

EXECUTIVE OFFICER HEARING
STATE OF CALIFORNIA
AIR RESOURCES BOARD

JOE SERNA, JR. BUILDING
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
BYRON SHER AUDITORIUM, SECOND FLOOR
1001 I STREET
SACRAMENTO, CALIFORNIA

THURSDAY, FEBRUARY 24, 2011
2:00 P.M.

TIFFANY C. KRAFT, CSR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 12277

CALIFORNIA REPORTING, LLC
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APPEARANCES

STAFF

Mr. James Goldstene, Executive Officer

Mr. Richard Corey, Chief, Stationary Source Division

Mr. Bob Fletcher, Deputy Executive Officer

Mr. Bob Jenne, Assistant Chief Counsel

Mr. Mike Waugh, Staff

ALSO PRESENT

Louie Brown, National Biodiesel Board

Jim Lyons, POET, LLC

Steve Unnasch, Life Cycle Associates

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PROCEEDINGS

1
2 EXECUTIVE OFFICER GOLDSTONE: Good afternoon, and
3 welcome. I'm James Goldstene, Executive Officer of the
4 Air Resources Board. The public hearing for Agenda Item
5 EO 11-1-1 will now come to order.

6 First, a couple of routine announcements. Anyone
7 who wishes to testify on this item must sign up with the
8 Clerk of the Board. There are speaker cards both outside
9 the room and at the Clerk's desk over here on your right.

10 In the event of an emergency, we must evacuate
11 the room immediately and go downstairs and out of the
12 building and assemble at Cesar Chavez Park across the
13 street. The emergency exits are at the rear of the room
14 as well as to my right and left.

15 We'll now provide a little bit of background
16 about why we are here today. The Board approved the
17 low-carbon fuel standard at its hearing on April 23rd,
18 2009. A central feature of the LCFS regulation is the set
19 of Lookup Tables which lists the fuel pathways for which
20 carbon intensity values have been determined at the time
21 of the rulemaking. Anticipating the need to account for
22 innovations and advancements in the fuel pathways, the
23 Board in Resolution 09-31 authorized and directed the
24 Executive Officer to conduct public hearings to add new or
25 modified fuel pathways into the Lookup Tables. Since the

1 changes to the Lookup Tables are technical in nature, the
2 Board delegated to the Executive Officer the authority to
3 adopt regulatory amendments to the Lookup Tables and to
4 conduct public hearings and to take other appropriate
5 actions to make such amendments. This delegation of
6 authority allows the Executive Officer to conduct these
7 activities on behalf of our Board.

8 Today's hearing is the first of such Executive
9 Officer hearing. After staff makes its presentation today
10 on the proposed amendments, I'll open the record for
11 public testimony. Individuals on the list of commentors
12 will be called upon to make their statements. Please be
13 prepared to limit your comments to three minutes.

14 Also, if you've submitted written comments, you
15 don't need to read your comments. Making oral comments
16 will make your points heard clearly and quickly is always
17 appreciated. And if I have questions, I'll follow up with
18 questions.

19 I may allow more time for some comments if there
20 are few commentors and others wish to have a discussion.
21 I'll now call upon Wes Ingram of the Stationary Source
22 Division to give staff's presentation on the proposed
23 amendments. Wes, are you ready?

24 (Thereupon an overhead presentation was
25 presented as follows.)

1 MR. INGRAM: Thank you, Mr. Goldstene.

2 The Low Carbon Fuel Standard regulation contains
3 a Lookup Table listing all of the currently approved fuel
4 pathways. A pathway is a comprehensive quantitative
5 description of a well-to-wheels fuel production process
6 which is summed up in the pathway carbon intensity. And
7 I'll usually use the abbreviation "CI" to refer to a fuel
8 carbon intensity.

9 Regulated parties may get carbon intensity scores
10 for their fuels by one of two methods. The first, Method
11 1, allows them to use an appropriate carbon intensity from
12 the Lookup Table. The second, Method 2, allows them to
13 apply for a carbon intensity specific to the fuels they
14 supply.

15 Method 2 is subdivided into two sub-methods:
16 Method 2A and Method 2B. The Method 2A process is used
17 for fuel production processes that are essentially
18 variations on existing pathways, variations that result in
19 significant CI improvements.

20 An example would be corn ethanol produced in
21 highly efficient plants. The 2B process is reserved for
22 entirely new fuels or for entirely new ways of producing
23 existing fuels, producing a hydrocarbon fuel from solid
24 waste, for example.

25 The Lookup Table also contains pathways developed

1 by ARB staff. Staff continues to develop new fuel
2 pathways when they are deemed to be high priority. High
3 priority will be defined in a subsequent slide.

4 --o0o--

5 MR. INGRAM: Today, staff is asking the Executive
6 Officer to consider the approval of 28 new LCFS fuel
7 pathways. Twenty-five of these are Method 2A pathways --
8 25 are Method 2 pathways, either 2A or 2B. Three are
9 staff developed. The 25 Method 2 pathways are contained
10 in six applications submitted by fuel providers. The
11 three staff developed pathways are contained in two
12 pathway documents. Collectively, these fuel pathways will
13 incent the production of additional volumes of low carbon
14 fuel for the California market. Additional pathways to be
15 presented at subsequent hearings will continue this trend.

16 --o0o--

17 MR. INGRAM: What you will see in the next series
18 of slides is a summary of the key elements that describe
19 each of the proposed fuel pathways. Please keep in mind
20 that these slides were arranged by application rather than
21 by pathway. The difference is that a single application
22 can contain multiple pathways.

23 The key elements that will be presented for each
24 pathway are the following:

25 First, the application type, whether it is a 2A

1 or 2B application.

2 Second, the reference pathway. Method 2A
3 applications must be referenced to an existing pathway in
4 the Lookup Table. A proposed 2A pathway, recall, is
5 defined as a substantial improvement on an existing Lookup
6 Table pathway.

7 Third, the type and location of the production
8 plants covered.

9 Fourth, the number of pathways proposed in the
10 application.

11 Fifth, the co-products produced. Two co-products
12 occur in this group of applications: A livestock feed
13 known as the distillers grains, or DGS, and glycerin.

14 Throughout this presentation, I will mention the
15 dryness or the moisture content of the DGS produced. This
16 is important because drying the product consumes
17 additional energy and increases the CI.

18 The final descriptive element I will identify for
19 each pathway is the proposed carbon intensity.

20 --o0o--

21 MR. INGRAM: The first application I will discuss
22 is a Method 2B application from Archer Daniels Midland
23 Corporation. It covers a single plant located in
24 Columbus, Nebraska. This is a dry mill corn ethanol plant
25 with the following distinguishing characteristics:

1 It is powered by a cogeneration facility that
2 produces thermal and electrical power from coal, natural
3 gas, and biomass. Because all the energy needed to power
4 the Columbus plant is produced by the cogen plant, no grid
5 electricity is used. This plant will be operated in two
6 modes: A pre- and a post-optimized mode. It will be in
7 pre-optimized mode until a unit to capture and reuse the
8 last increment of waste heat is installed and functioning.
9 At that point, it will switch to the optimized mode. In
10 general, sophisticated systems to capture and reuse waste
11 heat help reduce this plant's carbon intensity.

12 --o0o--

13 MR. INGRAM: ADMs apply for eight pathways. For
14 each of the two operational modes discussed above, the
15 plant will be powered using four combinations of process
16 fuels. Each combination is comprised of varying
17 proportions of coal, natural gas, and biomass. The
18 Columbus plant produces distillers grains, or DGS, as a
19 co-product. Some of this DGS is not dried. Some is
20 partially dried. And some is fully dried. The CIs for
21 these eight pathways range from 85.25 to 91 when the plant
22 operates in a pre-optimized mode and 87.27 to 90.11 when
23 it operates in the post-optimized mode.

24 --o0o--

25 MR. INGRAM: This and the next two slides cover

1 Method 2A applications for what are known as cookie cutter
2 plants. They are called this because they were all
3 designed and built by ICM, a firm specializing in
4 Midwestern ethanol plants. Most ICM designed plants
5 exhibit strong similarities. These applications are all
6 for natural gas powered dry mill plants and all share the
7 same reference pathway, the pathway being the Midwest dry
8 mill; dry DGS natural gas pathway. And CI in this pathway
9 is 98.4 grams of carbon dioxide equivalent per mega joule.

10 Given this common background, I can cover these
11 three applications fairly quick. The first is the Louis
12 Dryfus plant which is located in Northfork, Nebraska. It
13 produces both dry and partially dried DGS. Its proposed
14 CI is 87.16.

15 --o0o--

16 MR. INGRAM: The Green Plains Central City Plant
17 is located in Central City, Nebraska. It produces
18 partially dried DGS and its proposed CI is 84.29.

19 --o0o--

20 MR. INGRAM: The Green Plains, Lakota plant is
21 located in Green Plains, Iowa. It produces both wet and
22 dry DGS. And its proposed CI is 91.6.

23 --o0o--

24 MR. INGRAM: The next application I will cover is
25 less straight forward. POET, LLC, has applied for eleven

1 pathways covering several Midwestern dry mill corn ethanol
2 plants. These pathways are not plant specific. As its
3 pathways are approved, POET will make use of the LCFS
4 Biorefinery Registration process to associate specific
5 plants with each approved pathway. POET's eleven pathways
6 are grouped as follows:

7 For each of six production technologies, except
8 one, both wet and dry DGS will be produced. Under one to
9 six, only dry DGS will be produced. This gives us six
10 production technologies times two DGS types, minus one, or
11 eleven pathways.

12 --o0o--

13 MR. INGRAM: The production technologies on which
14 POET's pathways are based are combinations of the
15 following six processes:

16 First, raw starch hydrolysis, which is the use of
17 special enzymes to facilitate the conversion of starch to
18 sugar and to ferment the sugar. These enzymes reduce
19 heating needs.

20 Second, combined heat and power.

21 Third, the use of biomass fuel.

22 Fourth, the use of landfill gas.

23 Fifth, the conventional cook process, which is
24 the more typical higher energy method of starch
25 conversion.

1 And finally, corn fractionation. Under this
2 process, feedstock corn is broken up into its constituent
3 parts and only the corn starch enters the ethanol
4 production process.

5 The CI's associated with POET's pathways range
6 from 74.7 to 92.4 for the dry DGS pathways and 73.2 to
7 83.7 for the wet DGS pathways.

8 --oOo--

9 MR. INGRAM: In this slide, we change feedstocks
10 and depart from the Midwest to consider a Method 2B
11 application for Brazilian sugar cane ethanol. Although
12 the fuel covered by this application was produced in
13 Brazil, the application itself covers a natural gas
14 powered ethanol dehydration plant located in the Caribbean
15 nation of Trinidad.

16 Under federal legislation known as the Caribbean
17 Basin Initiative, a limited amount of ethanol can be
18 imported from the Caribbean basin without be subject to
19 tariffs.

20 Trinidad Bulk Traders is applying for three
21 pathways. For each, its single dehydration CI is added to
22 an existing Brazilian sugar cane CI. The resulting CI's
23 are 78.94, 71.94 and 63.94.

24 --oOo--

25 MR. INGRAM: The two slides will cover the three

1 proposed biodiesel pathways developed by ARB staff. ARB
2 develops what can be called generic pathways. These are
3 designed to incent multiple producers both in state and
4 outside of California to enter the California market. To
5 include the largest number of potential producers, these
6 generic pathways are calculated using conservative
7 assumptions. More efficient producers with lower CIs can
8 use these generic pathway numbers until they are able to
9 prepare a Method 2A application for the lower CI. The
10 three staff-developed pathways recommended for approval
11 today are two Midwestern used cooking oil biodiesel
12 pathways and one corn oil biodiesel pathway.

13 --o0o--

14 MR. INGRAM: The two proposed used cooking oil
15 biodiesel pathways differ only in terms of the type of
16 rendering process used. The higher energy rendering
17 process, known as cooking, yields a higher CI, while the
18 lower energy non-cooking process yields a lower CI. As
19 with all the biodiesel pathways, glycerin is produced as a
20 co-product. These pathways are similar to the existing
21 California used cooking oil pathways. They differ in only
22 two respects: Feedstock and fuel transportation distances
23 and the mix of fuels used to generate electricity into two
24 regions. Both of these factors are inputs to the GREET
25 model that ARB uses to calculate carbon intensity values.

1 --o0o--

2 MR. INGRAM: Staff are also recommending that the
3 Executive Officer approve the pathway for the production
4 of biodiesel from corn oil. The feedstock for this fuel
5 pathway is produced by adding an extraction process to the
6 final stages of the corn ethanol production process.
7 Specifically, the corn oil is extracted from the DGS by
8 centrifuge, although additional energy is required to heat
9 and centrifuge the DGS, less energy is needed to dry the
10 resulting DGS.

11 For dry DGS, a net energy savings is realized.
12 For wet DGS, however, there is a net energy expenditure.
13 The ARB corn oil pathway consists of the net energy
14 savings or expenditure from the extraction process and the
15 emissions associated with the biodiesel production. All
16 other pathway emissions remain with the primary product,
17 corn ethanol.

18 --o0o--

19 MR. INGRAM: The proposed new pathways are not
20 expected to produce any environmental or economic impacts
21 that weren't previously considered. The Initial Statement
22 of Reasons covering the Low Carbon Fuel Standard contains
23 extensive chapters covering the environmental and economic
24 impacts of the implementation of the regulation. The
25 system boundaries established in those chapters take in

1 the production of the fuels included in this proposal.
2 Consistent with that original analysis, no significant
3 adverse impacts would occur as a result of the approval of
4 the proposed pathways.

5 --o0o--

6 MR. INGRAM: During the 45-day comment period
7 covering the proposed pathways, POET submitted changes to
8 two of its eleven pathways. These adjustments were made
9 to ensure that the plants operating under those two
10 pathways could reliably meet the pathway carbon
11 intensities.

12 POET has fully documented the revisions it
13 proposes. Based on that documentation, staff recommends
14 that the proposed revisions be approved. In order to
15 provide the public with an opportunity to review POET's
16 changes, however, a supplemental 15-day public comment
17 period is needed.

18 The proposed changes are relatively minor. As
19 shown on this slide, two wet DGS pathways are affected.
20 The raw starch hydrolysis combined heat and power pathway
21 would increase by .2 grams of carbon dioxide equivalent
22 per mega joule, and the raw starch hydrolysis corn
23 fractionation pathway would decrease by .4 grams.

24 --o0o--

25 MR. INGRAM: To reiterate, staff recommends that

1 a total of 28 new fuel pathways be approved and added to
2 the LCFS Lookup Table and that a supplemental 15-day
3 comment period be initiated to allow the public time to
4 consider the pathway changes proposed by POET.

5 Approval of this proposed Method 2A and 2B
6 pathways will incentivize the production of greater
7 volumes of low carbon ethanol for the California market.
8 Approval of the proposed staff-developed pathways will
9 likewise incent the production of greater volumes of low
10 carbon biodiesel for the California market.

11 And this concludes today's presentation.

12 EXECUTIVE OFFICER GOLDSTONE: Thank you, Wes.

13 Before I call for public testimony, I'd like to
14 make a quick observation. It seems to me that these
15 submittals reflect the fact that this process, the LCFS
16 rule, has a process to reward efficient innovative biofuel
17 and alternative fuel producers by allowing their fuels to
18 be assigned lower carbon intensity values. In turn, the
19 lower CI makes these fuels more valuable to their
20 producers, which means LCFS seems to be working as
21 intended, which I think the staff should be very pleased
22 with that. I think we all are.

23 Now I'd like to open up the public testimony. We
24 have three witnesses who have signed up to speak. If you
25 have not yet signed up and would like to speak, please see

1 the Clerk.

2 The first witness is Steve Unnasch from Life
3 Cycle Associates. I don't know if I've pronounced your
4 name right, so please correct it for the record.

5 MR. UNNASCH: Steven Unnasch.

6 EXECUTIVE OFFICER GOLDSTENE: I know you have a
7 slide presentation. It looks to me like a 15 minute
8 presentation, but you have three minutes. Do you want to
9 summarize your points instead of showing the slides?

10 (Thereupon an overhead presentation was
11 presented as follows.)

12 MR. UNNASCH: So thank you for the opportunity to
13 talk, Mr. Goldstene.

14 --o0o--

15 MR. UNNASCH: I'm here to talk about the corn oil
16 biodiesel pathway.

17 We believe that ARB's approach for treating corn
18 oil biodiesel as an incremental technology is inconsistent
19 with other fuel pathways and inconsistent with the
20 precedent set for life cycle analysis and international
21 standard for life cycle assessment. Corn oil biodiesel
22 converts oil fraction into fuel and the effects of
23 converting the small amount of food into fuel have not
24 been addressed and is not consistent with ARB's approach
25 on land use conversion.

1 Next.

2 --o0o--

3 MR. UNNASCH: Normally, in the case of corn
4 ethanol, you would define products, co-products, and then
5 indirect effects, which is ARB's approach for the corn
6 ethanol pathway.

7 --o0o--

8 MR. UNNASCH: Ideally, in a consequential LCA
9 which is used by EPA and you would look at taking the corn
10 oil out of the DGS and you would examine the effect of
11 alternative oil supplies. This is not the approach that
12 ARB has taken. They have taken the more attributional LCA
13 approach and made a first order estimate of changes of
14 DGS, for example, on the feed market. So we believe that
15 the following approach on the -- next slide --

16 --o0o--

17 MR. UNNASCH: -- will be most consistent with the
18 method ARB has defined to treat both ethanol and biodiesel
19 as products of the corn ethanol mill and thereby
20 allocating the energy inputs and emissions to the ethanol
21 and the corn oil biodiesel.

22 Next.

23 --o0o--

24 MR. UNNASCH: So there is a number of issues with
25 ARB's approach converting the feed into fuel. This is

1 taken into account. The ARB's carbon intensity creates a
2 golden gallon where all of the benefits are added to a
3 single gallon of fuel, which creates a lopsided or
4 distorted incentive. For example, fractionation
5 technologies receive the benefit only in terms of the corn
6 ethanol plant's carbon intensity. And here the benefit is
7 concentrated into the golden gallon.

8 Next slide.

9 --o0o--

10 MR. UNNASCH: So we analyzed both ARB's analysis
11 and found other than a few minor nuances that they perform
12 the analysis as intended. However, if we follow the more
13 conventional approach, we arrived at a carbon intensity of
14 70 grams per mega joule for the corn oil biodiesel and a
15 reduction of about two grams per mega joule ethanol. We
16 believe the ethanol and corn oil biodiesel should be sold
17 in California to receive the full benefits of the LCFS.

18 Next slide.

19 --o0o--

20 MR. UNNASCH: We also looked at it in terms of
21 the total emissions for a bushel of corn. Both approaches
22 result in about the same greenhouse gas emissions per
23 bushel of corn. As I indicated, allocating all of the
24 benefits to corn oil biodiesel is inconsistent with the
25 LCA methods.

1 EXECUTIVE OFFICER GOLDSTENE: Why don't you keep
2 going.

3 --o0o--

4 MR. UNNASCH: Just to wrap up, we believe the ARB
5 method is inconsistent with prior methodology. It doesn't
6 follow the intent of ISO standards. We think that the
7 pathways should maintain technology neutrality rather than
8 over-incentivizing one particular technology which would
9 create a lopsided incentive to do back-end extraction for
10 corn oil biodiesel. And we believe that the food and fuel
11 impacts, albeit a small fraction of the DGS, have not been
12 taken into account. High fat DGS is very good feed. It's
13 exported to Asia. And removing the oil from the DGS would
14 ultimately result in shuffling soy oil, or other corn oil
15 may need to be sprayed back onto the DGS to maintain a
16 consistent system boundary and retain the value of the
17 DGS.

18 Thank you for the time.

19 EXECUTIVE OFFICER GOLDSTENE: You kept saying
20 "we," but I'm not sure who Life Cycle Associates
21 represents or who you are.

22 MR. UNNASCH: Oh, well, Life Cycle Associates, we
23 were aware of this fuel pathway when it was being
24 developed. We talked to Dr. Stephen Muller at the
25 University of Illinois, Chicago. And we shared some

1 spreadsheets, and we're -- first, the cleanest way to do
2 it would be the way that we proposed and we looked at some
3 of these other --

4 EXECUTIVE OFFICER GOLDSTENE: You just said "we"
5 again. Who's "we"?

6 MR. UNNASCH: My staff and I.

7 EXECUTIVE OFFICER GOLDSTENE: Who are you
8 representing? This is scientific only or do you
9 represent --

10 MR. UNNASCH: This is a scientist. We're paid
11 for our work. But --

12 EXECUTIVE OFFICER GOLDSTENE: That's what I'm
13 asking.

14 MR. UNNASCH: We're paid by our work. But we
15 would have done it -- we would have done it on our own
16 initiative absent the effort to put in --

17 EXECUTIVE OFFICER GOLDSTENE: I'm only asking so
18 I can have the context and understand your argument.

19 MR. UNNASCH: So we worked with Dr. Muller in
20 examining these options. And then I and Dr. Muller also
21 prepared a detailed comment letter, which we submitted.

22 EXECUTIVE OFFICER GOLDSTENE: Okay. I appreciate
23 that. Before you sit down, I don't know if staff has any
24 comments or wants to respond to some of the points that
25 were made.

1 CRITERIA POLLUTANTS BRANCH CHIEF WAUGH: Yes.
2 I'm Mike Waugh, Chief of the Criteria Pollutants Branch.
3 And I'd like to address some of the points that were
4 brought up.

5 First of all, we do believe that the corn oil
6 extraction process and subsequent conversion to biodiesel
7 isn't an incremental technology to be applied to existing
8 corn ethanol plants. And we clearly state that in our
9 supporting technical document for this pathway.

10 We disagree with reallocating some of the energy
11 inputs for farming and land use change from corn ethanol
12 to the corn oil biodiesel. We are not inconsistent with
13 ISO, as corn oil and biodiesel is not our primary product.
14 It is an inedible byproduct of a co-product.

15 And, finally, we are following the same approach
16 that we did with the pathways in the original rulemaking,
17 which the Board found to be scientifically sound.

18 Regarding the food and fuel impacts, I think when
19 we remove the oil from the DGS, fat content is one
20 nutritional factor which they determine the value of DGS.
21 Their lifestocks' specific nutritional need between cattle
22 and swine, and we state clearly in the supporting
23 technical document if we do not intend to estimate the
24 effects of nutritional content on the value of DGS or how
25 that effected the market for other livestock feeds.

1 EXECUTIVE OFFICER GOLDSTONE: Thank you, Mike.

2 In terms of our process, since this is the first
3 time we've done this, you will respond in writing to those
4 comments as well? Or how do we -- what's the process?

5 STATIONARY SOURCE DIVISION CHIEF COREY: This is
6 Richard Corey.

7 The comments that are submitted will be responded
8 to as part of the FSOR that is prepared.

9 EXECUTIVE OFFICER GOLDSTONE: Thank you.

10 MR. UNNASCH: Just one other comment. We did
11 share our interest with other researchers and other
12 stakeholders, and we believe that there are several
13 comment letters along the lines of ours. Our letter was
14 rather intense and detailed. We believe there's others
15 that are providing similar comments. And we believe that
16 this process -- another element of the ISO procedure is
17 stakeholder review. And this is a rather small group of
18 stakeholders right here. So perhaps I don't know how the
19 process works, but it would be appropriate to review this
20 fully with all of the effected parties.

21 EXECUTIVE OFFICER GOLDSTONE: I think we do have
22 groups of people working in different parts of this. I
23 don't know if, Rich or Bob, you want to talk about the
24 different work groups we have going on.

25 Overall, the overall process -- the people

1 understand there are opportunities to weigh in. It's more
2 of a general question. But I just want to make sure that
3 Steve knows there is a lot of opportunity and that
4 although there aren't that many people here today, we held
5 this meeting last week with this new work group, and lots
6 of people, thank tanks to the LCFS.

7 STATIONARY SOURCE DIVISION CHIEF COREY: Again,
8 Richard Corey.

9 Absolutely. Multiple elements of the program.
10 Certainly, Steven can touch bases with us. Multiple
11 opportunities to participate with respect to his point.
12 The comments I believe are submitted in the record. Brief
13 letter is similar to the points he's making and all of
14 these points, whether it be both discussed here as well as
15 responded to in the FSOR.

16 EXECUTIVE OFFICER GOLDSTONE: Great. Thank you
17 very much.

18 DEPUTY EXECUTIVE OFFICER FLETCHER: I would just
19 add on that a little bit.

20 As we proceed through the development of the fuel
21 pathways, we are learning how to do them and are being
22 faced with a lot of facility configurations and a lot of
23 different challenges of how to do that. We are going to
24 continue to evaluate how we do fuel pathways over time.
25 We've made the decision we made on this one because we

1 obviously believe it's the right decision on how you deal
2 with this particular situation.

3 I did want to mention that Stephen in his letter
4 did identify a couple relatively minor technical errors or
5 emissions he found, and we are going to address those as
6 part of the 15-day package as well.

7 EXECUTIVE OFFICER GOLDSTONE: Great. Thank you.

8 DEPUTY EXECUTIVE OFFICER FLETCHER: We are not
9 going to address -- we're not going to be changing the
10 method that we use for allocation is our recommendation.

11 EXECUTIVE OFFICER GOLDSTONE: Okay. Thank you.

12 The next witness is Louie Brown.

13 MR. BROWN: Mr. Goldstone, members, staff, Louie
14 Brown on behalf of the National Biodiesel Board today
15 speaking in support of the pathway for inedible corn oil
16 biodiesel.

17 I have some comments that I will provide to you,
18 but just quickly three quick points as to our support.

19 First, we understand and appreciate the efforts
20 the staff is going through. This is extremely difficult
21 work. When it comes to issues that we're working on in
22 California that overlap with issues working on in
23 Washington, D.C., for example, with RFS, we appreciate
24 when the two regulatory bodies talk to one another. And
25 from our perspective in going through with this pathway,

1 that seems to have occurred. And there's consistent use
2 and consistent methodologies followed by ARB staff as used
3 at U.S. EPA. And we think that that outreach, that
4 dialogue, and that consistency is something that we should
5 continue to do and want to thank you and the staff for
6 doing it in this one example.

7 Secondly, when it comes to inedible corn, it has
8 very similar characteristics as cooking oil and other
9 waste feedstocks. And so we think again the methodology
10 used by the staff -- because this point is right on track.

11 Finally, the life cycle analysis developed by the
12 ISO should be adopted by modelers or at least given full
13 consideration at all points.

14 Again, we believe that the ISO recommends
15 avoiding allocation of greenhouse gas emissions between
16 co-products and using consistent approaches when possible.
17 We again believe that the staff has done exactly what the
18 ISO is talking about in this area. Very consistent with
19 these international standards and, therefore, we offer our
20 support for this pathway.

21 Thank you.

22 EXECUTIVE OFFICER GOLDSTENE: Thank you, Mr.
23 Brown. Thank you for coming.

24 Jim Lyons, who is our last witness listed.

25 MR. LYONS: Good afternoon, Mr. Goldstene. My

1 name is Jim Lyons. I'm here speaking today on behalf of
2 POET, LLC.

3 POET, the largest ethanol producer in the world
4 is the leader in efficient biorefinery and operates 26
5 production facilities nationwide.

6 POET also operates the pilot scale cellulosic
7 plant which uses corn cobs as feedstocks and will
8 commercialize the process in Emmetsburg, Iowa.

9 As we heard during the staff presentation, POET
10 has submitted a Method 2A application for eleven different
11 sub-pathways from Midwest corn. These pathways reflect
12 POET's incorporation of raw starch hydrolysis and corn
13 fractionation into the ethanol production process at
14 facilities using renewable biomass and landfill gases
15 fuels or combined heat and power processes. The carbon
16 intensity values for these sub-pathways based on a dry
17 distiller range from 74.7 to 92.4 grams of CO2 equivalent
18 per mega joule in contrast to the 99.4 grams CO2
19 equivalent per mega joule for default value produced from
20 the corn.

21 With wet distillers grain, the co-product CI
22 values drops to 73.2 to 83.7 grams of per mega joule.
23 POET urges you to approve the addition of these
24 sub-pathways to the carbon intensity Lookup Tables.

25 POET also hopes to work with CARB staff on

1 broader and more general enhancements in the CI values
2 assigned to ethanol produced from Midwest corn that will
3 lower them such that they more accurately reflect life
4 cycle emissions. These enhancements include revisions to
5 the CI assigned for indirect land use impacts as well as
6 others that update current assumptions regarding the
7 source mix for Midwest electricity generation as well as
8 those for energy, fertilizer, and pesticide use in corn
9 farming.

10 Thank you very much.

11 EXECUTIVE OFFICER GOLDSTONE: Thank you.

12 Bob and Rich and Mike and Wes and John,
13 everybody, do you have any comments about Mr. Brown or Mr.
14 Lyons' comments?

15 DEPUTY EXECUTIVE OFFICER FLETCHER: We do not
16 have any comments on that, on that testimony. We do
17 have -- there is at least one other letter in the record
18 that we would like to summarize for you so that you have
19 the full scope of the comments.

20 EXECUTIVE OFFICER GOLDSTONE: Sure. Go ahead.

21 MR. WAUGH: This letter was from the Western
22 States Petroleum Association, and they made four key
23 points.

24 The first one, some applicants had submitted
25 several sub-pathways, and they felt like by allowing

1 sub-pathways that we were allowing a circumvention of this
2 substantiality of the separate CI values. Essentially,
3 the regulation says in order to do a Method 2A, which is
4 an improvement over an existing pathway, you have to have
5 at least a five gram improvement over what's in the Lookup
6 Table. And they were asserting that because there were
7 for, say, eight different values that were crowded
8 together that we were circumventing that five gram
9 requirement. However, the regulation says the five gram
10 substantiality requirement is between the Method 2A
11 submissions and what's in the Lookup Table already. So
12 all of this sub-pathways demonstrate this.

13 And there is no requirement that the sub-pathways
14 be at least five grams from each other, if they're all
15 over five grams from what's in the Lookup Table now.

16 Their second point, there is a lack of
17 verification for modifications that do not yet exist, such
18 as separate CI values for an optimized plant energy mode
19 and energy savings in the future. Our response to that is
20 that CI values for sub-pathways are conditional. They can
21 only be used if the plant is meeting the special
22 conditions associated with that pathway. The plant is
23 required to periodically submit to ARB information related
24 to its overall energy use and types and amounts of fuel
25 used.

1 By considering multiple pathways, the LCFS is
2 providing operational flexibility for the plant while
3 incenting future improvements to reduce CIs even more.

4 And finally, providing CI values for processes
5 not yet built provides a clear signal that efficient and
6 innovative technologies will be recognized by the LCFS.

7 Their third point, they think that we were
8 cherry-picking inputs to the Cal GREET model, resulting in
9 lower CI values, for example, the use of biomass, lower
10 carbon coal, shorter transportation distances for
11 feedstock. For this, our response is there is no
12 cherry-picking. The facilities have submitted
13 facility-specific information. The regulation requires
14 the information be well documented and scientifically
15 defensible, which we found it to be.

16 And again, CI values for sub-pathways are
17 conditionable, and the plant is required to periodically
18 submit that to ARB.

19 The final point was that we use the same feed
20 value for DOA and non-DO DTS. And I think I responded
21 that earlier about fat content only being one part of the
22 nutritional factor for DTS.

23 EXECUTIVE OFFICER GOLDSTONE: Any other comments?

24 Well, I don't have any ex parte communications to
25 disclose.

1 And because staff suggested the 15-day changes to
2 the proposed amendments for the two fuel pathways, I'm not
3 going to make a decision today to approve for adoption the
4 proposed amendments. I'll direct staff to issue as soon
5 as possible a 15-day notice and make it publicly available
6 so the public can comment on those. The record will be
7 reopened once those are made public for a minimum of 15
8 days. And the public may submit written comments on the
9 item as specified in the notice.

10 At the end of the period, the record for this
11 agenda item will be closed again. Comments addressing
12 items within the scope of the 15-day notice and timely
13 received will be considered and responded to in the Final
14 Statement of Reasons for the rulemaking.

15 Upon consideration of the full public record of
16 this item, I'll make a final decision on staff's proposed
17 amendments and issue an Executive Order accordingly.

18 So unless I see any other comments --

19 DEPUTY EXECUTIVE OFFICER FLETCHER: Just to be
20 clear, the 15-day package would include the two POET
21 modifications as well as the technical comments raised by
22 Life Cycle Associates.

23 EXECUTIVE OFFICER GOLDSTONE: Okay. Good. Thank
24 you.

25 Any other clarifying comments before I close the

1 record? Okay.

2 Well, the record for this agenda item is now
3 closed. The February 24th, 2011, public hearing of the
4 Executive Officer of the Air Resources Board is now
5 adjourned. Thank you, everyone, for being here this
6 afternoon.

7 (Thereupon the California Air Resources
8 Board meeting adjourned at 2:39 p.m.)

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CERTIFICATE OF REPORTER

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I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of March, 2011.

TIFFANY C. KRAFT, CSR
Certified Shorthand Reporter
License No. 12277