

BEFORE THE ENVIRONMENTAL APPEALS BOARD
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

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ORDER SCHEDULING ORAL ARGUMENT

ENVIR. APPEALS BOARD

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IN RE: :

CARBON INJECTION SYSTEMS, : RCRA Appeal No.

LLC, SCOTT FORSTER, AND : 15-01

ERIC LOFQUIST :

Docket No. RCRA-05-2011-0009: :

Thursday,
October 1, 2015

Administrative Courtroom
Room 1152
EPA East Building
1201 Constitution Avenue, NW
Washington, DC

The above-entitled matter came on for hearing, pursuant to notice, at 1:35 p.m.

BEFORE:

THE HONORABLE LESLYE FRASER
Environmental Appeals Judge

THE HONORABLE KATHIE A. STEIN
Environmental Appeals Judge

THE HONORABLE MARY BETH WARD
Environmental Appeals Judge

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Scott Forster and Eric Lofquist

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ALSO PRESENT:

Eurika Durr, Clerk of the Board
Eric Lofquist, Appellant

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2 (1:35 p.m.)

3 JUDGE FRASER: Good afternoon.

4 Counsel, can you please introduce
5 yourselves? For Carbon Injection Systems? If
6 you could please stand and introduce yourself for
7 the record?

8 MS. EIBER: Good afternoon. My name
9 is Keven Eiber. I'm with the law firm of Brouse
10 McDowell. I'm here on behalf of Carbon Injection
11 Systems, Eric Lofquist and Scott Forster.

12 MS. MOORE: I'm Meagan Moore. I'm
13 with the law firm of Brouse McDowell, and I'm
14 also here on behalf of our clients, Carbon
15 Injection System, Eric Lofquist and Scott
16 Forster.

17 MR. LOFQUIST: Good afternoon. My
18 name's Eric Lofquist.

19 JUDGE FRASER: Thank you.

20 And for EPA? You probably have to
21 speak into the microphone.

22 MR. CAHN: Good afternoon. I'm

1 Jeffrey Cahn. I'm from Region V, and I'm one of
2 the attorneys representing EPA today.

3 MS. GARYPIE: Good afternoon.
4 Catherine Garypie with Region V, also
5 representing EPA today.

6 MR. RAACK: Peter Raack with the
7 Office of Civil Enforcement with EPA.

8 JUDGE FRASER: Thank you.

9 My name is Judge Fraser. I'm joined
10 by Judge Stein on my right and Judge Ward on my
11 left. We thank you all for being here today.

12 Today's case is an enforcement action
13 arising under the Resource Conservation and
14 Recovery Act, or RCRA, involving the use of
15 hydrocarbon injectants in an iron blast furnace.

16 For the benefit of those attending in
17 the audience, I am going to begin with some
18 background information on how a blast furnace
19 operates and how injectants are used in a furnace
20 and a brief summary of the positions of the
21 parties and the Administrative Law Judges, or
22 ALJs, decision.

1 I have prepared this summary based on
2 the record below, included the decision of the
3 ALJ and EPA's preamble to the 1985 rulemaking
4 pertinent to this case.

5 If counsel believe I have misstated
6 either the background facts or their positions,
7 they should certainly bring that to our attention
8 when they get their chance to speak.

9 The purpose of an iron blast furnace
10 is to convert iron ore, which is primarily a
11 chemically-bonded mixture of iron and oxygen into
12 elemental iron by stripping the oxygen from the
13 ore.

14 Blast furnaces work through a
15 combination of very high levels of heat and
16 chemical reactions.

17 A mixture of iron ore and coke is
18 loaded onto the top -- into the top of the blast
19 furnace then extremely hot air at approximately
20 2,000 degrees Fahrenheit called the hot blast is
21 pumped into the furnace from the bottom through
22 injection ports known as tuyeres.

1 The hot air ignites the coke in the
2 combustion zone, or raceway, near the bottom of
3 the furnace, raising the temperature in this zone
4 to over 3,500 degrees Fahrenheit.

5 The burning of the coke also creates
6 residues of carbon and carbon monoxide gas that
7 flow up through the blast furnace. The carbon
8 monoxide serves as a reducing agent to strip
9 oxygen from the iron ore in a chemical reaction.
10 Some of the carbon also bonds with the now-
11 reduced iron.

12 Liquid iron is collected at the bottom
13 of the furnace.

14 Due to cost considerations, iron
15 manufacturers have used alternatives to coke in
16 the iron production process.

17 The most common alternatives are
18 hydrocarbon-based injectants, which are materials
19 containing hydrogen and carbon, such as
20 pulverized coal, oil and natural gas.

21 These hydrocarbon materials are
22 injected with the hot blast at the bottom of the

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1 furnace through the tuyeres.

2 In this case, EPA Region V charged
3 that Carbon Injection Systems, or CIS, the
4 Respondent here, used hazardous waste as an
5 injectant without first obtaining a RCRA permit
6 for treatment, storage, and disposal of a
7 hazardous waste.

8 EPA's case turns on whether certain
9 hydrocarbon injectants used by CIS qualify as
10 solid waste.

11 Under RCRA, a material cannot be a
12 hazardous waste unless it meets the definition of
13 a solid waste.

14 EPA's position is that some of CIS's
15 injectants were solid waste because they were
16 spent materials or byproducts that were recycled
17 by being burned for energy recovery. As defined
18 by EPA's Hazardous Waste Management System,
19 burning of waste fuel and used oil fuel in
20 boilers and industrial furnaces final rule, also
21 known as the BIF rule.

22 On the other hand, CIS asserts that

1 the hydrocarbon materials were not burned for
2 energy recovery, but rather, were added to the
3 blast furnace only as a replacement for coke's
4 role in providing reducing gases and not to
5 replace coke's role in providing heat.

6 When EPA promulgated the BIF final
7 rule in 1985, it provided an explanation in the
8 preamble to the final rule summarizing what the
9 rule covered and providing responses to public
10 comments that EPA had received.

11 One comment EPA had received concerned
12 the use of a hydrocarbon hazardous waste
13 injectant called Cadence that was used in blast
14 furnaces.

15 In that case, the commenter argued
16 that Cadence should not be considered a hazardous
17 waste fuel under the BIF rule, because it was not
18 burned in the blast furnace for energy recovery,
19 but as an ingredient in the iron making process
20 to provide carbon.

21 The commenters further argued that
22 using Cadence has the beneficial effect of

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1 cooling flame temperatures in the combustion zone
2 and any heat release was incidental and
3 unavoidable.

4 EPA responded that the BIF final rule
5 applied if hazardous wastes are burned in
6 industrial furnaces both to recover energy, i.e.,
7 to provide substantial useful heat energy and for
8 some other recycling purpose even if energy
9 recovery is not the predominant purpose of the
10 burning.

11 And then, specifically, found the
12 Cadence product was burned partially for energy
13 recovery.

14 The Administrative Law Judge before
15 whom this case was first heard held, one, under
16 the plain language of the Statute and EPA's
17 regulations, burning for energy recovery means
18 burning to recover heat energy not burning to
19 recover chemical energy.

20 Two, the Cadence example was
21 distinguishable from the incident case.

22 And three, EPA did not meet its burden

1 of proving injectants in a blast furnace are
2 burned for their heat value.

3 On this latter point, the ALJ reasoned
4 that injectants burned in the blast furnace did
5 not provide substantial useful heat because the
6 use of the hydrocarbons had an overall net
7 cooling effect on the blast furnace.

8 The Environmental Appeals Board took
9 this case for review on its own initiative due to
10 questions the Board has regarding the ALJ's
11 conclusion on the interpretation of the
12 regulatory phrase, "burned to recover energy",
13 and the ALJ's finding on the heat supplied by
14 injectants when burned in a blast furnace.

15 That concludes the summary of the
16 case.

17 Turning now to the parties before the
18 Board.

19 In initiating review of this case, the
20 Board requested that you address five separate
21 issues.

22 The Judges today may have questions on

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1 all five issues, but we intend to focus primarily
2 on two of those issues.

3 First, how has EPA interpreted the
4 phrase "burned to recovery energy" prior to
5 initiating this enforcement action?

6 And, second, does the burning of
7 injectants in a blast furnace supply substantial
8 useful heat energy?

9 On this latter issue, we specifically
10 ask you to address the substantial useful heat
11 standard and to explain how that standard applies
12 to the net impact calculation that the ALJ found
13 to be decisive.

14 In your brief's, however, both parties
15 focused only on the net impacts of using
16 injectants. We have questions regarding the
17 correctness of the net approach.

18 The term "net" is defined by the
19 dictionary as what remains after the deduction of
20 all charges, outlay or loss. In other words, it
21 is the balance one obtains after all deductions
22 have been made.

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1 Translating this definition to the
2 heat energy of the injectants in the case before
3 the Board yields the following equation, $A - B =$
4 C , where A is the heat energy in of the
5 injectants, B is the heat energy out of the
6 injectants and C is the net energy that remains.

7 Quite a bit of your arguments before
8 the Board and in the underlying case before the
9 ALJ focused on the heat energy taken out by the
10 injectants and the resultant net impact on the
11 temperature.

12 In our questioning today, the Board
13 will be focusing particularly on understanding
14 the heat energy in supplied by injectants and
15 whether that heat energy in is substantial,
16 useful heat energy.

17 Once that issue is clear, we will turn
18 to the appropriateness of the use of the net
19 approach in defining what is substantial useful
20 energy.

21 EPA, we have asked you to argue first,
22 so Mr. Cahn, we will start by asking you

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1 questions on the issue of what has been EPA's
2 announced interpretation of the phrase "burned to
3 recovery energy" before initiating this case.

4 And I -- just a point of clarification
5 for both parties. This is a case that the Board,
6 as you know, took on sua sponte review. And so,
7 as such, we really are using this as an
8 opportunity to ask a number of clarifying
9 questions that we have.

10 We don't really need opening
11 statements and so forth. We really are using
12 this as an opportunity to get clarity on quite a
13 number of questions that we have before us.

14 So, just want to save you that worry
15 about needing to do that.

16 Mr. Cahn, in your brief, you state
17 that the meaning of the word "burn" is not at
18 issue. Doesn't that influence how the phrase
19 "burn to recover energy" is interpreted? And,
20 given the plain meaning of that term, doesn't it
21 suggest that the phrase was narrowly directed at
22 the use of burning waste materials to produce

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1 heat?

2 MR. CAHN: I was re -- in our brief, we
3 were referring to the fact that the ALJ concluded
4 that neither of the parties was contesting the
5 meaning of that phrase.

6 Of course, burning is relevant to the
7 question of whether materials are being oxidized.

8 JUDGE FRASER: You relied on expert
9 witnesses in interpreting this regulatory
10 language. What is EPA's view of the
11 circumstances under which an expert's view of
12 that meaning is relevant versus layperson's view?

13 MR. CAHN: I'm not sure that we relied
14 on the experts to define that phrase "burning for
15 energy recovery." The Agency's expert, Professor
16 Freuhan, testified as to what happens inside a
17 blast furnace, what types of energy are produced
18 when an injectant is oxidized in the raceway.
19 That was our focus.

20 The -- I'm sorry, could you repeat the
21 question? I apologize.

22 JUDGE FRASER: It was more a

1 clarification of there's quite a bit of
2 discussion in the ALJ's decision about the common
3 man's language, I don't if that's the exact
4 terminology she used, versus when is it --

5 And so, we're really trying to get a
6 sense of when does EPA this it's appropriate to
7 use the common language versus a technical
8 expertise?

9 MR. CAHN: Thank you, Judge Fraser,
10 for clarifying that for me.

11 I think, looking at the phrase
12 "burning for energy recovery" in this context,
13 it's appropriate to use not the simplistic
14 approach that is advocated by the Respondents
15 below in this matter.

16 Rather, a more intelligent
17 understanding of the meaning of the phrase is
18 appropriate.

19 We're dealing with pretty complex --
20 a pretty complex regulatory scheme. Respondent's
21 own witness, Mr. Rorick identified or testified
22 that blast furnace operations were very complex,

1 that terms of art are used by the operators, that
2 there's jargon that's relied on in the industry
3 and that chemical phrases in terminology are
4 used.

5 So, in that context, and in order to
6 give meaning to the phrase, at least as it
7 applies to blast furnace operations, it's
8 appropriate to use more than just the simple
9 understanding that burning means giving off heat.

10 Therefore, it's appropriate to
11 consider the other types of energy that are --
12 fall within the meaning of the term "burning for
13 energy recovery" including chemical energy or
14 kinetic energy.

15 JUDGE STEIN: I want to go back to
16 what, I think, was Judge Fraser's question, which
17 was really the definition of "burn." And I'm
18 having a little difficulty understanding why
19 we're looking to expert witnesses to interpret
20 that term as opposed to how it's used and applied
21 in the context of the regulations.

22 I mean, I understand the difference

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1 between simple and more complex, but, you know,
2 what do we have to go on other than the way it's
3 been used and applied in the regulations?

4 MR. CAHN: Judge, I don't think the
5 experts, again, were testifying as to the meaning
6 of the phrase, rather, the experts were
7 testifying as to what occurs inside a blast
8 furnace.

9 The phrase "burning" is very, as the
10 experts explained, an imprecise and nontechnical
11 term. The way the experts understand what
12 happens in combustion is oxidation.

13 JUDGE STEIN: Thank you.

14 JUDGE FRASER: I also -- we see quite
15 a bit of time in the briefs spent to arguing that
16 EPA intended the phrase to consider chemical
17 energy as well.

18 And I'd like to ask what statements do
19 you think point out in the preamble that that was
20 something EPA envisioned at the time?

21 MR. CAHN: I think that if you look at
22 the -- in the Cadence discussion --

1 JUDGE FRASER: And I'm sorry, just for
2 -- if you could move the microphone maybe, if it
3 moves it all, does it come a little closer to
4 you?

5 MR. CAHN: Closer to me, okay. It may
6 be a little harder to turn the pages, but --

7 JUDGE FRASER: No, no, that's fi --
8 thank you.

9 MR. CAHN: No worries.

10 In the Cadence discussion at 50
11 Federal Register Page 49172 in the first column,
12 if I'm not mistaken, EPA expressed consideration
13 of the chemical energy produced by the oxidation
14 of injectants in the raceway by making the clear
15 statement that carbon monoxide reduces the iron
16 ore by net energy absorbing reactions to produce
17 iron.

18 That's an acknowledgment that chemical
19 energy is used up. The energy that -- the carbon
20 monoxide is one of the products of the combustion
21 of the injectant and that carbon monoxide is used
22 up.

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1 What you get coming out of the top
2 gases of the blast furnace has less carbon in it
3 or carbon monoxide in it than it had in the
4 raceway or when it left the raceway.

5 JUDGE FRASER: Yes, there is numerous
6 statements in the Cadence example that there is a
7 chemical reaction as well as heat going on. But,
8 throughout, when you explain what is meant by
9 "burned for energy recovery" the examples you
10 give are providing substantial useful heat.

11 So, there's a disconnect between the
12 discussion that there is a chemical and a heat
13 reaction -- heat occurring versus what the Agency
14 has said.

15 And so, doesn't that cut actually
16 against you that you have not said "burn for
17 energy recovery" is chemical energy as well?

18 MR. CAHN: If you're talking about in
19 the Cadence discussion, I think the Cadence
20 discussion talks about energy in two forms, the
21 chemical energy like I just talked about, the
22 carbon monoxide reducing the iron ore by net

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1 energy absorbing reactions and then the heat
2 energy from subsequent reactions that occur
3 outside the raceway which I understand to mean,
4 the use of the top gas as a fuel in the stoves
5 that are used to preheat the hot blast that goes
6 into the raceway or the blast furnace that's
7 providing actual heat energy.

8 I have a demonstrative that I could
9 put up if that would assist the Board.

10 JUDGE FRASER: Sure.

11 MR. CAHN: And, Judge Fraser, I think
12 you probably -- it sounds like you already
13 understand all of this, but --

14 JUDGE FRASER: I will tag on with
15 Judge Ward.

16 Is there a way of showing what he has
17 on the screen up on our monitors? Thank you.

18 MR. CAHN: So this is the injection,
19 this is the raceway. This is the location where
20 the hot blast and the hydrocarbon injectants come
21 in. This is a countercurrent reactor, so gases
22 go up as material descends.

1 The top gases are captured. They go
2 into a device that cleans the gases of
3 contaminants, for example, metals. Then they go
4 in -- then the top gases go into these stoves,
5 they come back out, and go back into the blast
6 furnace. These stoves burn the remaining carbon
7 that's contained in the top gases.

8 So, I think the Cadence discussion is
9 talking about the reactions, the useful heat
10 energy that's produced outside the raceway, when
11 the top gases are burned in the stoves.

12 JUDGE FRASER: We will come back to
13 the top gas discussion as it applies here. I'm
14 really getting at the rest of the preamble
15 discussion when the Agency is explaining what the
16 rule means and defining what is meant by "burn
17 for energy recovery."

18 For example, there's a place where the
19 Agency says, i.e., this means substantial useful
20 heat energy. There's no -- and i.e. means that
21 is, not for example.

22 And so, there is no "i.e. that is

1 substantial useful heat energy or chemical energy
2 or nuclear energy or any other kind of energy."

3 So, I'm struggling to find where, in
4 the preamble, language and explanation of what
5 the Agency intended that chemical energy was
6 intended to be included in the regulation scope.

7 MR. CAHN: Well, another place that
8 might be helpful to look to put this in context
9 is the definition of industrial furnace that's
10 contained in the RCRA regulations.

11 Trying to put the phrase "burning for
12 energy recovery" into context, the definition of
13 an industrial furnace includes a blast furnace
14 and such other devices as the administrator may,
15 after notice and comment, add to this list on the
16 basis of one or more of the following factors.

17 The use of the device to burn or
18 reduce raw materials to make a material, the use
19 of the device to burn or reduce secondary
20 materials as substitutes for raw materials or the
21 use of a device to burn or reduce secondary
22 materials as ingredients.

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1 I think the fact that the definition
2 of industrial furnace recognizes reduction which
3 is a form of chemical energy should assist the
4 Board in understanding the meaning of the phrase
5 "burn for energy recovery."

6 JUDGE FRASER: But the introductory
7 part of what you just read said the agency may
8 promulgate regulations after notice and comment.

9 And so, the BIF rule that you
10 promulgated after notice and comment then
11 throughout the preamble discusses essentially,
12 here's what we mean "burn for energy recovery" is
13 substantial useful heat is generated whether its
14 primary purpose was burned for that or secondary.

15 So, there, I would think, that if that
16 was what you intended to be covered, there would
17 be more discussion on chemical energy being
18 within the scope of -- the intended scope for the
19 regulation.

20 MR. CAHN: I believe that in the
21 preamble to that definition of industrial
22 furnace, the Agency spoke to that.

1 JUDGE STEIN: Could you give us a cite
2 when you --

3 MR. CAHN: I'm --

4 JUDGE STEIN: -- when you provide it?

5 MR. CAHN: I am looking for that if
6 you give me one moment.

7 All right, the October 26, 1989
8 Supplemental Proposal to the May 6, 1987 Proposal
9 published at 54 Federal Register 43719, Footnote
10 1, for purposes of this notice, burning in
11 industrial furnaces includes reduction as well as
12 combustion.

13 I think that's another indication that
14 chemical energy was intended to be captured
15 within the concept of burning in an industrial
16 furnace.

17 JUDGE STEIN: I mean, I feel like on
18 some levels, Counsel, you're grasping at phrases
19 in an overall very lengthy complex regulation.
20 And I may not be convinced that you couldn't
21 interpret the term as broadly as you seem to want
22 to, but I'm struggling to figure out how somebody

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1 reasonably reading these regulations is really,
2 by use of the word, you know, a word or a phrase,
3 reduction or materials recovery is supposed to
4 know that chemical energy is what's covered when,
5 really, all of your major examples don't really
6 fit that bill.

7 MR. CAHN: Well, the plain language of
8 the phrase "burning for energy recovery" isn't
9 limited. And I think what's -- so, I think
10 something that's important is to put the phrase
11 into the context of the regulatory scheme and
12 what Congress intended to be regulated with the
13 HSWA Amendments in '84.

14 And looking at the recent decision in
15 NRDC v. EPA, which invalidated the Comparable
16 Fuels rule, the Court explained that the loophole
17 that the Agency had created by excluding certain
18 hazardous wastes from the definition of solid
19 waste if the comparable fuel was similar to a
20 fossil fuel was not permissible.

21 In a sense, by limiting the definition
22 of "burning for energy recovery" to substantial

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1 useful heat energy, the ALJ and this Board, if it
2 upholds the ALJ is, in a sense, reopening or
3 creating a new loophole to the definition of
4 solid waste.

5 JUDGE STEIN: Well, I'm not convinced
6 the ALJ has properly interpreted the term. But,
7 I'm still looking for something that would be
8 somewhat more obvious or somewhat easier to glean
9 from these complicated regulations.

10 And if you're regulating chemical
11 energy, presumably, there are a whole host of
12 issues that could come within the term chemical
13 energy. And I would have expected if that's what
14 EPA had intended to do, that there would have
15 been a lot more precise discussion about, you
16 know, what chemical energy meant, you know, where
17 it began, where it ended, how it related to the
18 manufacturing process.

19 And I see pieces of phrases, or I see
20 phrases, and, you know, I'm not convinced that
21 you couldn't interpret the term that broadly.

22 So, I, you know, not convinced as a

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1 matter of plain language it's limited. But I'm
2 finding difficultly looking at EPA's language in
3 these regulations and in its guidance documents
4 that makes it clear that chemical energy is
5 really the focus here.

6 MR. CAHN: I think the best -- the
7 Cadence discussion does talk about the three
8 steps that occur in the raceway when, upon
9 initial combustion, there's a disassociation then
10 there's a -- which is an endothermic reaction.
11 Then there's an exothermic reaction. And then
12 there's again an endothermic reaction in the
13 raceway.

14 I am not aware of anything in the
15 record that supports the proposition that in the
16 raceway the net reaction is exothermic.

17 JUDGE WARD: But, Mr. Cahn, isn't part
18 of it exothermic? I think it goes back to -- and
19 we'll get to the net energy question in a bit --
20 but I think that that discussion is really
21 actually proving or, at least, seems to lead one
22 to conclude that EPA was focusing on the heat

1 contribution at that point in the process.

2 And frankly, if the focus of Cadence
3 were the chemical energy, the discussion could
4 have been a lot shorter.

5 So, you know, I think it's difficult
6 to see how the reference to the exothermic aspect
7 of it somehow, nevertheless, a net endothermic
8 reaction somehow proves that the Agency was
9 focusing on the net impact, but rather the heat
10 contribution from the BTU value of the fuel
11 injectant.

12 JUDGE FRASER: If I could ask the
13 clerk, I have some handouts here I'd like to give
14 three copies per table and one to the Court
15 Reporter. There're some other pages we'll be
16 referencing throughout our discussion.

17 And one of those I'd like to turn your
18 attention to or just point out is that we also
19 have looked at EPA's RCRA Orientation Manual
20 which seems to be a pretty comprehensive
21 explanation of RCRA's requirements. And, by its
22 terms, it states that it is intended to aid

1 regulated parties' compliance with RCRA.

2 And at least since 2003 all the way up
3 to 2014, and I'm referencing page nine in your
4 packet, the manual defines the phrase "burn to
5 recover energy" as burning hazardous waste for
6 its heating value as a fuel.

7 So, again, it seems to suggest
8 strongly to us that the Agency was not thinking
9 of chemical energy, else, in this orientation
10 manual, it certainly would seem that the
11 definition would be a little broader than what it
12 says before you.

13 MR. CAHN: Well then, I would have to
14 go back to the top gas analysis and when the
15 injectants are combusted or oxidized in the
16 raceway, the top gases -- the reducing gases
17 ascend the blast furnace, reducing the iron ore
18 to iron and whatever remains in the top gases,
19 whatever fuel value remains in the top gases is
20 cycled back to the stoves where it's burned,
21 producing useful substantial heat, roughly 2,000
22 degrees, which is then blown into the bottom of

1 the blast furnace through the tuyeres to heat up
2 the raceway.

3 JUDGE WARD: Mr. Cahn --

4 MR CAHN: That's substantial useful
5 heat that --

6 JUDGE WARD: Mr. Cahn, did you present
7 or introduce any evidence about the use by WCI or
8 this particular blast furnace of the top gas in
9 this case?

10 MR. CAHN: No, the Agency did not have
11 any direct evidence for the relevant time period
12 about what this specific blast furnace does or
13 did. But the Agency did present evidence with
14 respect to what all blast furnaces do.

15 C Ex 20 -- C Ex 86 is an exhibit that
16 talks about -- it's from American Steel or the
17 American Iron and Steel Institute talks about how
18 blast furnaces operate. They all recycle the top
19 gas.

20 Mr. Rorick, the witness for
21 Respondents testified to the fact that this is
22 something you don't waste. You capture it, you

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1 use it. It's recycled into the stoves, where
2 it's burned.

3 JUDGE WARD: Does that -- does it
4 state that all furnaces do, or that the industry
5 practice is to use the top gas that way?

6 MR. CAHN: I can't say all. I mean,
7 I just couldn't say all. But I think the record
8 evidence -- the only conclusion that can be drawn
9 from the record evidence is this is what blast
10 furnaces do. I can't qualify it and say all.

11 JUDGE FRASER: So, if I understand
12 your argument about the top gas, are you
13 essentially saying that you're moving away from
14 the chemical energy argument and going to the
15 heat recovery energy argument or -- I'm not sure
16 where you're -- what the relevance of the top gas
17 is to the question of how the Agency has
18 interpreted this regulation to cover chemical
19 energy.

20 MR. CAHN: Judge Fraser, I think the
21 Cadence discussion talks about both. I think the
22 Cadence discussion talks about what happens in

1 the raceway, and I think the Cadence discussion
2 talks about subsequent reactions outside of the
3 raceway.

4 And injectants in the raceway undergo
5 an endothermic, then an exothermic, then an
6 endothermic reaction. And then the top gases are
7 later used where they produce useful substantial
8 heat energy in the form of the hot blast.

9 I think it's both, and that's
10 consistent with our understanding of -- what we
11 believe the plain meaning of the phrase "burning
12 for energy recovery" should be which is something
13 broader than the limited definition that the ALJ
14 was suggesting.

15 JUDGE WARD: So, let's assume that we
16 don't agree with your reading of the preamble in
17 the record in this case in terms of -- on the
18 issue of chemical energy, versus heat energy, do
19 you have any other argument in terms of fair
20 notice to carbon injection here of your
21 interpretation?

22 MR. CAHN: Well, I think that the

1 record contains evidence that shows that the
2 Respondents below knew and understood that their
3 secondary material was going to be regulated when
4 it was burned or oxidized in the adjacent blast
5 furnace.

6 I think if we look to, if I'm not
7 mistaken, C Ex 47 is a letter from the Region V
8 Division Director informing Respondents that she
9 believed that their material would be regulated,
10 that their material provided both power and heat.

11 Their e-mail exchanges, I would direct
12 the Board to C Ex 2 at EPA page number 2772 which
13 is an e-mail from U.S. EPA -- or e-mail exchange
14 between EPA and Innovative Waste Management,
15 which was forwarded to Scott Forster talking
16 about how K022, which was one of the materials
17 that they were marketing or selling to the
18 adjacent blast furnace was regulated.

19 C Ex 2, again, at EPA 2758, e-mails
20 between Ohio EPA and Innovative Waste Management
21 forwarded to Mr. Forster. K022 is burned for
22 energy recovery in a blast furnace.

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1 So, I think there's actual notice.
2 And in addition to that, I think the notice was -
3 - or the Agency's view on whether this burning of
4 secondary materials was regulated was reasonably
5 ascertainable by looking at the regulatory scheme
6 and Congress's intent in promulgating 3004Q and
7 the regulations that we promulgated in response.

8 JUDGE WARD: So, your position is they
9 were on notice that they were regulated even if
10 they weren't on notice of your specific
11 interpretation of the regulation to include
12 chemical as well as heat energy?

13 MR. CAHN: I think the Cadence
14 discussion discussed chemical energy and that
15 discussion should have put them on notice.

16 JUDGE WARD: I'm actually asking you
17 to assume that we don't agree with that reading
18 of the preamble.

19 So assume we don't agree with that
20 reading of the preamble, what's your view on the
21 question of fair notice as to the application of
22 RCRA to this facility, or to their waste -- the

1 injectants?

2 MR. CAHN: It's clear that the Agency
3 intended to regulate secondary materials if they
4 were burned for energy recovery, and that's what
5 happens when the top gases are burned in the
6 stoves. So there was fair notice at least on
7 that point, if the Board disagrees with the
8 interpretation of energy including chemical
9 energy.

10 JUDGE WARD: So, actually, I did want
11 to draw at least a -- or make a point, in terms
12 of the brief that you filed, your initial opening
13 brief, when we asked this question or the
14 question was if we didn't agree with the -- your
15 view of the preamble or the regulatory history
16 here, was it appropriate for Region V to rely on
17 this interpretation, that is the chemical energy
18 interpretation, in seeking civil penalties for
19 past behavior?

20 And your response there was because we
21 believe that EPA clearly provided fair notice,
22 this question is not applicable.

1 And I just wanted to point out, at
2 least from my take of this, that wasn't a very
3 helpful response. We were asking for the Agency
4 to assume that we didn't agree with your reading
5 of the regulatory history here, and, in that
6 case, what was your position in terms of fair
7 notice?

8 So, I think in future briefings, if
9 you could be a little bit more forthcoming in
10 terms of your response.

11 MR. CAHN: I apologize.

12 JUDGE STEIN: I'd be interested if you
13 could cite any case law that suggests that if the
14 Agency advances one interpretation in giving
15 someone notice that they're regulated that fair
16 notice can be provided if the Agency is
17 proceeding along the lines of a different
18 interpretation.

19 So, if the Agency has such case law,
20 I'd be interested in seeing it. I don't need it
21 at this very moment, obviously, but I think with
22 respect to chemical energy, if the Board

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1 disagrees that fair notice was provided by the
2 regulations, I think what you're asking us to do
3 is to say that because we told this company it
4 was regulated, that that's fair notice.

5 But, I'm looking for how they had fair
6 notice of your particular interpretation which I
7 believe is the language that is used in some of
8 the federal court case law and in Board case law.

9 MR. CAHN: I did not do research on
10 that topic before coming here today. I was
11 looking at the -- how net analysis and the
12 reasonable ascertainable standard and continue to
13 believe that the Cadence discussion should have
14 put the parties on notice, the Respondents on
15 notice.

16 JUDGE FRASER: Just before turning to
17 the next set of questions which may take us a
18 little bit, I'll ask the clerk to add 15 minutes
19 to EPA's time as well as CIS's time when we get
20 to that point. I don't think we'll get through
21 them in the next three and a half minutes.

22 So, I want to turn to heat energy, and

1 this goes back to the equation that we're dealing
2 with which, as we look at it is, the question
3 before us is substantial useful heat energy.

4 We understand that CIS has argued net
5 as being -- we will come back to net, but for
6 now, if we go back to the equation in my
7 introductory comments, we look at net as being
8 the difference or the sum of heat energy in minus
9 heat energy out. And so, the next set of
10 questions will be focused on heat energy in.

11 So I just want to make sure we're all
12 on the same page. So, do you agree that what the
13 standard that the Agency set in the BIF final
14 rule was that "burned for energy recovery" at
15 least in part, I know you have chemical energy,
16 but at least in part is burned to recover
17 substantial useful heat energy?

18 Is that something that you see in the
19 preamble to the rule?

20 MR. CAHN: I do.

21 JUDGE FRASER: Okay. And so that's
22 where, again, that's where we would like to start

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1 with our conversation.

2 As I read the administrator's decision
3 on Cadence, I think she was -- or he was, at the
4 time, -- focused on the heat in question and not
5 the overall net impact of the injectants.

6 The preamble does talk about the
7 endothermic reactions of the injectants, but then
8 stresses the importance of the heat in provided
9 by the injectants as well.

10 So, for example, and this is on page
11 four of the packets that we handed you, the
12 administrator writes, Cadence's argument ignores
13 the fact that fuel injectants first behave as
14 bonafide fuels by combusting to, ideally, carbon
15 dioxide and water.

16 The fact that fuel injectants release
17 substantial heat energy while providing
18 hydrocarbon for reactions enables operators to
19 reduce coke rates.

20 And that's cited from line 50 of the
21 Federal Register, page 49172, column 3.

22 Essentially, I read this as saying

1 that heat from injectants is critical to driving
2 those reduction reactants in the furnace, do you
3 agree with that?

4 MR. CAHN: I think the record -- I
5 think that Professor Freuhan's testimony does
6 support that conclusion.

7 JUDGE FRASER: And Professor Freuhan
8 was EPA's expert, was he not?

9 MR. CAHN: Correct.

10 JUDGE FRASER: And so, if we do turn
11 to his testimony, and we have an excerpt on page
12 11 of the packet that we handed you, it's
13 actually taken from pages 1180 to 1181 of the
14 transcript before the Administrative Law Judge,
15 the question to Professor Freuhan was, if we look
16 at all three steps and taking -- and he's talking
17 about the reaction of the injectants in the
18 raceway, is it your testimony that it is, when
19 looked at as a whole, an exothermic reaction?

20 Professor Freuhan responded the
21 reaction itself, just the reaction now, not
22 heating up components -- your question -- the

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1 reaction itself, he answered, is exothermic.

2 You came back and said, if you look at
3 all three steps together?

4 Professor Freuhan said yes.

5 So, in this case, doesn't exothermic
6 mean give off heat?

7 And so, Professor Freuhan is saying --
8 you have to answer, I'm sorry, you can't nod.

9 MR. CAHN: Yes.

10 JUDGE FRASER: Yes. Thank you. So,
11 he stated that the injectants are providing heat
12 in the raceway?

13 MR. CAHN: Yes, I think -- in the
14 whole discussion from -- I looked at it from page
15 1176 to 1182.

16 JUDGE FRASER: Okay.

17 MR. CAHN: He does say that. Yes.

18 JUDGE FRASER: If we turn to Mr.
19 Rorick, who was the expert who testified on
20 behalf of Carbon Injection Systems, one of the
21 experts, his relevant testimony was on pages 2489
22 through 2390 of the transcript, and it's on page

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1 13 of the packet that we handed you at Counsel's
2 table.

3 The question posed to him was, if
4 carbon is oxidized, doesn't that also mean that
5 energy is being released?

6 Mr. Rorick answered, when a carbon
7 molecule changes state from carbon to a CO,
8 carbon monoxide, or carbon to CO₂, carbon
9 dioxide, which is probably a better example, that
10 change in state of that, there is an energy
11 release?

12 That is correct, that's standard
13 science.

14 So, didn't Mr. Rorick also admit that
15 burning injectants to CO or CO₂ also releases
16 heat energy?

17 MR. CAHN: Judge Fraser, I was a
18 history major, so I'm a little bit at a
19 disadvantage. I actually read that answer as
20 supporting the conclusion that there's chemical
21 energy that's being released.

22 I did not see it -- I don't -- I

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1 didn't read that as including heat or an
2 exothermic reaction. I see that there's energy
3 there. I suppose if -- I just didn't read it
4 that way.

5 But I'm not a scientist, I apologize.

6 JUDGE FRASER: No problem, but
7 exothermic is releasing -- the release of energy
8 and -- but thank you for that answer.

9 And then my next question would be,
10 and I will also direct this to Counsel for Carbon
11 Injection, so they can come back as well.

12 With Dr. Poveromo, and I hope I'm not
13 butchering his --

14 MS. EIBER: Poveromo.

15 JUDGE FRASER: I'm sorry?

16 MS. EIBER: Poveromo.

17 JUDGE FRASER: Poveromo. Thank you
18 very much for that correction.

19 He's another expert who testified on
20 behalf of Carbon Injection Systems, and he wasn't
21 asked about this issue directly at the hearing as
22 best we can tell from reading the transcript, but

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1 he does stress that the injectants have a net
2 cooling effect on the furnace.

3 And he ties this cooling effect to the
4 fact that they are added into the blast furnace
5 cold. But he didn't say that burning injectants
6 provide no heat, he came back to net heat.

7 And I don't know if you saw anything
8 in the testimony on your review that talked about
9 no heat being provided by the injectants from any
10 of the expert testimony on the other side.

11 MR. CAHN: All I could point to in Dr.
12 Poveromo's testimony is at Transcript Volume 11
13 page 2546, there is a standalone comment where
14 Dr. Poveromo said that outside the raceway, the
15 reducing gases from the injectants have both
16 exothermic and endothermic reactions.

17 JUDGE FRASER: And yet, if you -- on
18 those same pages, the question was asked to him,
19 and this is on page 15 of the packet we handed
20 you, Counsel, but if we stick within the raceway
21 zone for a moment, is it your testimony that the
22 oil injectants that react in the raceway on

1 balance provide no energy to the system?

2 And Dr. Poveromo responded, they
3 provide no net energy to the system when consider
4 the role of the reactant, the reaction products,
5 and the subsequent role they play in the process.

6 The key word here is net energy, and
7 that's pages 2545 to 46 that you cited.

8 So, we do look at -- from the question
9 we have is we're looking at, he has addressed the
10 heat in, but he's addressing it indirectly
11 through a net answer, which is that other side of
12 the equation.

13 I think I will save the rest of the
14 questions on Dr. Poveromo for the opposing
15 counsel.

16 JUDGE WARD: So, just one other
17 question on the issue of top gases, I think that
18 in addition to the general industry practice that
19 you'd cited in your reply brief, you had attached
20 a study concerning this facility, but dating
21 several years prior to the period of violations
22 or alleged violations here.

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1 And I think you have provided to the
2 Board, saying that we can take judicial notice of
3 that study. I think you cited the Halmet
4 decision for their proposition.

5 And looking at the document that was
6 at issue in Halmet, this one doesn't seem to fit
7 in that box.

8 Do you have any other cases to cite in
9 support of our considering or taking that into
10 account on principles of judicial notice?

11 MR. CAHN: Not readily at hand, I'm
12 afraid.

13 The Agency began research on that
14 topic. I think that the question is, you know,
15 is it a document in the public domain? Does it
16 contain information that's readily ascertainable?
17 Is it reliable in that sense?

18 This was a document that was part of
19 a rule-making docket. It is readily available
20 within reason, I guess, because it's not
21 published online. You have to ask for it from
22 the person that runs the docket.

1 It was submitted as part of a rule-
2 making. I think it's something that the Board
3 can look to for assistance in understanding what
4 was occurring, at least at some point in time, at
5 the LTD facility that later became a WCI
6 facility.

7 JUDGE WARD: And let me turn now to
8 questions in terms of burden of proof, and,
9 hopefully, we can walk through these pretty
10 quickly.

11 But, in the opinion below, in a
12 footnote, the ALJ concludes that or states that
13 the standard here, what you needed to prove was
14 that it was burned for energy recovery. And
15 having not proved that, it wasn't a solid waste.
16 If it wasn't burned for energy recovery, it was
17 still burned, correct?

18 MR. CAHN: Correct, it was oxidized.

19 JUDGE WARD: So, at least
20 presumptively, for purposes of the definition of
21 solid waste, it was a solid waste because it was
22 burned, even if not burned for energy recovery,

1 correct?

2 MR. CAHN: That is an argument that
3 could be made, correct.

4 JUDGE WARD: And so, if you had argued
5 that in the alternative, wouldn't that have put
6 the burden -- shifted the burden then to carbon
7 injection to show not just that it was a material
8 used in industrial -- in this process, but that
9 there was also a known market for this ingredient
10 or these injectants, correct?

11 MR. CAHN: Judge Ward, the way the
12 Agency allocated its time was, I was responsible
13 for the first four questions of the Board and Ms.
14 Garypie was going to address the burden
15 questions. She, I think, is better prepared to
16 address that question than I am.

17 JUDGE WARD: That's fine.

18 JUDGE FRASER: Happy to have her come
19 forward.

20 MR. CAHN: I don't want to interrupt
21 the Board's flow if there were more question on
22 the first four topics, I'd try to address them,

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1 but if this is a convenient breaking point, I'm
2 happy to allow Ms. Garypie to proceed.

3 JUDGE FRASER: We're fine with the
4 first four for now and would invite Ms. Garypie
5 to come forward. Thank you.

6 MR. CAHN: Before I step down, I want
7 to thank the Board too for accommodating my
8 personal schedule.

9 JUDGE FRASER: Thank you.

10 MS. GARYPIE: Good afternoon.

11 JUDGE FRASER: Good afternoon.

12 MS. GARYPIE: It may assist the Board
13 to take a look at the Authorized Regulations,
14 specifically, I'm looking to Illinois
15 Administrative Code 3745-51-02 and, particularly,
16 Section E.

17 JUDGE FRASER: I'm sorry, you said
18 Illinois, or Ohio?

19 MS. GARYPIE: I'm sorry, Ohio.

20 JUDGE FRASER: Okay.

21 MS. GARYPIE: I apologize.

22 I think, as the Board is aware, the

1 parties largely agree on burden of proof, and, in
2 this matter, it's laid out pretty succinctly in
3 40 CFR Section 22.24(a).

4 So, initially, the Complainant has the
5 burden of presentation and persuasion that the
6 violation --

7 JUDGE WARD: Actually, if I could
8 focus your --

9 MS. GARYPIE: Absolutely.

10 JUDGE WARD: -- response here.

11 So, what I was just asking, if it
12 wasn't burn for energy recovery, it was burned,
13 it would still be at least presumptively a solid
14 waste. That would have shifted the burden then
15 to Carbon Injection to prove one of the
16 exemptions apply.

17 MS. GARYPIE: Right.

18 JUDGE WARD: And the ALJ found, at
19 least, that they had demonstrated, on this
20 record, that it was used or reused as an
21 ingredient in an industrial process.

22 Carbon Injection also points out or

1 makes the claim in their reply briefs that they
2 demonstrated the other aspect of the exemption,
3 or at least the requirement in F of the Ohio
4 regulations to demonstrate that there is no
5 market for this material.

6 And they claim they did so based on
7 the specific contracts in this case with WCI as
8 well as some general statements in, I think it's
9 Mr. Rorick's testimony, that injectants are and
10 have been used as a substitute for coke.

11 And I'm trying to -- I just wanted to
12 probe and ask you if you thought that
13 demonstrated within the meaning of this
14 regulatory term that, in fact, that's evidence of
15 a known market for these injectants that were
16 used in this case?

17 MS. GARYPIE: Frankly, I was looking
18 strictly at burden of proof issues when I was
19 preparing for today. We had a third attorney who
20 was on this case when it was below, and that was
21 his area.

22 What I can say, however, is that if we

1 have -- if the materials were burned for energy
2 recovery, then it's our position that we don't
3 actually get to Section E where the defenses
4 occur.

5 And that is because particularly,
6 (e)(2) because at (e)(2)(b), it takes out
7 materials burned for energy recovery. But if
8 what you're saying is that -- we don't really get
9 to that point if EPA hasn't --

10 JUDGE WARD: I was just going to say,
11 in the footnote, it just -- it seemed to, from
12 the ALJ, the way that she had written the
13 footnote was, having failed to prove that it was
14 burned for energy recovery, the case is over.
15 And it just --

16 MS. GARYPIE: Right.

17 JUDGE WARD: -- I just wanted to probe
18 a little bit, well -- even if let's assume that's
19 true. Let's assume that the Board were to
20 conclude you had failed to prove that it was burn
21 for energy recovery within the meaning of the
22 regulations, wouldn't there be an alternative

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1 argument that it was still burned, and so the
2 burden would have shifted to the company to prove
3 that the exemption applied including
4 demonstrating that there was a known market for
5 these injectants?

6 MS. GARYPIE: Well, I think that our
7 prima facie case is, in Section C, is burn for
8 energy recovery, so we would have to prove the
9 whole -- the entirety of it.

10 So, I think if we didn't get to -- if
11 we just had that it was burned but not for energy
12 recovery, I think we, you know, I think that our
13 initial burden would not have been met, and so we
14 wouldn't go -- then move to (e)(1).

15 JUDGE WARD: But your burden would
16 have been met to show it was a solid waste,
17 because it was at least burned. They would then
18 have to demonstrate that the exemption applied
19 including Subsection F.

20 MS. GARYPIE: That is certainly one
21 reading, I think. I guess when we looked at it,
22 we assumed that we would need to prove burning

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1 for energy recovery at our initial prima facie
2 case. And so, we would need to prove both.

3 And so, if we're not proving both, we
4 don't then move to (e) --

5 JUDGE WARD: And you didn't argue in
6 the alternative to, at least, put in question the
7 issue of these injectants -- that there be a
8 known market for these particular injectants?

9 MS. GARYPIE: That is correct. In the
10 briefs on appeal, we did not. I think below, my
11 co-counsel did get into some of that discussion,
12 and I can certainly provide citations to the
13 briefs to the Board if that's required. I cannot
14 right now, but --

15 JUDGE WARD: All right. No further
16 questions on that.

17 JUDGE FRASER: Any further questions
18 for EPA?

19 We thank EPA, and we invite Carbon
20 Injection to the stand. And I will ask at the
21 outset, if you wanted to reserve any of your time
22 at the end, or not sure we're coming back to EPA.

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1 It would have been EPA, I'm sorry. You do have a
2 minute left I saw.

3 We added 15 minutes, and it was
4 initially? So, it's 45 total. If we could reset
5 the clock before us.

6 Thank you.

7 Ms. Eiber, is it? Eiber?

8 MS. EIBER: Eiber. Thank you.

9 JUDGE FRASER: Eiber.

10 MS. EIBER: Thank you very much. I'm
11 Keven Eiber. I'm here for the Respondents,
12 Carbon Injection Systems. Eric Lofquist and his
13 partner, Scott Forster, who's holding down the
14 fort back home and my partner, Meagan Moore, is
15 with us today.

16 So, we've not had the opportunity to
17 appear previously before the Board. It's a
18 beautiful space that you have. I wish I could
19 say we were completely delighted to be here. I
20 don't think we are delighted to be here.

21 When Mr. Lofquist and his business
22 partner, Scott Forster, started Carbon Injection

1 Systems, this is certainly not a place where any
2 of us expected to end up, particularly with
3 respect to the issues that we're addressing here
4 this afternoon.

5 Just briefly, by way of a little
6 background, the evidence showed at the hearing
7 that back in 2005, when they were building the
8 facility in Warren, Ohio, for the storage and the
9 supply of oil to the blast furnace, my clients
10 and a number of brokers and generators of
11 chemical intermediary materials worked very hard
12 exploring the whole issue that we're talking
13 about here today.

14 They explored whether injectants were
15 intended for the blast furnace, whether
16 injectants intended for a blast furnace would be
17 regulated by EPA as waste because they were being
18 burned for energy recovery.

19 Nobody had any question about what the
20 Cadence discussion addressed or the nature of the
21 conclusions that had been reached back in 1985 by
22 EPA. Everybody understood that.

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1 But, those conclusions were thought to
2 be wrong. And so, an effort was undertaken in
3 2005 to approach the Agency, to approach U.S. EPA
4 and to approach Ohio EPA to try to convince them
5 that, in fact, they ought to revisit that
6 discussion in Cadence and reach a different
7 conclusion about whether injectants supplied
8 substantial useful heat energy to a blast
9 furnace.

10 JUDGE FRASER: And didn't you get an
11 answer that the Agency stood by Cadence?

12 MS. EIBER: We did. We did. In
13 December of 2005, there was a letter that came
14 from Margaret -- I'm going to pronounce it --

15 JUDGE FRASER: Guerriero.

16 MS. EIBER: Thank you.

17 And also, at the same time, a letter
18 from her counterpart at Ohio EPA that said yes,
19 we're sticking by our Cadence discussion.

20 That was the whole basis for the fair
21 notice defense that we raised in the case below.

22 There was one shipment of material

1 that could have been characterized, admittedly
2 was characterized, as a hazardous waste that had
3 been received by the facility prior to that
4 determination being made in December of 2005.

5 And the position that we took was
6 that, we get it. That shipment never should have
7 come in. We jumped the gun. It slipped in. The
8 people at the factory didn't know, you know, what
9 the decision had been made at the corporate
10 office.

11 But that was it. These individuals,
12 this company was approached over the years many,
13 many times with offers to buy different materials
14 for the blast furnace. And every time they asked
15 the question, could this be characterized as a
16 hazardous waste? If the answer was yes, they
17 said we're not taking it.

18 They never bought any material. In
19 other words, they acquiesced in the decision that
20 they got in 2005. And they didn't pursue it
21 further. We thought about it in 2006. It's very
22 expensive. To go through a delisting procedure

1 would be astronomically expensive, and there were
2 other circumstances that came up in April of 2006
3 that prevented them from really devoting any more
4 time and resource to the question.

5 They just bought other material. It
6 didn't really matter. They weren't buying
7 hazardous waste. They weren't accepting
8 hazardous waste at this facility.

9 So, and there was plenty of evidence
10 of this at the hearing from the three brokers
11 that testified and from the two Respondents that
12 testified.

13 And there was a -- there are boxes of
14 e-mail correspondence back and forth that
15 demonstrate this course of dealing. If it was
16 offered, if it was a hazardous waste, they didn't
17 buy it.

18 JUDGE STEIN: So, does your point go
19 to liability, or does your point go to if
20 liability is found there -- this should be taken
21 into account in determining a penalty. I'm
22 trying to figure out where you're heading.

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1 MS. EIBER: It goes a little -- I
2 think it goes to the fair notice question that
3 has been raised. And there was a suggestion
4 during the course of Mr. Cahn's comments that
5 somehow there was a misunderstanding about what
6 Cadence meant.

7 There was no misunderstanding about
8 what EPA intended to regulate. That's not enough
9 to give notice, though, of this chemical energy
10 theory. It gave them notice as of December of
11 2005 that EPA would intend to regulate these
12 materials. That's why they didn't take these
13 materials any more.

14 JUDGE STEIN: But, let's assume that
15 --

16 MS. EIBER: There was one shipment
17 that came in.

18 JUDGE STEIN: -- excuse me. Let's
19 assume that I buy your argument that if EPA
20 intended to regulate chemical energy as opposed
21 to the Cadence discussion and heat value, if
22 there isn't fair notice, okay? Where does that

1 take you with respect to the questions that Judge
2 Fraser was asking about the heat value?

3 Because it seems to me that Cadence
4 did put you on notice as of the time of the
5 regulations and as the basis for all the inquiries
6 to EPA that you knew that the Cadence product was
7 regulated.

8 So, that's why I'm -- are you telling
9 me that the only thing that is at issue here --
10 that this case is about one shipment of hazardous
11 waste?

12 MS. EIBER: No.

13 JUDGE STEIN: Or potentially hazardous
14 waste?

15 MS. EIBER: If the Agency intended to
16 regulate this material, the point -- the only
17 point that I was trying to make to the Board is
18 that my clients acquiesced in this. They
19 acquiesced in this back in 2005.

20 That's why we don't really -- that's
21 why we never expected to be here. Okay? We're
22 now almost a decade later, and we're still

1 litigating this.

2 They understood what the Agency wanted
3 to do. They got it. But they always thought
4 that the Agency was wrong. Okay?

5 And the Agency brought this case
6 anyway. And at the end of the day, we went to a
7 hearing, and I think we proved that, in fact, the
8 Agency was wrong.

9 We acquiesced in what the Agency
10 wanted us to do, but the Agency was wrong. They
11 did not have the jurisdiction to regulate this
12 material in the blast furnace.

13 And so, at the end of the day, it's
14 not just about one shipment, it's not about that
15 at all. The question is whether or not these
16 materials, in fact, provide heat energy to the
17 blast furnace. And if they don't, then the
18 Agency can't regulate them as a solid waste or,
19 therefore, a hazardous waste.

20 JUDGE FRASER: Well, let's turn --

21 MS. EIGER: Because for something to
22 be a hazardous waste, it has to be a solid waste.

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1 JUDGE FRASER: Let's turn to that
2 question, so we can come back to fair notice and
3 potentially what you would see, were we to remand
4 this case, what you would think appropriate
5 remedy or issues that are left on the table, all
6 of those questions.

7 But, if we get back to -- and putting
8 -- let's assume we agree with you that the Agency
9 didn't provide adequate notice that the
10 regulation includes burning for chemical
11 recovery.

12 So, we're dealing with burning for
13 heat recovery type of questions at this stage of
14 the questioning.

15 I want to take a slightly different
16 tack just for a minute.

17 In reading the ALJ's decision and then
18 the underlying record, didn't Carbon Injection
19 Systems claim a \$10 million tax credit in
20 alternative fuel mixture -- alternative fuel
21 mixture tax credits in the years 2007 to 2009 for
22 the hydrocarbon materials it was injecting into

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1 the WCI blast furnace?

2 MS. EIBER: There were -- I don't know
3 a lot about the tax credit issues.

4 There were, my understanding, tax
5 credits available for the type of operation that
6 they had as a result of their inclusion of
7 certain renewable-sourced materials in with the
8 oil.

9 JUDGE FRASER: Right, and -- but, the
10 definition of fuel in the relevant IRS Bulletin,
11 it's not identical but, arguably, it's
12 essentially equivalent to how EPA defines burning
13 for energy recovery in the 1985 preamble that is
14 something burned for its heat value.

15 And so, the question that we have is
16 if the company is claiming it's a fuel, the oil
17 that they're using as injectants are fuels for
18 purposes of the IRS, a sister Agency, and getting
19 a \$10 million tax credit for that, how can they
20 argue before us that it's not a fuel?

21 MS. EIBER: I don't think the IRS is
22 concerned with heat, and I don't think IRS is

1 concerned with products of incomplete combustion,
2 and I don't think IRS is concerned with the
3 problem of the volume of solid wastes and
4 hazardous wastes.

5 JUDGE FRASER: Well, with all due
6 respect, the IRS definition of alternative fuel
7 mixture is a mixture is used as a fuel when it is
8 consumed in the production of energy.

9 Thus, for example, a mixture is used
10 as a fuel when it is consumed in an internal
11 combustion engine to power a vehicle or in a
12 furnace to produce heat.

13 MS. EIBER: IRS's regulations were
14 concerned primarily with the -- with encouraging
15 renewable energy sources versus petroleum-based
16 or non-renewable sources.

17 And I don't think that it would be
18 fair or really meaningful to try and draw
19 conclusions about what EPA meant in 1985 when it
20 wrote these regulations based on something that
21 the IRS put in a the tax code many, many, many
22 decades later.

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1 JUDGE FRASER: Right, the question I
2 have is --

3 MS. EIBER: That, to me, seems like
4 way too tenuous of a --

5 JUDGE FRASER: Well, no, I'm saying
6 that this is the U.S. Government. And so, your
7 client has argued before one branch of the
8 government that the materials that they are using
9 are fuels and that the fact that they are using
10 fuels, and one of the definitions is the
11 production of energy, so they're using them as
12 fuels. One of the examples is heat.

13 The other branch, they're coming to
14 EPA saying, but we're not a fuel.

15 And so, I'm really trying to reconcile
16 those two points.

17 MS. EIBER: My client doesn't come to
18 the EPA, in this case, and say these aren't fuels
19 in the way that the tax code means.

20 My client comes to the EPA in this
21 case and says, these materials don't provide
22 energy to the blast furnace.

1 IRS doesn't care about that. That's
2 not their issue.

3 Whether they're fuels or not, is sort
4 of an interesting question but it raises a whole
5 host of other regulatory conundrums in the
6 context of this case.

7 Because there are other provisions in
8 the solid waste definition that says if you're
9 using these things as fuels, and they are fuels,
10 then they're still not solid wastes.

11 The EPA's position in this case is
12 that they weren't fuels.

13 JUDGE FRASER: Well, turning --

14 MS. EIBER: They said that they were
15 -- they gave energy recovery because we called
16 them fuels, but they weren't fuels, because if
17 they'd been fuels, they would have been exempt
18 under a different provision.

19 JUDGE FRASER: So, turning to the
20 standard, the regulation that EPA used as the
21 basis of the charges against Carbon Injection
22 Systems, I take it you agree that for a material

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1 to be burned to recover energy, it must be burned
2 to provide substantial useful heat energy?

3 MS. EIBER: That is correct. That is
4 our position. That's always been our position,
5 and we believe that when you look at the course
6 of the discussion in the various preambles over
7 the years, that EPA really made that clear.

8 JUDGE FRASER: Okay. So, if we go
9 back to that standard, and looking at the -- not
10 the net part of the equation, but the heat in
11 part of the equation, that is where the Board is
12 focusing in light of that standard of do these
13 injectants provide substantial useful heat
14 energy, we first want to look at what's the
15 energy coming in, then we will look at whether
16 that's substantial and then whether it was
17 useful. Those are the three pieces we're trying
18 to pull apart.

19 So, in your response brief, you write
20 that EPA in the Cadence discussion wrongly
21 concluded that the injectants provided sensible
22 heat because the Agency failed to consider that

1 the injectants are added cold and the reducing
2 gases they produce needed to raise -- the
3 reducing gases they produce need to be raised to
4 raceway temperature.

5 And then you add, quote, "this
6 requires more heat energy than can be supplied by
7 the combustion of the injectants."

8 So, when you say more heat energy, the
9 implication I get from that is you are
10 acknowledging that burning the injectants
11 actually is giving off some heat. It's just not
12 enough heat to get to the raceway temperature.

13 MS. EIBER: Theoretically,
14 theoretically, if these materials are burned,
15 burned in the sense of combusted, combusted to
16 CO2 and H2O which is the, you know, the old
17 triangle we all saw in Girl Scouts where you need
18 fuel, oxygen, and heat, right?

19 So, theoretically, if you take these
20 materials, and you burn them, you get heat at
21 room temperature, at room temperature.

22 Dr. Poveromo testified that, in the

1 blast furnace and at the temperatures that are in
2 the raceway, they're not even combusted. They
3 are immediately and instantaneously dissociated
4 into carbon and to 2CO. And that's the point --
5 and I think it's actually in one of the pages
6 that you handed out in your handout a moment ago,
7 I have that quote, I think it's on page 8 or our
8 reply brief as well.

9 So, they're not even combusted.
10 They're immediately dissociated. And it's
11 interesting, when you look at the Cadence
12 discussion, Cadence talks about this reaction in
13 the raceway of these materials as if it's
14 something that happens in three stages.

15 I questioned Dr. Freuhan about that at
16 the hearing. Dr. Freuhan didn't agree with this
17 sort of three stage, he sort of talked about two
18 stages, then he said he really talks about it all
19 as one.

20 And when you look at Mr. Rorick's
21 testimony, I think it really makes no sense to
22 even try and break it up into three, it's one.

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1 These materials move through this
2 raceway in .003 seconds, three-thousandths of a
3 second. Okay? For these mate -- for whatever
4 happens to these materials, it's in three-
5 thousandths of a second in this raceway, and they
6 go from coming in to being -- some of the
7 materials go straight out, because we know from
8 Mr. Rorick's testimony that some of this carbon
9 is not combusted at all. Only a portion of it is
10 even dissociated into these reducing gases, but
11 it's immediately dissociated. And that is an
12 overall endothermic reaction. All three experts
13 were very clear about that. And Cadence is
14 actually -- the Cadence discussion is very clear
15 about that.

16 When you look at this together, it is
17 overwhelmingly endothermic. And even if you just
18 -- and even if you want to break it into these
19 three little pieces like Cadence did and you just
20 look at that middle step which is, in theory,
21 what you would call combustion which is when
22 these injections go to H₂O and CO₂ before they

1 get to 2CO and carbon.

2 If you look at just that step alone,
3 at the raceway temperature, they provide no heat
4 because they can't get to the point of
5 dissociation until they are heated up.

6 JUDGE FRASER: Ms. Eiber, if I go back
7 to -- you said all three agreed. If I go back to
8 the questions I was asking EPA, and so we'll
9 start with Dr. Freuhan on page 11 of the handout,
10 and this is from the transcript of the hearing,
11 pages 1180 to 1181.

12 MS. EIBER: Yes, he said exothermic.

13 JUDGE FRASER: He says it's an
14 exothermic reaction. That's --

15 MS. EIBER: I think he was confused.
16 I --

17 JUDGE FRASER: So, you're saying that
18 --

19 ME. EIBER: He was confused -- he was
20 actually confused about a lot of that discussion.
21 He was confused about Cadence.

22 JUDGE FRASER: But, does the -- did

1 you take -- did you challenge that conclusion at
2 the time in the hearing or is that the conclusion
3 in the record from the hearing?

4 MS. EIBER: I think if you look at --

5 JUDGE FRASER: Our job is to look at
6 the record.

7 MS. EIBER: I think if you look at his
8 entire testimony, I think you would agree that,
9 at the end of the day, Dr. Freuhan agreed with
10 Dr. Poveromo on these issues. And I think that's
11 why he didn't come back on rebuttal.

12 JUDGE FRASER: And what about Mr.
13 Rorick, you don't think that he testified it's
14 exothermic, either?

15 If we look at page 13 of the material
16 we handed to you, the question was asked if
17 carbon is oxidized, doesn't that mean energy is
18 being released?

19 And he says, when the carbon changes
20 from CO or to CO₂, there is an energy release.

21 That is correct, that's standard
22 science.

1 That's your own expert.

2 MS. EIBER: When -- if you look at
3 that entire discussion with Mr. Rorick at that
4 point of the hearing, I think what you will see
5 is that he was talking about these not as what is
6 happening at a raceway temperature in the
7 raceway, he made that statement in the context of
8 that is sort of basic chemistry.

9 In other words, when you --

10 JUDGE FRASER: And you think the
11 chemistry is changing?

12 MS. EIBER: No, he was talking about
13 sort of basic chemistry. Go back to your
14 triangle with, you know, fuel, heat and oxygen.
15 He wasn't talking about what happens at the
16 raceway temperature.

17 And that was the whole point that Dr.
18 Poveromo made. He said, sure, you burn this
19 stuff. You burn this stuff generally, you're
20 going to get -- these are generally considered to
21 be exothermic reactions when you have a
22 combustion reaction. No question. That's what

1 Dr. -- or Mr. Rorick was talking about when he
2 made that statement.

3 But Dr. Poveromo's whole point is that
4 when you do this at 2,800 degrees Fahrenheit,
5 that's not what happens. At 2,800 degrees
6 Fahrenheit, in the raceway, when you're at those
7 raceway temperatures, you have -- you don't have
8 that sort of standard grade school science
9 combustion reaction.

10 What you have is this dissociation
11 immediately which requires a lot of energy which
12 is why, when you put these materials into the
13 raceway, it lowers the temperature.

14 That's why you have to put more oxygen
15 enrichment in. That's why you have to control
16 these -- you know, that's why you have these --

17 JUDGE FRASER: But, we're --

18 MS. EIBER: -- operating controls.

19 JUDGE FRASER: The question we're
20 asking you isn't whether the injectants give you
21 all the heat you need to get back up to the
22 raceway temperature. We're trying to ask, are

1 the injectants bringing any heat at all to the
2 table?

3 We can get to the different question
4 of whether it's substantial. We can get to the
5 question of whether it's useful. But, you still
6 -- it seems to me, you're still arguing net, that
7 there is no net increase as opposed to the very
8 fact that the simple burning of the hydrocarbons
9 in the oil that are being injected is giving off
10 heat.

11 ME. EIBER: I think when you look at
12 the statement from Dr. Poveromo's report, Dr.
13 Poveromo says, there's no heat. There is no heat
14 from that reaction that you gain in the raceway,
15 even when you break it down to that middle step,
16 there's no heat.

17 Now I think that's clear from Dr.
18 Poveromo's written statements that were
19 introduced into evidence. I understand that the
20 experts aren't 100 percent crystal clear on that,
21 but I think, on balance, at the end of the day,
22 Judge Biro did a very careful and thorough

1 evaluation of all of this testimony and of all of
2 these statements and concluded that, on balance,
3 what Dr. Poveromo had to say about it was the
4 more compelling of the evidence that she had in
5 front of her.

6 JUDGE FRASER: Well, let's go to the
7 heat energy in of the injectants. So, I want to
8 discuss the contract that Carbon Injection
9 Systems had with WCI.

10 Doesn't that contract call for an
11 injectant with a minimum of roughly 17,000 BTUs
12 per pound?

13 MS. EIBER: It does. And there was
14 testimony, both from experts and from the brokers
15 and, I believe, it was from Dr. Sass and also, I
16 don't remember if it was from Mr. Forster or from
17 Mr. Lofquist, but they talked about why they were
18 using BTU as a measure in their specifications in
19 their contract.

20 And I think that EPA's expert
21 addressed this as well, but generally speaking, a
22 BTU test is a fairly good, from a businessman's

1 purpose, equivalent of the carbon content that
2 you'll get from the material.

3 You can do a BTU test on site at the
4 facility quickly. It doesn't cost much. You can
5 do it while the truck is there.

6 If you're going to do a carbon -- a
7 more sophisticated carbon content test, that's
8 like, I think the testimony might have been \$200
9 or \$300 per test and there has to be --

10 JUDGE FRASER: No, I understand that
11 they were using it as a marker for carbon.

12 MS. EIBER: They're using it as a
13 marker for carbon.

14 JUDGE FRASER: But, doesn't that still
15 mean that you may have been using it as a marker
16 for carbon, but the very fact that you had that
17 higher carbon content at 17,000 BTUs per pound,
18 it's still indicative of how much heat you can
19 get out of the burning of that material. Is it
20 not?

21 MS. EIBER: Not at all.

22 JUDGE FRASER: Why isn't it not?

1 MS. EIBER: No. Because the material
2 is not being combusted for heat. It's been
3 dissociated into its elements, and the elements
4 then are reacting and reducing reactions
5 throughout the upper part of the blast furnace --

6 JUDGE FRASER: But, didn't the Cadence
7 discussion say it didn't matter?

8 MS. EIBER: They're not providing --

9 JUDGE FRASER: Cadence said it doesn't
10 matter if you get -- even if the heat you get is
11 incidental to the primary purpose. The Cadence
12 discussion, the Agency was very clear, that said
13 heat can be an incidental side effect, but the
14 fact that you get heat out of it doesn't mean
15 that we're not regulating this material if it
16 provides substantial useful heat.

17 MS. EIBER: The overwhelming evidence
18 at the hearing was, was that notwithstanding how
19 much carbon is in these materials, you're not
20 getting heat from them.

21 When the carbon reacts in the blast
22 furnace, in order for that carbon to strip an

1 oxygen molecule from the iron ore, that is a
2 highly endothermic reaction. It is absorbing
3 heat. You're not getting any heat from these
4 materials.

5 So, you're not giving off --

6 JUDGE STEIN: So, you're not getting
7 heat?

8 MS. EIBER: They're not giving off
9 heat. They're not being burned.

10 JUDGE STEIN: They're not giving off
11 heat, or you're not getting net heat?

12 MS. EIBER: They're not giving off
13 heat. They are not giving off heat. These are
14 endothermic reactions. They are heat-absorbing
15 chemical reactions.

16 The heat is coming solely from two
17 sources, all of the heat in the blast furnace
18 comes from two places. It comes from coke that
19 is being combusted, and it's coming from the hot
20 blast air that's coming in through the tuyeres.
21 There's no heat coming from these injectant
22 materials.

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1 JUDGE WARD: When the carbon turns to
2 CO or CO₂, isn't that combustion, and doesn't
3 that generate heat?

4 MS. EIBER: That's not combustion, and
5 it does not generate heat, no.

6 JUDGE WARD: Because?

7 MS. EIBER: Because when the materials
8 go from carbon dioxide to carbon --

9 JUDGE WARD: I'm starting -- I'm
10 taking you all the way back. So, the carbon --
11 the hydrocarbons? When the hydrocarbons -- the
12 hydrogen and the carbon are separated and the
13 carbon becomes either CO₂ and then CO or, I
14 think, you're trying -- you've made the argument
15 that it instantaneously becomes CO, but that
16 process is oxidation, and that does generate
17 heat, doesn't it?

18 MS. EIBER: That whole process --

19 JUDGE WARD: Just the step of C to CO,
20 or CO₂, does that generate heat?

21 MS. EIBER: From -- well, it doesn't
22 start out as C, so it doesn't go from C to CO₂.

1 But, that step alone would, in theory, provide
2 some sensible heat if it was done at room
3 temperature.

4 If it's done at a raceway temperature,
5 it does not. That was what Dr. Poveromo
6 testified to.

7 So, in the raceway, it doesn't.
8 That's what the evidence showed.

9 JUDGE WARD: So, at page 10 of your
10 reply brief, there's a couple of points that
11 you're making here about it being the combustion
12 occurring so rapidly as to be virtually
13 instantaneous. I don't think it -- it's not
14 instantaneous, there is a however finite a period
15 of time or a small period of time, there is a
16 period of time that passes, correct?

17 MS. EIBER: Dr. Rorick testified that
18 these materials pass through the raceway at -- in
19 a time span of between .003 and .005 seconds.
20 So, between three and five thousandths of a
21 second.

22 Now, if for purposes of applying

1 regulations to the regulated community, that's
2 not instantaneous, I don't know what
3 instantaneous would be. But, that's the time
4 frame.

5 JUDGE WARD: So, the time matters how
6 long it takes for something to combust as to
7 whether it's regulated or not?

8 MS. EIBER: I think it matters if you
9 want to say are these materials combusted, and do
10 they give off heat, yes, I think it matters. I
11 think it is impracticable for a regulation to
12 only apply if you can break something down to
13 something that happens in less than .003 seconds
14 when what happens is an overall decrease in heat
15 value that results from the use of these
16 materials.

17 JUDGE WARD: So, in terms of the
18 preamble in 1985, the Agency wasn't really
19 concerned with how much time it took for those
20 steps to occur, the Agency was looking at however
21 quickly it occurred that there was at least in
22 one step of that process the release of heat

1 energy.

2 And so, didn't that -- I mean to now
3 be arguing that you're not covered by that
4 discussion because, in your view, it happened too
5 quickly to really have happened?

6 MS. EIBER: I think it's interesting,
7 if you look at the progression of the Agency's
8 discussion of what happens in a blast furnace, I
9 think that that might be instructive on this
10 point.

11 Because, in Cadence, there is this
12 discussion that sort of breaks it down into
13 endothermic, exothermic, endothermic, overall
14 endothermic. I think that's what Cadence says
15 about the energy from these reactions.

16 The Cadence argument concludes that
17 there's energy supplied by these injectants,
18 despite that analysis. The Cadence discussion
19 concludes that there's energy provided by these
20 injectants, because it goes back to the overall,
21 sort of, global energy balance that Dr. Freuhan
22 talked about in his testimony where they just

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1 say, look, in a very simplistic way, we're going
2 to take the BTU value of everything that goes
3 into the blast furnace and the BTU value of
4 everything that comes out of the blast furnace in
5 an on balance, you know, it uses a whole lot of
6 energy and it comes from coke, but if you
7 substitute anything for coke, then, you know,
8 we're going to equate it to what you get from
9 coke.

10 It was a very simplistic overall
11 energy balance theory. And at the end of the
12 Cadence argument, Cadence concludes that it's
13 okay for EPA to reach the conclusion that the use
14 of these materials supplies some heat energy
15 because of that overall energy balance approach
16 and because of the top gas argument.

17 And then if you go to the 1987
18 discussion, there's a whole other discussion of
19 the blast furnace.

20 The Agency, in that discussion, has
21 completely abandoned this notion that injectants
22 supply heat energy, and the only thing that forms

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1 the basis for the Agency's continuing view that
2 there's some heat energy supplied, is the use of
3 top gases. That's it.

4 And then, you go to 1991, and the
5 Agency doesn't even revisit it.

6 So, I think the Agency abandoned this
7 notion that somehow injectants supply any amount
8 of heat energy. They abandoned that by 1987.

9 And so, if you look at the discussion
10 in the 1987 preamble, you won't see it. You
11 won't see it.

12 Basically, what the Agency did over
13 these -- over its sort of, you know, progression
14 of thinking about these issues, the Agency
15 struggled a lot with the whole idea of material
16 recovery versus energy recovery.

17 You know, the Agency came up with this
18 -- the Agency clearly was concerned with burning.
19 We know that when you go back to the 1983
20 preamble, and you can see why, it makes sense.
21 Burning is an issue, but jurisdiction's also an
22 issue.

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1 And so, the Agency said, look, we've
2 got three different kinds of combustion devices.
3 We've got incinerators, we don't have any issues
4 with incinerators. People put things in
5 incinerators to get rid of them, that's clearly
6 waste disposal. We can stop talking about that.

7 We've got boilers. Boilers clearly
8 are used for heat energy. You know, that's what
9 a boiler does. You can burn anything in a boiler
10 and you get heat from it. You can get heat from
11 pretty much anything you want to burn, you know,
12 in a boiler kind of a setting.

13 So, the Agency's comfortable with its
14 boilers, because you can logically determine that
15 heat's the purpose there.

16 But they struggled with the idea of
17 these other types of furnaces and the blast
18 furnace was one where, really, there's material
19 recovery going on. And what do we do about that?
20 Because we're not sure that's really waste
21 disposal, that's not really part of the waste
22 disposal problem.

1 So, you've got this struggle about, is
2 it within our jurisdiction or is it without our
3 jurisdiction when we're talking about material
4 recovery?

5 And so, there's this progression of
6 thinking. And the Agency, when it's talking
7 about blast furnaces, comes up in this Cadence
8 discussion with this idea that, okay, we can
9 regulate the blast furnace because we're getting
10 heat energy overall, this sort of global energy
11 balance concept, and we've got these top gases.

12 In '87, well, we've still got the top
13 gases, that's all we've got, at this point, and
14 then they don't revisit it again.

15 JUDGE FRASER: So, if the Agency had
16 proven in this case that Carbon Injection Systems
17 was using the energy in the top gas or the heat
18 in the top gas in some way, then we would be
19 having a different conversation from your
20 perspective? Is it all about where the top gases
21 are used?

22 MS. EIBER: We'd be having a very

1 different conversation. I think we'd still be
2 having a conversation. It would be different.

3 When, first of all, the Agency in this
4 case, I think, unquestionably took the position
5 that, based on Cadence, and really without going
6 further than Cadence, that all they had to show
7 was the use of injectants in the raceway of the
8 blast furnace. That was their case going into
9 this hearing, you know, that was their approach.

10 They elected to really ignore the top
11 gas issue, in large part, except in the context
12 of their penalty discussion. The Agency said,
13 well, we've got to worry about these top gases,
14 because we've got emissions, and we've got --

15 JUDGE FRASER: But didn't Mr. Rorick
16 say that the blast furnace at issue here was a
17 closed system?

18 MS. EIBER: No, he did not.

19 JUDGE FRASER: I think that's in his
20 declaration.

21 ME. EIBER: He said that -- well, he
22 may have said that it was a closed system in the

1 sense that they're not just going to straight to
2 the atmosphere.

3 In most blast furnaces, and, in fact,
4 I think Mr. Beedle testified in this case that
5 there was an air permit at the WCI facility and
6 there was a scrubber and a dust collection
7 system.

8 So, in that sense, absolutely, it's a
9 closed system in the sense that these are not
10 uncontrolled air emissions.

11 The question, though, about top gases
12 is, what's the facility doing with them. Okay?
13 And when you look at these sort of general
14 statements about how a typical blast furnace is
15 built or how a typical steel plant works, what
16 you see is that top gases are considered useful.

17 You know, no manufacturer gets rid of
18 something that's useful if they can use it,
19 right, that's -- you might as well just put your
20 money up the stack. So, they're useful.

21 Typically, they're used in power
22 plants. They might be used at the steel mill.

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1 They could be used in boilers. But, they're not
2 necessarily used in the stoves to heat the hot
3 blast, and they're oftentimes flared.

4 We sat in the courtroom at the hearing
5 in this case and looked at the flare at the LTV
6 stack that was visible through the window of the
7 courthouse.

8 JUST WARD: So, Counsel, I think that
9 the Agency argued here that the record shows that
10 it's not just -- it's industry practice to use
11 these top gases in the blast furnace or
12 otherwise, perhaps.

13 MS. EIBER: Or otherwise.

14 JUDGE WARD: But, and as you just
15 said, what manufacturer would simply just let
16 them go to waste? They'd put them to some use.

17 And so, if they were used in some way,
18 whether they were used in this blast furnace or
19 otherwise put to some use, doesn't that bring the
20 top gases into -- bring these injectants into the
21 regulatory scheme because of that use of the top
22 gases?

1 MS. EIBER: Well, first of all,
2 they're not out of the regulatory scheme. Okay?
3 Top gases are clearly regulated by the EPA.

4 JUDGE FRASER: I think the question is
5 whether the injectants. Doesn't it bring the
6 injectants into the regulatory scheme, because
7 they're being put to some use?

8 MS. EIBER: Not any more so than the
9 iron ore, or the limestone, or the coke, or
10 anything else. Under that, if you take that
11 approach to its logical conclusion, every raw
12 material that's used in the manufacturing
13 operation, if the manufacturing operation has a
14 coke product or a byproduct that you could say is
15 ever burned anywhere or is discarded in some way
16 if it's thrown away in a landfill, by that
17 rationale, every raw material ends up being a
18 solid waste at the outset.

19 And I think it's really interesting to
20 think about this in a slightly related, but
21 different context.

22 Issues about what's a solid waste and

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1 what isn't a solid waste come up a lot of
2 different ways. This is a very complicated rule,
3 and it's got lots of little parts and exceptions
4 and exclusions and bells and whistles. And one
5 of those has to do with spent materials.

6 And I will say that your introduction
7 I guess it was still this afternoon was very,
8 very good except for one point that I do want to
9 point out.

10 There was never, I don't think, any
11 assertion in this case that the materials in
12 question here were ever spent materials. These
13 were clean manufactured streams that came
14 straight out of chemical manufacturing
15 facilities. These are not like Cadence, they're
16 not spent products, they're not spent solvents.
17 They're not previously used in any way.

18 But it's interesting to think about
19 spent materials as an analogy because when -- and
20 I don't remember exactly which case it was, but
21 when a regulated entity has a material that they
22 have used for its original purpose and they then

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1 want to take that, when they can't use it for
2 that purpose any more, and they want to use it
3 for something else like a fertilizer, okay? That
4 regulated entity may say, look, it's not a spent
5 material. Okay?

6 It's not a solid waste, because it's
7 not a spent material yet, because it's not spent,
8 because I can still take it and use it for this,
9 and then I can use it for this, even if it's not
10 in the same facility and not for the same purpose
11 and maybe not even by the same people.

12 And the Agency says, no, we're not
13 going to do that. We're going to look at the
14 original process, the original purpose, and we're
15 going to stick to this process. And we're going
16 to say, is this a solid waste based on sort of
17 this parameter or this sort of scope.

18 JUDGE FRASER: Ms. Eiber, I think
19 we're -- if I can -- please hold on just for a
20 second, hold on for a second.

21 I'd like to return to the top gases
22 and what I really want to hear from you is, did

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1 you introduce any evidence at the hearing below
2 as to how this facility was using the top gases,
3 or did you stay silent on that point?

4 MS. EIBER: We addressed the top gas
5 issue in response to the way that Region V raised
6 it in this case.

7 So, we actually put in a lot of
8 evidence about the top gases, but EPA never
9 claimed that this blast furnace got heat energy
10 from top gases. That was not part of their case.

11 And so, we did put in a fair amount of
12 evidence about the top gases and what our
13 evidence showed was that top gases are generated
14 by a blast furnace inevitably. And that the
15 volume of top gases that is generated is a
16 function of the production rate of the furnace.

17 JUDGE WARD: I don't mean to cut you
18 off, but I really want to get to the point. So,
19 it doesn't sound as if you introduced any
20 evidence as to how these top gases were used,
21 maybe about their composition and how they might
22 have been generated, but you didn't introduce

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1 evidence as to how they were used at this
2 facility?

3 MS. EIBER: There was one piece of
4 evidence that was introduced as to how the top
5 gases were used at this facility and that was a
6 letter that I believe was authored by Mr.
7 Lofquist back during the 2005 exchange of
8 communications with the Agencies that indicated
9 that the top gases were not used in the stoves.

10 Now, Judge Biro mentions that one
11 piece of evidence. As far as I am aware, that is
12 the only piece of evidence that is in the record
13 as to how the top gases were used at this
14 particular facility because the EPA didn't base
15 their case on the use of the top gases in this
16 facility.

17 It was the EPA's position that they
18 were uncontrolled, and that it was an open
19 system. And we addressed that.

20 Now what Mr. Rorick did say, though,
21 that goes to the extent to which the injectants
22 even contribute to top gases is that if you use

1 injectants as a substitute for coke, the volume
2 of your top gases goes down.

3 JUDGE FRASER: Can I go to that point
4 right now on coke? So, coke is added to the
5 furnace, the blast furnace, to provide heat,
6 correct?

7 MS. EIBER: It provides three
8 different roles in the blast furnace. The coke
9 goes in at the top. It's charged into the top in
10 layers with the iron ore and limestone and other
11 dry, lumpy raw materials. And it provides --
12 it's in there for three purposes.

13 It's in there because, as rocks, as
14 big chunks, it provides this permeable grid. If
15 you can imagine water in a bucket of rocks. So,
16 it provides structure to what's happening in the
17 gas furnace.

18 It also provides a source of reducing
19 gases. So, it's in there for its material value.
20 And it provides, by being combusted in the
21 raceway, it provides the heat that then generates
22 the reduction reactions that take place

1 throughout the various levels of the blast
2 furnace.

3 JUDGE FRASER: And with respect to the
4 heat component of those three functions for coke,
5 do you know what the BTU per pound value is of
6 coke roughly?

7 MS. EIBER: I don't know off the top
8 of my head.

9 JUDGE FRASER: I think it's in the
10 12,000, 13,000 BTU per pound range.

11 MS. EIBER: It could be, I don't know
12 the answer to that.

13 JUDGE FRASER: So, presuming that, if
14 we have coke at 12 to 13,000 BTU per pound and
15 you're adding these injectants at 17,000 BTU per
16 pound, isn't it reasonable to conclude that the
17 injectants are, by the very nature of however
18 fast it takes, combusting, releasing that amount
19 of the heat energy into the system?

20 MS. EIBER: No, because the injectants
21 aren't going in as an actual substitute for any
22 of the amount of the coke in the blast furnace

1 that is providing the heat.

2 Not all the coke is burned. There's
3 -- coke does three different things.

4 JUDGE FRASER: No, I heard that, but
5 I also -- but I heard you say that coke is in
6 part -- I want to focus on the heat part of coke,
7 not the other two components of coke, just the
8 heating value.

9 So, if we are talking about how much
10 heat is being generated by the coke and you're
11 adding -- and you have a blast furnace that has
12 no injectants and then you have a blast furnace
13 that has these oil injectants, don't you need
14 less coke -- it's still the same amount of coke?

15 MS. EIBER: You actually use a little
16 more coke because you need a little more heat
17 because of the injectants.

18 So, you actually -- you don't use as
19 much coke -- the amount of coke that's in that
20 blast furnace that is being burned goes up a
21 little. And the amount of coke that's in that
22 blast furnace that is being -- that is reacting

1 as a source of reducing gases is going down.
2 Okay?

3 But, the amount of coke that's being
4 burned goes up.

5 JUDGE FRASER: And is the --

6 MS. EIBER: So, because coke is doing
7 three different things. Not every molecule of
8 coke does all three things, different amounts of
9 -- it's like a, you know, some of the coke does
10 this, some of the coke does this and some of the
11 coke does this.

12 The injectants only substitute for the
13 coke that's providing reducing gases and it
14 doesn't substitute at all, in fact, it requires a
15 little more of the coke that is providing heat.

16 JUDGE FRASER: But in --

17 MS. EIBER: The coke that provides
18 heat is not the same as the coke that's providing
19 the reducing gases, it's doing three different
20 things.

21 JUDGE FRASER: I understand that and
22 I'm not worried about those other two right now,

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1 I'm trying to get back to the heat end. And so,
2 we can put aside the reducing gases, we can put
3 aside the grid, I want to focus on the burning of
4 the coke and that there is coke -- the carbon in
5 the coke is going to carbon monoxide in the
6 raceway, is it not? Just that part of that coke,
7 the function of that part of the coke?

8 MS. EIBER: It would be such a
9 wonderful thing to be able to have our experts
10 here today. I'm sure it would be useful to all
11 of us.

12 I don't think it would be accurate,
13 according to Dr. Poveromo, to say that the coke
14 is providing -- did you say carbon dioxide or --

15 JUDGE FRASER: Carbon monoxide, CO.

16 MS. EIBER: Carbon monoxide in the
17 raceway. The carbon monoxide is all up in the
18 furnace. Nothing stays in the raceway. It
19 doesn't stay in the raceway.

20 JUDGE FRASER: So, none of the coke
21 that's at the -- that's coming down into the
22 raceway zone is not combusting there and the

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1 carbon is not generating the gases? Because I
2 understood the gases were going up.

3 MS. EIBER: The gases go up.

4 JUDGE FRASER: So, they've got to be
5 coming from some place to -- they've got to
6 combust down below from something to be able to
7 become CO to go up.

8 MS. EIBER: That's right. The coke
9 combusts in the raceway.

10 JUDGE FRASER: So, that is the carbon
11 in the coke is combusting in the raceway to make
12 CO?

13 MS. EIBER: It doesn't combust to CO,
14 it combusts to CO₂ and H₂O. It dissociates which
15 is an endothermic reaction to CO and carbon.

16 JUDGE FRASER: And that occurs --

17 MS. EIBER: That was the whole point
18 of the three step reaction that Cadence talked
19 about and that Professor Freuhan sort of
20 condensed into one step or two steps, depending
21 on which question he was answering.

22 JUDGE FRASER: So, it's your position

1 that the injectants are not providing any heat to
2 the furnace?

3 MS. EIBER: Correct.

4 JUDGE FRASER: And that is counter to
5 a statement that, if we turn to pages 29,
6 actually, it's page 32 in the handout, but this
7 is a Compliance Inspection Report that was
8 introduced into evidence before the ALJ. The EPA
9 inspector was Michael Beedle and the conversation
10 was had with Bob DeLost or DeLost --

11 MS. EIBER: DeLost.

12 JUDGE FRASER: DeLost, coordinator of
13 blast furnace operations and his statement on
14 page 32 is that the injection of the fuel
15 increases the temperature from approximately
16 1,600 to 3,300. The injection point of the oil
17 and natural gas is at the bottom of the furnace
18 and that the purpose of the injection is to add
19 heat value and that there is a baseline BTU value
20 of the fuel, otherwise, there would be a cooling
21 reaction.

22 And then, on the next page, he says,

1 WCI uses the oil for the BTU value in the blast
2 furnace.

3 So, how do you reconcile these
4 statements by the blast furnace operator at the
5 time of the inspection that the injectants are
6 being used to provide heat with the later
7 statements before the hearing -- in the hearing?

8 MS. EIBER: I don't think any of the
9 three blast furnace experts that testified at the
10 hearing would agree with this statement. I don't
11 think any person from EPA who authored any of the
12 discussions that we've seen in the preambles
13 would agree with this statement.

14 This statement's just completely
15 wrong. Mr. DeLost, I don't know who he is, he's
16 not the blast furnace operator, he says he's the
17 coordinator of blast furnace -- it says he's the
18 coordinator of blast furnace operations. I don't
19 know what that means. I don't know what his
20 educational background is. I don't know what his
21 experience is. And I don't know whether Mr.
22 Beedle accurately transcribed what he heard from

1 him.

2 He was not called to testify at the
3 hearing. And, you know, we don't who he is. But
4 I don't think there's any question but that this
5 statement is completely wrong.

6 JUDGE STEIN: But this was introduced
7 at the hearing, was it not?

8 MS. EIBER: I don't think EPA would
9 stand up here today and tell you that this
10 statement was correct in any way.

11 JUDGE STEIN: Was this introduced at
12 the hearing or not?

13 MS. EIBER: EPA introduced every
14 single piece of paper that it collected over a
15 ten-year investigation at this hearing. There
16 were hundreds and hundreds of thousands of pages
17 --

18 JUDGE STEIN: I'm just asking for a
19 simple question. Was it introduced or not?

20 MS. EIBER: This report was introduced
21 at the hearing.

22 JUDGE STEIN: Thank you.

1 MS. EIBER: And, in fact, Mr. Beedle,
2 at the hearing, recounted this statement. And I
3 think that the takeaway, really, the only
4 legitimate takeaway from this statement is that
5 going into this hearing, EPA believed, and this
6 is what Mr. Beedle was focused on, that it had to
7 prove that the injectants provided heat in the
8 raceway.

9 That's what he understood he needed to
10 do. That's why he asked Mr. DeLost the question.
11 That's why it's in the report, but it's not
12 correct.

13 JUDGE WARD: So, I think that the
14 question to focus on the addition or the addition
15 of heat from the burning of these injectants, the
16 reason it cools it off is because it nevertheless
17 doesn't get up to the existing temperature in the
18 raceway, correct?

19 MS. EIBER: Well, I don't read the
20 statement from Dr. Poveromo's report as being
21 limited to that single one point because he says
22 in his report that these materials immediately

1 dissociate and don't combust at all at the
2 temperatures that exist in the raceway.

3 He nonetheless does say, and I think
4 there's a number, if you look at the Wakelin
5 Report, if you look at the Jeschar & Dombrowski
6 White Paper which has a number of very sort of
7 interesting charts, you know, I think that they
8 all agree that Because these materials go in cold
9 and they have to be brought up to raceway
10 temperatures, that that overall has a chilling
11 effect on the raceway.

12 I mean, I think that everybody would
13 conclude that is true.

14 JUDGE WARD: But when they combust,
15 they still release positive heat even though it's
16 not enough to bring it up to the raceway
17 temperatures. And so, in that environment, the
18 overall temperature is lower.

19 But it still seems, at least to me,
20 that that is nevertheless adding positive heat
21 through that combustion process even if it is
22 virtually instantaneous. The record appears to -

1 - seems to suggest strongly that that is still,
2 in fact, happening.

3 MS. EIBER: I think that the record --
4 I think there is conflicting information in the
5 record on that point. That is, I think, the most
6 that I would say about it.

7 I think that Dr. Poveromo is -- I
8 think that his testimony suggests that there's
9 not even heat to that extent, but there's
10 certainly all of the other testimony would
11 suggest that, at a minimum, there's still a
12 chilling effect because of this need to bring the
13 temperatures up and the fact that they go in at
14 room temperature.

15 So, I think there's a little bit of
16 testimony on both sides on that point.

17 JUDGE FRASER: Well, in turning to
18 what Dr. Poveromo stated, and this is page 26 of
19 your packet, it's page 2544 of the hearing
20 transcript. And the question was posed, why
21 don't injectants help perform the energy role
22 that coke plays?

1 And Dr. Poveromo responded, the big
2 problem is because they're injected cold into a
3 blast furnace that's really the problem. If you
4 had some way to get the injectants into the top
5 of the furnace and somehow preheat them up to
6 raceway temperature, then, indeed, they could
7 provide an energy role. But, they're injected
8 cold and so it takes a lot of energy to heat them
9 back up to the raceway temperature and the net
10 reaction of heating them up, plus the reactions
11 themselves, those net reactions, are endothermic
12 and require energy.

13 But so, I don't read this as saying
14 that they're not brining -- the injectants aren't
15 bringing anything to the table, they're still
16 bringing 17,000 BTUs per pound to the table of
17 heat energy versus steam which you also could get
18 the hydrogen for the reducing agent which isn't
19 bringing any heat energy to the table or would
20 have a greater cooling effect, would it not?

21 So, what I'm struggling with is that
22 question of heat energy in, that if you're

1 looking for an injectant to be a reducing agent,
2 both of those injected cold would have to be
3 elevated to raceway temperature. It may take
4 more energy to do that.

5 But if there is one injectant that's
6 bringing no BTU value to the table, there's
7 nothing -- there's no carbon to burn and there's
8 another injectant that's bringing even more BTUs
9 per pound than coke has, how you can say that the
10 injectant, even if it needs more of a push to get
11 back to 3,500 isn't bringing in substantial --
12 isn't bringing in heat. We can get to
13 substantial and usable isn't bringing in heat.

14 MS. EIBER: I think that you can
15 certainly read the testimony that way. I do
16 think, though, that you have to also look at Dr.
17 Poveromo's statements about the immediate
18 dissociation and the fact that this is an
19 instantaneous sort of -- I hesitate to even call
20 it a step. It's this instantaneous sort of
21 process of these molecules dissociating, and at
22 the very -- you can't get them to the

1 dissociation point where they're going to turn
2 into the reducing cases without adding to them a
3 whole lot of heat.

4 And you get that heat from the
5 preheated coke that is burned in the raceway that
6 you're burning at a greater rate because you are
7 injecting oxygen in order to generate more coke
8 burning in order to deal with the injectants that
9 are going in.

10 JUDGE WARD: But, if you use steam as
11 an injectant as opposed to these fuel, wouldn't
12 you have to introduce even more energy?

13 MS. EIBER: I don't think you can use
14 steam as an injectant. I think it's --

15 JUDGE WARD: I'm not sure exactly
16 where that notion comes from.

17 JUDGE FRASER: It's in the testimony
18 as examples of another reducing agent that even
19 has a bigger chilling effect.

20 JUDGE WARD: Right. Or natural gas
21 would have had an even greater --

22 MS. EIBER: Natural gas has more

1 hydrogen --

2 JUDGE WARD: So, if you started with
3 natural gas --

4 MS. EIBER: -- and has a greater
5 cooling effect.

6 JUDGE WARD: So, if you start with
7 natural gas, you'd have to introduce more energy
8 -- you have to introduce less energy because of
9 what the fuel injectants bring to the table if
10 you use them in lieu of natural gas, correct?

11 MS. EIBER: If you use natural gas,
12 natural gas, I believe if I'm remembering the
13 various sort of charts and graphs correctly, has
14 more hydrogen. And so, there is more reducing
15 gases that have to be brought up to temperature
16 which requires more energy.

17 And if you use pulverized coal, you're
18 at the other end of the spectrum with respect to
19 injectants. And oil is sort of right in the
20 middle.

21 JUDGE FRASER: And that's sort of how
22 we are struggling with understanding, and we can

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1 get to the net argument, but how we are looking
2 at -- on that simplistic equation of heat energy
3 in and we recognize you've been talking quite a
4 bit about the flip side of the heat energy out,
5 which is the other side of the equation, that
6 they're absorbing heat. So, they may be --

7 But we're focusing on that heat energy
8 in, so the very fact that oil is being used as an
9 injectant and has significant BTU value in and of
10 itself, it is bringing heat energy to the table.

11 We can then discuss how much it's
12 taking off the table for whatever reason and then
13 we can talk about what is net and what's the
14 right interpretation of substantial useful heat.

15 MS. EIBER: I don't think that it
16 would be correct, although I'd love to have a
17 conversation with my expert. But I don't believe
18 it would be correct to assume that the amount of
19 heat, putting aside whether you want to call it
20 substantial or useful, but the amount of the
21 heat, even equates in any way to what you're
22 referring to as the BTU value of these materials

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1 because they are not completely combusted.

2 Even if they are, even if you want to
3 take these three steps and look at this interim
4 step, that's a small fraction of what's going in.

5 And so, you can't even look at -- I
6 think it would be a mistake to assume that
7 whatever the volume is times its BTU value would
8 be some measure of what this little bit of heat
9 is, if there is a little bit of heat which I'm
10 not sure Dr. Poveromo would see --

11 JUDGE FRASER: Well, I guess I see a
12 question about the little bit. I think Dr.
13 Rorick's testimony was something like 30 to 40
14 percent is combusted in the raceway, or maybe he
15 said 60 to 70.

16 There was some 30 to 40 percent --

17 MS. EIBER: I don't remember the
18 percentages, but they may be.

19 JUDGE FRASER: Somewhere in that
20 range, so let's presume it was 30 to 40 percent
21 at 17,000 BTUs and I think the record shows there
22 was something like roughly a million gallons per

1 month being injected into the furnace.

2 That seems to be quite a bit of heat
3 in. I think the contract says up to 1.4 million
4 gallons a month and the ALJ's decision at page 14
5 says a total of 55 to 60 million gallons total of
6 injectants were at issue in this case.

7 MS. EIBER: If you look at on sort of
8 a percentage basis with respect to the production
9 volume of the blast furnace at the injection
10 rates that were experienced at WCI, the injection
11 volume was less than .01 percent of the materials
12 going into the blast furnace. So, less than .01
13 percent --

14 JUDGE FRASER: Explain that. So, in
15 my numbers that are in the contract and in the
16 decision, so let's just use a round number, 60
17 million gallons total of injectants are used. Is
18 that your .01 percent equals the 60 million or
19 it's .01 of the 60 million? In which case,
20 what's happening to the rest of it?

21 MS. EIBER: Point zero one percent --
22 if you look at what's going into a blast furnace

1 on a daily basis, let's say on a daily basis in
2 terms of volume of materials. With the type
3 injection that they were doing on a daily basis,
4 the injectant would have amounted to .01 percent
5 of what's going in.

6 The 60 million --

7 JUDGE FRASER: Of what's going into
8 the furnace as a whole?

9 MS. EIBER: The furnace as a whole.

10 JUDGE FRASER: Okay. That --

11 MS. EIBER: Yes, so when you're
12 talking about this 60 million pounds, I think
13 that that was a figure about the amount of
14 injectants that the CIS facility purchased over
15 the life of the facility. It doesn't really bear
16 a direct relationship to the percentage of
17 injectants versus percentage of coke or other
18 inputs into the blast furnace.

19 JUDGE FRASER: So, there's two
20 different questions. I think you're answering a
21 question of how much of the -- out of everything
22 that's in the mix in that furnace, how much of

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1 that mix was the injectants?

2 MS. EIBER: Correct.

3 JUDGE FRASER: And so maybe you're
4 backing into -- so therefore, how much energy are
5 they bringing into that process?

6 I'm asking a question of if you're --
7 even if you assume 30 to 40 percent is reacting,
8 30 to 40 percent of a million gallons a month
9 times 17,000 BTUs per pound, seems like that
10 would be some significant heat into your reaction
11 as opposed to steam which may not be bringing
12 anything on.

13 MS. EIBER: Yes, it would be --

14 JUDGE FRASER: I think.

15 MS. EIBER: Yes, I don't have any way
16 to do that math. You know, I don't have any way
17 to do that math. I can't tell you that that's
18 significant or not.

19 I can tell you that in my view, the --
20 it's my view Because I don't have Mr. Rorick or
21 Dr. Poveromo standing here behind me, you know,
22 if going into this blast furnace production,

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1 you've got .01 percent and then you're only
2 combusting or getting any kind of heat use, if
3 any, out of 30 percent of that, you know, what
4 does that take you down to .003, is that
5 significant? You'd have to as a blast furnace
6 operator.

7 But I can assure you that Dr. Poveromo
8 and Mr. Rorick, you know, the whole point of
9 their testimony was that it was not.

10 You know, the whole point of their
11 testimony at the hearing was to demonstrate to
12 the Administrative Law Judge, and I think that
13 they did demonstrate to the Administrative Law
14 Judge that these materials, in fact, don't
15 provide substantial useful heat energy. That's
16 why they were there.

17 JUDGE STEIN: Didn't EPA really decide
18 this question when it promulgated the regulations
19 and put the Cadence example in? And wouldn't
20 your client and other had an opportunity to then
21 challenge those regulations at that time?

22 And if that's correct, why shouldn't

1 I just see this as a belated attack on the
2 regulations that's out of time?

3 MS. EIBER: Well, there's I guess a
4 number of different things I'd like to say in
5 response to that.

6 EPA, back in 1985, could certainly
7 decide what it meant, but I don't think EPA could
8 decide what happens in a blast furnace. Okay?
9 That's not something that's subject to an EPA
10 decision.

11 With respect to whether this is a
12 belated challenge, I'll go back to my opening
13 remarks. When my clients first went into
14 business two decades later, they approached the
15 Agency and did challenge the Agency's
16 understanding of this.

17 And when the Agency said, no, we're
18 sticking by our earlier understanding of what
19 goes on in a blast furnace, my clients basically
20 said okay. And, you know, that was in 2005.
21 It's a decade alter and here we are still
22 fighting about it, but not Because we didn't say

1 okay. Okay?

2 You can't challenge -- the only way
3 you can challenge something like this is you can
4 try and go in and get a delisting of a specific
5 material or you can fail to comply and invite an
6 enforcement action. But, you can't go into a
7 court and get a Declaratory Judgment that a
8 regulation doesn't mean what the EPA has said it
9 means.

10 There's no avenue really to challenge.
11 So, my client said, okay, we're not going to
12 challenge it.

13 JUDGE STEIN: Well, you could have
14 challenged the regulation insofar as it swept in
15 that particular interpretation. I don't see why
16 you couldn't have brought that challenge when the
17 regs were promulgated.

18 MS. EIBER: My client's weren't in
19 business when the regulations were promulgated.
20 You know, we're all, you know, back in college
21 and high school when these regulations were
22 promulgated.

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1 JUDGE STEIN: But the particular
2 regulation is challenged, then there's an
3 opportunity to challenge that regulation. You
4 don't get to come back 20 years later and argue
5 about something that was swept in.

6 I mean, there's a specific time within
7 that the Statute provides to make that challenge.
8 And, typically, the Board does not revisit these
9 regulations in a context of an enforcement
10 action. That's kind of too late.

11 So, I don't want to interrupt Judge
12 Fraser's line of questioning to the extent she
13 has something else, but I hear the arguments that
14 you're making, but I am not confident that Judge
15 Biro was free to disregard the interpretation of
16 the administrator of the Agency in promulgating a
17 final rule.

18 MS. EIBER: Okay. Well --

19 JUDGE STEIN: And that is one of the
20 things, not the only thing, but that's one of the
21 things that I'm struggling with in the context of
22 this case.

1 MS. EIBER: Yes. I think that there's
2 a big difference between an agency saying this is
3 what our regulations mean versus this is what
4 happens in the real world. Okay?

5 And if the regulations are based on an
6 understanding of what happens in the real world
7 that is not correct, there must be an opportunity
8 for somebody to come in and say, hey, look, you
9 ought to look at what's really happening in the
10 real world if those facts are wrong. And if the
11 facts as they really are are such that you're
12 outside your jurisdiction, you know, that's a
13 jurisdictional question. It's not really a
14 question of interpreting the Agency regulation,
15 it's a question of does the Agency have
16 jurisdiction over these materials?

17 And that's why I think it's
18 appropriate for us to challenge that at this
19 proceeding or, you know, in any other proceeding
20 that you can get to. There aren't a whole lot of
21 opportunities to bring these challenges.

22 JUDGE STEIN: Well, with all due

1 respect, there are challenges to EPA regulations
2 that say that EPA has exceeded its jurisdiction.
3 And there are a number of them in, obviously,
4 the, you know, solid and hazardous waste area
5 about the extent to which it's gone into the
6 manufacturing process.

7 So, I hear your point, but I'm not
8 sure -- I'll reflect on that.

9 MS. EIBER: Well, I appreciate that
10 and I think way over my time.

11 JUDGE FRASER: We have kept you here,
12 yes, we've kept you here.

13 JUDGE WARD: I have just a few
14 questions. Just a few questions on burden of
15 proof as I'd asked EPA Counsel.

16 So, assuming the Board were to
17 conclude this wasn't burned for energy recovery,
18 wasn't it still burned and, therefore, at least
19 presumptively, a solid waste?

20 MS. EIBER: No, I heard you ask that
21 question earlier and I think the answer to that
22 is no. I understand the provision that you're

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1 looking at, but you have to take a look at the
2 definition as whole.

3 And there are at least three other
4 parts of that definition where the phrase burned
5 is specifically burned for energy recovery,
6 burned for energy recovery, burned for energy
7 recovery.

8 And so, what you see is you see a
9 definition of solid waste that -- I wish I had it
10 in front of me -- but you have a definition of
11 solid waste that says it is solid waste if it's
12 burned for energy recovery.

13 And you look at this chart that's in
14 the regulations, it's like a grid, and that grid
15 says if it's this type of material, if it's a,
16 you know, a commercial chemical product used as a
17 substitute, you know, whatever different
18 categories are, it's burned for energy recovery.

19 And then you get a definition of what
20 is an exempt recycled material and then you get a
21 sort of, you know, what I would say is sort a
22 belt and suspenders exemption to the exclusion,

1 you get another sort of reiteration of but it is
2 a solid waste still if it's burned for energy
3 recovery.

4 And if you just look at that first
5 statement that just says if it's burned, that's
6 enough. You run into real jurisdictional
7 problems which was the whole point of these
8 earlier discussions about well, what kind of
9 burning can we regulate? And EPA concluded, you
10 know, over this whole entire legislative --

11 JUDGE WARD: Okay, we did hear you
12 earlier, I just want -- and I don't want to keep
13 you up here too much longer.

14 But so, let's assume, though, that we
15 concluded, even if not burned for energy
16 recovery, it was burned, and that that shifted
17 the burden of proof to Carbon Injection to
18 demonstrate the exemption including that these
19 injectants -- that there's a no market for these
20 injectants.

21 At least, as I read your briefs, you
22 did litigate that issue. You did introduce

1 evidence, but that evidence seems could be viewed
2 as a little thin, which is the contract at issue
3 here which hardly proves that there's a no market
4 elsewhere and Mr. Rorick's testimony of the
5 general use of injectants, but not these specific
6 injectants.

7 MS. EIBER: Well, I think that there
8 was actually quite a bit more evidence than that.
9 And I think that the -- that was the whole point
10 of Footnote 30 in Judge Biro's decision, which
11 goes on for four or five pages in small print and
12 single space.

13 You know, that was her explanation of
14 how the Respondents actually met their burden to
15 the extent that they had a burden.

16 You know, so she basically said, look
17 --

18 JUDGE WARD: But she didn't address F,
19 she addressed whether it was used as an
20 ingredient in the process. She didn't address, I
21 don't think, the question of known market which
22 is why, in your briefs, you dropped a footnote to

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1 say, but here's the evidence. Is there any other
2 evidence beyond what you cited in your footnotes
3 in this case?

4 MS. EIBER: There was other evidence.
5 There was a gentleman from Neville Chemicals that
6 testified about, you know, their sale of these
7 materials. There were three brokers that
8 testified regarding their sale and market of
9 these materials.

10 EPA put in boxes of email
11 communications regarding the offer, sale,
12 pricing, you know, basically the commerce
13 surrounding these types of injectant materials.

14 You know from the evidence that we
15 discussed a moment ago that, in fact, there were
16 over 60 million gallons of various injectant
17 materials that were purchased at this facility
18 alone.

19 Mr. Rorick testified that injectants
20 have been used in blast furnaces since, I don't
21 know, for over half a century. And he talked
22 about the different types of materials that are

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1 suitable for use. There were specific expert
2 opinion about the suitability of these materials
3 for this purpose.

4 And then there was testimony from, I
5 think, three IFF witnesses including information
6 about their marketing of their materials, which
7 were the other -- which was the other -- these
8 were the unitine materials that were the other
9 material the EPA claimed was a waste material.

10 But there was testimony from three
11 people from their company and there were written
12 responses to information requests that included
13 all of this type of information, all of which
14 were introduced by EPA which numbered from, you
15 know, among their many exhibits which didn't
16 really get a lot of discussion at the hearing and
17 it never got a lot of discussion at the hearing
18 and I guess it only merited a footnote in our
19 briefs Because there really was no issue about
20 this. It was well proved.

21 JUDGE WARD: All right, thank you.

22 JUDGE FRASER: I just have one

1 question just, you had talked about
2 disassociation of the injectants almost
3 instantaneously and I just wanted to -- was your
4 argument that, therefore, that it was not burning
5 or you were just saying it happens so fast? I
6 was just trying to get -- what was the
7 distinction you were drawing? Because you kept
8 using the word disassociation in the construct
9 here.

10 MS. EIBER: I think that when we were
11 discussing this earlier, we were focused on the,
12 you know, this sort of instantaneous reaction.

13 But, the point that you make about is
14 that burning I think is a good point and I think
15 we made that point in our briefs. That's not
16 burning.

17 And EPA sort of ran right by the issue
18 of what is burning and what is recovery. I think
19 those are actually are important issues. And
20 when you're talking about dissociation into
21 chemical components and the use of those
22 components in reducing reactions, you're not

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1 actually talking about burning.

2 So, I think that that's a good point
3 to remember.

4 JUDGE FRASER: And if we were to
5 remand this case, are there further issues that
6 you think would go before the ALJ that needed to
7 be addressed that haven't been addressed?

8 MS. EIBER: The idea of this case
9 getting remanded so that we can go back for years
10 and years and years of more litigation is truly
11 appalling to us, I have to say.

12 I don't know what would happen on
13 remand. I don't know whether it would be a
14 remand for the ALJ to consider the record that is
15 already before her which, to us, would be
16 preferable.

17 Obviously, what we would like to see
18 in this case is an affirmance of the ALJ's
19 decision.

20 We've been at this for a decade. This
21 case means nothing to my clients from a business
22 standpoint. It is just, you know, it's like

1 seven years of litigation really ought to be
2 punishment enough.

3 JUDGE FRASER: Well, Ms. Eiber, thank
4 you for your time. If you wanted to take two
5 minutes to have uninterrupted closing statement?

6 MS. EIBER: I hope I've answered your
7 questions to your satisfaction. Again, it would
8 be delightful to be able to have my experts on my
9 shoulders whispering my ear.

10 Like Mr. Cahn, you know, I'm not a
11 chemist. So, I appreciate you listening to me.

12 JUDGE FRASER: Well, thank you very
13 much.

14 Mr. Cahn, I have one final question
15 for you. I had a question and then we were going
16 to give you five minutes if you had -- since we
17 went quite a well a ways over in questions Carbon
18 Injection Systems.

19 But, I had a question going back to
20 the brief that you had before us where quite a
21 bit of your argument was also focused on the net
22 question and less on the substantial useful heat

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1 standard.

2 And so, wanting to know, has the
3 Agency moved away from that? Is the Agency --
4 was that a -- were you simply responding to what
5 Carbon Injection Systems had argued or is that
6 the standard that the Agency is adopting for this
7 case?

8 MS. CAHN: I have to base my answer on
9 the Cadence discussion which says that all of the
10 reactions are net endothermic.

11 If you step back and look at the whole
12 blast furnace operation, everything is going in
13 cold originally. All of the material, the coke,
14 the limestone, it's all going into the top of the
15 blast furnace cold.

16 So, everything is -- when you step
17 back and look at it, is a net endothermic
18 reaction.

19 That was my -- that's my reading of
20 Cadence.

21 JUDGE FRASER: Okay, thank you.

22 MR. CAHN: I don't think we're

1 stepping -- I don't think that it's a step back.

2 JUDGE FRASER: Okay, thank you.

3 MR. CAHN: This is a, perhaps, too
4 simplistic an answer to some of the questions
5 that the Board has been asking. But, it's --
6 when you come down to it, carbon molecules, when
7 they're standalone carbon molecules, whether they
8 come from the coke or whether they come from the
9 hydrocarbons, they're going to oxidize at the
10 same temperature.

11 And an analogy for that would be a pot
12 of hot water on a stove. If it goes on there
13 preheated and a pot of cold water that goes on
14 the stove cold, those two pots are going to both
15 come to a boil at 212, it's just the one that's
16 been preheated like the coke that's been
17 descending and getting heated up is going to come
18 to a boil quicker. But, they're both pots, both
19 pots will come to a boil at 212.

20 The only evidence that I think that
21 I'm aware of that the ALJ cited to with respect
22 to top gas not being used is contained in C Ex 2

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1 at page EPA 2734 and it's a letter from Mr.
2 Lofquist acting on behalf of General
3 Environmental Management to Ohio EPA.

4 It's the third paragraph and Mr.
5 Lofquist writes, the purpose of high carbonaceous
6 liquids is not to supply heat for the hot air
7 blast.

8 And, Judge Biro, at page 86 of her
9 decision identified this statement as self-
10 serving and not entitled to much weight.

11 So, I think the Agency has gone
12 forward with evidence to support the conclusion
13 that industry practice is that top gases are used
14 to supply substantial useful heat when those top
15 gases are burned in the stoves. And that
16 Respondents below put on no evidence to the
17 contrary other than this one statement that was
18 rejected.

19 My co-counsel was helpful and pointed
20 out that in the recently filed EPA's Motion to
21 Strike, we did cite two additional cases in
22 addition to Halmet. One is Decision in Footprint

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1 and I don't have the citation in front of me, I
2 just have the case name. And then the second is
3 Stevenson.

4 And both of those cases support the
5 conclusion that it's appropriate for the Board to
6 take administrative notice of the information
7 that we cited to that's contained in the
8 administrative record.

9 The last point I want to make is that
10 I don't want the Board to be left with the
11 impression that this case is about one load of
12 K022 and that the company then towed the line
13 with respect to burning of secondary materials or
14 processing of secondary materials which were then
15 burned by their customer.

16 This case is actually about thousands
17 of gallons of secondary materials which the
18 Agency, I believe, proved below were secondary
19 materials in the sense they were still bottoms.

20 That's a fact, if this case is
21 remanded for the ALJ still to determine, though.

22 JUDGE STEIN: I have a question that

1 I'm a little confused by. The Board doesn't take
2 sua sponte very often. And we took it in this
3 case in part because we think that the
4 interpretation being advanced by the ALJ is a
5 very important interpretation, you know, not just
6 in this case, but also elsewhere.

7 And so, it's really important to us
8 that, as we sort through the issues in this case,
9 that we're clear that this really is the
10 interpretation.

11 And looking at 50 Federal Register
12 49164, which does make a reference to net
13 reactions, I didn't read that language as
14 adopting a net test. I read it as rejecting a
15 net test.

16 And I guess I think it would be
17 helpful that before the Board ultimately decides
18 this case if we can have some clarification on
19 that point.

20 And I'm looking at language that
21 basically says, Cadence argument, in fact, proves
22 too much. It is clear that net furnace reactions

1 are endothermic. Heat from the coke and fuel
2 injections is required to drive reactions that
3 reduce iron ore to metallic iron.

4 Under Cadence's logic, the material
5 involved in an endothermic reaction is not a fuel
6 irrespective of heating value, the coke would not
7 be a fuel.

8 It is the primary fuel source to the
9 furnace. The fact is that both coke and fuel
10 injections like Cadence product serve a dual
11 purpose of providing substantial needed energy
12 and reductants.

13 And I am concerned that this focus on
14 net and, you know, exothermic and endothermic,
15 you know, has added perhaps a lot of confusion to
16 this case. And I'm not asking you to clarify
17 that right now, I'll turn it back to Judge
18 Fraser, but I continue to -- it'd be helpful to
19 me to understand why the Agency believes that the
20 net calculation is called for by the Cadence
21 example because I need to understand why that's
22 the case.

1 JUDGE FRASER: Thank you. I want to
2 thank both parties, both for coming today for
3 your responses to our prolonged questions. It's
4 much appreciated in helping us to really address
5 the important issues that are at play in this
6 case.

7 Our goal is to try and get a decision
8 done by the end of the year and so that we could
9 at least bring some finality to this phase. And
10 so, we appreciate your time in being here.

11 I would invite the parties to the
12 extent they think it would be helpful to file a
13 post-hearing brief with us not to exceed 15 pages
14 by close of business next Friday. That doesn't
15 count table of contents and cases and all of
16 that.

17 And then particularly focusing on --
18 you don't need to repeat what else in your brief,
19 but if you understand the focus of our questions
20 today and the concluding question that Judge
21 Stein just raised, in particular.

22 And with respect to that Cadence

1 example, I would invite both parties to look at
2 the Babcock and Wilcox reference that's in
3 Footnote 22 of the preamble to the final rule
4 because it does address in more detail the
5 endothermic nature of the reaction and what's
6 going on at 35. I think it's 3,000 degrees
7 Fahrenheit is what they address and points out
8 that the heat that is absorbed is not lost. It
9 is recovered when the gas is cooled down.

10 So, it lends some light, I think, to
11 the text that's in the Cadence example.

12 And so, to the extent that the parties
13 would like to file post-hearing briefs, that
14 would be by close of business next Friday. We
15 are not going to accept reply briefs arguing
16 about what the other side said. This is really
17 for us to the extent there are additional points
18 you think would be helpful in our review and
19 understanding based on the questions we had today
20 and recognizing you did not have your experts
21 here.

22 So, if there's an opportunity that

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1 being put on the spot you gave an answer, but
2 being able to go back and get further
3 clarification and understanding, that would be
4 helpful as well.

5 Yes, no new evidence, just -- no new
6 declarations, just summary arguments to the
7 extent you would like to.

8 And, with that, the hearing is closed.
9 And, again, our thanks for your participation.

10 (Whereupon, the above-entitled matter
11 was concluded at 4:00 p.m.)

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C E R T I F I C A T E

This is to certify that, the foregoing transcript

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Before: US EPA/EAB

Date: 10-01-15

Place: Washington, DC

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R Gross

Court Reporter

NEAL R. GROSS

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