the other, the, the final report and the raw
 16 data, you know, within the next few days. And we said,
 17 great, and then we'll just pay you for the final, you
 18 know, payment due.
 19 Q. And who set up that meeting? Who, who
 20 scheduled it or, do you know?
 21 A. I suspect JT Vaughn, but I, I don't, I don't
 22 recall.
 23 Q. And I think your testimony was at that
 24 meeting that Mr. Fabiani came with spreadsheets and
 25 documents to turn over?

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1 Q. Was there any offer made to Mr. Fabiani for
 2 an extension of continuing to do work for Industrial
 3 Heat?
 4 A. I think --
 5 MR. LOMAX: Objection.
 6 A. Okay. I, I think there was, but I can't
 7 recall specifically.
 8 MR. ANNESSER: One and a half minutes, Rudy.
 9 Q. And what were you told about the purpose of
 10 that meeting with Mr. Fabiani?
 11 MR. LOMAX: Objection to the extent it's
 12 about communications with counsel. Otherwise you
 13 can answer.
 14 A. Okay. I was --
 15 Q. What was that?
 16 A. I'm sorry.
 17 MR. LOMAX: Could you hear me Rudy?
 18 MR. NUÑEZ: Yeah.
 19 Q. I was going to say I don't want to hear what
 20 the attorneys told you. I want to hear what Mr. Vaughn
 21 or Mr. Darden told you or Mr. Dameron, whoever else was
 22 there.
 23 A. Yeah, well, it was just JT and I. What was
 24 your question? The purpose of the meeting?
 25 Q. Well, yeah. Let me clear that up. You know,

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1 A. Well, the, the next day. He came back with
 2 just spreadsheets. Sorry.
 3 MR. LOMAX: Rudy, do you have one more
 4 question? The time is up, but I, you know --
 5 MR. NUÑEZ: Well, here's the thing, guys. I
 6 mean I'm not there, but I marked my watch when the
 7 court reporter said 31 minutes. I think John had
 8 one question. Francisco made two questions. I
 9 still have, I mean by my calculation, I've got like
 10 7 minutes left. You know, time does not work
 11 differently down here, and I marked it when the
 12 court reporter said 31 minutes. So I'm not sure how
 13 I've lost these 8 minutes because John did not take
 14 up 8 minutes asking questions.
 15 MR. LOMAX: Well, the court reporter --
 16 MR. NUÑEZ: We can go back to the video or we
 17 can go back to something. I got a couple more
 18 questions left. I don't think I have 10 minutes,
 19 but I marked my watch when the court reporter said
 20 31 minutes.
 21 MR. LOMAX: Well, you know, Rudy, this is
 22 Chris. I would, I would be willing to extend 5, 5
 23 more minutes. The court reporter is telling us that
 24 the time is up.
 25 THE WITNESS: So let's go. If you have a

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| <p style="text-align: right;">Page 366</p> <p>1 couple more questions, go ahead, Rudy, quickly.</p> <p>2 MR. NUÑEZ: Yeah. I don't have that much, so</p> <p>3 I appreciate it, Mr. Murray.</p> <p>4 BY MR. NUÑEZ:</p> <p>5 Q. And I'll move on from the meeting at Jones</p> <p>6 Day. Let's go to the -- and I think it's in your expert</p> <p>7 report. You've been asked a lot about it. I'm not</p> <p>8 trying to retread all this stuff, but I do want to</p> <p>9 confirm a couple things just to clear up with my</p> <p>10 questions.</p> <p>11 There were -- and correct me if I'm wrong.</p> <p>12 Mr. Fabiani provided what I would call, and you correct</p> <p>13 me, electric power consumption numbers; is that correct?</p> <p>14 A. He provided us with, I think it was a</p> <p>15 spreadsheet for each month or maybe it was one</p> <p>16 spreadsheet that had numerous tabs. I don't recall</p> <p>17 which. And it had the time stamp for twice a day,</p> <p>18 cumulative energy in those 12-hour periods. And he</p> <p>19 provided us with a, a log that kind of showed dates and</p> <p>20 events when things were turned on and the power went off</p> <p>21 and this and that and different events, so what I would</p> <p>22 describe as a log of events.</p> <p>23 And I think those were the two major items</p> <p>24 that he had provided to us on the second day, and then</p> <p>25 he was going to wait and provide us with the final</p> | <p style="text-align: right;">Page 367</p> <p>1 report and the other data a few days later. He also</p> <p>2 said that he had taken data from the flow meter from</p> <p>3 time to time, and he had logged it into a spreadsheet on</p> <p>4 the desktop of his computer, but his computer was locked</p> <p>5 up and he couldn't get to it, and he was going to</p> <p>6 provide that data to us as well, but he didn't produce</p> <p>7 that data either.</p> <p>8 Q. Okay. And now my question relates -- I think</p> <p>9 you made an analysis that his power consumption numbers</p> <p>10 for the plant don't match the readings from Florida</p> <p>11 Power and Light; is that correct?</p> <p>12 A. No, which just incidentally we would not</p> <p>13 anticipate that they match. We would anticipate that</p> <p>14 the building would absorb more power than just the</p> <p>15 reactor because there was other, there were other</p> <p>16 electrical devices in the building. The primary concern</p> <p>17 is where the value goes negative, where the building is</p> <p>18 actually absorbing less, less energy per day than the,</p> <p>19 than reported by Mr. Fabiani and Mr. Penon.</p> <p>20 Q. Okay. And how many times did that happen?</p> <p>21 A. How many times? There was a 14-day period.</p> <p>22 I think cumulative number of days where it was below</p> <p>23 zero was 14 days, and that's just pure absolute</p> <p>24 negative. And, you know, and that's just assuming that</p> <p>25 nothing else in the building absorbed power.</p> |
| <p style="text-align: right;">Page 368</p> <p>1 Q. Okay. So that was 14 out of, I think it was</p> <p>2 350 or almost a year, correct?</p> <p>3 A. I believe the number in the final report was</p> <p>4 total of 357 days, and then Mr. Penon deducted 5 or 6</p> <p>5 days. I don't remember the exact number. And so there</p> <p>6 was a cumulative number of maybe 352 days of, of</p> <p>7 operational days.</p> <p>8 Q. And for lack of a better word, I think there</p> <p>9 were discrepancies between Fabiani's numbers versus the</p> <p>10 FP&L's numbers. Do you have any reason to believe that</p> <p>11 that is a result of Mr. Fabiani manipulating the data</p> <p>12 that he was putting into his spreadsheets?</p> <p>13 A. At this point, I have no evidence of that</p> <p>14 whatsoever.</p> <p>15 Q. And do you anticipate any kind of work in the</p> <p>16 future between now and trial where you would come to a</p> <p>17 different conclusion?</p> <p>18 A. I can't say at this point because I think</p> <p>19 that there's a lot of data that's just becoming</p> <p>20 available. For example, I think the raw data from</p> <p>21 Mr. Fabiani just became available, and I have not looked</p> <p>22 at that at all.</p> <p>23 Q. Okay. Let me ask you, and this will --</p> <p>24 MR. LOMAX: And Rudy --</p> <p>25 Q. I'm close to the end here.</p> | <p style="text-align: right;">Page 369</p> <p>1 MR. LOMAX: This is Chris and --</p> <p>2 Q. Do you have any evidence --</p> <p>3 MR. LOMAX: -- time is up.</p> <p>4 Q. -- in your investigation and your work for</p> <p>5 Industrial Heat that Mr. Fabiani manipulated improperly</p> <p>6 any data?</p> <p>7 A. At this point, no, I do not.</p> <p>8 MR. LOMAX: And, Rudy, this is Chris. That's</p> <p>9 the time.</p> <p>10 MR. NUÑEZ: All right. And, yep, that's</p> <p>11 going to match up with my time. And I will say</p> <p>12 thank you, Mr. Murray. Thank you, everyone. Have a</p> <p>13 good weekend.</p> <p>14 THE WITNESS: Okay. No problem. Thank you,</p> <p>15 guys.</p> <p>16 THE VIDEOGRAPHER: This concludes the</p> <p>17 videotaped deposition of Joseph Murray. We are off</p> <p>18 the record at 5:20 p.m.</p> <p>19 (Stenotype record continued off the video record.)</p> <p>20 MR. ANNESSER: Just as a formality, sir, you</p> <p>21 have the right to read or waive, which means you can</p> <p>22 read the deposition before it's finalized, or you</p> <p>23 can waive that right.</p> <p>24 THE WITNESS: I would like to read it.</p> <p>25 MR. ANNESSER: Okay.</p> |

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1 MR. LOMAX: And Defendants are going to
 2 designate Mr. Murray's testimony at this time as
 3 highly confidential due to a lot of the information
 4 that was provided here today.
 5 (DEPOSITION CONCLUDED AT 5:20 P.M.)
 6 (SIGNATURE RESERVED)
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1 WITNESS'S CERTIFICATE
 2
 3 I, JOSEPH ALAN MURRAY, do hereby certify
 4 that I have read and understand the foregoing
 5 transcript and believe it to be a true, accurate, and
 6 complete transcript of my testimony, subject to
 7 the attached list of changes, if any.
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 JOSEPH ALAN MURRAY


This deposition was signed in my presence by
 _____, on the _____ day of
 _____, 2017.

 Notary Public

My commission expires:

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1 STATE OF NORTH CAROLINA
 COUNTY OF WAKE:
 2
 3 REPORTER'S CERTIFICATE
 4 I, LAUREN MCINTEE, RPR, a Notary Public in
 5 and for the State of North Carolina, do hereby certify
 6 that there came before me on Friday, the 17th day of
 7 February, 2017, the person hereinbefore named, who was
 8 by me duly sworn to testify to the truth and nothing but
 9 the truth of his knowledge concerning the matters in
 10 controversy in this cause; that the witness was
 11 thereupon examined under oath, the examination reduced
 12 to typewriting under my direction, and the deposition is
 13 a true record of the testimony given by the witness.
 14 I further certify that I am neither attorney
 15 or counsel for, nor related to or employed by, any
 16 attorney or counsel employed by the parties hereto or
 17 financially interested in the action.
 18 IN WITNESS WHEREOF, I have hereto set my
 19 hand, this the 20th day of February, 2017.
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 LAUREN MCINTEE, RPR, Notary Public
 Notary Number: 201616600044

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1 CaseWorks, Inc.
 811 Ninth Street, Suite 260 (Page 1 of 2)
 2 Durham, North Carolina 27705
 3 E R R A T A S H E E T
 4 Re: Andrea Rossi, et al. vs. Thomas Darden, et al.
 5 Deposition of: JOSEPH ALAN MURRAY
 6 Please read this transcript with care, and if
 7 you find any corrections or changes you wish made, list
 8 them by page and line number below. DO NOT WRITE IN
 9 THE TRANSCRIPT ITSELF. Return the
 10 Certificate and Errata Sheet to this office after
 11 it is signed. We would appreciate your prompt
 12 attention to this matter.
 13 To assist you in making any such corrections,
 14 please use the form below. If supplemental or
 15 additional pages are necessary, please furnish same and
 16 attach them to the errata sheet.
 17 Page _____ Line _____ should
 18 read: _____
 19 Page _____ Line _____ should
 20 read: _____
 21 Page _____ Line _____ should
 22 read: _____
 23 Page _____ Line _____ should
 24 read: _____
 25 Page _____ Line _____ should
 read: _____