In The Matter Of:

Hickman's Egg Farm

Permit No. 140062

Combined Public Meeting and Executive Session

November 7, 2016

Maricopa County Air Pollution Hearing Board

Griffin & Associates Court Reporters, LLC

2398 E. Camelback Road

Suite 260

Phoenix, AZ 85016

Original File ADAQ11716.txt

Min-U-Script® with Word Index

COMBINED PUBLIC MEETING AND EXECUTIVE SESSION

OF THE

MARICOPA COUNTY AIR POLLUTION HEARING BOARD

In Re:

Hickman's Egg Farm,
Permit No. 140062

Phoenix, Arizona
November 7, 2016
1:05 p.m.

REPORTED BY:
LAURA A. ASHBROOK, RMR
Certified Reporter
Certificate No. 50360

PREPARED FOR:
Maricopa County Air Pollution
Hearing Board

(Certified Copy)

I N D E X

Witnesses	Page
DANIEL E. BLACKSON	15
KATHY JEAN MARTIN	
EXAMINATION BY MR. BLACKSON	36
RICHARD ALAN SUMNER	
EXAMINATION BY MR. SWAN	62
EXAMINATION BY MR. BLACKSON	85
EXAMINATION BY MR. SWAN	103
EXAMINATION BY MR. BLACKSON	105

Meeting of the Maricopa County Air Pollution

Hearing Board was taken on November 7, 2016, commencing at 1:05 p.m. at the offices of the Maricopa County Air Quality Department, 1001 North Central Aveune, Suite 560, Phoenix, Arizona, before LAURA A. ASHBROOK, a Certified Reporter in the State of Arizona.

MARICOPA COUNTY AIR POLLUTION HEARING BOARD:

SHANE LEONARD, Chairperson
District 1

LUCAS NARDUCCI,
District 2

KIM McEACHERN,
District 3

SINE KERR,
District 4

BRIAN DAVIDSON, Vice Chair
District 5

ERIC HISER,
Board Attorney

For the Petitioner Appellant:

DANIEL E. BLACKSON
42211 W. Salome Highway
Tonopah, Arizona 85354

For the Department of Air Quality:

ROBERT SWAN
Deputy County Attorney
222 North Central Avenue
Suite 1100
Phoenix, Arizona

P R O C E E D I N G S

CHAIRMAN LEONARD: Folks, I'd like to call this meeting of the Maricopa County Air Pollution Hearing Board together. I'll note the start time as 1:05. As was mentioned earlier, the first agenda item will be to motion into executive session so we can get a little instruction from our folks. I appreciate your deference. Don't go too far because we'll try and get back right about 1:30

With that, I will entertain a motion to go into executive session, please.

MR. NARDUCCI: Move to go into executive session.

MS. KERR: Second.

CHAIRMAN LEONARD: All in favor?

(All members responded in the affirmative.)

CHAIRMAN LEONARD: Any opposed?

(There was no response.)

CHAIRMAN LEONARD: All right, folks. We're going into executive session. Stay where you're at and we'll kick over into the other room.

(Recess taken, 1:07 p.m. to 1:41 p.m.)

CHAIRMAN LEONARD: Thank you very much for your patience, folks. I'll entertain a motion to go back into open session, please.

MR. NARDUCCI: So moved.

Page 5

1] CHAIRMAN LEONARD: Second?
2] MR. DAVIDSON: Second.
3] CHAIRMAN LEONARD: All those in favor?
4] (All members responded in the affirmative.)
5] CHAIRMAN LEONARD: Any opposed?
6] (There was no response.)
7] CHAIRMAN LEONARD: All right. We are back
8] in open session. Okay. Folks, again, thanks for your
9] patience. We appreciate you giving the board an
10] opportunity to kind of run through what we think our
11] process rules are supposed to be today.
12] For purposes, however, of clarification, I
13] know some folks in the audience may not have ever done
14] this before. So what I'd like to do is have Mr. Hiser
15] kind of run you through the process we're going to go
16] through today.
17] One of the things that I want to make sure I
18] point out is that the majority of today's hearing is going
19] to be between Mr. Blackson and the Department. We have,
20] at the end of the hearing, a place for public comment
21] which is where I think some folks are going to want to
22] talk, understanding though that that won't take place as a
23] matter of the hearing.
24] So if you do have something you'd like to
25] say, certainly stay so we can get those comments. That

Page 6

1] won't be a part of the actual hearing. That doesn't mean
2] it won't be put into the meeting minutes, so it will be
3] there. I just want to make sure folks understand.
4] So for purposes of Mr. Blackson and purposes
5] of Mr. Swan and the Department, if Mr. Hiser you go ahead
6] and walk us through what the process is going to be. That
7] way, everybody is on the same page, please.
8] MR. HISER: Thank you, Mr. Chairman. This
9] is the second hearing in this matter. In the previous
10] hearing, the Board had decided that the issues that we
11] would be investigating today are the propriety of the
12] procedures that were used in issuance of the minor permit
13] revision and any issue going to the minor permit revision
14] itself.
15] At this hearing, we will start with five
16] minutes per side for opening arguments, that you can make
17] sort of a preview of your case you will be putting on.
18] We'll start with Mr. Blackson as the petitioner appellant
19] who will be followed by Mr. Swan responding on behalf of
20] the Department.
21] We will then go to the petitioner
22] appellant's case which will be Mr. Blackson. He will then
23] be able to put on the testimony. We understand that there
24] will be testimony from himself as a witness and also from
25] an expert. Following each witness' testimony, there will

Page 7

1] be an opportunity for cross-examination by the other
2] party.
3] After Mr. Blackson is finished with his
4] case-in-chief and if he feels he wants to reserve time for
5] rebuttal, we may come back to rebuttal. Then we'll go to
6] Mr. Swan. Mr. Swan will be able to put on any witnesses
7] that he chooses to do so. Mr. Blackson will have an
8] opportunity to cross-examine those witnesses.
9] If there is a request for rebuttal, we'll
10] then handle any rebuttal witness testimony that we need to
11] do so and then we will close with, say, ten minutes per
12] party for the closing arguments, because you'll have a
13] little bit more to talk about because there will be
14] evidence and stuff in the record at that point.
15] We would like to hold this hearing to
16] close -- somewhere between the -- 4:30, around that time.
17] So that's roughly about an hour and 20 minutes per party.
18] We will also take a break in the middle of the day to
19] allow people to go out and use the restroom or whatever.
20] If you do need to break during the day, just please go out
21] and try not to make too much noise going through the
22] doors.
23] I believe that is most of the information
24] that we need to have. Just to clarify for the parties,
25] the Board has, once again, asked me to serve in the

Page 8

1] capacity of the hearing examiner, so I may be asking you
2] questions for the purpose of expanding the record for the
3] Board's consideration as well.
4] Are there any questions from the parties?
5] With that then, Mr. Chairman, I will turn it back over to
6] you to start the hearing.
7] CHAIRMAN LEONARD: Thank you very much.
8] Just one reminder: We do have a court reporter in the
9] room today so I would ask, as best you can, to kind of
10] look over every once in a while; I will too, in case she
11] gets behind or her fingers start cramping or whatever may
12] be the case, just as a reminder, and then again, if
13] something happens and you need some assistance, just let
14] me know.
15] So with that, Mr. Blackson, the floor is
16] yours for opening statement, please.
17] MR. BLACKSON: Thank you. Chairman Leonard
18] and members of the Board, Maricopa County Air Quality
19] Department alleges that the Department has not developed
20] regulations addressing animal feeding operations emissions
21] from the units covered in the EPA study for two main
22] reasons: one the absence of reliable emissions factors
23] and, two, the federal and state law limit the Department's
24] authority to promulgate regulations regarding animal
25] feeding operations emissions from units in the EPA study.

Page 9

1] They also note that the Arizona Department of
2] Environmental Quality has not adopted relevant
3] regulations, and their second reason for not addressing it
4] is that emissions from the Tonopah Egg Ranch poultry
5] operation are fugitive.
6] My pre-hearing disclosure refutes the
7] Department's position that a new source review was not
8] necessary to determine whether or not a Title V or
9] non-Title V permit is appropriate for the Tonopah Egg
10] Ranch operation from this day forward. I understand that
11] the underlying permit is not at issue, and what is at
12] issue is whether a non-Title V permit is still appropriate
13] or whether from this day forward, it should be a Title V
14] permit.
15] Our arguments demonstrate that the
16] Department's decision was arbitrary, unreasonable,
17] unlawful and the technical judgment was invalid, and
18] that's what I need to demonstrate to you, according to
19] your procedures, and I believe that I can do that. The
20] Department's position on this permit action is at odds
21] with their obligation under their EPA delegated authority
22] and Clean Act responsibilities with respect to the Tonopah
23] Egg Ranch permit action that we are here to discuss today.
24] The Department is intentionally limiting the
25] scope of the minor permit modification review by ignoring

Page 10

1] stationary sources that are at the facility which would
2] demonstrate to have the potential to emit more than
3] 100 tons per year of new source review pollutants.
4] We will lay the regulatory foundation
5] through the Department's rule showing that the Department
6] has the ability to and the obligation to conduct a new
7] source review. We will show that there are published
8] emission factors that can be used to calculate estimated
9] emissions from poultry operations. We will show that it
10] is no longer -- that there are no longer reasons to ignore
11] stationary sources of the Tonopah Egg Ranch.
12] We are also going to show today that the
13] Department did not follow rules performing a new source
14] review during the minor permit modification process. The
15] Department intentionally limited their review process by
16] ignoring stationary sources that have the potential to
17] emit more than 100 tons per year of new source review
18] pollutants. Department continues to ignore these
19] stationary sources in an arbitrary, capricious way.
20] In August, the Board ruled on the
21] jurisdiction of this hearing. As recent as Friday last
22] week, the Department again made an effort to limit the
23] scope of this hearing to emissions only from the diesels
24] for the emergency generators and the boiler operations. I
25] intend to provide testimony, including myself and expert

Page 11

1] witness, to demonstrate that a new source review with a
2] minor permit modification should have been done and the
3] new source review pollutants quantified.
4] Expert witness Miss Martin will testify
5] about emissions calculations permitting major stationary
6] sources at the facility. We intend to challenge the
7] Department's position on fugitive emissions and
8] demonstrate that the emissions are non-fugitive.
9] I can only use the plain language of the
10] Clean Air Act of Maricopa County state implementation plan
11] air quality rules and that will be the basis of my
12] argument. Although I've been able to find some legal
13] cases on the internet that support my appeal, I don't have
14] the skills or the ability to find, cite or weave court
15] cases into the legal argument.
16] However, I would like to make a statement
17] about the Chevron USA, Incorporated versus Natural
18] Resources Defense Council. That was a Supreme Court case.
19] It seems to me that the laws, regulations and rules are
20] clear, and interpretation is not necessary. Therefore,
21] the Chevron decision would not apply.
22] I hope by the end of the day you will agree
23] with us that a new source review should have been
24] triggered during the minor permit modification process.
25] Thank you.

Page 12

1] CHAIRMAN LEONARD: Thank you. Mr. Blackson.
2] Mr. Swan.
3] MR. SWAN: Mr. Chairman, members of the
4] Board, in the Department's view -- in the Department's
5] view, this is a very simple case that involves an
6] application for a minor permit revision to add boilers and
7] generators to an existing operation that already had been
8] granted an air quality permit. So, again, we're looking
9] at an application for a minor permit revision to an
10] existing permit.
11] The Board's own manual at Section 3.22
12] states that under these circumstances, the petitioner
13] certainly has the right to challenge the Department
14] directors' action in approving that minor permit revision,
15] but the petitioner has the high burden to prove that in
16] doing so, the Department's decision to issue the revision
17] falls into at least one of the following four categories:
18] It was arbitrary; it was unreasonable; it was unlawful or
19] it was based upon a technical judgment that was clearly
20] invalid, and the petitioner must -- you must find that one
21] of those four categories of omissions is applicable here.
22] It's our argument that you must find that in order to
23] overturn and not confirm the Department directors'
24] decision to issue the permit.
25] Here, the Department's decision to issue the

Page 13

1] minor permit revision should be confirmed under all of
2] those. We met all of those standards and others. The
3] evidence we will present will confirm that the Department
4] applied all proper permitting standards and processes.
5] At the conclusion of the evidence, the
6] Department will ask the Board to approve the Department's
7] decision to issue the minor permit modification. Thank
8] you.
9] CHAIRMAN LEONARD: Thank you, Mr. Swan. All
10] right. Mr. Blackson, however, you would like to proceed,
11] whether it's you first or you'd like your expert witness
12] to proceed.
13] MR. BLACKSON: What I would like to do first
14] is Mr. Swan and I agreed that all of the exhibits that
15] have been provided in both of our pre-hearing disclosures
16] be accepted by the Board as exhibits. So I would like to
17] make that motion.
18] CHAIRMAN LEONARD: Mr. Swan, are you okay
19] with that?
20] MR. SWAN: The Department agrees, yes.
21] CHAIRMAN LEONARD: Thank you, gentlemen, for
22] doing that. We appreciate that. So we'll note that for
23] the record, and thank you.
24] Mr. Hiser, I apologize. Sometimes I can be
25] a little too informal. We need to admit those as part of

Page 14

1] the hearing. We will admit those.
2] MR. BLACKSON: With that, I would also like
3] to make a motion to submit some regulatory rules for the
4] board to consider also. We've talked -- and it's the
5] understanding that the old version of the county rules
6] have been used to review this permit. So with that, I
7] would move that Maricopa County Rules 100, 200, 220, 241
8] and if, Mr. Swan would agree, also 41 CFR 165 which I
9] believe the county has referenced as a legal citation.
10] MR. SWAN: We have no problem with any of
11] those being admitted.
12] MR. HISER: I'd just like to clarify whether
13] these are the current rules or these are historic rules?
14] MR. BLACKSON: My understanding -- I have
15] both, but my understanding is they are the historic rules.
16] MR. HISER: Historic begs the question
17] effective as of what date, just so I know what rules we're
18] talking about?
19] MR. SWAN: I understand from my colleague
20] Mr. Sumner, who is head of the permitting division, that
21] all four of those rules were updated effectively --
22] effective as of February 2016.
23] MR. HISER: Okay. So these would be the
24] rules in effect in the 2014 time fame as previewed prior
25] to the revision of Rule 16. Thank you.

Page 15

1] MR. BLACKSON: I do have copies.
2] MR. HISER: Copies would be appreciated.
3] Most certainly that was going to be my next question, is
4] if you had copies. And just for the record, the CFR
5] reference would be 40 CFR part 51.165.
6] MR. SWAN: In lieu of the citation he gave?
7] MR. HISER: That's the one I think he
8] intended but he transposed a couple of numbers.
9] MR. BLACKSON: I did. I apologize.
10] CHAIRMAN LEONARD: Okay. If both parties
11] are in agreement, I will accept those as submitted.
12] MR. BLACKSON: Okay. I haven't done this
13] before, but I would like to be able to present the case.
14] So I would call myself as a witness. Is that proper?
15] MR. HISER: So, Mr. Blackson, if you will
16] raise your right arm.
17] DANIEL E. BLACKSON,
18] a witness herein, having been first duly sworn by the
19] Certified Reporter to speak the truth and nothing but the
20] truth, was examined and testified as follows:
21] MR. HISER: Thank you. You may proceed.
22] CHAIRMAN LEONARD: Also, so that we have one
23] point of focus, if you need to get back up and get your
24] information, that's fine, but, again, because of the court
25] reporter, if you can make sure every once in a while we'll

Page 16

1] take a breath. You and I will be doing this together, so
2] just let me know if something comes up that seems a little
3] funny, all right? Thank you, sir.
4] MR. HISER: And for the benefit of the court
5] reporter, if you could start by stating your name and
6] spelling it and your address.
7] MR. BLACKSON: My name is Daniel E.
8] Blackson. D-A-N-I-E-L, E. B-L-A-C-K-S-O-N. My address
9] is 42211 West Salome Highway, Tonopah, Arizona, 85354.
10] So I have some new information that I would
11] like to add, and I have not done this before, so if I
12] drift out of the bounds, please let me know, but I would
13] like to talk about about the rule process some and also at
14] the core of this, our fugitive, non-fugitive emissions,
15] and I would like to be able to state a position on that.
16] So if we could start with Rule 100, I
17] believe there's some important definitions in Rule 100.
18] So we'll have the whole version and I would first like to
19] point out the definition of a building and I'm turning to
20] the -- it's in alphabetical order and it can be found on
21] page 12, and I think this definition will be important as
22] we talk about fugitive and non-fugitive emissions.
23] So 200.26, ,"Building, Structure, Facility
24] and Installation. All the pollutant emitting equipment
25] and activities that belong to the same industry grouping

Page 17

1] that are located on one or more contiguous or adjacent
2] properties and that are under the control of the same
3] person or persons under common control except the
4] activities of any vessel. Pollutant-emitting activities
5] shall be considered as part of the industrial grouping if
6] they belong to the same major group as described in the
7] Standard Industrial Classification Manual, 1987."
8] I would also like to read the fugitive
9] emissions definition. Again, it's alphabetical and it
10] would be found on page 17.
11] "Fugitive emission. Any emission which
12] could not reasonably pass through a stack, chimney, vent,
13] or other functionally equivalent opening."
14] And then there's also a definition for major
15] source, and that's number 60 on page 19. "A major source
16] as defined in Rule 240, permits for new major sources and
17] modifications to existing major sources of these rules."
18] B talks about hazards, air pollutants would
19] be relevant to this, but C goes on to say at the bottom of
20] the page, "A major stationary source, as defined in
21] Section 302, definitions of the act, that directly emits
22] or has the potential to emit 100 tons per year or more of
23] any air pollutant, including any major source of fugitive
24] emissions of any such pollutant."
25] And I would like to stop at this point and

Page 18

1] make a statement that that's fugitive emissions here that
2] have to be quantified, so somewhere in the process, even
3] if the emissions from the hen houses are fugitive, they
4] should have at least been calculated to determine whether
5] this is a major source or major stationary source.
6] "The fugitive emissions of a stationary
7] source shall not be considered in determining whether it's
8] a major stationary source for the purpose of
9] Section 302(j) of the act unless the source belongs to one
10] of the following categories," and then this is the list of
11] categorical stationary sources that are found in the act.
12] I don't think there is a need to read through those.
13] There's an important definition
14] on quantifiable at the bottom of page 24. "Quantifiable:
15] With respect to emissions, including the emissions
16] involved in equivalent emission limits and emission
17] trades, capable of being measured or otherwise determined
18] in terms of quantity and assessed in terms of character.
19] Quantification may be based on emission factors, stack
20] tests, monitored values, operating rates and averaging
21] times, materials used in a process or production, modeling
22] or other reasonable measurement practices."
23] So I believe what this is saying is that
24] emissions can be quantified and you're not limited to
25] using AP-42 in order to quantify those emissions.

Page 19

1] I believe we'll be talking about sources so
2] that definition is worth going through. Source is on
3] page 28 at the very bottom. "Source: Any building,
4] structure, facility or installation that may cause or
5] contribute to air pollution."
6] And then with that, there's also a
7] definition of a stationary source. This is on page 29.
8] "Any source that operates at a fixed location and that
9] emits or generates regulated air pollutants."
10] So I would like to say that the Clean Air
11] Act does not have an exemption for animal feeding
12] operations, and also, when you look at the county rules,
13] rules 200, 210, 220, 240, 241, they describe the
14] permitting process of all sources. Those rules do not
15] have an exemption for animal feeding operations. In fact,
16] if you look at Rule 100, it does not even have a
17] definition of an animal feeding operation.
18] Part of my appeal was issues with the permit
19] application for boilers and the source of fuel from
20] boilers. That got sorted out eventually through an e-mail
21] note from Robert Palin to the Department on May 10th, 2016
22] and I would like to motion to enter that record -- to make
23] that record an exhibit.
24] CHAIRMAN LEONARD: Mr. Swan?
25] MR. SWAN: I think it's already deemed

Page 20

1] admitted so --
2] MR. BLACKSON: Oh, it was?
3] MR. SWAN: Was it in the disclosure? I'm
4] assuming it was.
5] CHAIRMAN LEONARD: Actually, I was going
6] to -- I'm pretty sure we saw that as a part of your
7] submittal. If it was something different than that,
8] then --
9] MR. BLACKSON: No, it's not. I apologize.
10] I just didn't know everything would be accepted.
11] CHAIRMAN LEONARD: No apologies necessary.
12] You're good. Thank you.
13] MR. BLACKSON: Do we have a copy of that
14] that I can read from?
15] It's Exhibit 33. So in this e-mail there's
16] a question asked about boilers and the source of fuel --
17] I'm sorry -- about the boilers and the existence of a
18] propane tank, and Mr. Fallon or Falin, maybe is how he
19] said his name, came back and responded that there are two
20] propane tanks on-site, each of them a thousand gallons
21] that fuel the boilers themselves. That resolved that
22] issue and the tanks were declared to be insignificant. So
23] that resolved the issue.
24] But as I looked through the records, what I
25] saw is that on the technical support document, it

Page 21

1] actually -- the final one was actually dated as prepared
2] November 30th, electronically signed on February 17th. So
3] I am puzzled here how you can receive information in May
4] and it get recorded in a document that you have considered
5] to be final in February. So I'm a little bit -- I guess
6] question how the county can do that, and that goes back to
7] is this type of thing arbitrary? Maybe there's no TSD out
8] there that's not been provided that's dated differently or
9] is that an illegal type thing?
10] I know as environmental manager and
11] operations manager, if we were to do records required by a
12] permit or a regulation, if this activity happened, if this
13] truly is what happened, that would be pretty egregious and
14] that person might even get terminated back-dating some
15] information into an official record. So I -- so I
16] would -- if there's something more current than that, I
17] would really appreciate if the county would volunteer that
18] up, and it does go back to the processing of the
19] application and how that's being handled.
20] And then I also came across another concern
21] regarding the processing of the permit and -- well, let me
22] back up. I kind of got ahead of myself.
23] So the hen houses, I believe, from what we
24] read here are definitely stationary sources and they do
25] emit regulated air pollutants that would be PM-10, PM-2.5

Page 22

1] and VOC's. The process waste water surface impoundment
2] ponds are stationary sources also, and in the TSD, the
3] Department called them structural. I'll mention now that
4] I believe that there's also VOC emissions from that, and
5] we will talk about that in a little bit.
6] I would also mention that the definition of
7] stationary sources also found in 40 CFR 51.165, it really
8] reads the same as what the county has but it's a little
9] bit updated. "Stationary source means any building,
10] structure, facility, installation which emits or may emit
11] a regulated pollutant, and the regulated -- the PM-10, the
12] PM-2.5 and the volatile organic compounds are resource
13] review pollutants."
14] Also in the Code of Federal Regulation, it
15] does give a definition of building structure -- of a
16] building, structure, facility and installation, and that
17] definition reads, "Building, structure, facility,
18] installation means all of the pollutant-emitting
19] activities as it belongs to the same industrial grouping,
20] are located at one or more contiguous or adjacent
21] properties and are under the control of the same person or
22] persons under common control, except the activities of any
23] vessel pollutant emitting activities, shall be considered
24] as part of the same industrial grouping; they belong to
25] the same major group, for example, which have the same two

Page 23

1] digit codes as described in the standard industrial
2] classification manual," and then it goes on to kind of say
3] how that was amended. So, again, the hen houses are
4] buildings and the process waste water surface impoundments
5] are structures and the TSD does recognize them as
6] structures.
7] The regulated air pollutants from these
8] sources have not been quantified. If you look at the
9] permit application, that applicant left section Z-M part
10] of the minor permit modification application blank but
11] they do appear on the TSD calculations, and I guess I
12] could stop at this point if we want to actually look at
13] those documents.
14] CHAIRMAN LEONARD: Mr. Blackson, if you'd
15] like us to, we can review that if you want. If not, again
16] just, as a reminder, we have all the information as you
17] submitted and we've accepted it into record. If you're
18] saying you'd like to point that out, that's just fine.
19] MR. BLACKSON: Thank you. Regarding the
20] waste water ponds, in the TSD, the ponds are mentioned and
21] that's on page seven in the comments and it states none of
22] the chemicals containing VOC or HAPs but there's evidence
23] in the ADAQ determination of applicability of other
24] chemicals used in that building, and those chemicals,
25] other than egg washing, do contain VOC's such as chemicals

Page 24

1] to clean the floor and probably the walls, and, also, the
2] TSD was not comprehensive in its analysis and it didn't
3] look at feces and urine, broken egg matter that would be
4] on those eggs. That's why they're being washed. So all
5] of that matter then would be carried with it through the
6] wash water into these ponds and, of course, the biological
7] activity still continues in those ponds.
8] There's also a matter with the actual permit
9] application itself, and there actually may be a third
10] application that predates the two that we have, and I
11] would like to try and clear that up if possible. And in
12] going through my records request, there was an e-mail note
13] between the permitting supervisor and I believe the
14] permitting engineer that indicated that the original
15] permit application did not have the boilers. So I would
16] move to include -- and you have not seen this -- include
17] that e-mail and the attachment into the record as an
18] exhibit.
19] MR. HISER: Mr. Swan, was that included in
20] what you were knowing you were admitting?
21] MR. SWAN: Did Mr. Blackson disclose it?
22] MR. BLACKSON: I did not because I did not
23] find it until Saturday night.
24] MR. HISER: Then Mr. Blackson you will need
25] to present a copy of that to Mr. Swan.

Page 25

1] MR. SWAN: We'll need to review it. I was
2] assuming it was part of your disclosure statement. The
3] Department does not object to the admission of this
4] document. It's a little unclear. There's green, red and
5] blue.
6] CHAIRMAN LEONARD: For the court reporter's
7] benefit, Mr. Swan was asking if Mr. Blackson might
8] describe what the different colors in the proposed e-mail
9] exhibit mean.
10] MR. BLACKSON: Yes. If you look at the
11] e-mail, the cover e-mail on the document, that explains
12] what the colors are. So there could be an explanation.
13] It just looks like there was another application.
14] MR. SWAN: Again, the Department does not
15] object to introduction of this piece of evidence, although
16] we want to make it clear that the various colors were not
17] applied by the Department. I assume they were applied by
18] Mr. Blackson or somebody on his team. You found them that
19] way?
20] MR. BLACKSON: Yes. If you look at the
21] e-mail, embedded in the e-mail it says, "Todd, the
22] attached document has been revised per your
23] input/suggestion (in red)."
24] MR. SWAN: Okay.
25] MR. BLACKSON: Revised sections --

Page 26

1] MR. SWAN: Okay. We're satisfied.
2] CHAIRMAN LEONARD: Okay. We'll introduce
3] that. Sorry. I'm used to being on your side of the
4] table. My apologies. We'll admit that, please.
5] MR. BLACKSON: And I would like to make a
6] point then that goes back to the Department's actions on,
7] you know, was that arbitrary? What about the technical
8] decision on that? Where is that other -- that other
9] application? And hopefully, it has not been swept away
10] somewhere where it can't be found, because I think an
11] important point on that is that a similar facility
12] received the notice of violation, but the Department chose
13] not to issue a violation to the Tonopah Egg Ranch for the
14] same issue of operating boilers without permits.
15] What I would like to do now is just briefly
16] mention the non-Title V permit -- minor permit
17] modification process. So if you look at Rule 220, there
18] is a section in this rule -- and I apologize. I really
19] had gone through the revised rules to do this testimony
20] and not so much the older rules. I believe it will be
21] section 405, permit revision procedures and then if you go
22] on to 405.3, non-minor permit revisions is kind of what
23] we're talking about and that's on page 21. So I
24] apologize. This was not a non-minor; this was a minor
25] permit revision.

Page 27

1] On page 20 and the section 405.2, minor
2] permit revisions. "Minor permit revision procedures shall
3] used for a change that triggers a new applicable
4] requirement", and then it has steps one, two, three and
5] then, "Minor permit revision procedures shall be used for
6] a change that increases operating hours or rates of
7] production", and, "The minor permit revision procedures
8] shall be used for a change in fuel."
9] So on to the next page then, it continues to
10] explain the procedures that will be used for a change that
11] results in emissions subject to monitoring, record
12] keeping. "E. Minor permit revision procedures shall be
13] used for a change that decreases emissions. Minor permit
14] revision procedures shall be used for a change that
15] replaces an item -- " but also complementing this is
16] Rule 200, permit requirements. So Rule 220 has some
17] specifics and Rule 200 also talks about the change.
18] I believe actually I got a little confused
19] with the different rules so the numbering is -- caused me
20] a little bit of a problem here, but I think I want to go
21] back to Rule 220, section 300 and if you look on
22] page four, it's got the permit application processing
23] procedures, and in these procedures, there is a standard
24] application form and required information, 301.1. Second
25] step, permit application, and a compliance plan; that

Page 28

1] would be on page five, a timely permit application also,
2] and duty to supplement or correct application, action on
3] application and then that's the process the agency
4] follows.
5] I would like to point out a couple of
6] particular steps, and on page six, on 301.4, step C, it's
7] kind of towards the top, "To be complete, an application
8] for a new permit or a notification of a permit revision
9] shall contain an assessment of the applicability of the
10] requirements established under rule --" let's go to B
11] right above it, very top page. "To be complete, an
12] application for a new permit or a notification of a permit
13] revision shall contain an assessment of the applicability
14] of the requirements of Rule 241, permits for new sources
15] and modifications to existing sources of these rules and
16] shall comply with all applicable requirements of Rule 241,
17] permits for new sources and modifications to existing
18] sources of these rules."
19] Now, through my records request, that
20] assessment has not been provided. However, if you look
21] down, the control officer has a lot of leeway on minor
22] permit modifications, and if we go on down to F, "The
23] completeness determination shall not apply to revisions
24] processed through the minor permit revision process."
25] So it would be, I think, pretty arbitrary

Page 29

1] not to require the assessment of Rule 241 and weigh that
2] requirement and allow the minor permit modification to be
3] processed. Maybe, maybe not the control officer has the
4] ability to do that. I would hope no; it's pretty
5] important, but if we look at the -- there's a checklist
6] that is done on minor permit modifications, and that
7] actually is part of the exhibit that the county has
8] provided at the end of the TSD, and on that checklist, it
9] does not talk about an assessment of the applicability of
10] the requirements of Rule 241, permits for new sources and
11] modifications to existing sources. So as near as I can
12] determine from trying to follow this process, that
13] assessment has not been done.
14] If we then go to Rule 200, it talks about
15] standards for applications, and this is on page nine.
16] "All permit applications shall be filed in the manner and
17] form prescribed by the control officer. The application
18] shall contain all the information necessary to enable the
19] control officer to make the determination to grant or to
20] deny a permit or permit revision which shall contain such
21] terms and conditions as the control officer deems
22] necessary to assure a source's compliance with the
23] requirements of these rules. The issuance of any permit
24] or permit revision shall not relieve the owner or operator
25] from compliance with any federal laws, Arizona laws or

Page 30

1] these rules, nor does any other law, regulation or permit
2] relieve the owner or operator from obtaining a permit or
3] permit revision required under these rules."
4] Again, it does not -- there is no exemption
5] for animal feeding operations. So the rules are very
6] specific, and hopefully the county would have followed
7] these rules that the hen houses are stationary sources and
8] should be permitted as such or at least appear on the
9] application as a stationary source for the county's
10] valuation.
11] MR. HISER: Although, Mr. Blackson, if you
12] look at the paragraph above that, you will see that there
13] is a section entitled exemptions that says,
14] "Notwithstanding these rules, the following sources shall
15] not require a permit unless the source is a major source
16] or unless operation without a permit would result in a
17] violation of the act", and then under Section 308.3, it
18] says, "Agricultural equipment used in normal farm
19] operations, for the purposes of this rule, does not
20] include equipment that will be classified as a source that
21] would require a permit under Title V of the act or would
22] be subject to a standard under 40 CFR parts 60 or 61."
23] Do you agree?
24] MR. BLACKSON: It does say that; I agree,
25] but --

Page 31

1] MR. HISER: So is it then -- are you going
2] to be demonstrating to the Board then this is a facility
3] that you believe should be classified as a major source
4] under Title V of the act?
5] MR. BLACKSON: I believe I'm restricted to
6] talk about the minor permit modification.
7] MR. HISER: But the minor permit revision is
8] at a source that would or would not be subject to Title V.
9] I guess that's my question.
10] MR. BLACKSON: I believe in my pre-hearing
11] disclosure with my calculations, I demonstrated that, and
12] I believe that our expert will also demonstrate that, but
13] I would like to point out that this says agricultural
14] equipment, not agricultural stationary sources.
15] MR. HISER: So your testimony is there is a
16] difference between equipment and stationary sources?
17] MR. BLACKSON: Yes, there is a difference.
18] For example, agricultural equipment could be a tractor,
19] and I believe there's some references in Arizona Revised
20] Statutes that do talk about that.
21] MR. HISER: Just in the interest of your time
22] management, you're about halfway through your allotted
23] hour and a half.
24] MR. BLACKSON: Then I think what I'll do is
25] I will skip ahead, and I do have more to say, but I would

Page 32

1] like to talk about the fugitive, non-fugitive. And I
2] would also ask for the Board's indulgence. This is a
3] pretty important issue and setting a time element on this
4] may be difficult. You may not get all the information
5] that you really need to make a decision at the end of the
6] day.
7] So fugitive, non-fugitive does seem to be at
8] the heart of this and there is a definition that we would
9] find in the 40 CFR or the county rules. "Fugitive
10] emissions means those emissions which could not reasonably
11] pass through a stack, chimney vent or other functionally
12] equivalent opening."
13] Well, the hen houses which are stationary
14] sources does have an opening. It is a building. It's got
15] a roof; it's got three sides and one side to the east is
16] open and they have actually reduced that opening a little
17] bit by putting some fabric up there, so that opening is a
18] vent. So all of the emissions coming out of that building
19] are passing through a vent or if you think maybe that
20] opening is too large for some reason to call it a vent,
21] but it's a vent, how much would you shrink it down to some
22] arbitrary definition of what a vent is or what a vent
23] isn't? But, of course, you can always go back and say
24] that that opening in that building, large or small, is a
25] functionally equivalent opening and it exhausts new source

Page 33

1] review regulated pollutants from that building.
2] So since NSR pollutants pass through a vent
3] into the ambient atmosphere, that causes those emissions
4] to be non-fugitive, and I believe that the EPA has
5] actually even taken a position on that.
6] If we look at the Buckeye Farms egg-laying
7] poultry operations, the EPA clearly considered those hen
8] houses to be a building and a vent when they issued the
9] consent agreement to Buckeye Farms.
10] I would also like to touch base quickly
11] about ARS 49.457 and this talks about best management
12] practices, and there is a definition of a regulated area
13] in there at the very bottom of the statute and it does
14] talk about a regulated area has to be an area A or it has
15] to be in a non-attainment area, and I would like to
16] introduce an e-mail that the permitting supervisor also
17] agreed that the Tonopah facility is not in the regulated
18] area and he had a map on that e-mail note. It may not be
19] attached, but for the sake of time, I think I'll just move
20] forward, and if you're not in a regulated area, then you
21] don't have a regulated agriculture activity.
22] MR. SWAN: Is that document included as an
23] attachment to your disclosure statement or are we reading
24] it for the first time? What is the answer?
25] MR. BLACKSON: The answer is the map below

Page 34

1] showing PM-10 non-attainment area. Tonopah facility falls
2] outside these areas and therefore does not appear to
3] qualify for coverage under Ag BMP. I've been supporting
4] that position. I believe it's very clear in the
5] regulations if the legislature wanted the BMP's to be
6] statewide, they would not have defined the area as such,
7] the regulated area.
8] CHAIRMAN LEONARD: Mr. Blackson, I'm sorry
9] to interrupt. It won't detract from your time. The
10] question I think was whether the e-mail you're discussing
11] was something that was included in the initial submittals
12] or if this is new, like the previous e-mail was?
13] MR. BLACKSON: I'm sorry. It is new and I
14] would like to motion to -- oh, I'm sorry it was. It was,
15] but just to make sure, I would like to pass it out.
16] MR. SWAN: We have no objection to the
17] introduction of that evidence.
18] CHAIRMAN LEONARD: The e-mail will be
19] admitted then.
20] MR. BLACKSON: With that, I think it would
21] be best to conclude my testimony.
22] CHAIRMAN LEONARD: Mr. Swan, do you have any
23] questions of Mr. Blackson?
24] MR. SWAN: I have none, sir.
25] CHAIRMAN LEONARD: All right.

Page 35

1] MR. BLACKSON: Thank you.
2] CHAIRMAN LEONARD: Mr. Blackson, are you
3] calling another witness?
4] MR. BLACKSON: Yes, I would like to, yes. I
5] would like to call a witness, Kathy Martin, to be a
6] technical witness. I would -- there's some information I
7] have about her previous testimony and deposition history
8] and a resume type of information to validate that she's an
9] expert witness.
10] MR. HISER: Mr. Swan, do you have any
11] objection if this witness is an expert?
12] MR. SWAN: No, I do not.
13] MR. HISER: Miss Martin, if you'll take the
14] witness stand.
15] MR. HISER: Miss Martin, I'd ask you state
16] your name, please, for the record.
17] THE WITNESS: My name is Kathy Jean Martin
18] K-A-T-H-Y, J-E-A-N, M-A-R-T-I-N.
19] MR. HISER: Miss Martin
20] KATHY JEAN MARTIN,
21] a witness herein, having been first duly sworn by the
22] Certified Reporter to speak the truth and nothing but the
23] truth, was examined and testified as follows:
24]
25]

Page 36

1] EXAMINATION
2] BY MR. BLACKSON:
3] Q. Miss Martin, are you familiar with the matters
4] before the Board today?
5] A. Yes.
6] Q. And could you describe how you prepared today to
7] testify?
8] A. Clearly, you have almost a half a foot of
9] information in front of you. I have been working with Dan
10] Blackson off and on getting prepared for this hearing
11] today, and so I have read the Maricopa County regulations,
12] the rules, right, 100, 200, such that you've been looking
13] at already, some of the applicable Clean Air Act
14] requirements under the 40 CFR, as you have incorporated
15] them by reference in your own rules.
16] I have looked at some filings by the
17] Maricopa County Board with respect to non-attainment for
18] ozone, some of the history of whether or not you've had
19] attainment for eight-hour ozone, how you lost it and now
20] you're in a moderate attainment zone, for kind of getting
21] a feel for what's going on in this particular part of the
22] country.
23] I have read the materials and e-mails and
24] copies of permits, permit application, management plan,
25] the aquifer protection plan, et cetera, all related to the

Page 37

1] Hickman Tonopah egg laying facility that Mr. Blackson
2] acquired through a public information request, and he
3] forwarded a lot of those documents on to me for review.
4] I've looked at the pre-hearing disclosure
5] statements by both Mr. Blackson and by the county and the
6] exhibits in the books. I have looked at some of the
7] preliminary jurisdiction things and stuff like that, so
8] hopefully, almost that entire stack that you have in front
9] of you as well, in order to be here today, that relate to
10] this particular place, and then, of course, I did some
11] outside research just on air quality and egg laying
12] facilities that is the -- a lot of the research that has
13] been done through the EPA, the National Ambient Air
14] Quality Emission Compliance Program, the NAEMS program.
15] I also -- because I've been working on CAFO
16] issues since 1997, I have actually been following
17] emissions and studies for I think it's almost 20 years,
18] 21 years in all parts of the country. I've worked in 21
19] states in the United States with respect to CAFO issues.
20] So I'm also familiar with quality issues with respect to
21] CAFO's, including egg layers, and I've been involved in
22] some litigation on egg-laying facilities in California.
23] So I am aware of what some of your
24] neighboring air quality divisions are doing with respect
25] to air permits for egg-laying facilities and looking at

Page 38

1] the peer-reviewed or at least the published research that
2] has come out on various egg-laying facilities in Indiana,
3] Iowa, Ohio.
4] Q. And have you visited the Tonopah Egg Ranch?
5] A. Yes, I have. I've been around it twice.
6] Q. And did you identify any -- what stationary
7] sources have you identified from that visit, from your
8] review?
9] A. Right. Just to be clear when -- even though you
10] have my CV, very quickly, I worked for the State of
11] Oklahoma in the small business assistance program related
12] to the Clean Air Act amendments, and so in my tenure with
13] the Oklahoma Department of Environmental Quality, I
14] received training on the Clean Air Act Title V permit
15] writers training program. Also, they have a -- had
16] various training programs through the University of Texas
17] at Arlington on identifying stationary sources, and then
18] also, on each type of best available control technology,
19] such as bag houses, wet scrubbers, dry scrubbers, how to
20] do stack testing, et cetera, and that was all part of my
21] job working in the small business assistance program,
22] helping both small business and larger companies in
23] Oklahoma understanding the requirements under the Clean
24] Air Act amendment of 1990. So that was actually my job
25] for three years in Oklahoma.

Page 39

1] And so from that, I'm going to say that I
2] identified some stationary sources. I just wanted to let
3] you know it just didn't come out of nowhere. It came from
4] some background and work knowledge.
5] So when you're looking at a facility, you're
6] going to identify all the sources, and then once you've
7] identified the sources, try to see what their potential to
8] emit is, whether they're operating 24/7, whether they have
9] some sort of synthetic bottleneck where you only have one
10] shift versus three shifts, et cetera, and you get all of
11] that lined out and start trying to estimate emissions from
12] whatever actual data or emission factors or whatever. So
13] then you have a full picture of what we're calling an air
14] assessment or now it's going to be called a new source
15] review.
16] So the stationary sources that I identified,
17] of course, would be all of the barns associated with the
18] egg-laying operation, all of the lagoons associated with
19] the manure or waste water storage, and then, of course,
20] you have your feed delivery system, your generators and
21] the boilers that the county has identified. Of course, I
22] had to identify these from the street but if, you know, we
23] had a site inspection, we may find something else,
24] correct.
25] Q. What are the types of air pollutants that would

Page 40

1] be emitted from the poultry operation at the Tonopah Egg
2] Ranch?
3] A. Right, and I believe Dan provided some exhibits
4] on -- some research on typical air pollutants from poultry
5] operations and from egg-laying operations and, of course,
6] I have done similar reading and research in the last 10,
7] 15 years but you're looking at basic categories.
8] For today's hearing, we're going to be
9] looking at particulates and volatile organic compounds.
10] The particulates are from feed dust, dander, feathers, the
11] animals just in their movement producing particulate
12] matter, and the particulate matter that we're concerned
13] about is PM-10 which is actually very, very small, not
14] really visible to the naked eye but it's respirable and
15] PM-2.5, which is even more respirable; then the volatile
16] organic compounds which those come from the degradation
17] from the manure, the feces and urine which all comes from
18] the same place in a bird, but that fecal material, as it
19] degrades, it's going to release volatile organic
20] compounds, right?
21] As proteins degrade, that's the natural
22] course and then there is also, of course, ammonia and that
23] is from the degradation of the urease part of fecal
24] material. It is a very, very large amount from poultry.
25] That's a big part of their emissions, and then other

Page 41

1] things that are normal like carbon monoxide from their
2] breathing, methanes and other things that are not going to
3] be spoken of here today. So we're looking at particulates
4] and VOC's today.
5] Q. Is there anything else you would like to comment
6] about the stationary sources and pollutants?
7] A. No.
8] Q. So let's talk about emissions. What is an
9] emission factor?
10] A. Okay. An emission factor is some kind of a
11] number you can multiply by, like, in this case, with an
12] animal feeding operation, the number of birds at the
13] facility. So the emission factor that we're looking at
14] here today would be pounds of that pollutant per bird per
15] day or per year. There's other kinds of emission factors
16] that could be a function of ventilation rate, et cetera,
17] but we are just looking at some simple emission factors to
18] show that there's definitely many ways at the facility to
19] trigger 110 per year criteria pollutant in order to have
20] further investigation.
21] Q. How can emission factors be derived? And perhaps
22] as part of that, you'd like to talk about the potential to
23] emit, a guide for small business which should have been
24] provided in everybody's packet and this would be 13 --
25] page 13 to maybe 16?

Page 42

1] A. And this is the SBAP the EPA published in
2] October 1998 and what this Small Business Assistance
3] Program was supposed to do is provide an interpretation of
4] the Clean Air Act for small business people, right. This
5] is not a policy wonk document. This is supposed to be,
6] you know, putting it into regular people's terms so small
7] business owners can understand whether or not they need to
8] get a permit, and one of the great things about it is in
9] this document on page 13 it says how do I determine if I
10] have a potential to emit? How do I figure out, you know,
11] what my emissions are? And so the EPA gives the hierarchy
12] of data, which is basically a science or engineering
13] function, the hierarchy of data in any permitting program.
14] Also, the air quality permitting program would be to look
15] at measured data from the existing site, correct, or
16] measured data from a similar site, emission factors based
17] on actual sites, okay, that isn't in a book; that's just
18] applied, whatever, then some modeling and then, of course,
19] there's always lesser guesses, okay.
20] So what we are trying to say today is that
21] the county was claiming that there was -- there was no
22] defined emission factors by the EPA. They were doing a
23] large nationwide study. It was very extensive. They went
24] to great pains through the National Compliance Order to
25] get people to sign up and to get some sort of amnesty

Page 43

1] during the study in order to determine a final emission
2] factor for animal feeding operations. There would be
3] several different factors, one for each type of species
4] that once that number was determined, then every single
5] CAFO or animal feeding operation in United States, every
6] last one of them had to look at that number and calculate
7] the emissions. There would be no exceptions. Okay. So
8] that's when the study is finally done and the emission
9] factors are published.
10] Where we're at right now, the study has been
11] done. There are publications of the emission factors
12] developed by Dr. Heber out of Purdue with respect to the
13] poultry emissions. It was a robust study. I believe when
14] you look at the exhibit provided by the county, there's
15] nearly 400 pages that shows how robust Dr. Heber's study
16] was looking at emissions from poultry facilities, and so
17] we are saying and also the EPA says that, yes, you may
18] have fantastic beautiful data in the future, but you go to
19] the dance with the girl you got. You go with the data you
20] have at hand. We're not going to wait indefinitely for
21] perfect information, so -- and I think we have some
22] documents in the exhibits that say that by the EPA with
23] respect to the Buckeye egg facility or with the California
24] dairy study. I don't remember the exhibit numbers right
25] off the bat, but they're in there.

Page 44

1] So the EPA has been pretty clear all along,
2] even though they know they have the study going on on the
3] side, that they still expect people to use -- to generate
4] emission numbers using the best available numbers that
5] they have at hand, contrary to what the county would like
6] to do which is wait forever, right.
7] So what we're saying is there is a beautiful
8] study out there with these beautiful numbers and there are
9] also consent orders by EPA for poultry egg-laying
10] facilities that have estimated emissions from 2005. So
11] these are emissions that went through a legal process and
12] a consent order and so, you know, they've been tested to a
13] certain extent way more than just a graduate student's
14] thesis, for example, and that those numbers were available
15] to generate a range of emissions from the Tonopah facility
16] which Mr. Blackson had calculated and shown in quite
17] laborious detail in his pre-hearing disclosure.
18] And so my purpose here today is -- as a
19] professional engineer is to say that I've reviewed those
20] emissions calculations. I have reviewed his source
21] material and his methodology of how he presented the
22] information to you, and I believe that he has been fairly
23] accurate in what he has presented to you, and he's shown
24] time and time again, no matter whether you went to the
25] NAEMS study emission factor, whether you went to the

Page 45

1] Buckeye factor, whether you went to the -- was it the Iowa
2] factor, I think, whether you were in particulate material
3] or whether you were at VOC's, hitting over a hundred tons
4] per year, sometimes in the 200, 300 tons per year, using
5] existing emission factors, some of which have been
6] available for 11 years now, right.
7] So there's absolutely no reason from this
8] day forward to ignore the fact that you have major
9] stationary sources at the facility that generate more than
10] 100 tons per year and that there needs to be a decision
11] made now whether you continue to provide a non-Title V
12] permit by basically ignoring this information, you know,
13] forever, I guess, or you take a stand at the procedure we
14] are in, the permitting process, which is creating a new
15] permit, a modified permit that at that point, you take
16] that opportunity to remedy and go forward under whatever
17] permit program is required after you do the new source
18] review, correct, which is what we're asking to have done,
19] okay?
20] MR. BLACKSON: Also, sometimes a visual can
21] be very helpful and there's an EPA document that I
22] recently found that talks about AP-42 and it has a chart
23] on it that kind of shows a hierarchy of emission factors,
24] and I would like to be able to enter it in as an exhibit.
25] I did quite a bit of research over the weekend. In

Page 46

1] particular, if you would look at page four --
2] MR. SWAN: The county has no objection to
3] this document.
4] CHAIRMAN LEONARD: Okay. We'll admit that.
5] BY MR. BLACKSON:
6] Q. So, Miss Martin, if you could share a little bit
7] more information about emission factors and how some are
8] perhaps more accurate than others?
9] A. Right. I believe we got this from the published
10] AP-42, okay, right, and what's nice about Figure 1 is it
11] includes that engineering judgment I was speaking of where
12] we like to look at, you know, actual emission values
13] obviously, then going to source category emissions models,
14] and then the reliability gets better as you get closer to
15] your facility. And there is additional cost, but what we
16] have access to is unique because we have a national
17] emission study which was paid for, you know, several
18] million dollars was paid for by the participating
19] producers. So we have access to great data without having
20] to make one particular applicant do some testing, right.
21] Q. Okay. Thank you. So you talked about the
22] calculations that I prepared during the pre-hearing
23] disclosure and you found those to be understandable and
24] acceptable calculations; is that correct?
25] A. Correct. I reviewed the calculations. There's

Page 47

1] several in this disclosure, three or four different places
2] and I've looked at all of them. So unless we want to go
3] through them one by one, I think if you read the
4] disclosure, you know what I'm talking about. I have
5] looked at his source materials that are also exhibits, and
6] as an engineer, I believe he made good solid decisions on
7] how to transfer some of the emission factors to apply to
8] Tonopah.
9] Q. Do you believe that it would have been prudent
10] for the county, as part of the minor permit modification
11] process, to actually conduct sampling of the existing hen
12] houses at the Tonopah Egg Ranch?
13] A. Well, you're in a unique position. Once that
14] facility's constructed and in operation, no matter whether
15] it's an egg-laying facility, to a power plant or anything
16] else, once the facility is in operation, everyone has
17] access to taking samples, right? And that is built into
18] the Clean Air Act, right?
19] So, yes, and the fact that Hickman's is
20] constructed, the Tonopah facility is in operation, some
21] types of measurements could have been made and you could
22] have followed some of the more complex methods listed in
23] the national emission study or you could have come up with
24] some lesser cost measures, but it can be done, of course.
25] Q. So you're saying that there is a variety of ways

Page 48

1] to estimate the emissions from all the sources used in a
2] new source review process for this minor permit
3] modification at the Tonopah Egg Ranch? The county would
4] not be limited to one particular emissions factor; they
5] could have measured -- AP-42 doesn't have a particular
6] emission factor, but they could have measured -- they
7] could have used industry; they could have used the small
8] business approach. There's a variety of ways that
9] emissions factor could be selected?
10] A. Correct. And let me tell you it is the same
11] thing that happens during evaluation of a nutrient
12] management plan. There's like three different ways to
13] calculate the amount of nitrogen in the manure from three
14] different well-known peer review sources, and you can
15] calculate a range from low to medium and just say
16] somewhere in between is where this facility lies or you
17] can be conservative and prepare a nutrient management plan
18] according to the maximum nutrient value.
19] So similarly, you can look at a variety of
20] emission factors that were available, find a range and
21] then either pick an average or somewhere closer to the
22] higher end to be conservative, meaning you're making sure
23] you're not underestimating emissions; you might be a
24] little bit overestimating emissions and see if that
25] triggers a different permitting program. If it doesn't,

Page 49

1] it doesn't. But if you've never done the calculation at
2] all, which is what we have determined through the e-mails
3] that Mr. Blackson collected during his public information
4] requests and reading through what he got back from the
5] county, there is no proof of any calculations. And, in
6] fact, I think he got an e-mail response back from
7] Jacqueline or something that just said no calculations, no
8] calculations, no calculations. So there was no doubt that
9] it was not done. We wanted to make sure we didn't miss
10] something.
11] Q. Would you like to discuss the flaws in the
12] county's arguments that they need to wait for official
13] emissions factors from the EPA in order to determine the
14] new source review pollutant emissions from the Tonopah Egg
15] Ranch?
16] A. Right. And this kind of goes to the county's
17] pre-hearing disclosure where they are pointing to Indiana
18] and saying, well, Indiana did -- in fact, in one of the
19] e-mails from the county, Mr. Sumner said, well, Indiana
20] did this study on air emissions and they didn't change
21] Indiana air quality rules to require permits. However,
22] that Indiana study which was done at Purdue by Dr. Heber
23] was not a study for Indiana. It was a study for the
24] national compliance program, first of all.
25] Second of all, I've been working in Indiana

Page 50

1] since 2004, and I know a lot of people in the water
2] quality division of IDEM and I know if they have something
3] called a non-regulatory policy statement, that that's not
4] enforceable in the State of Indiana, okay. So that's --
5] which is the document that I believe the county provided
6] as saying, look, they're saying right there in this
7] brochure that the EPA doesn't have a final emission
8] factor, so we're just going to permit boilers and
9] generators, so I think we'll do the same thing that
10] Indiana does, which is an interesting idea to go all the
11] way across the country to Indiana when you can just go
12] right next door to California who has 30 some odd air
13] quality county boards such as yourself that are delegated
14] authority that do have large-scale animal feeding
15] operations that were involved and are involved in issuing
16] permits for animal feeding operations that were under
17] stern compliance eyes of EPA by creating an ag exemption
18] from the Clean Air Act.
19] That's who you need to look for as the -- as
20] your future because that's where somebody is actually
21] doing the permitting they're required to do. The state
22] attempted to provide a statewide exemption for
23] agricultural facilities and EPA came back and say, uh-huh,
24] you can't do. That's in violation of your SIP.
25] So that's who you need to go to for

Page 51

1] guidance, the people who are being out there issuing
2] permits and at least being set straight on how these
3] permits need to be operated versus another state who also
4] just threw up their hands and said we're not going to do
5] it until somebody makes us do it. So I find that to be a
6] fatal flaw in that particular part of the argument.
7] I think you have plenty of information in
8] the research out of the national compliance. I think you
9] have resources in the EPA itself, not only in region nine
10] but in other regions such as where Ohio is and how they
11] handle the Buckeye Egg that you could reach out and you
12] could get access to their emission factors and understand
13] how barns are stationary sources and how you estimate air
14] emissions from not only poultry facilities but other
15] housed animal feeding operations in the state.
16] Q. Does the Clean Air Act have an exemption for
17] animal feeding operations?
18] A. No, it does not, and that's been stated over and
19] over again by EPA in the federal register and other legal
20] documents such as Buckeye Egg and the dairy in California.
21] So it's not just my opinion. This is by reading EPA's own
22] words.
23] Q. Are there any other observations, comments that
24] you'd like to make about the stationary sources emission
25] calculations or county's application or regulations

Page 52

1] related to the facility?
2] A. Let me just look real quickly at my notes here.
3] I did just want to give a short chronology of events for
4] the record because we didn't really provide anything like
5] that in the -- it might help.
6] You know, the original permit was issued
7] November 2014, and I believe in December of 2014 there was
8] a new ozone standard that EPA came out with in December.
9] In the following year, the application for the minor
10] permit modification was submitted, also November of 2015,
11] so don't mix those dates up.
12] Then meanwhile, this Board made the rule
13] changes to incorporate TSD and that was official in
14] February 2016; maybe not this board but Maricopa County,
15] sorry, and then in May of this year EPA changed the status
16] of Maricopa County from marginal to moderate for the
17] eight-hour ozone. So that's going on in the background of
18] this permit, this minor modification permit being issued,
19] which was then issued June 10th of 2016 this year with the
20] responsiveness summary. And then of course Maricopa
21] County is required to have their moderate ozone plan to
22] the EPA by January 2017 which is just a couple of months
23] from today. That includes your reasonably attainable
24] control technology, your RACT, for the eight-hour ozone.
25] So while this Hickman facility permit was

Page 53

1] going on, we know that you had attained -- ozone, you
2] know, attainment, it was like getting within reach. Then
3] you had a bump in Central Phoenix so now you're in
4] moderate so you have some other issues going on. The main
5] issue related to ozone of course is VOC's. Here is a
6] permit, an air permit that completely ignores hundreds of
7] tons of VOC's. So when you look at the documents that
8] were presented to EPA in your state implementation plan
9] where you have your pie charts that show what are the
10] sources of VOC's in Maricopa County non-attainment area,
11] those -- that pie chart is based on invalid, you know, not
12] accurate data, right. So maybe you're not seeing the full
13] impact of some of the animal feeding operations around the
14] Phoenix area.
15] You know, of course, we have a lot of
16] dairies down in cowtown, but I just wanted to bring that
17] up; that under the -- underneath this permit issue that
18] we're talking about today, you also in this county have
19] some pretty serious issues with the ozone and it's all
20] related to VOC's.
21] So I am not sure I am going to give you any
22] recommendations, but I believe that there's an -- it's
23] possible to estimate PM-10 and VOC emissions. It's
24] possible that this facility could be considered from now
25] on to be a Title V facility and therefore start

Page 54

1] incorporating, but you need to do a new source review.
2] You need to do that. The applicant and the county needs
3] to do that and make sure that there's some interaction,
4] right. We can't do that for you. We're just showing you
5] that there's definitely signs that it's what you should
6] have done in the past, right.
7] Q. What's your opinion on fugitive and non-fugitive?
8] The county has taken a position that the emissions are
9] non-fugitive.
10] A. Oh, sure, yes, and I wanted to add on to
11] something that Mr. Blackson said in his testimony where he
12] was just talking about the opening of the barns. And if
13] you have ever been out by Hickman's, the typical
14] egg-laying barn is a very long barn, and one end is where
15] they have manure storage and they have an opening there
16] that's permanently opened so trucks can come in and out to
17] get manure, but also so that the ventilation fans inside
18] the barn are blowing the air pollution from inside the
19] barn out of the barn through the ventilation fans across
20] the manure to dry them; thereafter creating more emissions
21] from the drying of the manure, okay.
22] This is fine. Nobody is saying you can or
23] cannot do that, but the actual vents for these barns are
24] those ventilation fans. There is movement from where the
25] animals are laying the eggs, the birds are laying the eggs

Page 55

1] where there's -- manure is deposited where it's initially
2] volatilized. The particulate matter is also generated in
3] there from the bird movement, their feathers, et cetera,
4] the feed. Especially when they do feeding, there's a
5] definite rise in particulate material.
6] If you want to look at some of the diagrams
7] in Dr. Heber's report on the Indiana poultry facilities,
8] all of those pollutants have to be removed from the
9] presence of the birds or it will harm them. It's bad for
10] their health. It could kill them. So the vents take that
11] air out and blow it out of the barn, and in this
12] particular design, it's blown out of the barn across the
13] manure pile.
14] So I believe as a stationary source, the
15] vent that you're looking for starts at the ventilation
16] fans and then it's combined into one, and then there's
17] many ventilation fans, and it's combined into one vent at
18] the opening of the barn, and those are not fugitive
19] emissions coming out of the fans; those are non-fugitive
20] emissions and should be treated as such.
21] MR. HISER: For the benefit of the Board,
22] because we have not been there to see it, like you have
23] been, so the barn is a long structure. One end of it is
24] sort of quasi open and has the manure storage, manure
25] handling in that, and then is it your testimony that there

Page 56

1] are fans at the end of this long barn which are blowing
2] the air from the laying areas across the manure pile and
3] out the end of the building? Is that what you're saying?
4] THE WITNESS: Let me answer your question.
5] Two things. There's actually an exhibit that has some
6] photographs of the barns and that was -- and we also have
7] some photographs that the citizens took, but the county
8] has some inspection reports that have the pictures of the
9] outside of the barns, but let's look at these two
10] exhibits.
11] CHAIRMAN LEONARD: While you're passing it
12] off, Mr. Blackman, do you have an estimate how much longer
13] you may be? The only reason is if we're getting close, we
14] can finish and then take our break or if you think you're
15] going to go a little bit longer --
16] MR. BLACKSON: I don't expect to be much
17] longer. I have a couple estimates on the other federal
18] register I would like for Miss Martin to respond to and
19] we'll be done.
20] CHAIRMAN LEONARD: Not a problem. I am also
21] taking into account the fact our court reporter hasn't had
22] a break.
23] THE WITNESS: Okay. So we're looking at
24] Exhibit 34 -- 33 and 34 which are color photographs that
25] were taken by the citizens from the road, and let me make

Page 57

1] sure I'm --
2] MR. HISER: Why don't you just hold them up
3] so we can see?
4] THE WITNESS: I wanted to make sure I hadn't
5] mixed them all together. So that was my first concern.
6] What we're looking at here is at the corner of, oh, gosh,
7] 415th Avenue and Indian School Road. That is photo number
8] one, so that would be Exhibit 34, and then the other one
9] is -- and what you're going to see here is -- this is
10] probably taken at the same time and these are extras.
11] These -- and according to an e-mail by Kelly Reed, these
12] photographs were taken October 20th, 2016, both of them
13] were.
14] So that we're standing north and east of the
15] facility probably, something like that, because these
16] openings that you see, with the -- like a gray shading at
17] the top, that's actually a fabric awning. It would lay
18] flat if the ventilation fans were not blowing, but when
19] the ventilation fans are blowing from inside the barn,
20] they push this fabric out. It kind of billows out like a
21] balloon. And you see at the bottom of each barn a wide
22] opening and that's where the trucks can come in and out to
23] pick up the manure to take to the Arlington facility.
24] In one of the exhibits -- in both exhibits,
25] you can see some opacity just from like fugitive emissions

Page 58

1] from trucks going on a dirt or gravel road.
2] BY MR. BLACKSON:
3] Q. Actually, this is -- this photograph -- both
4] these photographs are from the operation of loading the
5] manure that's piled inside the building with a front-end
6] loader into a truck to be hauled off.
7] A. Sorry about that.
8] MR. SWAN: Mr. Chairman, I believe Mr.
9] Blackson is testifying at this time.
10] MR. BLACKSON: I apologize.
11] THE WITNESS: If we had longer to prepare --
12] to provide this case to you properly, then there could
13] have been someone come up and talk to you about the
14] photographs, et cetera. We were there yesterday, and we
15] saw truck traffic on the other side of the barns which is
16] not where the opening is. So I apologize but, yes, so
17] he's correct. This is during manure load-out. I
18] apologize. We're both a little frazzled trying to get
19] this all in a couple of --
20] CHAIRMAN LEONARD: Just so we can come back,
21] I want to make sure that the question that was asked isn't
22] lost. We were talking about the venting and how the
23] venting might come across, and then when we get to that
24] point, I think the next point is something along those
25] lines. It was a question of making clarification for the

Page 59

1] Board as to what your thoughts were on that.
2] THE WITNESS: And I believe the attorney
3] asked if the ventilation fans were at the end of the
4] barns. They are inside internally in the barns. They are
5] on the other side of the manure storage so that they are
6] internally in the barns. They're not at the end. Other
7] types of laying barns, they are actually like on the sides
8] of the barns.
9] BY MR. BLACKSON:
10] Q. Miss Martin, to conclude, do you believe the
11] fugitives from the hen houses -- or the emissions from the
12] hen houses are fugitive or non-fugitive?
13] A. From the hen houses coming through the
14] ventilation fans, they are non-fugitive. Items like the
15] trucks going on the gravel roads, those would be
16] traditional fugitive.
17] Q. Okay. Thank you. There is an exhibit that you
18] have for the federal register. It's volume 70 and I
19] believe it might be Exhibit 13, and what this exhibit is
20] is the animal feeding operations consent agreement and
21] final order and on page 4950 -- or page 4959, in the
22] left-hand column about in the middle I'll go ahead and
23] read this and then I will ask Miss Martin a question.
24] The EPA says, "To the extent that certain
25] pollutants from AFO's are regulated under the Clean Air

Page 60

1] Act and are emitted in quantities that exceed regulatory
2] thresholds, EPA can and will require AFO's to comply with
3] all applicable Clean Air Act requirements including
4] limiting those emissions where appropriate."
5] So, Miss Martin, do you believe that the EPA
6] is intending to continue enforcement and has the authority
7] to enforce permitting for poultry operations?
8] A. They have the authority to do permitting and they
9] also have the authority to do enforcement.
10] Q. Thank you. And also --
11] A. Maybe I should clarify. The enforcement -- any
12] enforcement restriction would be given to the people who
13] signed up for the national compliance agreement. There is
14] some restriction on what the EPA will do to sue them but
15] folks that had not signed up or dropped out of the program
16] lost that privilege of amnesty.
17] Q. Also in the same document on page 4961 on the
18] right-hand column kind of towards the upper middle, "EPA
19] recognizes state and local agencies are undertaking
20] efforts to improve emissions estimation methodology for
21] animal feeding operations. EPA supports continuing action
22] to improve emissions information for all sorts of source
23] categories and will use the best information available as
24] we implement our programs. EPA also supports state and
25] local efforts to demonstrate improved emission redirection

Page 61

1] strategies and recognizes the value of state and local
2] control requirements tailored to the needs of specific
3] geographical areas."
4] Do you believe that this is a message to
5] encourage state and local agencies to continue to develop
6] emission factors and regulate AFO's?
7] A. Yes.
8] Q. Would you like to add anything else to your
9] testimony?
10] A. Let me check my notes one more time. I think
11] that will be fine.
12] MR. BLACKSON: We're done, whatever the
13] official term is.
14] CHAIRMAN LEONARD: Well, if I might say,
15] understanding that this is somewhat a new process, well
16] done. At this point, what I'd like to entertain is taking
17] a ten-minute break so everybody can get up, stretch their
18] legs, use the restroom.
19] When we come back, there will be an
20] opportunity to the Department to proceed, and depending on
21] how long that takes, we will move into the next phase. So
22] let's adjourn for approximately ten minutes and then we'll
23] go from there.
24] (Recess taken, 3:24 p.m. to 3:37 p.m.)
25] CHAIRMAN LEONARD: All right, folks. Miss

Page 62

1] Martin, I hate to be officious for you, but I remind you
2] you're still under oath.
3] If the Department would like to go ahead and
4] cross at this point, this would be your opportunity.
5] MR. SWAN: The Department has no questions
6] to ask this witness.
7] CHAIRMAN LEONARD: Okay. Well, you're good
8] to sit down.
9] Mr. Swan, you're up.
10] MR. SWAN: I would call as our witness,
11] Richard Sumner.
12] MR. HISER: Mr. Sumner, if you could state
13] your name and address for the record.
14] THE WITNESS: My name is Richard Alan
15] Sumner. My address is 1156 East Grandview Road, in
16] Phoenix, Arizona.
17] RICHARD ALAN SUMNER,
18] a witness herein, having been first duly sworn by the
19] Certified Reporter to speak the truth and nothing but the
20] truth, was examined and testified as follows:
21] CHAIRMAN LEONARD: Mr. Swan.
22]
23] EXAMINATION
24] BY MR. SWAN:
25] Q. What is your current position at the Department?

Page 63

1] A. I am currently the air quality permitting
2] manager.
3] Q. Can you give the Board a summary of your
4] educational and licensure background, please?
5] CHAIRMAN LEONARD: Mr. Swan, get pretty
6] close to the mike.
7] A. Education-wise, I received my Bachelor's Degree
8] in civil engineering from the University of Missouri,
9] Raleigh in 1977 and subsequently received my Master's
10] Degree in civil engineering from the same university in
11] 1981 with an emphasis in environmental engineering.
12] So when I left college after the Bachelor's
13] Degree in 1977 and began work in the refining and chemical
14] industry, I began addressing air quality issues there.
15] Even when I was in college, I had the opportunity to begin
16] doing some air quality work. One of the papers that I
17] wrote was -- my junior year in 1976 was one addressing
18] ozone depletion, the hole in the stratospheric ozone. So
19] I have seen a few air issues come and go along through the
20] years.
21] After about ten years in chemical refining,
22] we got here to Arizona, went to work in the printing
23] industry, as an environmental engineer for a printing
24] company, and the primary issue we dealt with there was air
25] quality issues.

Page 64

1] From there, I moved on to a phone making
2] company; again, additional air issues, particularly VOC's
3] and how to address those, from making phone cups, and then
4] moved to consulting. We did a myriad of types of projects
5] here in companies that we dealt with. One of the more
6] interesting ones was how to address emissions from
7] companies that make rocket fuel for jet ejection seats.
8] So I have seen some interesting things from all different
9] types of air quality issues.
10] And I moved on to El Paso, Texas to work
11] with what was known as El Paso Corp. which is now a part
12] of Kinder Morgan, and there I initially started as a staff
13] engineer working primarily with air quality Title V issues
14] for compressor stations, promoted to the manager over --
15] environmental manager and then I was promoted to the
16] director of environmental health and safety at the
17] corporate level.
18] And so that in about 2003, left El Paso
19] which was then located in Houston, moved to California for
20] a slight career diversion and spent five years as a pastor
21] at a church in California up until 2008, and then I came
22] back to Arizona, resumed my environmental engineering
23] career, started with the county as a staff engineer, was
24] promoted to supervisor over the Title V large source
25] program and then promoted in 2013 to the position I

Page 65

1] currently hold which is the permitting division manager.
2] Q. Thank you. Today the focus of our hearing is the
3] Hickman Egg Ranch facility in Tonopah located --
4] MR. HISER: Mr. Swan, before you get any
5] further, is the Department's wish to qualify Mr. Sumner as
6] an expert witness?
7] MR. SWAN: Yes, it is.
8] MR. HISER: Is there any objection from you,
9] Mr. Blackson?
10] MR. BLACKSON: Well, I guess I do. He
11] started off as a -- requested to be a lay witness, not an
12] expert witness and now it's changed. So I guess I would
13] like to maybe question a little bit more about his
14] expertise when it comes to permitting.
15] MR. HISER: Mr. Swan.
16] MR. SWAN: Okay.
17] BY MR. SWAN:
18] Q. Richard, your permitting experience, we've heard
19] about it here with the county. We can come back to it if
20] necessary. In your earlier positions, was there
21] permitting experience that you gained in those?
22] A. Yes, there was. All along, whether it's been
23] starting with the time in the refinery, whether working
24] with the initiation of the Title V program in the late
25] nineties, I worked on probably, I would guess, 40 to 50

Page 66

1] Title V permits with El Paso Corp. during that tenure and
2] then we went through probably 4- to 500 permitting actions
3] a year here in the county. So that that total would
4] probably be somewhere over a thousand during my time here
5] at the county.
6] Also, I would like to mention I am a
7] registered professional engineer in the State of Arizona.
8] MR. SWAN: Is there any need for further
9] questioning?
10] MR. BLACKSON: I have no further questions.
11] CHAIRMAN LEONARD: Are you maintaining your
12] objection or are you prepared to allow him in as an
13] expert?
14] MR. BLACKSON: I'm prepared to allow him as
15] an expert witness. Thank you.
16] MR. HISER: Thank you. Just to clarify the
17] record. Thank you. Mr. Swan, back to you.
18] BY MR. SWAN:
19] Q. What type of business is the Hickman Egg Ranch
20] involved in?
21] A. Yeah, they are in the -- in the business of
22] poultry egg producing.
23] Q. Can you walk us through the permitting history of
24] the Hickman Tonopah operation as it concerns Maricopa
25] County Department of Air Quality?

Page 67

1] A. Yes. Okay. I believe you heard a little about
2] that earlier. Just to reiterate some of those points is
3] that in 2014, we received the initial permit for the
4] Hickman facility. That permit was granted, I believe, in
5] November of 2014 and it was subsequently requested to be
6] modified, revised in 2015 with a minor permit revision
7] that was submitted, I believe, also in November of '15.
8] That permit was then issued in June of 2016.
9] Q. The first air quality permit issued to Hickman,
10] what classification was that? Was it Title V or
11] non-Title V?
12] A. That permit was a non-Title V permit. You know,
13] we've had a significant amount of discussion about what
14] types of emissions that are to be considered and not
15] considered here so far today, and so when we looked at
16] that initial permit, you know, we looked at the equipment
17] that was being there, and there was 12 emergency engines
18] for part of that original permit and also looked at other
19] pieces to the facility that were -- that were present, the
20] animal feeding operations which includes the manure piles,
21] includes the hen houses, includes the lagoons, and as has
22] been communicated, we considered those to be fugitive
23] emissions for various reasons.
24] Number one, the type of opening that's in
25] the building, we believe those couldn't be reasonably

Page 68

1] captured as a point source and should be considered as
2] fugitive. You've seen pictures of the front of the
3] building and the pictures that were taken there, and as I
4] look through some of the documents on the nutrient
5] management plan, there are dimensions for the buildings
6] there that you have in the record that was provided by Mr.
7] Blackson that I believe the width of the opening of those
8] buildings is 84 feet. So it's not exactly a small
9] opening. The height of the building at its peak is about
10] 40 feet before the springs were added to help to reduce
11] the emissions that might be coming out.
12] So this is not a small -- I tried to put
13] 84 feet into perspective, and since it is the middle of
14] football season, I figure that's about a 28-yard
15] completion from Carson Palmer to Larry Fitzgerald. So
16] it's a pretty good gain. So that it's not a small
17] opening. So from that aspect of it, we looked at those as
18] being fugitive.
19] You know, we also considered some of the
20] work that had been done as part of the hen house studies,
21] and EPA and this is -- we relied on this. We looked at
22] the permits was -- that EPA had said these were open
23] issues, whether these were fugitive or non-fugitive, and
24] they would look at those at a later date and begin to
25] provide some emission factors with those and that that was

Page 69

1] a national issue that would really require a national
2] solution. So we relied on that when we put the permits
3] together originally.
4] Therefore, the main things that we looked at
5] were the engines that were part of that permit and then
6] with the minor mod, we added eight more emergency engines
7] that are diesel fired; in addition to that, two boilers.
8] So, again, there's some discussion about the boilers, and
9] those were there at the beginning but were only picked up
10] in the minor modification. So those were added into the
11] permit as part of the minor modification at that time.
12] Q. Can you tell us, beginning with the receipt of
13] the application for the minor permit revision, what
14] processes did you go through, you and your staff go
15] through to evaluate that application?
16] A. Whenever a permit application comes in, our first
17] step is to run it through an administrative review to
18] determine whether everything from the administrative
19] perspective is in place: the name is there; is it signed,
20] addresses, contact, just very, very basic information.
21] Once that is complete, we are satisfied we
22] have sufficient information from which to be able to move
23] the permit to the next step, it goes on to the -- assigned
24] to a permit engineer. That permit engineer then begins
25] the technical review process to see if we have the

Page 70

1] technical information with which to process the permit to
2] determine, you know, whether it is non-Title V, Title V
3] permit, what rules apply, whether things like NSR apply,
4] what national maximum standards might apply, all those
5] types of things. We -- you know, we look at, whenever the
6] permit comes in, to be able to determine what rules to
7] apply, which of our local rules and what standards to
8] apply once the emissions are determined.
9] So a permit engineer goes through, evaluates
10] all of those types of things. We go through several
11] iterations internally to look at the draft permit. That
12] permit engineer would develop -- and in that draft
13] process, you know, there may be several moves back and
14] forth, and you've seen some of the internal e-mails that
15] were part of that sausage-making process where the permit
16] engineer may put something down and someone else will look
17] at it and say you missed that or why isn't this in there
18] or why is that in there? And so you've seen some of those
19] pieces that we will look at until -- our objective is to
20] get it right, get the permit to be complete as to what
21] information should be in there, what should not be in
22] there and how we are then able to issue that final permit.
23] Before we get to that step, in the internal
24] review process, we look at it among the engineering staff.
25] The supervisor can be -- can be in on this one and then we

Page 71

1] also will have compliance look at it. We'll have the
2] compliance staff take a look because they look at things
3] maybe a little differently than the engineers would
4] because they're boots on the ground, in the field more so
5] than us.
6] Then once we have a draft permit that we are
7] satisfied with internally that we feel meets all the legal
8] requirements, that meets all the rule requirements, meets
9] all the technical requirements, then we will forward that
10] on to the source to give them an opportunity to look at
11] it, because whenever -- you know, they are obviously more
12] knowledgeable of the source than we are. So if there's
13] something that we miss or misinterpreted, we want the
14] source to be able to have the opportunity to identify that
15] so that we can correct it. So once all that is done, then
16] we will issue the permit.
17] Now, in the case of this minor modification,
18] there is a step that is not normal for us, and I'm not
19] sure I've ever seen a minor modification have a public
20] hearing. But because of the elevated public interest and
21] also because of Mr. Blackson, we posted it for a formal
22] 30-day public notice time which would not be normal for --
23] our rules would not require this for a minor modification,
24] but we did in this case and so -- to have opportunity for
25] people to provide input, to comment on the permit and to

Page 72

1] give us -- give us their thoughts or inputs as to what
2] should be there.
3] And so in that process, we not only did the
4] public -- or posting for public notice, we also then held
5] a public hearing to give, again, additional oral
6] opportunity for people to -- opportunity for oral comments
7] on the permit, not just what is submitted in writing.
8] So after all those were completed, we
9] addressed the comments that were made and put those
10] together in response to comments and that puts us in a
11] position then to issue the permit.
12] Q. You mentioned that you were the head of the
13] permitting department and quarterback of a staff of people
14] that work for you. But with regard to this particular
15] minor permit revision, how actively involved were you in
16] the process of evaluating it and the analysis that goes
17] on?
18] A. Yeah, I had more involvement in this one than I
19] would typically because of the elevated interest that was
20] there, and so we wanted to make sure that we had as many
21] people look at it and make sure we got it right. So I was
22] probably more involved in this than I would be typically.
23] Q. In particular, you were involved in the
24] calculations that were made by the Department?
25] A. Yeah. So when the calculations -- the staff

Page 73

1] engineer would do that, and then all those calculations
2] would then be reviewed by both the permitting supervisor
3] and by me also to make sure that those were correct.
4] Q. Let me step back to one thing that I meant to ask
5] you which was the -- you said one of the steps you look at
6] on a routine basis -- and I assume what you described was
7] both what the Department or your staff does in a typical
8] evaluation as well as what you did for the Hickman
9] evaluation; is that correct?
10] A. Right.
11] Q. What about -- one of the steps would be assuring
12] that the application is complete. Was there anything
13] special or anything particular about the Hickman
14] application in that regard?
15] A. Yes. With the -- with regard to the completeness
16] of the application, it's been noted earlier that there's a
17] section known as Z-M that was missing information, and so
18] that's a section where the applicant has the opportunity
19] to be able to describe and calculate what the emissions
20] would be from the source, and in this case, it was not
21] filled out by Hickman's in their initial application, in
22] the minor modification application, and that's not
23] unusual. As a matter of fact, it probably happens more
24] that it's not filled out than it is because many sources
25] do not have the sophistication or tools to accurately be

Page 74

1] able to calculate and predict what those emissions would
2] be, and so -- but on the other hand, if we have sufficient
3] information to be able to calculate that, we will do so.
4] And where we had the information on the
5] engines and on the boilers, as to what size they were,
6] what types they were -- for instance, the engines were
7] tier three engines. So with those, there are certified
8] EPA emission factors that come with those. So even though
9] the specific emission calculations weren't filled out, we
10] had the opportunity then from the description of the
11] equipment to be able to know what the emissions were. And
12] even if someone does fill that out, we will always rerun
13] those anyway because we're really -- we're not going to
14] take the applicant's word for what those emission
15] calculations are. We're always going to confirm those,
16] even if they were provided by the applicant.
17] Q. Earlier there was testimony about the emission of
18] boilers in the minor permit revision. Were the emissions
19] of the boilers ultimately included? Were they included in
20] the final emissions calculations?
21] A. Yes, the boilers were included in there and,
22] again, part of that sausage-making process, when drafts
23] are moving back and forth among staff and supervisors,
24] different ones, we may have pieces that are missing. So
25] those were probably missing at one step of the drafting of

Page 75

1] the TSD when that passed through, and we tried to get that
2] information and understand what -- once we understood that
3] the boilers were there and be able to appropriately add
4] those to the emissions for the facility.
5] Q. Let's get back to emissions calculations. What
6] emissions were calculated?
7] A. So the emissions that we calculated were from the
8] point sources, from the non-fugitive emissions which would
9] be from the boilers and from the generators. We
10] characterized the emissions from the CAFO, from the animal
11] feeding operations, again, the lagoons, the hen houses and
12] the manure piles, and we captured those as being fugitive
13] emissions. And even if they had been -- so fugitive
14] emissions, whether there's a determination whether they're
15] part of a Title V determination or not, was pointed out
16] earlier from Rule 100, I believe 200.60, if I remember
17] correctly, of the determination of a major source.
18] When you have fugitive emissions, you
19] include those only if the major source is one of those 28
20] categorical sources listed there in 200.60. So we went
21] through the first part of that where it talked about
22] fugitive emissions and calculations that go into the major
23] source determination, but fugitives for sources that are
24] not listed as categorical in that group, and you see the
25] 28 of them that are there, all other fugitive emissions

Page 76

1] are not included for major source purposes for operations
2] that are not on that list. In this case, hen houses are
3] not on that list, so therefore, fugitive emissions were
4] not considered to be part of that.
5] Q. So in conclusion, it is your opinion that all of
6] the emissions pertaining to the minor permit modifications
7] were properly calculated?
8] A. Yes, we do believe those were properly
9] calculated, and we had plenty of reason to not include
10] those. We've talked a little bit about what other states
11] are doing. You heard about that. When we look at the
12] State of Arizona, basically farm operations are exempted
13] from Arizona, whether -- that is the law today. Recently
14] as last year, the NSR rules for the State of Arizona were
15] revised. That was not deleted from any NSR rules at that
16] time, and so we believe that what the prevailing rule is
17] that we would not include those here; that even though
18] they may be included in other jurisdictions, as we look at
19] the data that's out there and see that, we just see it is
20] as not reliable enough for us to run out ahead of where
21] EPA is.
22] We look at how EPA regulates things. We see
23] there are a number of ways they do that. They may do that
24] on the basis of different types of rules or new source
25] performance standards of which there's probably maybe 150

Page 77

1] or a hundred new source performance standards out there,
2] none of which pertain to this type of operation. There
3] are max standards, maximum available control technology
4] standards, maybe another 150 of those, none of which
5] pertain to this operation.
6] There are control technique guidance
7] documents that whenever EPA wants to regulate something,
8] they will provide that as a means for sources to be able
9] to determine what the emissions are and how to handle
10] those. There's been no CTG's or control technique
11] guidance documents provided for this. There are a number
12] of ways that EPA will regulate these different type of
13] sources, and we did not see that that had occurred in any
14] of those.
15] We also looked at the State of Indiana that
16] has been mentioned and whether the tests were run by the
17] state or not. They were run by Purdue University which is
18] in the State of Indiana, chose a facility there, and after
19] they looked at that, we looked at, yeah, this is a similar
20] type situation to what we have, and it seemed reasonable
21] at that time to say, you know, if they're looking at this,
22] they are disregarding -- they are not going to regulate
23] the animal feeding operation, the emissions only that come
24] from the point source equipment, it seemed like a
25] reasonable conclusion for us to reach in doing likewise

Page 78

1] here with this facility.
2] Q. I'd like to dwell for a minute on NSR. Mr.
3] Blackson mentioned surprise that it didn't appear that you
4] had considered NSR, new source review. Can you tell us
5] again how -- or tell us for the first time what your
6] review was and what consideration was given to the
7] potential applicability of NSR to this facility under this
8] permit modification application?
9] A. Sure. NSR is new source review, and it applies
10] in non-attainment areas. Where the facility is located,
11] it is located in the non-attainment area for ozone. For
12] ozone -- the precursor for ozone are NOx, nitrogen oxide,
13] and VOC, volatile organic compound, is a precursor for
14] ozone. So those are the pollutants that you would look at
15] primarily under NSR.
16] So the threshold for that would be -- for a
17] major source in our current attainment status which is
18] moderate, non-attainment of where we are, and so the
19] threshold for that would be 100 tons per year. And
20] looking at the point sources, the total NOx emissions
21] under the minor modification are a total of just under
22] 25 tons of NOx, so it is well below the NSR threshold for
23] NOx.
24] The VOC emissions from the engines and the
25] boilers are like 1.2 tons. They are relatively small.

Page 79

1] So, you know, we concluded that they were well below the
2] NSR thresholds. As we previously mentioned, we did not
3] look at the -- any fugitive emissions as part of the major
4] source determination under NSR because it is not a
5] categorical source, and not being a categorical source, we
6] did not look at the fugitive emissions.
7] Q. Did the Department perform a Rule 241 assessment
8] and could you explain what that is?
9] A. Yeah. Rule 241 is -- we affectionately refer to
10] it as our local BACT rule, best available control
11] technology, and that -- and so when looking at this
12] facility, the total emissions for BACT would be -- or the
13] threshold for BACT, for NOx would be 25 tons at the time
14] because we were dealing under the old rules. That has
15] since been moved up to 40 tons per year. At that time, it
16] was 25 tons per year. From the original permit, the
17] emissions of NOx from the original permit was about
18] 60 tons so BACT did not apply, and so Rule 241 would not
19] be triggered.
20] With the minor modification, about another
21] additional eight tons of NOx was added and so we were
22] still below 25 tons total which is really not even
23] relevant because we'd only be looking at the modification
24] anyway. The modification was only eight tons of NOx. So
25] therefore, under Rule 241 -- and even though it's not

Page 80

1] spelled out explicitly in the TSD, as Mr. Blackson noted,
2] you know, there's a fair amount of latitude with that, but
3] we did look at those total amount of emissions and found
4] that the BACT would not apply which would be the essence
5] and the substance of Rule 241.
6] Q. Would an NSR normally apply to a minor permit
7] modification?
8] A. No. You could not have NSR apply to minor permit
9] modification because the definitions we looked at earlier
10] would preclude that from occurring.
11] Q. Mr. Blackson used emission factors to calculate
12] the emissions from the Hickman process. Are those
13] emission factors credible in your mind and based your
14] analysis and expertise?
15] A. You know, there are a myriad of emission factors
16] out there that we have seen. I know, looking through one
17] of the documents that was provided by Mr. Blackson in
18] their disclosure of the 2006 study from Iowa State
19] University, that showed just ammonia emissions, for
20] instance, that are there. The EPA had estimated in that
21] that the emission factors for ammonia should be like
22] 435 --
23] MR. BLACKSON: I object to this because
24] ammonia is not permitted. It's not an -- I object because
25] ammonia is not a permitted pollutant; it's not an NSR

Page 81

1] pollutant. You don't have to have a permit to release
2] ammonia, but when you get into EPCRA and that sort of
3] thing, then ammonia is in play.
4] CHAIRMAN LEONARD: I'm going to overrule
5] that objection only from the standpoint that there's --
6] we're talking about credibility. If you have other
7] concerns, again, you'll have the opportunity, as I
8] mentioned, for cross so --
9] THE WITNESS: But in those -- determination
10] of those emissions, EPA would have a factor of 435 grams
11] of ammonia per year per each hen and which I would think
12] that European numbers in the Netherlands would be pretty
13] credible. That range was ten to 83 grams per hen per
14] year. So you can just see the massive variation that
15] occurs in different emission factors that are out there
16] depending under what circumstances that they were run.
17] They range all the way from ten to 435 for the same type
18] of emission factor. And so with that absence, we felt
19] like that the emissions factors just really weren't there
20] to do that.
21] There's also a General Accounting Office
22] report that was done, that was completed, and I believe
23] this is also in our record. I don't know the page number
24] right off. Do you guys have that over there handy that
25] you can point these folks to, where the page number is on

Page 82

1] that? I believe it's somewhere probably page AQ600
2] something. I can't remember what the final exact number
3] is.
4] Q. Can you identify the document again? I'm not
5] sure I heard that.
6] A. It's a document for the General Accounting Office
7] where they evaluated concentrated animal feeding
8] operations in looking at the studies that had been done,
9] and their conclusion was that EPA -- or the title of the
10] document was EPA needs more information and clearer
11] defined strategies to protect air and water from
12] pollutants of concern, and this was on the -- on the back
13] side of the main study, the national air emission
14] monitoring study that had already been done.
15] So they had some conclusions about that
16] report, if I may read those here. I have the page number.
17] It is AQ0683, if that will help you find that in your
18] documents, in our pre-disclosure documents that were
19] provided.
20] It says, "However, questions about the
21] efficiency of the sites selected for the air emission
22] study and the quality and quantity of the data being
23] collected could undermine EPA's efforts to develop air
24] emission protocol by 2011, and finally, while the study
25] and resulting protocols are important first steps, the

Page 83

1] process-based model that more accurately predicts the
2] total air emissions from an animal feeding operation is
3] still needed. While EPA has indicated it intends to
4] develop such a model, it has not yet established a
5] strategy and timeline for this activity."
6] And so, again, we're trying to look at the
7] body of evidence that's out there. Are we running too far
8] ahead to be able to come up -- use emission factors that
9] may or may not have quality? And, again, our conclusion
10] was the science just wasn't there yet. And when the
11] science is there, we are -- we'll very actively and
12] vigorously be able to enforce those and put those in the
13] permit and apply those to the appropriate sources, but we
14] believe at this time that those are not there yet.
15] Q. The minor permit revision was to authorize the
16] addition of boilers and eight emergency, small emergency
17] generators as I recall, and both of those were
18] characterized by the Department as point sources. Can you
19] explain the determination in that regard briefly?
20] A. Sure, because the emissions from those types of
21] operations come through a defined stack, through a defined
22] point in the equipment rather than some large amorphous
23] opening that really has no opportunity to be captured,
24] controlled or really even accurately measured. Some of
25] the other literature that we have looked at, you know,

Page 84

1] talked about how difficult it is to measure just, in
2] general, emissions from hen houses and those types of
3] operations, that it's one of the great encumbrances to be
4] able to quantify emissions that were out there, and
5] whenever you're dealing with this type of operation, it is
6] difficult to do.
7] Again, we think that the science will get
8] there, but we just don't believe that it's there yet for
9] this type of point source that -- these are the point
10] sources and the other -- all the rest from the animal
11] feeding operation are fugitive emissions.
12] Q. I'm getting close to the end of my questions.
13] The Department has not promulgated rules addressing
14] emissions from hen houses, manure piles and lagoons. Can
15] you tell us why that is the case?
16] A. At this time, that is not a source category
17] that -- you know, that we have looked at, and so those
18] emissions are not yet ones that we've elected to be able
19] to quantify as we begin to work through different types of
20] emissions that are out there.
21] Q. Okay. This is my final question: Based upon the
22] cumulative information you provided, based on calculation,
23] characterization and legal requirements, did the
24] Department apply proper permitting standards and
25] procedures when analyzing and evaluating the minor permit

Page 85

1] revision?
2] A. Yes, we did.
3] MR. SWAN: I have no further questions.
4] CHAIRMAN LEONARD: Mr. Blackson, if you'd
5] like to cross.
6] MR. BLACKSON: Yes, I would.
7]
8] EXAMINATION
9] BY MR. BLACKSON:
10] Q. Thank you, and, I apologize, I may skip around a
11] lot and kind of --
12] A. I do too, so that's all right.
13] Q. I think we're going to get through it.
14] Mr. Sumner, you've had training, right, on
15] the permitting process? EPA offers some training that we
16] talked about?
17] A. Yes.
18] Q. And how recent was that?
19] A. Probably the last one was about probably two
20] years ago where we went through NSR training and BFP
21] training that's offered nationally by EPA.
22] Q. Thank you. Can you show us in the Clean Air Act,
23] is there an exemption for animal feeding operations?
24] A. No, there is not an exemption in the Federal
25] Clean Air Act for animal feeding operations.

Page 86

1] Q. Now, you said there was an exemption, if I heard
2] correctly, an agricultural exemption. Can you cite what
3] that exemption is?
4] A. Yeah. The agricultural operations for poultry,
5] for cattle, for pigs, for different types of animals,
6] those are under the agricultural exemption under ag BMP's
7] for the state, and so we did not regulate those.
8] Q. So you must be talking about ARS 49-457, correct?
9] A. Yes.
10] Q. That exemption for all NSR pollutants?
11] A. It's primarily for PM-10 and so the PM-10
12] emissions then are ones that --
13] Q. But not for BFP's?
14] A. Under that exemption, no.
15] Q. Now, you're saying it's an exemption. Perhaps
16] you can read the definition of a regulated area. That
17] definition will be at the very bottom. It's page six?
18] A. I'm looking on the front page.
19] Q. They change how it appears now.
20] A. Regulated means Maricopa PM-10 particulate
21] non-attainment area, any portion of area A that's located
22] in the county with a population of two million or more
23] persons and any PM-10 particulate non-attainment area
24] established in this state on or after June 1st, 2009.
25] Q. Does the word state or statewide appear in that

Page 87

1] definition of a regulated area?
2] A. It does not.
3] Q. Does the word county or countywide appear in it?
4] A. County does.
5] Q. Is it countywide, entire county?
6] A. Area A or PM-10 particulate non-attainment area.
7] Q. Is the Tonopah Egg Ranch in a regulated area?
8] A. It is not.
9] Q. Yet you apply BFP to the Tonopah Egg Ranch?
10] A. That is correct, because we have received
11] guidance from the state that PM emissions are of a
12] statewide concern, and that even though this may
13] specifically list deregulated area here, that they have
14] taken the interpretation that this is a statewide concern
15] and therefore they are going to apply BMP's to all areas.
16] Given the county rules that exempt normal farm cultural
17] operations from PM-10 regulations, then neither us nor the
18] state would be able to have any activity and so the state
19] has taken that activity there.
20] Q. And all of this came from a SIP process where the
21] EPA was going to come in and issue a SIP on agricultural
22] activities and things?
23] Q. The EPA was interested in implementing a federal
24] implementation plan because there was a gap in these
25] regulations.

Page 88

1] Now, the statewide concern does appear in
2] that statute, if I'm not mistaken. They make a
3] philosophical statement about statewide concern about
4] particulate matter; is that correct?
5] A. That's correct.
6] Q. But yet the legislature decided that's not how a
7] regulated area is defined, correct?
8] A. I can't address what the legislature might have
9] said.
10] Q. Well, the legislature passed a statute, correct?
11] A. That's correct.
12] Q. Did the legislature include a statewide BMP
13] policy for a regulated area?
14] A. That -- I don't know what the legislature
15] included. I knew ADAQ has, so we are kind of subservient
16] to them.
17] Q. Did the legislature in the definition of
18] regulated area give ADAQ authority to make it statewide?
19] A. No.
20] Q. Did they give authority to Maricopa County to
21] make it statewide?
22] A. No.
23] Q. Or countywide?
24] A. Countywide, no.
25] Q. Yeah. So the county is overreaching in this case

Page 89

1] applying a regulated area to the Tonopah Egg Ranch because
2] it does not typically reside in a regulated area?
3] A. Can you rephrase the question, please?
4] Q. The Tonopah Egg Ranch does not reside in a
5] regulated area, correct?
6] A. It does not reside in a regulated area.
7] Q. Physically located. So, Mr. Sumner, have you
8] ever considered the emissions from the Tonopah Egg Ranch
9] to be normal farm cultural activity?
10] A. Yes.
11] Q. And what is a normal farm cultural activity? Can
12] you define that?
13] A. I'd have to refer back to the rules to get the
14] exact definitions, so it's probably there pretty close.
15] Q. I can help you.
16] A. Bet you could.
17] Q. Can you read for us what this is?
18] A. All agricultural activity by the owner, leasee,
19] agent, independent contractor --
20] CHAIRMAN LEONARD: Mr. Sumner, just remember
21] to slow down.
22] A. "Normal farm cultural practice. All activities
23] by the owner, lessee, agent, independent contractor and/or
24] supplier conducted on any facility or production of crops
25] or in nursery plants, disturbances of field surface caused

Page 90

1] by turning stalks, tilling, fertilizing or harvesting are
2] included in this definition."
3] Q. So as part of the property, there are fields at
4] the Tonopah Egg Ranch, so the fields would meet that
5] definition?
6] A. Correct.
7] Q. Now, would the hen houses?
8] A. Not in this particular definition.
9] Q. So even though you stated that the normal farm
10] cultural activity would apply, it doesn't meet the
11] definition?
12] A. Not in this particular area. I'm trying to think
13] of the other -- it's defined in other places in the rules.
14] I don't know if those are more expansive, so not off the
15] top of my head.
16] Q. This is an important point, so if you want to
17] take some time to tell us what that is, I would appreciate
18] it.
19] A. We may have to come back to that. I know we have
20] it defined other places other than this. What you have
21] provided me, just for the record, is Rule 310.
22] Q. Now, the permitting supervisor actually stated
23] that he believed that the Tonopah Egg Ranch was not in a
24] regulated area and the BMP's would not apply?
25] A. Yes, and the context of that --

Page 91

1] Q. A yes or no, thank you.
2] A. Yes.
3] Q. Thank you. You made a statement about ammonia
4] emissions. Can you also talk about, in the same vein, the
5] PM-10 and the PM-2.5 and the VOC emission factors?
6] A. Right. I just know that those were -- one of
7] them that showed a rate variation. I know there is a
8] large variation on the other factors that have been
9] developed also. I don't have the exact numbers on those,
10] but I know they have ranges on them in what is provided.
11] Q. So that it is very possible that there might be
12] some difficulty in measuring ammonia but they might carry
13] over to measuring PM-10, PM-2.5 or VOC's?
14] A. Yes. If I remember correctly from some of the
15] ranges that are there, the PM numbers have a substantial
16] range on those.
17] Q. Now, you also talked about the -- this Indiana
18] policy. You reached out and found this and that's not a
19] rule, right? I think it says right on there it's not a
20] rule?
21] A. Yep.
22] Q. Yeah. Did you research any other states?
23] A. We looked -- I am trying to think of other states
24] we looked at recently. Even since this started, we looked
25] at a few more, looking at any of them that had specific

Page 92

1] rules, and I did not see any that gave specific emission
2] factors for those.
3] Q. Did you find any states that actually are
4] regulating animal feeding operations air-quality-wise?
5] A. I think I saw one report where there are about
6] six states and most of those are regulating the H2 S1
7] table that I saw.
8] Q. What about California?
9] A. I'm not sure what California is regulating.
10] Q. But could you have reached out to California like
11] you reached out to Indiana to find out?
12] A. Yes.
13] Q. Or Texas? Texas regulates issues of air quality
14] permits for animal feeding operations. Did you talk with
15] Texas?
16] A. No.
17] Q. Idaho?
18] A. No.
19] Q. Ohio?
20] A. No.
21] Q. The interesting thing about Ohio is the Buckeye
22] Farms, and I think you probably prepared by looking at
23] that consent order and the news release.
24] A. Mm-hmm.
25] Q. Would you agree that in order for the EPA to have

Page 93

1] issued that consent order, they must have determined what
2] emissions factors are from those hen houses?
3] A. Yes, and I know that there are places where that
4] has been -- where that has been done but, again, our
5] posture was that we're not there yet with the overall
6] science and so we said those would continue to be looked
7] at as fugitive emissions.
8] Q. But based on the EPA activity, they're ready to
9] act, right?
10] A. They don't seem like it, because I mentioned
11] earlier they haven't provided any control technique
12] guidances and documents; they haven't provided any new
13] source performance standards; haven't provided any MAC
14] standards. They haven't provided anything that they
15] typically do to underwrite the regulation of different
16] types of industries.
17] Q. However, you're not limited to issuing permits
18] just to those facilities? A source doesn't have to be
19] categorized to receive a permit?
20] A. That is correct.
21] Q. All right. And if we go back to the Buckeye
22] Farms, the EPA very clearly demonstrated that you can
23] proceed and permit those facilities, and somehow, did you
24] reach out to the EPA for emission factors?
25] A. Yes, I believe we did talk to region nine on that

Page 94

1] so --
2] Q. And could you share that conversation?
3] A. Yeah, there was -- they didn't provide any
4] additional guidance to us, and we provided information on
5] Hickman's. I believe that's in some of the records there
6] that we have provided to Hickman's.
7] Q. And when did you do that?
8] A. I don't remember the date off the top of my head.
9] Q. When the initial permit or the minor permit --
10] A. I think it was probably the minor permit process.
11] Q. I'd like to talk about fugitive emissions, and I
12] think both of us have cited to the Federal Register with
13] the consent agreement for animal feeding operations, and
14] in that agreement, and I'll paraphrase, the EPA had said
15] that we're not going to make decisions on fugitive
16] emissions at this time; we'll do that later.
17] So there's a range of fugitive emissions,
18] isn't there? For instance, you can have a dust devil
19] going across a vacant lot versus a power plant that has a
20] stack, fugitive emissions versus non-fugitive emissions;
21] would you agree with that?
22] A. I am not sure what I would be agreeing to.
23] Q. Give us an example of non-fugitive emissions.
24] A. Anything that goes -- you know, in this case what
25] we were looking at would be the engines that would go

Page 95

1] through a stack so --
2] Q. The engines, the diesels go through a stack?
3] A. The diesel engines, yeah, they have a stack on
4] those.
5] Q. Oh, okay. And what would be -- not citing the
6] hen houses, what would be a non-fugitive example, an
7] extreme non-fugitive example?
8] A. Extreme?
9] Q. Sure.
10] A. I'm not sure I want to define what extreme --
11] Q. What about a wind blowing across a vacant lot, is
12] that fugitive or non-fugitive.
13] A. It would be fugitive; that would be fugitive.
14] Q. Okay. So we have a wind blowing across a vacant
15] lot is fugitive and a stack from a diesel is non-fugitive.
16] Now, when we start to move to the middle, does it get
17] easier or harder to differentiate between fugitive and
18] non-fugitive?
19] MR. SWAN: Before you answer that question,
20] I'm questioning whether this line of questioning isn't
21] beyond the scope of my direct examination of Mr. Sumner,
22] so I ask the Board to consider that.
23] CHAIRMAN LEONARD: Mr. Blackson, I don't
24] want to put words in your mouth. You're asking the
25] Department to provide examples of fugitive versus

Page 96

1] non-fugitive events in relation to how they may or may not
2] have applied that to the minor permit revision?
3] MR. BLACKSON: No, I'm not. I guess I'm
4] trying to lay the groundwork that there's a range from
5] fugitive to non-fugitive, and as you get to the middle
6] ground, it's more difficult to sort out which is fugitive
7] and non-fugitive. And I believe that's where the EPA is
8] right now and that's why they have not given guidance.
9] They have a very clear opinion of a hen house by the
10] consent order at Buckeye.
11] CHAIRMAN LEONARD: With respect then to the
12] Department's objection, I'll overrule that. I believe
13] that Mr. Sumner has already discussed this, and so again,
14] understanding that we're talking about cross, just try and
15] make the point.
16] Mr. Sumner, answer as you deem appropriate.
17] Please proceed.
18] You can ask the question just as you did
19] before.
20] MR. BLACKSON: I'd like to gather myself for
21] a second. And it might help if the court reporter could
22] help me out.
23] (The record was read by the reporter.)
24] BY MR. BLACKSON:
25] Q. So is it more difficult, as you get to the middle

Page 97

1] of non-fugitive and fugitive, to differentiate which is
2] which?
3] A. Yes.
4] Q. So would you say, yes or no, that it's possible
5] that EPA hasn't issued guidance because that middle
6] ground, perhaps where you have an animal in a covered
7] corral, that you don't know whether that's fugitive or
8] non-fugitive yet?
9] A. Correct. It can be difficult to define.
10] Q. It can, but if we look at the EPA actions such as
11] the Buckeye Farms, it's clear that the EPA, since they
12] issued a consent order believe that the emissions from
13] those hen houses were non-fugitive?
14] A. Yeah, it was clear in that situation.
15] Q. All right. Thank you. I would like to talk
16] about vents then, and we've both cited the statute about
17] buildings and vents and functional openings, and you make
18] a very good point that the opening at the Hickman hen
19] house is very large, right?
20] A. Mm-hmm.
21] Q. So if you start to shrink it down, when does that
22] opening become a vent?
23] A. That would just be part of the judgment that we
24] would employ in making that determination. There's not a
25] hard-and-fast number which is why some are regulated in

Page 98

1] some places and some are not regulated in others because
2] there is -- there is a spectrum there.
3] Q. Is there any regulatory basis for saying what the
4] size of the vent is or is not?
5] A. I think the modifier at the beginning of the
6] definitions is reasonable, what is reasonable.
7] Q. What about a functional opening? How large can a
8] functional opening be?
9] A. That's also a term of art to be determined on
10] what that would be.
11] Q. So it's just as reasonable to say that that
12] opening is a vent as it's not a vent, versus one person
13] and another?
14] A. Correct.
15] Q. And so I'm not sure if I'll be allowed to do
16] this, but a comparison of another facility that you
17] permitted that doesn't have an opening like that, so they
18] are vents? If the design was different, there could be a
19] vent in that building then, in your opinion?
20] A. Yeah. We're going to look at every situation
21] individually.
22] Q. But again, when we look at the EPA and their
23] actions with Buckeye Farms, they clearly decided that
24] whatever opening is in a hen house is a vent and they
25] issued that consent order according to that. Would you

Page 99

1] agree with that?
2] A. Yes.
3] Q. So somehow there has to be some ultimate
4] determination of the size of the vent in a functional
5] opening?
6] A. I think we would both agree on that one.
7] Q. Actually not. An opening is an opening; a
8] functional opening is a functional opening, so we probably
9] would not agree, no matter how large or how small. Sorry
10] if I'm testifying. I don't mean to do that so I'll stop.
11] So, Mr. Sumner, you said you got pretty
12] involved with this minor permit modification. So can you
13] describe where these fans are in the building and what
14] they do and maybe how big they are?
15] A. As I understand, the fans are probably, what,
16] about three quarters of the way through the building, more
17] toward the east end and they're there to blow through the
18] manure piles as they come off of the -- when the manure
19] comes off of the conveyer belts, be able to dry those out
20] and to reduce the moisture in those.
21] Q. Are the fans pulling air across the hens then?
22] A. Right. They are blowing from west to east.
23] Q. And where are the hens?
24] A. They're behind those on the east side on the
25] various levels, on the west of the fans.

Page 100

1] Q. And then the manure piles are on the east side?
2] A. East side of the fans.
3] Q. And the fans are blowing across that. Is there
4] particulate matter being picked up by that ventilation and
5] blown out of the building?
6] A. Yes, there is.
7] Q. And what is the purpose of those fans? Can you
8] say?
9] A. Yeah, my understanding is to dry the manure piles
10] to make those really -- as I understand, to reduce any of
11] the emissions from those.
12] Q. Do they serve a purpose for the birds?
13] A. The fans?
14] Q. The fans, yes, sir.
15] A. Yes. They're also to keep the birds cool which
16] is the purpose of the emergency generators that they are
17] there as part of the process, so in case the power goes
18] down, the emergency generators are there to make sure that
19] the birds will stay cool.
20] Q. Do those fans also remove pollutants, NSR
21] pollutants?
22] A. Yes, they would move pollutants across there.
23] Q. So the fans would bring in fresh air and through
24] forced ventilation remove the pollutants?
25] A. They would bring in fresh air through the west

Page 101

1] open end of the building out through the -- for the most
2] part, opened east end of the building.
3] Q. Are the hen houses stationary sources?
4] A. We would not consider those to be stationary
5] sources.
6] Q. And why would they not be stationary sources?
7] A. Because of the fugitive emissions from those.
8] Q. Fugitive emissions in the definition of a
9] stationary source?
10] A. I'd have to go back and look again.
11] Q. Let's do that. I think that would be in
12] Rule 100.
13] A. Yeah, let's go ahead and look at it. I'm not
14] seeing the definition of stationary source in what you
15] handed me there. I see a major source but I don't see
16] the stationary source.
17] Q. Actually, we might have to go to the CFR 51.165.
18] CHAIRMAN LEONARD: For the interest of
19] expediting this, I believe you're looking for Rule 100,
20] section 200.105, page 29.
21] MR. BLACKSON: All right. Thank you. It is
22] in Rule 100.
23] THE WITNESS: All right. So Rule 100,
24] 200.105, "Stationary source. Any source that operates at
25] a fixed location and that emits or generates regulated air

Page 102

1] pollutants."
2] BY MR. BLACKSON:
3] Q. Are the hen houses in Tonopah Egg Ranch
4] stationary sources?
5] A. Yes, they would be stationary sources.
6] Q. Thank you. You had commented earlier that there
7] actually was an assessment of the applicability of the
8] requirements of Rule 241 as part of the process. Is that
9] documented?
10] A. We did not document that, as we just looked and
11] saw that the emissions were below the thresholds that we
12] looked at with regard to the point sources; that they were
13] below the thresholds so therefore it was obvious that we
14] didn't document that in the TSD.
15] Q. Is that a normal practice?
16] A. Pretty much.
17] Q. So how would you show compliance with your
18] permitting process through your rule if you don't document
19] it? For example, you have a checklist for completeness.
20] Why would you not document an assessment of applicability?
21] A. We would just be looking at the emissions. They
22] are below 25 tons so that, again, it's one of those things
23] where it's obvious that it would not require any further
24] discussion so they would be below any of the thresholds.
25] Q. But how would you ever demonstrate it?

Page 103

1] A. By the amount of emissions that are listed in the
2] tables in the TSD.
3] MR. BLACKSON: I'm done. Thank you.
4] CHAIRMAN LEONARD: All right.
5] MR. SWAN: I have a couple questions on
6] redirect.
7] CHAIRMAN LEONARD: Mr. Swan, you're up on
8] redirect.
9]
10] EXAMINATION
11] BY MR. SWAN:
12] Q. Okay. Mr. Sumner, EPA is the governing body for
13] this type of activity, so why would you have reached out
14] to other states to see what they are doing in this area?
15] A. Right. EPA is where we take our ultimate
16] guidance from and look for ultimate guidance. Sometimes
17] it's valuable to see what other states may or may not be
18] doing.
19] Q. Okay. But it's -- is it for precedent? Is it to
20] establish what regulations would govern the activity or is
21] it just to see what others are doing in the area, given
22] the fact that EPA has not nailed down its opinion and not
23] issued regulations in this area?
24] A. Yeah, whenever it's an area like this that is in
25] flux. I think it's well established here today that this

Page 104

1] is a developing area, so we're trying to see kind of
2] what's out there, what are other people doing.
3] Q. But it's not required looking at other states?
4] It's informative, but not required?
5] A. Right, that's correct.
6] Q. I'm looking at ARS -- two sections of ARS 49-457
7] the first is P5(a) and if I can just read that small
8] paragraph to you. I have a question for you about it.
9] 5(a) says "Commercial farming practices that may produce
10] PM-10 particulate emissions within the regulated area,
11] including activities of a dairy, a beef cattle feed lot, a
12] poultry facility and a swine facility." I forgot to read
13] above it. "Regulated agricultural activities means", and
14] then it leads into commercial farming practices. It
15] specifically mentions poultry facilities. Is that where
16] the Department found the exemption for hen houses?
17] A. Correct, yeah, when we looked at all the
18] different farm type operations and that is the basis for
19] that; that would be in that definition.
20] Q. The other provision of 49-457 is subsection O
21] which reads as follows: "The regulation of PM-10
22] particulate emissions produced by regulated agricultural
23] activities is a matter of statewide concern. Accordingly,
24] this section preempts further regulation of regulated
25] agricultural activities by a county, city, town or other

Page 105

1] political subdivision of this state."
2] Does this not mean the county is expressly
3] prohibited from regulating emissions from hen houses as it
4] is an agricultural activity? Is that your interpretation
5] of that?
6] A. That was my interpretation when I talked about
7] statewide concern earlier, yes.
8] MR. SWAN: We have no further questions.
9] MR. BLACKSON: May I follow up?
10] CHAIRMAN LEONARD: Let's go ahead with your
11] questions and then we'll take a break.
12]
13] EXAMINATION
14] BY MR. BLACKSON:
15] Q. Again, is the Tonopah Egg Ranch physically
16] located in a regulated area?
17] A. No.
18] Q. The regulated activity includes the definition of
19] a regulated area? Let me borrow --
20] MR. SWAN: Mr. Chairman, I am questioning
21] whether these questions have already been asked and
22] answered. I don't know what your recollection is but it
23] seems to me that's the case.
24] CHAIRMAN LEONARD: I don't necessarily
25] disagree, but given the limited number of questions I

Page 106

1] think Mr. Blackson has, we're going to go ahead and allow
2] him to ask those questions.
3] BY MR. BLACKSON:
4] Q. The definition of regulated cultural --
5] agricultural activity. In order to perform a regulated
6] agricultural activity, you must be in a regulated area; is
7] that correct? And I will give this back to you.
8] A. Correct, that's the definition of a regulated
9] area, yes.
10] Q. Now, you talked about an exemption from the
11] agricultural process. Are you familiar with, in my
12] pre-hearing disclosure, where the EPA sued California
13] because they exempted animal feeding operations?
14] A. I am familiar with that.
15] Q. Do you believe that could happen here because of
16] the exemption that you're saying exists statewide and
17] countywide for animal feeding operations?
18] A. I believe that could exist here. It would be
19] speculative but by the same token it hasn't so --
20] Q. So --
21] MR. SWAN: It seems to me to be beyond the
22] scope of direct.
23] CHAIRMAN LEONARD: Remember on redirect, Mr.
24] Blackson, it's got to be about questions that you may have
25] already asked or things that you may have learned from Mr.

Page 107

1] Swan. So I understand where you're trying to go, but we
2] got to bring it back to where we're at.
3] MR. BLACKSON: One more question.
4] BY MR. BLACKSON:
5] Q. You said that you did not go to the EPA but you
6] went to Indiana. So why would you go to Indiana and not
7] the EPA?
8] A. We -- I think you had said -- I don't know how
9] you define going to Indiana. We just looked at
10] literature. We didn't talk to anyone directly. In the
11] end, we just looked at literature available. We did not
12] speak to anyone directly.
13] Q. And you did not speak to anybody directly at the
14] EPA?
15] A. Yeah, I believe we did.
16] Q. Can you share the conversations?
17] A. Yeah. You know, again, I don't remember the
18] details of it and I don't have any particular notes or
19] anything from that conversation, but we just discussed
20] what -- with the EPA what was going on with that site and,
21] you know, any guidance that they have and they had no
22] guidance for us so --
23] Q. Can you say who you talked to?
24] A. Eugene Shin (phonetic).
25] MR. BLACKSON: We've seen e-mails on that.

Page 108

1] Thank you.
2] CHAIRMAN LEONARD: All right. Given the
3] interest of time, we do have some closing discussions
4] potentially as well as then there might be some questions
5] but --
6] MR. BLACKSON: I will be short.
7] CHAIRMAN LEONARD: Mr. Swan?
8] MR. SWAN: I just have a short paragraph.
9] CHAIRMAN LEONARD: All right. Mr. Blackson,
10] if you'd like to go ahead and give your closing.
11] Hold on just a second. I can guarantee that
12] I think we're going to have questions that we'll ask
13] ourselves as we go through, but at this point, we don't
14] have questions for Mr. Blackson or Mr. Swan.
15] So, Mr. Blackson, if you'd go ahead and
16] proceed with your closing and then we'll allow Mr. Swan.
17] MR. BLACKSON: Yes. I'd just like to say
18] that somebody has to decide if the county, Maricopa County
19] Air Quality Department, will be allowed to continue to
20] mischaracterize animal feeding operations as a major
21] source for non-fugitive emissions. I believe you have the
22] authority to stop this arbitrary behavior, and I ask that
23] you decide in our favor. Thank you.
24] CHAIRMAN LEONARD: Thank you.
25] MR. SWAN: The Department has shown that we

Page 109

1] have a very narrow scope of authority with regard to this
2] type of an action, and Mr. Blackson's appeal is whether or
3] not the director's action in approving the minor permit
4] revision was inappropriate. That's all we're looking at,
5] so it is really very narrow.
6] Our evidence has shown that we properly
7] calculated and characterized the emissions. The decisions
8] we made were not arbitrary. We acted reasonably and
9] lawfully in performing the analysis of the minor permit
10] revision application and the Department's decisions were
11] based upon clear technical judgment.
12] Two other points. Whether other states have
13] chosen to regulate these operations without credible final
14] evidence from the EPA does not mean that we must follow
15] their lead, and the Department's decision to wait for the
16] EPA to issue regulation is evidence of a consistent
17] reasonable analysis. For all of the foregoing reasons,
18] the Board should confirm the director's decision to issue
19] the minor permit modification. Thank you.
20] CHAIRMAN LEONARD: Thank you, gentlemen,
21] very much. I'll conclude this portion of the hearing. I
22] have a sneaking suspicion that the Board is going to need
23] some additional time, so I would propose setting another
24] meeting date to discuss in executive session some of what
25] we've heard together, and hopefully at that same hearing,

Page 110

1] potentially come out with at least what we believe our
2] decision is. So at this point, I'd like to stop the
3] hearing now. I would like to take a five-minute break and
4] then we'll come back for public comment.
5] So at this point, the court reporter can be
6] done at the conclusion of my statements and, Mr. Blackson
7] and Mr. Swan, your group are free to stay. Obviously,
8] you're free to go but we will coordinate our schedule with
9] your schedules to get that scheduled up.
10] MR. SWAN: Would we be involved -- if it's
11] executive session, would we be involved in your next
12] meeting? It sounds like deliberations without us but I'm
13] asking for clarification.
14] MR. HISER: It's a complex question, Mr.
15] Swan. Under the Arizona open meetings law, while we can
16] discuss in executive session certain aspects and questions
17] that they may have for counsel for guidance, the actual
18] deliberations of the Board are public activity. So the
19] deliberation portion would be open to the public and so
20] that's why we will coordinate to make sure, as a courtesy
21] to the two parties and anybody else who sat through this
22] hearing that would like to hear when that would be.
23] MR. SWAN: Okay. I appreciate the
24] explanation. Thank you.
25] CHAIRMAN LEONARD: Again, it goes without

Page 111

1] stating that one of the things this hearing Board is
2] tasked with doing is making sure that the public has an
3] opportunity to understand where we're coming from, both
4] individually and as a Board; if for no other reason, Mr.
5] Blackson has put in a tremendous amount of effort, as well
6] as has the Department. At that point, we will be
7] scheduling another hearing or another meeting date.
8] At this point, our court reporter, you are
9] officially done.
10] (The hearing concluded at 4:55 p.m.)
11]
12]
13]
14]
15]
16]
17]
18]
19]
20]
21]
22]
23]
24]
25]

Page 112

1] STATE OF ARIZONA) SS.
)
2] COUNTY OF MARICOPA)
3] BE IT KNOWN that the foregoing proceedings were taken before me; that the witness before testifying was
4] duly sworn by me to testify to the whole truth; that the foregoing pages are a full, true and accurate record of
5] the proceedings, all done to the best of my skill and ability; that the proceedings were taken down by me in
6] shorthand and thereafter reduced to print under my direction.
7] I CERTIFY that I am in no way related to any of
8] the parties hereto nor am I in any way interested in the outcome hereof.
9]
10] [ ] Review and signature was requested.
[ ] Review and signature was waived.
11] [X] Review and signature not required.
12]
I CERTIFY that I have complied with the ethical
13] obligations set forth in ACJA 7-206(F)(3) and ACJA 7-206 J(1)(g)(1) and (2).
14] Dated at Phoenix, Arizona, this 22nd day of November, 2016.
15]
16]
17] LAURA A. ASHBROOK, RMR
Certified Reporter
18] Arizona CR No. 50360
19]
* * *
20]
21] I CERTIFY that GRIFFIN & ASSOCIATES, LLC, has complied with the ethical obligations set forth in ACJA
22] 7-206 (J)(1)(g)(1) through (6).
23]
24]
GRIFFIN & ASSOCIATES, LLC
25] Arizona RRF No. R1005

A

ability (3) 10:6;11:14;29:4
able (22) 6:23;7:6;11:12;15:13;16:15;45:24;69:22;70:6,22;71:14;73:19;74:1,3,11;75:3;77:8;83:8,12;84:4,18;87:18;99:19
above (3) 28:11;30:12;104:13
absence (2) 8:22;81:18
absolutely (1) 45:7
accept (1) 15:11
acceptable (1) 46:24
accepted (3) 13:16;20:10;23:17
access (4) 46:16,19;47:17;51:12
according (4) 9:18;48:18;57:11;98:25
Accordingly (1) 104:23
account (1) 56:21
Accounting (2) 81:21;82:6
accurate (3) 44:23;46:8;53:12
accurately (3) 73:25;83:1,24
acquired (1) 37:2
across (12) 21:20;50:11;54:19;55:12;56:2;58:23;94:19;95:11,14;99:21;100:3,22
Act (22) 9:22;11:10;17:21;18:9,11;19:11;30:17,21;31:4;36:13;38:12,14,24;42:4;47:18;50:18;51:16;60:1,3;85:22,25;93:9
acted (1) 109:8
action (7) 9:20,23;12:14;28:2;60:21;109:2,3
actions (4) 26:6;66:2;97:10;98:23
actively (2) 72:15;83:11
activities (12) 16:25;17:4,4;22:19,22,23;87:22;89:22;104:11,13,23,25
activity (18) 21:12;24:7;33:21;83:5;87:18,19;89:9,11,18;90:10;93:8;103:13,20;105:4,18;106:5,6;110:18
actual (7) 6:1;24:8;39:12;42:17;46:12;54:23;110:17
Actually (23) 20:5;21:1,1;23:12;24:9;27:18;29:7;32:16;33:5;37:16;38:24;40:13;47:11;50:20;56:5;57:17;58:3;59:7;90:22;92:3;99:7;101:17;102:7
ADAQ (3) 23:23;88:15,18
add (5) 12:6;16:11;54:10;61:8;75:3
added (4) 68:10;69:6,10;79:21
addition (2) 69:7;83:16
additional (6) 46:15;64:2;72:5;79:21;94:4;109:23
address (7) 16:6,8;62:13,15;64:3,6;88:8
addressed (1) 72:9
addresses (1) 69:20
addressing (5) 8:20;9:3;63:14,17;84:13
adjacent (2) 17:1;22:20
adjourn (1) 61:22
administrative (2) 69:17,18
admission (1) 25:3
admit (4) 13:25;14:1;26:4;46:4
admitted (3) 14:11;20:1;34:19
admitting (1) 24:20
adopted (1) 9:2
affectionately (1) 79:9
affirmative (2) 4:15;5:4
AFO's (3) 59:25;60:2;61:6
Ag (3) 34:3;50:17;86:6
again (32) 5:8;7:25;8:12;10:22;12:8;15:24;17:9;23:3,15;25:14;30:4;44:24;51:19;64:2;69:8;72:5;74:22;75:11;78:5;81:7;82:4;83:6,9;84:7;93:4;96:13;98:22;101:10;102:22;105:15;107:17;110:25
agencies (2) 60:19;61:5
agency (1) 28:3
agenda (1) 4:5
agent (2) 89:19,23
ago (1) 85:20
agree (9) 11:22;14:8;30:23,24;92:25;94:21;99:1,6,9
agreed (2) 13:14;33:17
agreeing (1) 94:22
agreement (6) 15:11;33:9;59:20;60:13;94:13,14
agrees (1) 13:20
Agricultural (17) 30:18;31:13,14,18;50:23;86:2,4,6;87:21;89:18;104:13,22,25;105:4;106:5,6,11
agriculture (1) 33:21
ahead (12) 6:5;21:22;31:25;59:22;62:3;76:20;83:8;101:13;105:10;106:1;108:10,15
Air (61) 4:3;8:18;11:10,11;12:8;17:18,23;19:5,9,10;21:25;23:7;36:13;37:11,13,24,25;38:12,14,24;39:13,25;40:4;42:4,14;47:18;49:20,21;50:12,18;51:13,16;53:6;54:18;55:11;56:2;59:25;60:3;63:1,14,16,19,24;64:2,9,13;66:25;67:9;82:11,13,21,23;83:2;85:22,25;92:13;99:21;100:23,25;101:25;108:19
air-quality-wise (1) 92:4
Alan (2) 62:14,17
alleges (1) 8:19
allotted (1) 31:22
allow (6) 7:19;29:2;66:12,14;106:1;108:16
allowed (2) 98:15;108:19
almost (3) 36:8;37:8,17
along (4) 44:1;58:24;63:19;65:22
alphabetical (2) 16:20;17:9
Although (3) 11:12;25:15;30:11
always (4) 32:23;42:19;74:12,15
ambient (2) 33:3;37:13
amended (1) 23:3
amendment (1) 38:24
amendments (1) 38:12
ammonia (10) 40:22;80:19,21,24,25;81:2,3,11;91:3,12
amnesty (2) 42:25;60:16
among (2) 70:24;74:23
amorphous (1) 83:22
amount (7) 40:24;48:13;67:13;80:2,3;103:1;111:5
analysis (5) 24:2;72:16;80:14;109:9,17
analyzing (1) 84:25
and/or (1) 89:23
animal (31) 8:20,24;19:11,15,17;30:5;41:12;43:2,5;50:14,16;51:15,17;53:13;59:20;60:21;67:20;75:10;77:23;82:7;83:2;84:10;85:23,25;92:4,14;94:13;97:6;106:13,17;108:20
animals (3) 40:11;54:25;86:5
answered (1) 105:22
AP-42 (4) 18:25;45:22;46:10;48:5
apologies (2) 20:11;26:4
apologize (9) 13:24;15:9;20:9;26:18,24;58:10,16,18;85:10
appeal (3) 11:13;19:18;109:2
appear (7) 23:11;30:8;34:2;78:3;86:25;87:3;88:1
appears (1) 86:19
appellant (1) 6:18
appellant's (1) 6:22
applicability (7) 23:23;28:9,13;29:9;78:7;102:7,20
applicable (5) 12:21;27:3;28:16;36:13;60:3
applicant (5) 23:9;46:20;54:2;73:18;74:16
applicant's (1) 74:14
application (34) 12:6,9;19:19;21:19;23:9,10;24:9,10,15;25:13;26:9;27:22,24,25;28:1,2,3,7,12;29:17;30:9;36:24;51:25;52:9;69:13,15,16;73:12,14,16,21,22;78:8;109:10
applications (2) 29:15,16
applied (5) 13:4;25:17,17;42:18;96:2
applies (1) 78:9
apply (18) 11:21;28:23;47:7;70:3,3,4,7,8;79:18;80:4,6,8;83:13;84:24;87:9,15;90:10,24
applying (1) 89:1
appreciate (6) 4:7;5:9;13:22;21:17;90:17;110:23
appreciated (1) 15:2

approach (1)
48:8
appropriate (5)
9:9,12;60:4;83:13;
96:16
appropriately (1)
75:3
approve (1)
13:6
approving (2)
12:14;109:3
approximately (1)
61:22
AQ0683 (1)
82:17
AQ600 (1)
82:1
aquifer (1)
36:25
arbitrary (9)
9:16;10:19;12:18;
21:7;26:7;28:25;32:22;
108:22;109:8
area (40)
33:12,14,14,15,18,
20;34:1,6,7;53:10,14;
78:11;86:16,21,21,23;
87:1,6,6,7,13;88:7,13,
18;89:1,2,5,6;90:12,24;
103:14,21,23,24;104:1,
10;105:16,19;106:6,9
areas (5)
34:2;56:2;61:3;
78:10;87:15
argument (4)
11:12,15;12:22;51:6
arguments (4)
6:16;7:12;9:15;
49:12
Arizona (12)
9:1;16:9;29:25;
31:19;62:16;63:22;
64:22;66:7;76:12,13,
14;110:15
Arlington (2)
38:17;57:23
arm (1)
15:16
around (4)
7:16;38:5;53:13;
85:10
ARS (4)
33:11;86:8;104:6,6
art (1)
98:9
aspect (1)
68:17
aspects (1)
110:16
assessed (1)
18:18
assessment (10)
28:9,13,20;29:1,9,
13;39:14;79:7;102:7,
20
assigned (1)
69:23
assistance (4)
8:13;38:11,21;42:2
associated (2)
39:17,18
assume (2)
25:17;73:6
assuming (2)
20:4;25:2
assure (1)
29:22
assuring (1)
73:11
atmosphere (1)
33:3
attached (2)
25:22;33:19
attachment (2)
24:17;33:23
attainable (1)
52:23
attained (1)
53:1
attainment (4)
36:19,20;53:2;78:17
attempted (1)
50:22
attorney (1)
59:2
audience (1)
5:13
August (1)
10:20
authority (10)
8:24;9:21;50:14;
60:6,8,9;88:18,20;
108:22;109:1
authorize (1)
83:15
available (9)
38:18;44:4,14;45:6;
48:20;60:23;77:3;
79:10;107:11
Avenue (1)
57:7
average (1)
48:21
averaging (1)
18:20
aware (1)
37:23
away (1)
26:9
awning (1)
57:17

B

Bachelor's (2)
63:7,12
back (33)
4:8,23;5:7;7:5;8:5;
15:23;20:19;21:6,18,
22;26:6;27:21;32:23;
49:4,6;50:23;58:20;
61:19;64:22;65:19;
66:17;70:13;73:4;
74:23;75:5;82:12;
89:13;90:19;93:21;
101:10;106:7;107:2;
110:4
back-dating (1)
21:14
background (3)
39:4;52:17;63:4
BACT (5)
79:10,12,13,18;80:4
bad (1)
55:9
bag (1)
38:19
balloon (1)
57:21
barn (12)
54:14,14,18,19,19;
55:11,12,18,23;56:1;
57:19,21
barns (12)
39:17;51:13;54:12,
23;56:6,9;58:15;59:4,
4,6,7,8
base (1)
33:10
based (9)
12:19;18:19;42:16;
53:11;80:13;84:21,22;
93:8;109:11
basic (2)
40:7;69:20
basically (3)
42:12;45:12;76:12
basis (5)
11:11;73:6;76:24;
98:3;104:18
bat (1)
43:25
beautiful (3)
43:18;44:7,8
become (1)
97:22
beef (1)
104:11
began (2)
63:13,14
begin (3)
63:15;68:24;84:19
beginning (3)
69:9,12;98:5
begins (1)
69:24
begs (1)
14:16
behalf (1)
6:19
behavior (1)
108:22
behind (2)
8:11;99:24
belong (3)
16:25;17:6;22:24
belongs (2)
18:9;22:19
below (8)
33:25;78:22;79:1,22;
102:11,13,22,24
belts (1)
99:19
benefit (3)
16:4;25:7;55:21
best (7)
8:9;33:11;34:21;
38:18;44:4;60:23;
79:10
Bet (1)
89:16
better (1)
46:14
beyond (2)
95:21;106:21
BFP (2)
85:20;87:9
BFP's (1)
86:13
big (2)
40:25;99:14
billows (1)
57:20
biological (1)
24:6
bird (3)
40:18;41:14;55:3
birds (6)
41:12;54:25;55:9;
100:12,15,19
bit (12)
7:13;21:5;22:5,9;
27:20;32:17;45:25;
46:6;48:24;56:15;
65:13;76:10
Blackman (1)
56:12
Blackson (99)
5:19;6:4,18,22;7:3,7;
8:15,17;12:1;13:10,13;
14:2,14;15:1,9,12,15,
17;16:7,8;20:2,9,13;
23:14,19;24:21,22,24;
25:7,10,18,20,25;26:5;
30:11,24;31:5,10,17,
24;33:25;34:8,13,20,
23;35:1,2,4;36:2,10;
37:1,5;44:16;45:20;
46:5;49:3;54:11;56:16;
58:2,9,10;59:9;61:12;
65:9,10;66:10,14;68:7;
71:21;78:3;80:1,11,17,
23;85:4,6,9;95:23;
96:3,20,24;101:21;
102:2;103:3;105:9,14;
106:1,3,24;107:3,4,25;
108:6,9,14,15,17;
110:6;111:5
B-L-A-C-K-S-O-N (1)
16:8
Blackson's (1)
109:2
blank (1)
23:10
blow (2)
55:11;99:17
blowing (8)
54:18;56:1;57:18,19;
95:11,14;99:22;100:3
blown (2)
55:12;100:5
blue (1)
25:5
BMP (2)
34:3;88:12
BMP's (4)
34:5;86:6;87:15;
90:24
Board (24)
4:4;5:9;6:10;7:25;
8:18;10:20;12:4;13:6,
16;14:4;31:2;36:4,17;
52:12,14;55:21;59:1;
63:3;95:22;109:18,22;
110:18;111:1,4
boards (1)
50:13
Board's (3)
8:3;12:11;32:2
body (2)
83:7;103:12
boiler (1)
10:24
boilers (20)
12:6;19:19,20;20:16,
17,21;24:15;26:14;
39:21;50:8;69:7,8;
74:5,18,19,21;75:3,9;
78:25;83:16
book (1)
42:17
books (1)
37:6
boots (1)
71:4
borrow (1)
105:19
both (16)
13:15;14:15;15:10;
37:5;38:22;57:12,24;
58:3,18;73:2,7;83:17;
94:12;97:16;99:6;
111:3
bottleneck (1)
39:9

ED_001509B_00010891-00031

bottom (6)
17:19;18:14;19:3;
33:13;57:21;86:17
bounds (1)
16:12
break (7)
7:18,20;56:14,22;
61:17;105:11;110:3
breath (1)
16:1
breathing (1)
41:2
briefly (2)
26:15;83:19
bring (4)
53:16;100:23,25;
107:2
brochure (1)
50:7
broken (1)
24:3
Buckeye (11)
33:6,9;43:23;45:1;
51:11,20;92:21;93:21;
96:10;97:11;98:23
building (24)
16:19,23;19:3;22:9,
15,16,17;23:24;32:14,
18,24;33:1,8;56:3;
58:5;67:25;68:3,9;
98:19;99:13,16;100:5;
101:1,2
buildings (4)
23:4;68:5,8;97:17
built (1)
47:17
bump (1)
53:3
burden (1)
12:15
business (10)
38:11,21,22;41:23;
42:2,4,7;48:8;66:19,21

C

CAFO (4)
37:15,19;43:5;75:10
CAFO's (1)
37:21
calculate (8)
10:8;43:6;48:13,15;
73:19;74:1,3;80:11
calculated (7)
18:4;44:16;75:6,7;
76:7,9;109:7
calculation (2)
49:1;84:22
calculations (20)
11:5;23:11;31:11;
44:20;46:22,24,25;
49:5,7,8,8;51:25;72:24,
25;73:1;74:9,15,20;
75:5,22
California (10)
37:22;43:23;50:12;
51:20;64:19,21;92:8,9,
10;106:12
call (5)
4:2;15:14;32:20;
35:5;62:10
called (3)
22:3;39:14;50:3
calling (2)
35:3;39:13
came (7)
20:19;21:20;39:3;
50:23;52:8;64:21;
87:20
can (70)
4:6;5:25;6:16;8:9;
9:19;10:8;11:9;13:24;
15:25;16:20;18:24;
20:14;21:3,6;23:15;
29:11;32:23;41:11,21;
42:7;45:20;47:24;
48:14,17,19;50:11;
54:16,22;56:14;57:3,
22,25;58:20;60:2;
61:17;63:3;65:19;
66:23;69:12;70:25,25;
71:15;78:4;81:14,25;
82:4;83:18;84:14;
85:22;86:2,16;89:3,11,
15,17;91:4;93:22;
94:18;96:18;97:9,10;
98:7;99:12;100:7;
104:7;107:16,23;
108:11;110:5,15
capable (1)
18:17
capacity (1)
8:1
capricious (1)
10:19
captured (3)
68:1;75:12;83:23
carbon (1)
41:1
career (2)
64:20,23
carried (1)
24:5
carry (1)
91:12
Carson (1)
68:15
case (18)
6:17,22;8:10,12;
11:18;12:5;15:13;
41:11;58:12;71:17,24;
73:20;76:2;84:15;
88:25;94:24;100:17;
105:23
case-in-chief (1)
7:4
cases (2)
11:13,15
categorical (5)
18:11;75:20,24;79:5,
5
categories (5)
12:17,21;18:10;40:7;
60:23
categorized (1)
93:19
category (2)
46:13;84:16
cattle (2)
86:5;104:11
cause (1)
19:4
caused (2)
27:19;89:25
causes (1)
33:3
Central (1)
53:3
certain (3)
44:13;59:24;110:16
certainly (3)
5:25;12:13;15:3
Certified (4)
15:19;35:22;62:19;
74:7
cetera (6)
36:25;38:20;39:10;
41:16;55:3;58:14
CFR (8)
14:8;15:4,5;22:7;
30:22;32:9;36:14;
101:17
CHAIRMAN (60)
4:2,14,16,18,22;5:1,
3,5,7;6:8;8:5,7,17;12:1,
3;13:9,18,21;15:10,22;
19:24;20:5,11;23:14;
25:6;26:2;34:8,18,22,
25;35:2;46:4;56:11,20;
58:8,20;61:14,25;62:7,
21;63:5;66:11;81:4;
85:4;89:20;95:23;
96:11;101:18;103:4,7;
105:10,20,24;106:23;
108:2,7,9,24;109:20;
110:25
challenge (2)
11:6;12:13
change (9)
27:3,6,8,10,13,14,17;
49:20;86:19
changed (2)
52:15;65:12
changes (1)
52:13
character (1)
18:18
characterization (1)
84:23
characterized (3)
75:10;83:18;109:7
chart (2)
45:22;53:11
charts (1)
53:9
check (1)
61:10
checklist (3)
29:5,8;102:19
chemical (2)
63:13,21
chemicals (4)
23:22,24,24,25
Chevron (2)
11:17,21
chimney (2)
17:12;32:11
chooses (1)
7:7
chose (2)
26:12;77:18
chosen (1)
109:13
chronology (1)
52:3
church (1)
64:21
circumstances (2)
12:12;81:16
citation (2)
14:9;15:6
cite (2)
11:14;86:2
cited (2)
94:12;97:16
citing (1)
95:5
citizens (2)
56:7,25
city (1)
104:25
civil (2)
63:8,10
claiming (1)
42:21
clarification (3)
5:12;58:25;110:13
clarify (4)
7:24;14:12;60:11;
66:16
Classification (3)
17:7;23:2;67:10
classified (2)
30:20;31:3
Clean (16)
9:22;11:10;19:10;
24:1;36:13;38:12,14,
23;42:4;47:18;50:18;
51:16;59:25;60:3;
85:22,25
clear (10)
11:20;24:11;25:16;
34:4;38:9;44:1;96:9;
97:11,14;109:11
clearer (1)
82:10
clearly (5)
12:19;33:7;36:8;
93:22;98:23
close (6)
7:11,16;56:13;63:6;
84:12;89:14
closer (2)
46:14;48:21
closing (4)
7:12;108:3,10,16
Code (1)
22:14
codes (1)
23:1
colleague (1)
14:19
collected (2)
49:3;82:23
college (2)
63:12,15
color (1)
56:24
colors (3)
25:8,12,16
column (2)
59:22;60:18
combined (2)
55:16,17
coming (5)
32:18;55:19;59:13;
68:11;111:3
comment (4)
5:20;41:5;71:25;
110:4
commented (1)
102:6
comments (6)
5:25;23:21;51:23;
72:6,9,10
Commercial (2)
104:9,14
common (2)
17:3;22:22
communicated (1)
67:22
companies (3)
38:22;64:5,7
company (2)
63:24;64:2
comparison (1)
98:16
complementing (1)
27:15
complete (5)
28:7,11;69:21;70:20;
73:12
completed (2)
72:8;81:22
completely (1)

ED_001509B_00010891-00032

53:6
completeness (3)
28:23;73:15;102:19
completion (1)
68:15
complex (2)
47:22;110:14
compliance (12)
27:25;29:22,25;
37:14;42:24;49:24;
50:17;51:8;60:13;71:1,
2;102:17
comply (2)
28:16;60:2
compound (1)
78:13
compounds (4)
22:12;40:9,16,20
comprehensive (1)
24:2
compressor (1)
64:14
concentrated (1)
82:7
concern (9)
21:20;57:5;82:12;
87:12,14;88:1,3;
104:23;105:7
concerned (1)
40:12
concerns (2)
66:24;81:7
conclude (3)
34:21;59:10;109:21
concluded (2)
79:1;111:10
conclusion (6)
13:5;76:5;77:25;
82:9;83:9;110:6
conclusions (1)
82:15
conditions (1)
29:21
conduct (2)
10:6;47:11
conducted (1)
89:24
confirm (4)
12:23;13:3;74:15;
109:18
confirmed (1)
13:1
confused (1)
27:18
consent (10)
33:9;44:9,12;59:20;
92:23;93:1;94:13;
96:10;97:12;98:25
conservative (2)
48:17,22
consider (3)
14:4;95:22;101:4
consideration (2)
8:3;78:6
considered (14)
17:5;18:7;21:4;
22:23;33:7;53:24;
67:14,15,22;68:1,19;
76:4;78:4;89:8
consistent (1)
109:16
constructed (2)
47:14,20
consulting (1)
64:4
contact (1)
69:20
contain (5)
23:25;28:9,13;29:18,
20
containing (1)
23:22
context (1)
90:25
contiguous (2)
17:1;22:20
continue (5)
45:11;60:6;61:5;
93:6;108:19
continues (3)
10:18;24:7;27:9
continuing (1)
60:21
contractor (2)
89:19,23
contrary (1)
44:5
contribute (1)
19:5
control (17)
17:2,3;22:21,22;
28:21;29:3,17,19,21;
38:18;52:24;61:2;77:3,
6,10;79:10;93:11
controlled (1)
83:24
conversation (2)
94:2;107:19
conversations (1)
107:16
conveyer (1)
99:19
cool (2)
100:15,19
coordinate (2)
110:8,20
copies (4)
15:1,2,4;36:24
copy (2)
20:13;24:25
core (1)
16:14
corner (1)
57:6
Corp (2)
64:11;66:1
corporate (1)
64:17
corral (1)
97:7
correctly (3)
75:17;86:2;91:14
cost (2)
46:15;47:24
Council (1)
11:18
counsel (1)
110:17
country (3)
36:22;37:18;50:11
County (51)
4:3;8:18;11:10;14:5,
7,9;19:12;21:6,17;
22:8;29:7;30:6;32:9;
36:11,17;37:5;39:21;
42:21;43:14;44:5;46:2;
47:10;48:3;49:5,19;
50:5,13;52:14,16,21;
53:10,18;54:2,8;56:7;
64:23;65:19;66:3,5,25;
86:22;87:3,4,5,16;
88:20,25;104:25;
105:2;108:18,18
county's (4)
30:9;49:12,16;51:25
countywide (5)
87:3,5;88:23,24;
106:17
couple (6)
15:8;28:5;52:22;
56:17;58:19;103:5
course (14)
24:6;32:23;37:10;
39:17,19,21;40:5,22,
22;42:18;47:24;52:20;
53:5,15
court (10)
8:8;11:14,18;15:24;
16:4;25:6;56:21;96:21;
110:5;111:8
courtesy (1)
110:20
cover (1)
25:11
coverage (1)
34:3
covered (2)
8:21;97:6
cowtown (1)
53:16
cramping (1)
8:11
creating (3)
45:14;50:17;54:20
credibility (1)
81:6
credible (3)
80:13;81:13;109:13
criteria (1)
41:19
crops (1)
89:24
cross (4)
62:4;81:8;85:5;
96:14
cross-examination (1)
7:1
cross-examine (1)
7:8
CTG's (1)
77:10
cultural (6)
87:16;89:9,11,22;
90:10;106:4
cumulative (1)
84:22
cups (1)
64:3
current (4)
14:13;21:16;62:25;
78:17
currently (2)
63:1;65:1
CV (1)
38:10

D

dairies (1)
53:16
dairy (3)
43:24;51:20;104:11
Dan (2)
36:9;40:3
dance (1)
43:19
dander (1)
40:10
DANIEL (2)
15:17;16:7
D-A-N-I-E-L (1)
16:8
data (11)
39:12;42:12,13,15,
16;43:18,19;46:19;
53:12;76:19;82:22
date (5)
14:17;68:24;94:8;
109:24;111:7
dated (2)
21:1,8
dates (1)
52:11
DAVIDSON (1)
5:2
day (8)
7:18,20;9:10,13;
11:22;32:6;41:15;45:8
dealing (2)
79:14;84:5
dealt (2)
63:24;64:5
December (2)
52:7,8
decide (2)
108:18,23
decided (3)
6:10;88:6;98:23
decision (12)
9:16;11:21;12:16,24,
25;13:7;26:8;32:5;
45:10;109:15,18;110:2
decisions (4)
47:6;94:15;109:7,10
declared (1)
20:22
decreases (1)
27:13
deem (1)
96:16
deemed (1)
19:25
deems (1)
29:21
Defense (1)
11:18
deference (1)
4:7
define (4)
89:12;95:10;97:9;
107:9
defined (10)
17:16,20;34:6;42:22;
82:11;83:21,21;88:7;
90:13,20
definite (1)
55:5
definitely (3)
21:24;41:18;54:5
definition (28)
16:19,21;17:9,14;
18:13;19:2,7,17;22:6,
15,17;32:8,22;33:12;
86:16,17;87:1;88:17;
90:2,5,8,11;101:8,14;
104:19;105:18;106:4,8
definitions (5)
16:17;17:21;80:9;
89:14;98:6
degradation (2)
40:16,23
degrade (1)
40:21
degrades (1)
40:19
Degree (3)
63:7,10,13
delegated (2)
9:21;50:13
deleted (1)
76:15
deliberation (1)
110:19
deliberations (2)
110:12,18

ED_001509B_00010891-00033

delivery (1)
39:20
demonstrate (8)
9:15,18;10:2;11:1,8;
31:12;60:25;102:25
demonstrated (2)
31:11;93:22
demonstrating (1)
31:2
deny (1)
29:20
Department (41)
5:19;6:5,20;8:19,19;
9:1,24;10:5,13,15,18,
22;12:13,23;13:3,6,20;
19:21;22:3;25:3,14,17;
26:12;38:13;61:20;
62:3,5,25;66:25;72:13,
24;73:7;79:7;83:18;
84:13,24;95:25;
104:16;108:19,25;
111:6
Department's (16)
8:23;9:7,16,20;10:5;
11:7;12:4,4,16,25;
13:6;26:6;65:5;96:12;
109:10,15
depending (2)
61:20;81:16
depletion (1)
63:18
deposited (1)
55:1
deposition (1)
35:7
deregulated (1)
87:13
derived (1)
41:21
describe (5)
19:13;25:8;36:6;
73:19;99:13
described (3)
17:6;23:1;73:6
description (1)
74:10
design (2)
55:12;98:18
detail (1)
44:17
details (1)
107:18
determination (12)
23:23;28:23;29:19;
75:14,15,17,23;79:4;
81:9;83:19;97:24;99:4
determine (10)
9:8;18:4;29:12;42:9;
43:1;49:13;69:18;70:2,
6;77:9
determined (6)
18:17;43:4;49:2;
70:8;93:1;98:9
determining (1)
18:7
detract (1)
34:9
develop (4)
61:5;70:12;82:23;
83:4
developed (3)
8:19;43:12;91:9
developing (1)
104:1
devil (1)
94:18
diagrams (1)
55:6
diesel (3)
69:7;95:3,15
diesels (2)
10:23;95:2
difference (2)
31:16,17
different (18)
20:7;25:8;27:19;
43:3;47:1;48:12,14,25;
64:8;74:24;76:24;
77:12;81:15;84:19;
86:5;93:15;98:18;
104:18
differentiate (2)
95:17;97:1
differently (2)
21:8;71:3
difficult (6)
32:4;84:1,6;96:6,25;
97:9
difficulty (1)
91:12
digit (1)
23:1
dimensions (1)
68:5
direct (2)
95:21;106:22
directly (4)
17:21;107:10,12,13
director (1)
64:16
directors' (2)
12:14,23
director's (2)
109:3,18
dirt (1)
58:1
disagree (1)
105:25
disclose (1)
24:21
disclosure (13)
9:6;20:3;25:2;31:11;
33:23;37:4;44:17;
46:23;47:1,4;49:17;
80:18;106:12
disclosures (1)
13:15
discuss (4)
9:23;49:11;109:24;
110:16
discussed (2)
96:13;107:19
discussing (1)
34:10
discussion (3)
67:13;69:8;102:24
discussions (1)
108:3
disregarding (1)
77:22
disturbances (1)
89:25
diversion (1)
64:20
division (3)
14:20;50:2;65:1
divisions (1)
37:24
document (19)
20:25;21:4;25:4,11,
22;33:22;42:5,9;45:21;
46:3;50:5;60:17;82:4,
6,10;102:10,14,18,20
documented (1)
102:9
documents (12)
23:13;37:3;43:22;
51:20;53:7;68:4;77:7,
11;80:17;82:18,18;
93:12
dollars (1)
46:18
done (28)
5:13;11:2;15:12;
16:11;29:6,13;37:13;
40:6;43:8,11;45:18;
47:24;49:1,9,22;54:6;
56:19;61:12,16;68:20;
71:15;81:22;82:8,14;
93:4;103:3;110:6;
111:9
door (1)
50:12
doors (1)
7:22
doubt (1)
49:8
down (10)
28:21,22;32:21;
53:16;62:8;70:16;
89:21;97:21;100:18;
103:22
Dr (4)
43:12,15;49:22;55:7
draft (3)
70:11,12;71:6
drafting (1)
74:25
drafts (1)
74:22
drift (1)
16:12
dropped (1)
60:15
dry (4)
38:19;54:20;99:19;
100:9
drying (1)
54:21
duly (3)
15:18;35:21;62:18
during (10)
7:20;10:14;11:24;
43:1;46:22;48:11;49:3;
58:17;66:1,4
dust (2)
40:10;94:18
duty (1)
28:2
dwell (1)
78:2

E

earlier (10)
4:5;65:20;67:2;
73:16;74:17;75:16;
80:9;93:11;102:6;
105:7
easier (1)
95:17
east (9)
32:15;57:14;62:15;
99:17,22,24;100:1,2;
101:2
educational (1)
63:4
Education-wise (1)
63:7
effect (1)
14:24
effective (2)
14:17,22
effectively (1)
14:21
efficiency (1)
82:21
effort (2)
10:22;111:5
efforts (3)
60:20,25;82:23
Egg (30)
9:4,9,23;10:11;
23:25;24:3;26:13;37:1,
11,21;38:4;40:1;43:23;
47:12;48:3;49:14;
51:11,20;65:3;66:19,
22;87:7,9;89:1,4,8;
90:4,23;102:3;105:15
egg-laying (9)
33:6;37:22,25;38:2;
39:18;40:5;44:9;47:15;
54:14
eggs (3)
24:4;54:25,25
egregious (1)
21:13
eight (4)
69:6;79:21,24;83:16
eight-hour (3)
36:19;52:17,24
either (1)
48:21
ejection (1)
64:7
El (4)
64:10,11,18;66:1
elected (1)
84:18
electronically (1)
21:2
element (1)
32:3
elevated (2)
71:20;72:19
else (6)
39:23;41:5;47:16;
61:8;70:16;110:21
e-mail (16)
19:20;20:15;24:12,
17;25:8,11,11,21,21;
33:16,18;34:10,12,18;
49:6;57:11
e-mails (5)
36:23;49:2,19;70:14;
107:25
embedded (1)
25:21
emergency (7)
10:24;67:17;69:6;
83:16,16;100:16,18
emission (53)
10:8;17:11,11;18:16,
16,19;37:14;39:12;
41:9,10,13,15,17,21;
42:16,22;43:1,8,11;
44:4,25;45:5,23;46:7,
12,17;47:7,23;48:6,20;
50:7;51:12,24;60:25;
61:6;68:25;74:8,9,14,
17;80:11,13,15,21;
81:15,18;82:13,21,24;
83:8;91:5;92:1;93:24
emissions (127)
8:20,22,25;9:4;10:9,
23;11:5,7,8;16:14,22;
17:9,24;18:1,3,6,15,15,
24,25;22:4;27:11,13;
32:10,10,18;33:3;
37:17;39:11;40:25;
41:8;42:11;43:7,13,16;
44:10,11,15,20;46:13;
48:1,4,9,23,24;49:13,
14,20;51:14;53:23;
54:8,20;55:19,20;

ED_001509B_00010891-00034

57:25;59:11;60:4,20, 22;64:6;67:14,23; 68:11;70:8;73:19;74:1, 11,18,20;75:4,5,6,7,8, 10,13,14,18,22,25; 76:3,6;77:9,23;78:20, 24;79:3,6,12,17;80:3, 12,19;81:10,19;83:2, 20;84:2,4,11,14,18,20; 86:12;87:11;89:8;91:4; 93:2,7;94:11,16,17,20, 20,23;97:12;100:11; 101:7,8;102:11,21; 103:1;104:10,22; 105:3;108:21;109:7
emit (8) 10:2,17;17:22;21:25; 22:10;39:8;41:23; 42:10
emits (4) 17:21;19:9;22:10; 101:25
emitted (2) 40:1;60:1
emitting (2) 16:24;22:23
emphasis (1) 63:11
employ (1) 97:24
enable (1) 29:18
encourage (1) 61:5
encumbrances (1) 84:3
end (16) 5:20;11:22;29:8; 32:5;48:22;54:14; 55:23;56:1,3;59:3,6; 84:12;99:17;101:1,2; 107:11
enforce (2) 60:7;83:12
enforceable (1) 50:4
enforcement (4) 60:6,9,11,12
engineer (13) 24:14;44:19;47:6; 63:23;64:13,23;66:7; 69:24,24;70:9,12,16; 73:1
engineering (7) 42:12;46:11;63:8,10, 11;64:22;70:24
engineers (1) 71:3
engines (10) 67:17;69:5,6;74:5,6, 7;78:24;94:25;95:2,3
enough (1) 76:20
enter (2) 19:22;45:24
entertain (3) 4:9,23;61:16
entire (2) 37:8;87:5
entitled (1) 30:13
Environmental (8) 9:2;21:10;38:13; 63:11,23;64:15,16,22
EPA (67) 8:21,25;9:21;33:4,7; 37:13;42:1,11,22; 43:17,22;44:1,9;45:21; 49:13;50:7,17,23;51:9, 19;52:8,15,22;53:8; 59:24;60:2,5,14,18,21, 24;68:21,22;74:8; 76:21,22;77:7,12; 80:20;81:10;82:9,10; 83:3;85:15,21;87:21, 23;92:25;93:8,22,24; 94:14;96:7;97:5,10,11; 98:22;103:12,15,22; 106:12;107:5,7,14,20; 109:14,16
EPA's (2) 51:21;82:23
EPCRA (1) 81:2
equipment (10) 16:24;30:18,20; 31:14,16,18;67:16; 74:11;77:24;83:22
equivalent (4) 17:13;18:16;32:12, 25
Especially (1) 55:4
essence (1) 80:4
establish (1) 103:20
established (4) 28:10;83:4;86:24; 103:25
estimate (5) 39:11;48:1;51:13; 53:23;56:12
estimated (3) 10:8;44:10;80:20
estimates (1) 56:17
estimation (1) 60:20
et (6) 36:25;38:20;39:10; 41:16;55:3;58:14
Eugene (1) 107:24
European (1) 81:12
evaluate (1) 69:15
evaluated (1) 82:7
evaluates (1) 70:9
evaluating (2) 72:16;84:25
evaluation (3) 48:11;73:8,9
even (19) 18:2;19:16;21:14; 33:5;38:9;40:15;44:2; 63:15;74:8,12,16; 75:13;76:17;79:22,25; 83:24;87:12;90:9; 91:24
events (2) 52:3;96:1
eventually (1) 19:20
everybody (2) 6:7;61:17
everybody's (1) 41:24
everyone (1) 47:16
evidence (10) 7:14;13:3,5;23:22; 25:15;34:17;83:7; 109:6,14,16
exact (3) 82:2;89:14;91:9
exactly (1) 68:8
EXAMINATION (6) 36:1;62:23;85:8; 95:21;103:10;105:13
examined (3) 15:20;35:23;62:20
examiner (1) 8:1
example (7) 22:25;31:18;44:14; 94:23;95:6,7;102:19
examples (1) 95:25
exceed (1) 60:1
except (2) 17:3;22:22
exceptions (1) 43:7
executive (7) 4:6,10,11,19;109:24; 110:11,16
exempt (1) 87:16
exempted (2) 76:12;106:13
exemption (18) 19:11,15;30:4;50:17, 22;51:16;85:23,24; 86:1,2,3,6,10,14,15; 104:16;106:10,16
exemptions (1) 30:13
exhausts (1) 32:25
exhibit (14) 19:23;20:15;24:18; 25:9;29:7;43:14,24; 45:24;56:5,24;57:8; 59:17,19,19
exhibits (9) 13:14,16;37:6;40:3; 43:22;47:5;56:10; 57:24,24
exist (1) 106:18
existence (1) 20:17
existing (9) 12:7,10;17:17;28:15, 17;29:11;42:15;45:5; 47:11
exists (1) 106:16
expanding (1) 8:2
expansive (1) 90:14
expect (2) 44:3;56:16
expediting (1) 101:19
experience (2) 65:18,21
expert (11) 6:25;10:25;11:4; 13:11;31:12;35:9,11; 65:6,12;66:13,15
expertise (2) 65:14;80:14
explain (3) 27:10;79:8;83:19
explains (1) 25:11
explanation (2) 25:12;110:24
explicitly (1) 80:1
expressly (1) 105:2
extensive (1) 42:23
extent (2) 44:13;59:24
extras (1) 57:10
extreme (3) 95:7,8,10
eye (1) 40:14
eyes (1) 50:17

F

fabric (3) 32:17;57:17,20
facilities (12) 37:12,22,25;38:2; 43:16;44:10;50:23; 51:14;55:7;93:18,23; 104:15
facility (42) 10:1;11:6;16:23; 19:4;22:10,16,17; 26:11;31:2;33:17;34:1; 37:1;39:5;41:13,18; 43:23;44:15;45:9; 46:15;47:15,16,20; 48:16;52:1,25;53:24, 25;57:15,23;65:3;67:4, 19;75:4;77:18;78:1,7, 10;79:12;89:24;98:16; 104:12,12
facility's (1) 47:14
fact (8) 19:15;45:8;47:19; 49:6,18;56:21;73:23; 103:22
factor (13) 41:9,10,13;43:2; 44:25;45:1,2;48:4,6,9; 50:8;81:10,18
factors (34) 8:22;10:8;18:19; 39:12;41:15,17,21; 42:16,22;43:3,9,11; 45:5,23;46:7;47:7; 48:20;49:13;51:12; 61:6;68:25;74:8;80:11, 13,15,21;81:15,19; 83:8;91:5,8;92:2;93:2, 24
fair (1) 80:2
fairly (1) 44:22
Falin (1) 20:18
Fallon (1) 20:18
falls (2) 12:17;34:1
fame (1) 14:24
familiar (4) 36:3;37:20;106:11, 14
fans (22) 54:17,19,24;55:16, 17,19;56:1;57:18,19; 59:3,14;99:13,15,21, 25;100:2,3,7,13,14,20, 23

ED_001509B_00010891-00035

fantastic (1)
43:18
far (3)
4:8;67:15;83:7
farm (8)
30:18;76:12;87:16;
89:9,11,22;90:9;
104:18
farming (2)
104:9,14
Farms (6)
33:6,9;92:22;93:22;
97:11;98:23
fatal (1)
51:6
favor (3)
4:14;5:3;108:23
feathers (2)
40:10;55:3
February (4)
14:22;21:2,5;52:14
fecal (2)
40:18,23
feces (2)
24:3;40:17
federal (9)
8:23;22:14;29:25;
51:19;56:17;59:18;
85:24;87:23;94:12
feed (4)
39:20;40:10;55:4;
104:11
feeding (31)
8:20,25;19:11,15,17;
30:5;41:12;43:2,5;
50:14,16;51:15,17;
53:13;55:4;59:20;
60:21;67:20;75:11;
77:23;82:7;83:2;84:11;
85:23,25;92:4,14;
94:13;106:13,17;
108:20
feel (2)
36:21;71:7
feels (1)
7:4
feet (3)
68:8,10,13
felt (1)
81:18
fertilizing (1)
90:1
few (2)
63:19;91:25
field (2)
71:4;89:25
fields (2)
90:3,4
figure (3)
42:10;46:10;68:14
filed (1)
29:16
filings (1)
36:16
fill (1)
74:12
filled (3)
73:21,24;74:9
final (10)
21:1,5;43:1;50:7;
59:21;70:22;74:20;
82:2;84:21;109:13
finally (2)
43:8;82:24
find (12)
11:12,14;12:20,22;
24:23;32:9;39:23;
48:20;51:5;82:17;92:3,
11
fine (4)
15:24;23:18;54:22;
61:11
fingers (1)
8:11
finish (1)
56:14
finished (1)
7:3
fired (1)
69:7
first (16)
4:5;13:11,13;15:18;
16:18;33:24;35:21;
49:24;57:5;62:18;67:9;
69:16;75:21;78:5;
82:25;104:7
Fitzgerald (1)
68:15
five (3)
6:15;28:1;64:20
five-minute (1)
110:3
fixed (2)
19:8;101:25
flat (1)
57:18
flaw (1)
51:6
flaws (1)
49:11
floor (2)
8:15;24:1
flux (1)
103:25
focus (2)
15:23;65:2
Folks (11)
4:2,7,18,23;5:8,13,
21;6:3;60:15;61:25;
81:25
follow (4)
10:13;29:12;105:9;
109:14
followed (3)
6:19;30:6;47:22
Following (6)
6:25;12:17;18:10;
30:14;37:16;52:9
follows (5)
15:20;28:4;35:23;
62:20;104:21
foot (1)
36:8
football (1)
68:14
forced (1)
100:24
foregoing (1)
109:17
forever (2)
44:6;45:13
forgot (1)
104:12
form (2)
27:24;29:17
formal (1)
71:21
forth (2)
70:14;74:23
forward (6)
9:10,13;33:20;45:8,
16;71:9
forwarded (1)
37:3
found (11)
16:20;17:10;18:11;
22:7;25:18;26:10;
45:22;46:23;80:3;
91:18;104:16
foundation (1)
10:4
four (6)
12:17,21;14:21;
27:22;46:1;47:1
frazzled (1)
58:18
free (2)
110:7,8
fresh (2)
100:23,25
Friday (1)
10:21
front (4)
36:9;37:8;68:2;
86:18
front-end (1)
58:5
fuel (5)
19:19;20:16,21;27:8;
64:7
fugitive (48)
9:5;11:7;16:14,22;
17:8,11,23;18:1,3,6;
32:1,7,9;54:7;55:18;
57:25;59:12,16;67:22;
68:2,18,23;75:12,13,
18,22,25;76:3;79:3,6;
84:11;93:7;94:11,15,
17,20;95:12,13,13,15,
17,25;96:5,6;97:1,7;
101:7,8
fugitives (2)
59:11;75:23
full (2)
39:13;53:12
function (2)
41:16;42:13
functional (6)
97:17;98:7,8;99:4,8,
8
functionally (3)
17:13;32:11,25
funny (1)
16:3
further (8)
41:20;65:5;66:8,10;
85:3;102:23;104:24;
105:8
future (2)
43:18;50:20

G

gain (1)
68:16
gained (1)
65:21
gallons (1)
20:20
gap (1)
87:24
gather (1)
96:20
gave (2)
15:6;92:1
General (3)
81:21;82:6;84:2
generate (3)
44:3,15;45:9
generated (1)
55:2
generates (2)
19:9;101:25
generators (8)
10:24;12:7;39:20;
50:9;75:9;83:17;
100:16,18
gentlemen (2)
13:21;109:20
geographical (1)
61:3
gets (2)
8:11;46:14
girl (1)
43:19
given (7)
60:12;78:6;87:16;
96:8;103:21;105:25;
108:2
gives (1)
42:11
giving (1)
5:9
goes (11)
17:19;21:6;23:2;
26:6;49:16;69:23;70:9;
72:16;94:24;100:17;
110:25
good (5)
20:12;47:6;62:7;
68:16;97:18
gosh (1)
57:6
govern (1)
103:20
governing (1)
103:12
graduate (1)
44:13
grams (2)
81:10,13
Grandview (1)
62:15
grant (1)
29:19
granted (2)
12:8;67:4
gravel (2)
58:1;59:15
gray (1)
57:16
great (4)
42:8,24;46:19;84:3
green (1)
25:4
ground (3)
71:4;96:6;97:6
groundwork (1)
96:4
group (4)
17:6;22:25;75:24;
110:7
grouping (4)
16:25;17:5;22:19,24
guarantee (1)
108:11
guess (8)
21:5;23:11;31:9;
45:13;65:10,12,25;
96:3
guesses (1)
42:19
guidance (12)
51:1;77:6,11;87:11;
94:4;96:8;97:5;103:16,
16;107:21,22;110:17
guidances (1)
93:12
guide (1)
41:23
guys (1)
81:24

H

ED_001509B_00010891-00036

H2 (1)
92:6
half (2)
31:23;36:8
halfway (1)
31:22
hand (3)
43:20;44:5;74:2
handed (1)
101:15
handle (3)
7:10;51:11;77:9
handled (1)
21:19
handling (1)
55:25
hands (1)
51:4
handy (1)
81:24
happen (1)
106:15
happened (2)
21:12,13
happens (3)
8:13;48:11;73:23
HAPs (1)
23:22
hard-and-fast (1)
97:25
harder (1)
95:17
harm (1)
55:9
harvesting (1)
90:1
hate (1)
62:1
hauled (1)
58:6
hazards (1)
17:18
head (4)
14:20;72:12;90:15;
94:8
health (2)
55:10;64:16
hear (1)
110:22
heard (6)
65:18;67:1;76:11;
82:5;86:1;109:25
Hearing (26)
4:3;5:18,20,23;6:1,9,
10,15;7:15;8:1,6;
10:21,23;14:1;36:10;
40:8;65:2;71:20;72:5;
109:21,25;110:3,22;
111:1,7,10
heart (1)
32:8
Heber (2)
43:12;49:22
Heber's (2)
43:15;55:7
height (1)
68:9
held (1)
72:4
help (6)
52:5;68:10;82:17;
89:15;96:21,22
helpful (1)
45:21
helping (1)
38:22
hen (29)
18:3;21:23;23:3;
30:7;32:13;33:7;47:11;
59:11,12,13;67:21;
68:20;75:11;76:2;
81:11,13;84:2,14;90:7;
93:2;95:6;96:9;97:13,
18;98:24;101:3;102:3;
104:16;105:3
hens (2)
99:21,23
herein (3)
15:18;35:21;62:18
Hickman (11)
37:1;52:25;65:3;
66:19,24;67:4,9;73:8,
13;80:12;97:18
Hickman's (5)
47:19;54:13;73:21;
94:5,6
hierarchy (3)
42:11,13;45:23
high (1)
12:15
higher (1)
48:22
Highway (1)
16:9
himself (1)
6:24
Hiser (31)
5:14;6:5,8;13:24;
14:12,16,23;15:2,7,15,
21;16:4;24:19,24;
30:11;31:1,7,15,21;
35:10,13,15,19;55:21;
57:2;62:12;65:4,8,15;
66:16;110:14
historic (3)
14:13,15,16
history (3)
35:7;36:18;66:23
hitting (1)
45:3
hold (4)
7:15;57:2;65:1;
108:11
hole (1)
63:18
hope (2)
11:22;29:4
hopefully (4)
26:9;30:6;37:8;
109:25
hour (2)
7:17;31:23
hours (1)
27:6
house (4)
68:20;96:9;97:19;
98:24
housed (1)
51:15
houses (24)
18:3;21:23;23:3;
30:7;32:13;33:8;38:19;
47:12;59:11,12,13;
67:21;75:11;76:2;84:2,
14;90:7;93:2;95:6;
97:13;101:3;102:3;
104:16;105:3
Houston (1)
64:19
hundred (2)
45:3;77:1
hundreds (1)
53:6

I

Idaho (1)
92:17
idea (1)
50:10
IDEM (1)
50:2
identified (5)
38:7;39:2,7,16,21
identify (5)
38:6;39:6,22;71:14;
82:4
identifying (1)
38:17
ignore (3)
10:10,18;45:8
ignores (1)
53:6
ignoring (3)
9:25;10:16;45:12
illegal (1)
21:9
impact (1)
53:13
implement (1)
60:24
implementation (3)
11:10;53:8;87:24
implementing (1)
87:23
important (8)
16:17,21;18:13;
26:11;29:5;32:3;82:25;
90:16
impoundment (1)
22:1
impoundments (1)
23:4
improve (2)
60:20,22
improved (1)
60:25
inappropriate (1)
109:4
include (7)
24:16,16;30:20;
75:19;76:9,17;88:12
included (10)
24:19;33:22;34:11;
74:19,19,21;76:1,18;
88:15;90:2
includes (6)
46:11;52:23;67:20,
21,21;105:18
including (6)
10:25;17:23;18:15;
37:21;60:3;104:11
incorporate (1)
52:13
Incorporated (2)
11:17;36:14
incorporating (1)
54:1
increases (1)
27:6
indefinitely (1)
43:20
independent (2)
89:19,23
Indian (1)
57:7
Indiana (19)
38:2;49:17,18,19,21,
22,23,25;50:4,10,11;
55:7;77:15,18;91:17;
92:11;107:6,6,9
indicated (2)
24:14;83:3
individually (2)
98:21;111:4
indulgence (1)
32:2
industrial (5)
17:5,7;22:19,24;23:1
industries (1)
93:16
industry (4)
16:25;48:7;63:14,23
informal (1)
13:25
information (32)
7:23;15:24;16:10;
21:3,15;23:16;27:24;
29:18;32:4;35:6,8;
36:9;37:2;43:21;44:22;
45:12;46:7;49:3;51:7;
60:22,23;69:20,22;
70:1,21;73:17;74:3,4;
75:2;82:10;84:22;94:4
informative (1)
104:4
initial (5)
34:11;67:3,16;73:21;
94:9
initially (2)
55:1;64:12
initiation (1)
65:24
input (1)
71:25
input/suggestion (1)
25:23
inputs (1)
72:1
inside (5)
54:17,18;57:19;58:5;
59:4
insignificant (1)
20:22
inspection (2)
39:23;56:8
Installation (5)
16:24;19:4;22:10,16,
18
instance (3)
74:6;80:20;94:18
instruction (1)
4:6
intend (2)
10:25;11:6
intended (1)
15:8
intending (1)
60:6
intends (1)
83:3
intentionally (2)
9:24;10:15
interaction (1)
54:3
interest (5)
31:21;71:20;72:19;
101:18;108:3
interested (1)
87:23
interesting (4)
50:10;64:6,8;92:21
internal (2)
70:14,23
internally (4)
59:4,6;70:11;71:7
internet (1)
11:13
interpretation (5)
11:20;42:3;87:14;
105:4,6
interrupt (1)
34:9
into (26)
4:6,10,11,19,20,24;

ED_001509B_00010891-00037

6:2;11:15;12:17;21:15;23:17;24:6,17;33:3;42:6;47:17;55:16,17;56:21;58:6;61:21;68:13;69:10;75:22;81:2;104:14
introduce (2) 26:2;33:16
introduction (2) 25:15;34:17
invalid (3) 9:17;12:20;53:11
investigating (1) 6:11
investigation (1) 41:20
involved (11) 18:16;37:21;50:15,15;66:20;72:15,22,23;99:12;110:10,11
involvement (1) 72:18
involves (1) 12:5
Iowa (3) 38:3;45:1;80:18
issuance (2) 6:12;29:23
issue (22) 6:13;9:11,12;12:16,24,25;13:7;20:22,23;26:13,14;32:3;53:5,17;63:24;69:1;70:22;71:16;72:11;87:21;109:16,18
issued (11) 33:8;52:6,18,19;67:8,9;93:1;97:5,12;98:25;103:23
issues (15) 6:10;19:18;37:16,19,20;53:4,19;63:14,19,25;64:2,9,13;68:23;92:13
issuing (3) 50:15;51:1;93:17
item (2) 4:5;27:15
Items (1) 59:14
iterations (1) 70:11

J

Jacqueline (1) 49:7
January (1) 52:22
Jean (2) 35:17,20
J-E-A-N (1) 35:18
jet (1) 64:7
job (2) 38:21,24
judgment (5) 9:17;12:19;46:11;97:23;109:11
June (3) 52:19;67:8;86:24
junior (1) 63:17
jurisdiction (2) 10:21;37:7
jurisdictions (1) 76:18

K

Kathy (3) 35:5,17,20
K-A-T-H-Y (1) 35:18
keep (1) 100:15
keeping (1) 27:12
Kelly (1) 57:11
KERR (1) 4:13
kick (1) 4:20
kill (1) 55:10
kind (16) 5:10,15;8:9;21:22;23:2;26:22;28:7;36:20;41:10;45:23;49:16;57:20;60:18;85:11;88:15;104:1
Kinder (1) 64:12
kinds (1) 41:15
knew (1) 88:15
knowing (1) 24:20
knowledge (1) 39:4
knowledgeable (1) 71:12
known (2) 64:11;73:17

L

laborious (1) 44:17
lagoons (4) 39:18;67:21;75:11;84:14
language (1) 11:9
large (10) 32:20,24;40:24;42:23;64:24;83:22;91:8;97:19;98:7;99:9
larger (1) 38:22
large-scale (1) 50:14
Larry (1) 68:15
last (5) 10:21;40:6;43:6;76:14;85:19
late (1) 65:24
later (2) 68:24;94:16
latitude (1) 80:2
law (4) 8:23;30:1;76:13;110:15
lawfully (1) 109:9
laws (3) 11:19;29:25,25
lay (4) 10:4;57:17;65:11;96:4
layers (1) 37:21
laying (6) 37:1,11;54:25,25;56:2;59:7
lead (1) 109:15
leads (1) 104:14
learned (1) 106:25
leasee (1) 89:18
least (6) 12:17;18:4;30:8;38:1;51:2;110:1
leeway (1) 28:21
left (3) 23:9;63:12;64:18
left-hand (1) 59:22
legal (7) 11:12,15;14:9;44:11;51:19;71:7;84:23
legislature (7) 34:5;88:6,8,10,12,14,17
legs (1) 61:18
LEONARD (55) 4:2,14,16,18,22;5:1,3,5,7;8:7,17;12:1;13:9,18,21;15:10,22;19:24;20:5,11;23:14;25:6;26:2;34:8,18,22,25;35:2;46:4;56:11,20;58:20;61:14,25;62:7,21;63:5;66:11;81:4;85:4;89:20;95:23;96:11;101:18;103:4,7;105:10,24;106:23;108:2,7,9,24;109:20;110:25
lessee (1) 89:23
lesser (2) 42:19;47:24
level (1) 64:17
levels (1) 99:25
licensure (1) 63:4
lies (1) 48:16
lieu (1) 15:6
likewise (1) 77:25
limit (2) 8:23;10:22
limited (5) 10:15;18:24;48:4;93:17;105:25
limiting (2) 9:24;60:4
limits (1) 18:16
line (1) 95:20
lined (1) 39:11
lines (1) 58:25
list (4) 18:10;76:2,3;87:13
listed (4) 47:22;75:20,24;103:1
literature (3) 83:25;107:10,11
litigation (1) 37:22
little (19) 4:6;7:13;13:25;16:2;21:5;22:5,8;25:4;27:18,20;32:16;46:6;48:24;56:15;58:18;65:13;67:1;71:3;76:10
loader (1) 58:6
loading (1) 58:4
load-out (1) 58:17
local (6) 60:19,25;61:1,5;70:7;79:10
located (9) 17:1;22:20;64:19;65:3;78:10,11;86:21;89:7;105:16
location (2) 19:8;101:25
long (4) 54:14;55:23;56:1;61:21
longer (6) 10:10,10;56:12,15,17;58:11
look (53) 8:10;19:12,16;23:8,12;24:3;25:10,20;26:17;27:21;28:20;29:5;30:12;33:6;42:14;43:6,14;46:1,12;48:19;50:6,19;52:2;53:7;55:6;56:9;68:4,24;70:5,11,16,19,24;71:1,2,2,10;72:21;73:5;76:11,18,22;78:14;79:3,6;80:3;83:6;97:10;98:20,22;101:10,13;103:16
looked (27) 20:24;36:16;37:4,6;47:2,5;67:15,16,18;68:17,21;69:4;77:15,19,19;80:9;83:25;84:17;91:23,24,24;93:6;102:10,12;104:17;107:9,11
looking (28) 12:8;36:12;37:25;39:5;40:7,9;41:3,13,17;43:16;55:15;56:23;57:6;77:21;78:20;79:11,23;80:16;82:8;86:18;91:25;92:22;94:25;101:19;102:21;104:3,6;109:4
looks (1) 25:13
lost (3) 36:19;58:22;60:16
lot (10) 28:21;37:3,12;50:1;53:15;85:11;94:19;95:11,15;104:11
low (1) 48:15

M

MAC (1) 93:13
main (4) 8:21;53:4;69:4;

ED_001509B_00010891-00038

82:13
maintaining (1)
66:11
major (23)
11:5;17:6,14,15,16,17,20,23;18:5,5,8;22:25;30:15;31:3;45:8;75:17,19,22;76:1;78:17;79:3;101:15;108:20
majority (1)
5:18
makes (1)
51:5
making (6)
48:22;58:25;64:1,3;97:24;111:2
management (6)
31:22;33:11;36:24;48:12,17;68:5
manager (6)
21:10,11;63:2;64:14,15;65:1
manner (1)
29:16
manual (3)
12:11;17:7;23:2
manure (23)
39:19;40:17;48:13;54:15,17,20,21;55:1,13,24,24;56:2;57:23;58:5,17;59:5;67:20;75:12;84:14;99:18,18;100:1,9
many (4)
41:18;55:17;72:20;73:24
map (2)
33:18,25
marginal (1)
52:16
Maricopa (14)
4:3;8:18;11:10;14:7;36:11,17;52:14,16,20;53:10;66:24;86:20;88:20;108:18
Martin (14)
11:4;35:5,13,15,17,19,20;36:3;46:6;56:18;59:10,23;60:5;62:1
M-A-R-T-I-N (1)
35:18
massive (1)
81:14
Master's (1)
63:9
material (5)
40:18,24;44:21;45:2;55:5
materials (3)
18:21;36:23;47:5
matter (15)
5:23;6:9;24:3,5,8;40:12,12;44:24;47:14;55:2;73:23;88:4;99:9;100:4;104:23
matters (1)
36:3
max (1)
77:3
maximum (3)
48:18;70:4;77:3
may (38)
5:13;7:5;8:1,11;15:21;18:19;19:4,21;21:3;22:10;24:9;32:4,4;33:18;39:23;43:17;52:15;56:13;70:13,16;74:24;76:18,23;82:16;83:9,9;85:10;87:12;90:19;96:1,1;103:17,17;104:9;105:9;106:24,25;110:17
maybe (14)
20:18;21:7;29:3,3;32:19;41:25;52:14;53:12;60:11;65:13;71:3;76:25;77:4;99:14
mean (5)
6:1;25:9;99:10;105:2;109:14
meaning (1)
48:22
means (6)
22:9,18;32:10;77:8;86:20;104:13
meant (1)
73:4
meanwhile (1)
52:12
measure (1)
84:1
measured (6)
18:17;42:15,16;48:5,6;83:24
measurement (1)
18:22
measurements (1)
47:21
measures (1)
47:24
measuring (2)
91:12,13
medium (1)
48:15
meet (2)
90:4,10
meeting (5)
4:3;6:2;109:24;110:12;111:7
meetings (1)
110:15
meets (3)
71:7,8,8
members (4)
4:15;5:4;8:18;12:3
mention (4)
22:3,6;26:16;66:6
mentioned (8)
4:5;23:20;72:12;77:16;78:3;79:2;81:8;93:10
mentions (1)
104:15
message (1)
61:4
met (1)
13:2
methanes (1)
41:2
methodology (2)
44:21;60:20
methods (1)
47:22
middle (8)
7:18;59:22;60:18;68:13;95:16;96:5,25;97:5
might (15)
21:14;25:7;48:23;52:5;58:23;59:19;61:14;68:11;70:4;88:8;91:11,12;96:21;101:17;108:4
mike (1)
63:6
million (2)
46:18;86:22
mind (1)
80:13
minor (55)
6:12,13;9:25;10:14;11:2,24;12:6,9,14;13:1,7;23:10;26:16,24;27:1,2,5,7,12,13;28:21,24;29:2,6;31:6,7;47:10;48:2;52:9,18;67:6;69:6,10,11,13;71:17,19,23;72:15;73:22;74:18;76:6;78:21;79:20;80:6,8;83:15;84:25;94:9,10;96:2;99:12;109:3,9,19
minute (1)
78:2
minutes (5)
6:2,16;7:11,17;61:22
mischaracterize (1)
108:20
misinterpreted (1)
71:13
Miss (13)
11:4;35:13,15,19;36:3;46:6;49:9;56:18;59:10,23;60:5;61:25;71:13
missed (1)
70:17
missing (3)
73:17;74:24,25
Missouri (1)
63:8
mistaken (1)
88:2
mix (1)
52:11
mixed (1)
57:5
Mm-hmm (2)
92:24;97:20
mod (1)
69:6
model (2)
83:1,4
modeling (2)
18:21;42:18
models (1)
46:13
moderate (5)
36:20;52:16,21;53:4;78:18
modification (28)
9:25;10:14;11:2,24;13:7;23:10;26:17;29:2;31:6;47:10;48:3;52:10,18;69:10,11;71:17,19,23;73:22;78:8,21;79:20,23,24;80:7,9;99:12;109:19
modifications (7)
17:17;28:15,17,22;29:6,11;76:6
modified (2)
45:15;67:6
modifier (1)
98:5
moisture (1)
99:20
monitored (1)
18:20
monitoring (2)
27:11;82:14
monoxide (1)
41:1
months (1)
52:22
more (33)
7:13;10:2,17;17:1,22;21:16;22:20;31:25;40:15;44:13;45:9;46:7,8;47:22;54:20;61:10;64:5;65:13;69:6;71:4,11;72:18,22;73:23;82:10;83:1;86:22;90:14;91:25;96:6,25;99:16;107:3
Morgan (1)
64:12
most (4)
7:23;15:3;92:6;101:1
motion (7)
4:5,9,23;13:17;14:3;19:22;34:14
mouth (1)
95:24
Move (8)
4:11;14:7;24:16;33:19;61:21;69:22;95:16;100:22
moved (6)
4:25;64:1,4,10,19;79:15
movement (3)
40:11;54:24;55:3
moves (1)
70:13
moving (1)
74:23
much (9)
4:22;7:21;8:7;26:20;32:21;56:12,16;102:16;109:21
multiply (1)
41:11
must (7)
12:20,20,22;86:8;93:1;106:6;109:14
myriad (2)
64:4;80:15
myself (4)
10:25;15:14;21:22;96:20

N

NAEMS (2)
37:14;44:25
nailed (1)
103:22
naked (1)
40:14
name (8)
16:5,7;20:19;35:16,17;62:13,14;69:19
NARDUCCI (2)
4:11,25
narrow (2)
109:1,5
National (11)
37:13;42:24;46:16;47:23;49:24;51:8;60:13;69:1,1;70:4;82:13
nationally (1)
85:21
nationwide (1)
42:23
Natural (2)
11:17;40:21
near (1)
29:11
nearly (1)
43:15
necessarily (1)

ED_001509B_00010891-00039

105:24
necessary (6)
9:8;11:20;20:11;
29:18,22;65:20
need (20)
7:10,20,24;8:13;
9:18;13:25;15:23;
18:12;24:24;25:1;32:5;
42:7;49:12;50:19,25;
51:3;54:1,2;66:8;
109:22
needed (1)
83:3
needs (4)
45:10;54:2;61:2;
82:10
neighboring (1)
37:24
neither (1)
87:17
Netherlands (1)
81:12
new (32)
9:7;10:3,6,13,17;
11:1,3,23;16:10;17:16;
27:3;28:8,12,14,17;
29:10;32:25;34:12,13;
39:14;45:14,17;48:2;
49:14;52:8;54:1;61:15;
76:24;77:1;78:4,9;
93:12
news (1)
92:23
next (7)
15:3;27:9;50:12;
58:24;61:21;69:23;
110:11
nice (1)
46:10
night (1)
24:23
nine (3)
29:15;51:9;93:25
nineties (1)
65:25
nitrogen (2)
48:13;78:12
Nobody (1)
54:22
noise (1)
7:21
non-attainment (10)
33:15;34:1;36:17;
53:10;78:10,11,18;
86:21,23;87:6
none (4)
23:21;34:24;77:2,4
non-fugitive (27)
11:8;16:14,22;32:1,
7;33:4;54:7,9;55:19;
59:12,14;68:23;75:8;
94:20,23;95:6,7,12,15,
18;96:1,5,7;97:1,8,13;
108:21
non-minor (2)
26:22,24
non-regulatory (1)
50:3
non-Title (7)
9:9,12;26:16;45:11;
67:11,12;70:2
nor (2)
30:1;87:17
normal (10)
30:18;41:1;71:18,22;
87:16;89:9,11,22;90:9;
102:15
normally (1)
80:6
north (1)
57:14
note (6)
4:4;9:1;13:22;19:21;
24:12;33:18
noted (2)
73:16;80:1
notes (3)
52:2;61:10;107:18
notice (3)
26:12;71:22;72:4
notification (2)
28:8,12
Notwithstanding (1)
30:14
November (5)
21:2;52:7,10;67:5,7
nowhere (1)
39:3
NOx (8)
78:12,20,22,23;
79:13,17,21,24
NSR (18)
33:2;70:3;76:14,15;
78:2,4,7,9,15,22;79:2,
4;80:6,8,25;85:20;
86:10;100:20
number (15)
17:15;41:11,12;43:4,
6;57:7;67:24;76:23;
77:11;81:23,25;82:2,
16;97:25;105:25
numbering (1)
27:19
numbers (9)
15:8;43:24;44:4,4,8,
14;81:12;91:9,15
nursery (1)
89:25
nutrient (4)
48:11,17,18;68:4

O

oath (1)
62:2
object (4)
25:3,15;80:23,24
objection (7)
34:16;35:11;46:2;
65:8;66:12;81:5;96:12
objective (1)
70:19
obligation (2)
9:21;10:6
observations (1)
51:23
obtaining (1)
30:2
obvious (2)
102:13,23
obviously (3)
46:13;71:11;110:7
occurred (1)
77:13
occurring (1)
80:10
occurs (1)
81:15
October (2)
42:2;57:12
odd (1)
50:12
odds (1)
9:20
off (10)
36:10;43:25;56:12;
58:6;65:11;81:24;
90:14;94:8;99:18,19
offered (1)
85:21
offers (1)
85:15
Office (2)
81:21;82:6
officer (5)
28:21;29:3,17,19,21
official (4)
21:15;49:12;52:13;
61:13
officially (1)
111:9
officious (1)
62:1
Ohio (4)
38:3;51:10;92:19,21
Oklahoma (4)
38:11,13,23,25
old (2)
14:5;79:14
older (1)
26:20
omissions (1)
12:21
once (12)
7:25;8:10;15:25;
39:6;43:4;47:13,16;
69:21;70:8;71:6,15;
75:2
One (51)
5:17;8:8,22;12:17,
20;15:7,22;17:1;18:9;
21:1;22:20;27:4;32:15;
39:9;42:8;43:3,6;
46:20;47:3,3;48:4;
49:18;54:14;55:16,17,
23;57:8,8,24;61:10;
63:16,17;64:5;67:24;
70:25;72:18;73:4,5,11;
74:25;75:19;80:16;
84:3;85:19;91:6;92:5;
98:12;99:6;102:22;
107:3;111:1
ones (4)
64:6;74:24;84:18;
86:12
only (13)
10:23;11:9;39:9;
51:9,14;56:13;69:9;
72:3;75:19;77:23;
79:23,24;81:5
on-site (1)
20:20
opacity (1)
57:25
open (8)
4:24;5:8;32:16;
55:24;68:22;101:1;
110:15,19
opened (2)
54:16;101:2
opening (32)
6:16;8:16;17:13;
32:12,14,16,17,20,24,
25;54:12,15;55:18;
57:22;58:16;67:24;
68:7,9,17;83:23;97:18,
22;98:7,8,12,17,24;
99:5,7,7,8,8
openings (2)
57:16;97:17
operated (1)
51:3
operates (2)
19:8;101:24
operating (4)
18:20;26:14;27:6;
39:8
operation (20)
9:5,10;12:7;19:17;
30:16;39:18;40:1;
41:12;43:5;47:14,16,
20;58:4;66:24;77:2,5,
23;83:2;84:5,11
operations (40)
8:20,25;10:9,24;
19:12,15;21:11;30:5,
19;33:7;40:5,5;43:2;
50:15,16;51:15,17;
53:13;59:20;60:7,21;
67:20;75:11;76:1,12;
82:8;83:21;84:3;85:23,
25;86:4;87:17;92:4,14;
94:13;104:18;106:13,
17;108:20;109:13
operator (2)
29:24;30:2
opinion (6)
51:21;54:7;76:5;
96:9;98:19;103:22
opportunity (17)
5:10;7:1,8;45:16;
61:20;62:4;63:15;
71:10,14,24;72:6,6;
73:18;74:10;81:7;
83:23;111:3
opposed (2)
4:16;5:5
oral (2)
72:5,6
order (17)
12:22;16:20;18:25;
37:9;41:19;42:24;43:1;
44:12;49:13;59:21;
92:23,25;93:1;96:10;
97:12;98:25;106:5
orders (1)
44:9
organic (5)
22:12;40:9,16,19;
78:13
original (5)
24:14;52:6;67:18;
79:16,17
originally (1)
69:3
others (4)
13:2;46:8;98:1;
103:21
otherwise (1)
18:17
ourselves (1)
108:13
out (62)
5:18;7:19,20;16:12,
19;19:20;21:7;23:18;
28:5;31:13;32:18;
34:15;38:2;39:3,11;
42:10;43:12;44:8;51:1,
8,11;52:8;54:13,16,19;
55:11,11,12,19;56:3;
57:20,20,22;60:15;
68:11;73:21,24;74:9,
12;75:15;76:19,20;
77:1;80:1,16;81:15;
83:7;84:4,20;91:18;
92:10,11,11;93:24;
96:6,22;99:19;100:5;
101:1;103:13;104:2;
110:1
outside (3)
34:2;37:11;56:9
over (12)
4:20;8:5,10;45:3,25;
51:18,19;64:14,24;
66:4;81:24;91:13

ED_001509B_00010891-00040

overall (1)
93:5
overestimating (1)
48:24
overreaching (1)
88:25
overrule (2)
81:4;96:12
overturn (1)
12:23
own (3)
12:11;36:15;51:21
owner (4)
29:24;30:2;89:18,23
owners (1)
42:7
oxide (1)
78:12
ozone (15)
36:18,19;52:8,17,21,24;53:1,5,19;63:18,18;78:11,12,12,14

P

P5a (1)
104:7
packet (1)
41:24
page (30)
6:7;16:21;17:10,15,20;18:14;19:3,7;23:21;26:23;27:1,9,22;28:1,6,11;29:15;41:25;42:9;46:1;59:21,21;60:17;81:23,25;82:1,16;86:17,18;101:20
pages (1)
43:15
paid (2)
46:17,18
pains (1)
42:24
Palin (1)
19:21
Palmer (1)
68:15
papers (1)
63:16
paragraph (3)
30:12;104:8;108:8
paraphrase (1)
94:14
part (33)
6:1;13:25;15:5;17:5;19:18;20:6;22:24;23:9;25:2;29:7;36:21;38:20;40:23,25;41:22;47:10;51:6;64:11;67:18;68:20;69:5,11;70:15;74:22;75:15,21;76:4;79:3;90:3;97:23;100:17;101:2;102:8
participating (1)
46:18
particular (15)
28:6;36:21;37:10;46:1,20;48:4,5;51:6;55:12;72:14,23;73:13;90:8,12;107:18
particularly (1)
64:2
particulate (12)
40:11,12;45:2;55:2,5;86:20,23;87:6;88:4;100:4;104:10,22
particulates (3)
40:9,10;41:3
parties (4)
7:24;8:4;15:10;110:21
parts (2)
30:22;37:18
party (3)
7:2,12,17
Paso (4)
64:10,11,18;66:1
pass (4)
17:12;32:11;33:2;34:15
passed (2)
75:1;88:10
passing (2)
32:19;56:11
past (1)
54:6
pastor (1)
64:20
patience (2)
4:23;5:9
peak (1)
68:9
peer (1)
48:14
peer-reviewed (1)
38:1
people (12)
7:19;42:4,25;44:3;50:1;51:1;60:12;71:25;72:6,13,21;104:2
people's (1)
42:6
per (21)
6:16;7:11,17;10:3,17;17:22;25:22;41:14,14,15,19;45:4,4,10;78:19;79:15,16;81:11,11,13,13
perfect (1)
43:21
perform (2)
79:7;106:5
performance (3)
76:25;77:1;93:13
performing (2)
10:13;109:9
perhaps (4)
41:21;46:8;86:15;97:6
permanently (1)
54:16
permit (134)
6:12,13;9:9,11,12,14,20,23,25;10:14;11:2,24;12:6,8,9,10,14,24;13:1,7;14:6;19:18;21:12,21;23:9,10;24:8,15;26:16,16,21,22,25;27:2,2,5,7,12,13,16,22,25;28:1,8,8,12,12,22,24;29:2,6,16,20,20,23,24;30:1,2,3,15,16,21;31:6,7;36:24;38:14;42:8;45:12,15,15,17;47:10;48:2;50:8;52:6,10,18,18,25;53:6,6,17;67:3,4,6,8,9,12,12,16,18;69:5,11,13,16,23,24,24;70:1,3,6,9,11,12,15,20,22;71:6,16,25;72:7,11,15;74:18;76:6;78:8;79:16,17;80:6,8;81:1;83:13,15;84:25;93:19,23;94:9,9,10;96:2;99:12;109:3,9,19
permits (16)
17:16;26:14;28:14,17;29:10;36:24;37:25;49:21;50:16;51:2,3;66:1;68:22;69:2;92:14;93:17
permitted (4)
30:8;80:24,25;98:17
permitting (27)
11:5;13:4;14:20;19:14;24:13,14;33:16;42:13,14;45:14;48:25;50:21;60:7,8;63:1;65:1,14,18,21;66:2,23;72:13;73:2;84:24;85:15;90:22;102:18
person (4)
17:3;21:14;22:21;98:12
persons (3)
17:3;22:22;86:23
perspective (2)
68:13;69:19
pertain (2)
77:2,5
pertaining (1)
76:6
petitioner (5)
6:18,21;12:12,15,20
phase (1)
61:21
philosophical (1)
88:3
Phoenix (3)
53:3,14;62:16
phone (2)
64:1,3
phonetic (1)
107:24
photo (1)
57:7
photograph (1)
58:3
photographs (6)
56:6,7,24;57:12;58:4,14
Physically (2)
89:7;105:15
pick (2)
48:21;57:23
picked (2)
69:9;100:4
picture (1)
39:13
pictures (3)
56:8;68:2,3
pie (2)
53:9,11
piece (1)
25:15
pieces (3)
67:19;70:19;74:24
pigs (1)
86:5
pile (2)
55:13;56:2
piled (1)
58:5
piles (6)
67:20;75:12;84:14;99:18;100:1,9
place (5)
5:20,22;37:10;40:18;69:19
places (5)
47:1;90:13,20;93:3;98:1
plain (1)
11:9
plan (10)
11:10;27:25;36:24,25;48:12,17;52:21;53:8;68:5;87:24
plant (2)
47:15;94:19
plants (1)
89:25
play (1)
81:3
please (11)
4:10,24;6:7;7:20;8:16;16:12;26:4;35:16;63:4;89:3;96:17
plenty (2)
51:7;76:9
pm (6)
4:21,21;61:24;87:11;91:15;111:10
PM-10 (15)
21:25;22:11;34:1;40:13;53:23;86:11,11,20,23;87:6,17;91:5,13;104:10,21
PM-2.5 (5)
21:25;22:12;40:15;91:5,13
point (34)
5:18;7:14;15:23;16:19;17:25;23:12,18;26:6,11;28:5;31:13;45:15;58:24,24;61:16;62:4;68:1;75:8;77:24;78:20;81:25;83:18,22;84:9,9;90:16;96:15;97:18;102:12;108:13;110:2,5;111:6,8
pointed (1)
75:15
pointing (1)
49:17
points (2)
67:2;109:12
policy (4)
42:5;50:3;88:13;91:18
political (1)
105:1
pollutant (10)
16:24;17:23,24;22:11,23;41:14,19;49:14;80:25;81:1
Pollutant-emitting (2)
17:4;22:18
pollutants (23)
10:3,18;11:3;17:18;19:9;21:25;22:13;23:7;33:1,2;39:25;40:4;41:6;55:8;59:25;78:14;82:12;86:10;100:20,21,22,24;102:1
Pollution (3)
4:3;19:5;54:18
ponds (5)
22:2;23:20,20;24:6,7
population (1)
86:22
portion (3)
86:21;109:21;110:19
position (11)
9:7,20;11:7;16:15;33:5;34:4;47:13;54:8;62:25;64:25;72:11
positions (1)
65:20
possible (5)
24:11;53:23,24;91:11;97:4
posted (1)
71:21
posting (1)

ED_001509B_00010891-00041

72:4
posture (1)
93:5
potential (7)
10:2,16;17:22;39:7;
41:22;42:10;78:7
potentially (2)
108:4;110:1
poultry (16)
9:4;10:9;33:7;40:1,4,
24;43:13,16;44:9;
51:14;55:7;60:7;66:22;
86:4;104:12,15
pounds (1)
41:14
power (3)
47:15;94:19;100:17
practice (2)
89:22;102:15
practices (4)
18:22;33:12;104:9,
14
precedent (1)
103:19
preclude (1)
80:10
precursor (2)
78:12,13
predates (1)
24:10
predict (1)
74:1
predicts (1)
83:1
pre-disclosure (1)
82:18
preempts (1)
104:24
pre-hearing (8)
9:6;13:15;31:10;
37:4;44:17;46:22;
49:17;106:12
preliminary (1)
37:7
prepare (2)
48:17;58:11
prepared (7)
21:1;36:6,10;46:22;
66:12,14;92:22
prescribed (1)
29:17
presence (1)
55:9
present (4)
13:3;15:13;24:25;
67:19
presented (3)
44:21,23;53:8
pretty (13)
20:6;21:13;28:25;
29:4;32:3;44:1;53:19;
63:5;68:16;81:12;
89:14;99:11;102:16
prevailing (1)
76:16
preview (1)
6:17
previewed (1)
14:24
previous (3)
6:9;34:12;35:7
previously (1)
79:2
primarily (3)
64:13;78:15;86:11
primary (1)
63:24
printing (2)
63:22,23
prior (1)
14:24
privilege (1)
60:16
probably (18)
24:1;57:10,15;65:25;
66:2,4;72:22;73:23;
74:25;76:25;82:1;
85:19,19;89:14;92:22;
94:10;99:8,15
problem (3)
14:10;27:20;56:20
procedure (1)
45:13
procedures (12)
6:12;9:19;26:21;
27:2,5,7,10,12,14,23,
23;84:25
proceed (7)
13:10,12;15:21;
61:20;93:23;96:17;
108:16
process (37)
5:11,15;6:6;10:14,
15;11:24;16:13;18:2,
21;19:14;22:1;23:4;
26:17;28:3,24;29:12;
44:11;45:14;47:11;
48:2;61:15;69:25;70:1,
13,15,24;72:3,16;
74:22;80:12;85:15;
87:20;94:10;100:17;
102:8,18;106:11
process-based (1)
83:1
processed (2)
28:24;29:3
processes (2)
13:4;69:14
processing (3)
21:18,21;27:22
produce (1)
104:9
produced (1)
104:22
producers (1)
46:19
producing (2)
40:11;66:22
production (3)
18:21;27:7;89:24
professional (2)
44:19;66:7
Program (14)
37:14,14;38:11,15,
21;42:3,13,14;45:17;
48:25;49:24;60:15;
64:25;65:24
programs (2)
38:16;60:24
prohibited (1)
105:3
projects (1)
64:4
promoted (4)
64:14,15,24,25
promulgate (1)
8:24
promulgated (1)
84:13
proof (1)
49:5
propane (2)
20:18,20
proper (3)
13:4;15:14;84:24
properly (4)
58:12;76:7,8;109:6
properties (2)
17:2;22:21
property (1)
90:3
propose (1)
109:23
proposed (1)
25:8
propriety (1)
6:11
protect (1)
82:11
protection (1)
36:25
proteins (1)
40:21
protocol (1)
82:24
protocols (1)
82:25
prove (1)
12:15
provide (11)
10:25;42:3;45:11;
50:22;52:4;58:12;
68:25;71:25;77:8;94:3;
95:25
provided (22)
13:15;21:8;28:20;
29:8;40:3;41:24;43:14;
50:5;68:6;74:16;77:11;
80:17;82:19;84:22;
90:21;91:10;93:11,12,
13,14;94:4,6
provision (1)
104:20
prudent (1)
47:9
public (13)
5:20;37:2;49:3;
71:19,20,22;72:4,4,5;
110:4,18,19;111:2
publications (1)
43:11
published (5)
10:7;38:1;42:1;43:9;
46:9
pulling (1)
99:21
Purdue (3)
43:12;49:22;77:17
purpose (6)
8:2;18:8;44:18;
100:7,12,16
purposes (5)
5:12;6:4,4;30:19;
76:1
push (1)
57:20
put (10)
6:2,23;7:6;68:12;
69:2;70:16;72:9;83:12;
95:24;111:5
puts (1)
72:10
putting (3)
6:17;32:17;42:6
puzzled (1)
21:3

Q

qualify (2)
34:3;65:5
Quality (25)
8:18;9:2;11:11;12:8;
37:11,14,20,24;38:13;
42:14;49:21;50:2,13;
63:1,14,16,25;64:9,13;
66:25;67:9;82:22;83:9;
92:13;108:19
quantifiable (2)
18:14,14
Quantification (1)
18:19
quantified (4)
11:3;18:2,24;23:8
quantify (3)
18:25;84:4,19
quantities (1)
60:1
quantity (2)
18:18;82:22
quarterback (1)
72:13
quarters (1)
99:16
quasi (1)
55:24
quickly (3)
33:10;38:10;52:2
quite (2)
44:16;45:25

R

RACT (1)
52:24
raise (1)
15:16
Raleigh (1)
63:9
Ranch (21)
9:4,10,23;10:11;
26:13;38:4;40:2;47:12;
48:3;49:15;65:3;66:19;
87:7,9;89:1,4,8;90:4,
23;102:3;105:15
range (8)
44:15;48:15,20;
81:13,17;91:16;94:17;
96:4
ranges (2)
91:10,15
rate (2)
41:16;91:7
rates (2)
18:20;27:6
rather (1)
83:22
reach (4)
51:11;53:2;77:25;
93:24
reached (4)
91:18;92:10,11;
103:13
read (14)
17:8;18:12;20:14;
21:24;36:11,23;47:3;
59:23;82:16;86:16;
89:17;96:23;104:7,12
reading (4)
33:23;40:6;49:4;
51:21
reads (3)
22:8,17;104:21
ready (1)
93:8
real (1)
52:2
really (14)
21:17;22:7;26:18;
32:5;40:14;52:4;69:1;
74:13;79:22;81:19;
83:23,24;100:10;109:5
reason (6)
9:3;32:20;45:7;
56:13;76:9;111:4

ED_001509B_00010891-00042

reasonable (7)
18:22;77:20,25;98:6,6,11;109:17
reasonably (5)
17:12;32:10;52:23;67:25;109:8
reasons (4)
8:22;10:10;67:23;109:17
rebuttal (4)
7:5,5,9,10
recall (1)
83:17
receipt (1)
69:12
receive (2)
21:3;93:19
received (6)
26:12;38:14;63:7,9;67:3;87:10
recent (2)
10:21;85:18
recently (3)
45:22;76:13;91:24
Recess (2)
4:21;61:24
recognize (1)
23:5
recognizes (2)
60:19;61:1
recollection (1)
105:22
recommendations (1)
53:22
record (18)
7:14;8:2;13:23;15:4;19:22,23;21:15;23:17;24:17;27:11;35:16;52:4;62:13;66:17;68:6;81:23;90:21;96:23
recorded (1)
21:4
records (5)
20:24;21:11;24:12;28:19;94:5
red (2)
25:4,23
redirect (3)
103:6,8;106:23
redirection (1)
60:25
reduce (3)
68:10;99:20;100:10
reduced (1)
32:16
Reed (1)
57:11
refer (2)
79:9;89:13
reference (2)
15:5;36:15
referenced (1)
14:9
references (1)
31:19
refinery (1)
65:23
refining (2)
63:13,21
refutes (1)
9:6
regard (6)
72:14;73:14,15;83:19;102:12;109:1
regarding (3)
8:24;21:21;23:19
region (2)
51:9;93:25
regions (1)
51:10
register (4)
51:19;56:18;59:18;94:12
registered (1)
66:7
regular (1)
42:6
regulate (6)
61:6;77:7,12,22;86:7;109:13
regulated (39)
19:9;21:25;22:11,11;23:7;33:1,12,14,17,20,21;34:7;59:25;86:16,20;87:1,7;88:7,13,18;89:1,2,5,6;90:24;97:25;98:1;101:25;104:10,13,22,24;105:16,18,19;106:4,5,6,8
regulates (2)
76:22;92:13
regulating (4)
92:4,6,9;105:3
regulation (7)
21:12;22:14;30:1;93:15;104:21,24;109:16
regulations (11)
8:20,24;9:3;11:19;34:5;36:11;51:25;87:17,25;103:20,23
regulatory (4)
10:4;14:3;60:1;98:3
reiterate (1)
67:2
relate (1)
37:9
related (5)
36:25;38:11;52:1;53:5,20
relation (1)
96:1
relatively (1)
78:25
release (3)
40:19;81:1;92:23
relevant (3)
9:2;17:19;79:23
reliability (1)
46:14
reliable (2)
8:22;76:20
relied (2)
68:21;69:2
relieve (2)
29:24;30:2
remedy (1)
45:16
remember (8)
43:24;75:16;82:2;89:20;91:14;94:8;106:23;107:17
remind (1)
62:1
reminder (3)
8:8,12;23:16
remove (2)
100:20,24
removed (1)
55:8
rephrase (1)
89:3
replaces (1)
27:15
report (4)
55:7;81:22;82:16;92:5
reporter (11)
8:8;15:19,25;16:5;35:22;56:21;62:19;96:21,23;110:5;111:8
reporter's (1)
25:6
reports (1)
56:8
request (4)
7:9;24:12;28:19;37:2
requested (2)
65:11;67:5
requests (1)
49:4
require (8)
29:1;30:15,21;49:21;60:2;69:1;71:23;102:23
required (8)
21:11;27:24;30:3;45:17;50:21;52:21;104:3,4
requirement (2)
27:4;29:2
requirements (15)
27:16;28:10,14,16;29:10,23;36:14;38:23;60:3;61:2;71:8,8,9;84:23;102:8
rerun (1)
74:12
research (8)
37:11,12;38:1;40:4,6;45:25;51:8;91:22
reserve (1)
7:4
reside (3)
89:2,4,6
resolved (2)
20:21,23
resource (1)
22:12
Resources (2)
11:18;51:9
respect (9)
9:22;18:15;36:17;37:19,20,24;43:12,23;96:11
respirable (2)
40:14,15
respond (1)
56:18
responded (3)
4:15;5:4;20:19
responding (1)
6:19
response (4)
4:17;5:6;49:6;72:10
responsibilities (1)
9:22
responsiveness (1)
52:20
rest (1)
84:10
restricted (1)
31:5
restriction (2)
60:12,14
restroom (2)
7:19;61:18
result (1)
30:16
resulting (1)
82:25
results (1)
27:11
resume (1)
35:8
resumed (1)
64:22
review (29)
9:7,25;10:3,7,14,15,17;11:1,3,23;14:6;22:13;23:15;25:1;33:1;37:3;38:8;39:15;45:18;48:2,14;49:14;54:1;69:17,25;70:24;78:4,6,9
reviewed (4)
44:19,20;46:25;73:2
revised (6)
25:22,25;26:19;31:19;67:6;76:15
revision (31)
6:13,13;12:6,9,14,16;13:1;14:25;26:21,25;27:2,5,7,12,14;28:8,13,24;29:20,24;30:3;31:7;67:6;69:13;72:15;74:18;83:15;85:1;96:2;109:4,10
revisions (3)
26:22;27:2;28:23
Richard (4)
62:11,14,17;65:18
right (52)
4:8,18;5:7;12:13;13:10;15:16;16:3;28:11;34:25;36:12;38:9;40:3,20;42:4;43:10,24;44:6;45:6;46:9,10,20;47:17,18;49:16;50:6,12;53:12;54:4,6;61:25;70:20;72:21;73:10;81:24;85:12,14;91:6,19,19;93:9,21;96:8;97:15,19;99:22;101:21,23;103:4,15;104:5;108:2,9
right-hand (1)
60:18
rise (1)
55:5
road (4)
56:25;57:7;58:1;62:15
roads (1)
59:15
Robert (1)
19:21
robust (2)
43:13,15
rocket (1)
64:7
roof (1)
32:15
room (2)
4:20;8:9
roughly (1)
7:17
routine (1)
73:6
rule (39)
10:5;14:25;16:13,16,17;17:16;19:16;26:17,18;27:16,16,17,21;28:10,14,16;29:1,10,14;30:19;52:12;71:8;75:16;76:16;79:7,9,10,18,25;80:5;90:21;91:19,20;101:12,19,22,23;102:8,18
ruled (1)
10:20
rules (45)

5:11;10:13;11:11,19;14:3,5,7,13,13,15,17,21,24;17:17;19:12,13,14;26:19,20;27:19;28:15,18;29:23;30:1,3,5,7,14;32:9;36:12,15;49:21;70:3,6,7;71:23;76:14,15,24;79:14;84:13;87:16;89:13;90:13;92:1
run (7)
5:10,15;69:17;76:20;77:16,17;81:16
running (1)
83:7

S

S1 (1)
92:6
safety (1)
64:16
sake (1)
33:19
Salome (1)
16:9
same (21)
6:7;16:25;17:2,6;22:8,19,21,24,25,25;26:14;40:18;48:10;50:9;57:10;60:17;63:10;81:17;91:4;106:19;109:25
samples (1)
47:17
sampling (1)
47:11
sat (1)
110:21
satisfied (3)
26:1;69:21;71:7
Saturday (1)
24:23
sausage-making (2)
70:15;74:22
saw (6)
20:6,25;58:15;92:5,7;102:11
saying (13)
18:23;23:18;43:17;44:7;47:25;49:18;50:6,6;54:22;56:3;86:15;98:3;106:16
SBAP (1)
42:1
schedule (1)
110:8
scheduled (1)
110:9
schedules (1)
110:9
scheduling (1)
111:7
School (1)
57:7
science (5)
42:12;83:10,11;84:7;93:6
scope (5)
9:25;10:23;95:21;106:22;109:1
scrubbers (2)
38:19,19
season (1)
68:14
seats (1)
64:7
Second (9)
4:13;5:1,2;6:9;9:3;27:24;49:25;96:21;108:11
Section (14)
12:11;17:21;18:9;23:9;26:18,21;27:1,21;30:13,17;73:17,18;101:20;104:24
sections (2)
25:25;104:6
seeing (2)
53:12;101:14
seem (2)
32:7;93:10
seemed (2)
77:20,24
seems (4)
11:19;16:2;105:23;106:21
selected (2)
48:9;82:21
serious (1)
53:19
serve (2)
7:25;100:12
session (9)
4:6,10,12,19,24;5:8;109:24;110:11,16
set (1)
51:2
setting (2)
32:3;109:23
seven (1)
23:21
several (5)
43:3;46:17;47:1;70:10,13
shading (1)
57:16
shall (17)
17:5;18:7;22:23;27:2,5,8,12,14;28:9,13,16,23;29:16,18,20,24;30:14
share (3)
46:6;94:2;107:16
shift (1)
39:10
shifts (1)
39:10
Shin (1)
107:24
short (3)
52:3;108:6,8
show (7)
10:7,9,12;41:18;53:9;85:22;102:17
showed (2)
80:19;91:7
showing (3)
10:5;34:1;54:4
shown (4)
44:16,23;108:25;109:6
shows (2)
43:15;45:23
shrink (2)
32:21;97:21
side (10)
6:16;26:3;32:15;44:3;58:15;59:5;82:13;99:24;100:1,2
sides (2)
32:15;59:7
sign (1)
42:25
signed (4)
21:2;60:13,15;69:19
significant (1)
67:13
signs (1)
54:5
similar (4)
26:11;40:6;42:16;77:19
similarly (1)
48:19
simple (2)
12:5;41:17
single (1)
43:4
SIP (3)
50:24;87:20,21
sit (1)
62:8
site (4)
39:23;42:15,16;107:20
sites (2)
42:17;82:21
situation (3)
77:20;97:14;98:20
six (3)
28:6;86:17;92:6
size (3)
74:5;98:4;99:4
skills (1)
11:14
skip (2)
31:25;85:10
slight (1)
64:20
slow (1)
89:21
small (17)
32:24;38:11,21,22;40:13;41:23;42:2,4,6;48:7;68:8,12,16;78:25;83:16;99:9;104:7
sneaking (1)
109:22
solid (1)
47:6
solution (1)
69:2
somebody (4)
25:18;50:20;51:5;108:18
somehow (2)
93:23;99:3
someone (3)
58:13;70:16;74:12
Sometimes (4)
13:24;45:4,20;103:16
somewhat (1)
61:15
somewhere (7)
7:16;18:2;26:10;48:16,21;66:4;82:1
sophistication (1)
73:25
sorry (8)
20:17;26:3;34:8,13,14;52:15;58:7;99:9
sort (6)
6:17;39:9;42:25;55:24;81:2;96:6
sorted (1)
19:20
sorts (1)
60:22
sounds (1)
110:12
source (71)
9:7;10:3,7,13,17;11:1,3,23;17:15,15,20,23;18:5,5,7,8,9;19:2,3,7,8,19;20:16;22:9;30:9,15,15,20;31:3,8;32:25;39:14;44:20;45:17;46:13;47:5;48:2;49:14;54:1;55:14;60:22;64:24;68:1;71:10,12,14;73:20;75:17,19,23;76:1,24;77:1,24;78:4,9,17;79:4,5,5;84:9,16;93:13,18;101:9,14,15,16,24,24;108:21
sources (54)
10:1,11,16,19;11:6;17:16,17;18:11;19:1,14;21:24;22:2,7;23:8;28:14,15,17,18;29:10,11;30:7,14;31:14,16;32:14;38:7,17;39:2,6,7,16;41:6;45:9;48:1,14;51:13,24;53:10;73:24;75:8,20,23;77:8,13;78:20;83:13,18;84:10;101:3,5,6;102:4,5,12
source's (1)
29:22
speak (5)
15:19;35:22;62:19;107:12,13
speaking (1)
46:11
special (1)
73:13
species (1)
43:3
specific (5)
30:6;61:2;74:9;91:25;92:1
specifically (2)
87:13;104:15
specifics (1)
27:17
spectrum (1)
98:2
speculative (1)
106:19
spelled (1)
80:1
spelling (1)
16:6
spent (1)
64:20
spoken (1)
41:3
springs (1)
68:10
stack (11)
17:12;18:19;32:11;37:8;38:20;83:21;94:20;95:1,2,3,15
staff (9)
64:12,23;69:14;70:24;71:2;72:13,25;73:7;74:23
stalks (1)
90:1
stand (2)
35:14;45:13
Standard (5)
17:7;23:1;27:23;30:22;52:8
standards (12)
13:2,4;29:15;70:4,7;76:25;77:1,3,4;84:24;93:13,14
standing (1)
57:14
standpoint (1)
81:5

ED_001509B_00010891-00044

start (11)
4:4;6:15,18;8:6,11;16:5,16;39:11;53:25;95:16;97:21
started (4)
64:12,23;65:11;91:24
starting (1)
65:23
starts (1)
55:15
state (29)
8:23;11:10;16:15;35:15;38:10;50:4,21;51:3,15;53:8;60:19,24;61:1,5;62:12;66:7;76:12,14;77:15,17,18;80:18;86:7,24,25;87:11,18,18;105:1
stated (3)
51:18;90:9,22
statement (8)
8:16;11:16;18:1;25:2;33:23;50:3;88:3;91:3
statements (2)
37:5;110:6
states (14)
12:12;23:21;37:19,19;43:5;76:10;91:22,23;92:3,6;103:14,17;104:3;109:12
statewide (13)
34:6;50:22;86:25;87:12,14;88:1,3,12,18,21;104:23;105:7;106:16
stating (2)
16:5;111:1
stationary (38)
10:1,11,16,19;11:5;17:20;18:5,6,8,11;19:7;21:24;22:2,7,9;30:7,9;31:14,16;32:13;38:6,17;39:2,16;41:6;45:9;51:13,24;55:14;101:3,4,6,9,14,16,24;102:4,5
stations (1)
64:14
status (2)
52:15;78:17
statute (4)
33:13;88:2,10;97:16
Statutes (1)
31:20
Stay (4)
4:19;5:25;100:19;110:7
step (8)
27:25;28:6;69:17,23;70:23;71:18;73:4;74:25
steps (5)
27:4;28:6;73:5,11;82:25
stern (1)
50:17
still (6)
9:12;24:7;44:3;62:2;79:22;83:3
stop (5)
17:25;23:12;99:10;108:22;110:2
storage (4)
39:19;54:15;55:24;59:5
straight (1)
51:2
strategies (2)
61:1;82:11
strategy (1)
83:5
stratospheric (1)
63:18
street (1)
39:22
stretch (1)
61:17
structural (1)
22:3
Structure (7)
16:23;19:4;22:10,15,16,17;55:23
structures (2)
23:5,6
student's (1)
44:13
studies (3)
37:17;68:20;82:8
study (23)
8:21,25;42:23;43:1,8,10,13,15,24;44:2,8,25;46:17;47:23;49:20,22,23,23;80:18;82:13,14,22,24
stuff (2)
7:14;37:7
subdivision (1)
105:1
subject (3)
27:11;30:22;31:8
submit (1)
14:3
submittal (1)
20:7
submittals (1)
34:11
submitted (5)
15:11;23:17;52:10;67:7;72:7
subsection (1)
104:20
subsequently (2)
63:9;67:5
subservient (1)
88:15
substance (1)
80:5
substantial (1)
91:15
sue (1)
60:14
sued (1)
106:12
sufficient (2)
69:22;74:2
summary (2)
52:20;63:3
Sumner (15)
14:20;49:19;62:11,12,15,17;65:5;85:14;89:7,20;95:21;96:13,16;99:11;103:12
supervisor (6)
24:13;33:16;64:24;70:25;73:2;90:22
supervisors (1)
74:23
supplement (1)
28:2
supplier (1)
89:24
support (2)
11:13;20:25
supporting (1)
34:3
supports (2)
60:21,24
supposed (3)
5:11;42:3,5
Supreme (1)
11:18
sure (28)
5:17;6:3;15:25;20:6;34:15;48:22;49:9;53:21;54:3,10;57:1,4;58:21;71:19;72:20,21;73:3;78:9;82:5;83:20;92:9;94:22;95:9,10;98:15;100:18;110:20;111:2
surface (3)
22:1;23:4;89:25
surprise (1)
78:3
suspicion (1)
109:22
Swan (65)
6:5,19;7:6,6;12:2,3;13:9,14,18,20;14:8,10,19;15:6;19:24,25;20:3;24:19,21,25;25:1,7,14,24;26:1;33:22;34:16,22,24;35:10,12;46:2;58:8;62:5,9,10,21,24;63:5;65:4,7,15,16,17;66:8,17,18;85:3;95:19;103:5,7,11;105:8,20;106:21;107:1;108:7,8,14,16,25;110:7,10,15,23
swept (1)
26:9
swine (1)
104:12
sworn (3)
15:18;35:21;62:18
synthetic (1)
39:9
system (1)
39:20

T

table (2)
26:4;92:7
tables (1)
103:2
tailored (1)
61:2
talk (19)
5:22;7:13;16:13,22;22:5;29:9;31:6,20;32:1;33:14;41:8,22;58:13;91:4;92:14;93:25;94:11;97:15;107:10
talked (10)
14:4;46:21;75:21;76:10;84:1;85:16;91:17;105:6;106:10;107:23
talking (10)
14:18;19:1;26:23;47:4;53:18;54:12;58:22;81:6;86:8;96:14
talks (5)
17:18;27:17;29:14;33:11;45:22
tank (1)
20:18
tanks (2)
20:20,22
tasked (1)
111:2
team (1)
25:18
technical (9)
9:17;12:19;20:25;26:7;35:6;69:25;70:1;71:9;109:11
technique (3)
77:6,10;93:11
technology (4)
38:18;52:24;77:3;79:11
ten (5)
7:11;61:22;63:21;81:13,17
ten-minute (1)
61:17
tenure (2)
38:12;66:1
term (2)
61:13;98:9
terminated (1)
21:14
terms (4)
18:18,18;29:21;42:6
tested (1)
44:12
testified (3)
15:20;35:23;62:20
testify (2)
11:4;36:7
testifying (2)
58:9;99:10
testimony (13)
6:23,24,25;7:10;10:25;26:19;31:15;34:21;35:7;54:11;55:25;61:9;74:17
testing (2)
38:20;46:20
tests (2)
18:20;77:16
Texas (5)
38:16;64:10;92:13,13,15
thanks (1)
5:8
thereafter (1)
54:20
Therefore (8)
11:20;34:2;53:25;69:4;76:3;79:25;87:15;102:13
thesis (1)
44:14
third (1)
24:9
though (8)
5:22;38:9;44:2;74:8;76:17;79:25;87:12;90:9
thoughts (2)
59:1;72:1
thousand (2)
20:20;66:4
three (9)
27:4;32:15;38:25;39:10;47:1;48:12,13;74:7;99:16
threshold (4)
78:16,19,22;79:13
thresholds (5)
60:2;79:2;102:11,13,24
threw (1)
51:4
tier (1)
74:7
tilling (1)
90:1

ED_001509B_00010891-00045

timeline (1)
83:5
timely (1)
28:1
times (1)
18:21
Title (15)
9:8,13;30:21;31:4,8;38:14;53:25;64:13,24;65:24;66:1;67:10;70:2;75:15;82:9
today (21)
5:11,16;6:11;8:9;9:23;10:12;36:4,6,11;37:9;41:3,4,14;42:20;44:18;52:23;53:18;65:2;67:15;76:13;103:25
today's (2)
5:18;40:8
Todd (1)
25:21
together (6)
4:4;16:1;57:5;69:3;72:10;109:25
token (1)
106:19
Tonopah (28)
9:4,9,22;10:11;16:9;26:13;33:17;34:1;37:1;38:4;40:1;44:15;47:8,12,20;48:3;49:14;65:3;66:24;87:7,9;89:1,4,8;90:4,23;102:3;105:15
tons (18)
10:3,17;17:22;45:3,4,10;53:7;78:19,22,25;79:13,15,16,18,21,22,24;102:22
took (1)
56:7
tools (1)
73:25
top (5)
28:7,11;57:17;90:15;94:8
total (7)
66:3;78:20,21;79:12,22;80:3;83:2
touch (1)
33:10
toward (1)
99:17
towards (2)
28:7;60:18
town (1)
104:25
tractor (1)
31:18
trades (1)
18:17
traditional (1)
59:16
traffic (1)
58:15
training (7)
38:14,15,16;85:14,15,20,21
transfer (1)
47:7
transposed (1)
15:8
treated (1)
55:20
tremendous (1)
111:5
tried (2)
68:12;75:1
trigger (1)
41:19
triggered (2)
11:24;79:19
triggers (2)
27:3;48:25
truck (2)
58:6,15
trucks (4)
54:16;57:22;58:1;59:15
truly (1)
21:13
truth (6)
15:19,20;35:22,23;62:19,20
try (5)
4:8;7:21;24:11;39:7;96:14
trying (10)
29:12;39:11;42:20;58:18;83:6;90:12;91:23;96:4;104:1;107:1
TSD (12)
21:7;22:2;23:5,11,20;24:2;29:8;52:13;75:1;80:1;102:14;103:2
turn (1)
8:5
turning (2)
16:19;90:1
twice (1)
38:5
two (14)
8:21,23;20:19;22:25;24:10;27:4;56:5,9;69:7;85:19;86:22;104:6;109:12;110:21
type (16)
21:7,9;35:8;38:18;43:3;66:19;67:24;77:2,12,20;81:17;84:5,9;103:13;104:18;109:2
types (15)
39:25;47:21;59:7;64:4,9;67:14;70:5,10;74:6;76:24;83:20;84:2,19;86:5;93:16
typical (3)
40:4;54:13;73:7
typically (4)
72:19,22;89:2;93:15

U

ultimate (3)
99:3;103:15,16
ultimately (1)
74:19
unclear (1)
25:4
under (33)
9:21;12:12;13:1;17:2,3;22:21,22;28:10;30:3,17,21,22;31:4;34:3;36:14;38:23;45:16;50:16;53:17;59:25;62:2;78:7,15,21,21;79:4,14,25;81:16;86:6,6,14;110:15
underestimating (1)
48:23
underlying (1)
9:11
undermine (1)
82:23
underneath (1)
53:17
understandable (1)
46:23
understood (1)
75:2
undertaking (1)
60:19
underwrite (1)
93:15
unique (2)
46:16;47:13
United (2)
37:19;43:5
units (2)
8:21,25
University (5)
38:16;63:8,10;77:17;80:19
unlawful (2)
9:17;12:18
unless (4)
18:9;30:15,16;47:2
unreasonable (2)
9:16;12:18
unusual (1)
73:23
up (26)
15:23;16:2;21:18,22;24:11;32:17;42:25;47:23;51:4;52:11;53:17;57:2,23;58:13;60:13,15;61:17;62:9;64:21;69:9;79:15;83:8;100:4;103:7;105:9;110:9
updated (2)
14:21;22:9
upon (3)
12:19;84:21;109:11
upper (1)
60:18
urease (1)
40:23
urine (2)
24:3;40:17
USA (1)
11:17
use (6)
7:19;11:9;44:3;60:23;61:18;83:8
used (17)
6:12;10:8;14:6;18:21;23:24;26:3;27:3,5,8,10,13,14;30:18;48:1,7,7;80:11
using (3)
18:25;44:4;45:4

V

vacant (3)
94:19;95:11,14
validate (1)
35:8
valuable (1)
103:17
valuation (1)
30:10
value (2)
48:18;61:1
values (2)
18:20;46:12
variation (3)
81:14;91:7,8
variety (3)
47:25;48:8,19
various (5)
25:16;38:2,16;67:23;99:25
vein (1)
91:4
vent (19)
17:12;32:11,18,19,20,21,22,22;33:2,8;55:15,17;97:22;98:4,12,12,19,24;99:4
ventilation (12)
41:16;54:17,19,24;55:15,17;57:18,19;59:3,14;100:4,24
venting (2)
58:22,23
vents (5)
54:23;55:10;97:16,17;98:18
version (2)
14:5;16:18
versus (7)
11:17;39:10;51:3;94:19,20;95:25;98:12
vessel (2)
17:4;22:23
view (2)
12:4,5
vigorously (1)
83:12
violation (4)
26:12,13;30:17;50:24
visible (1)
40:14
visit (1)
38:7
visited (1)
38:4
visual (1)
45:20
VOC (6)
22:4;23:22;53:23;78:13,24;91:5
VOC's (10)
22:1;23:25;41:4;45:3;53:5,7,10,20;64:2;91:13
volatile (5)
22:12;40:9,15,19;78:13
volatilized (1)
55:2
volume (1)
59:18
volunteer (1)
21:17

W

wait (4)
43:20;44:6;49:12;109:15
walk (2)
6:6;66:23
walls (1)
24:1
wants (2)
7:4;77:7
wash (1)
24:6
washed (1)
24:4
washing (1)
23:25
waste (4)
22:1;23:4,20;39:19
water (7)
22:1;23:4,20;24:6;39:19;50:1;82:11
way (7)
6:7;10:19;25:19;

ED_001509B_00010891-00046

44:13;50:11;81:17;
99:16
ways (6)
41:18;47:25;48:8,12;
76:23;77:12
weave (1)
11:14
week (1)
10:22
weekend (1)
45:25
weigh (1)
29:1
well-known (1)
48:14
weren't (2)
74:9;81:19
West (4)
16:9;99:22,25;
100:25
wet (1)
38:19
what's (4)
36:21;46:10;54:7;
104:2
Whenever (6)
69:16;70:5;71:11;
77:7;84:5;103:24
whole (1)
16:18
wide (1)
57:21
width (1)
68:7
wind (2)
95:11,14
wish (1)
65:5
within (2)
53:2;104:10
without (6)
26:14;30:16;46:19;
109:13;110:12,25
witness (30)
6:24;7:10;11:1,4;
13:11;15:14,18;35:3,5,
6,9,11,14,17,21;56:4,
23;57:4;58:11;59:2;
62:6,10,14,18;65:6,11,
12;66:15;81:9;101:23
witness' (1)
6:25
witnesses (2)
7:6,8
wonk (1)
42:5
word (3)
74:14;86:25;87:3
words (2)
51:22;95:24
work (8)
39:4;63:13,16,22;
64:10;68:20;72:14;
84:19
worked (3)
37:18;38:10;65:25
working (6)
36:9;37:15;38:21;
49:25;64:13;65:23
worth (1)
19:2
writers (1)
38:15
writing (1)
72:7
wrote (1)
63:17

Y

year (19)
10:3,17;17:22;41:15,
19;45:4,4,10;52:9,15,
19;63:17;66:3;76:14;
78:19;79:15,16;81:11,
14
years (9)
37:17,18;38:25;40:7;
45:6;63:20,21;64:20;
85:20
Yep (1)
91:21
yesterday (1)
58:14

Z

Z-M (2)
23:9;73:17
zone (1)
36:20

1

1 (1)
46:10
1.2 (1)
78:25
1:05 (1)
4:4
1:07 (1)
4:21
1:30 (1)
4:8
1:41 (1)
4:21
10 (1)
40:6
100 (15)
10:3,17;14:7;16:16,
17;17:22;19:16;36:12;
45:10;75:16;78:19;
101:12,19,22,23
10th (2)
19:21;52:19
11 (1)
45:6
110 (1)
41:19
1156 (1)
62:15
12 (2)
16:21;67:17
13 (4)
41:24,25;42:9;59:19
15 (2)
40:7;67:7
150 (2)
76:25;77:4
16 (2)
14:25;41:25
165 (1)
14:8
17 (1)
17:10
17th (1)
21:2
19 (1)
17:15
1976 (1)
63:17
1977 (2)
63:9,13
1981 (1)
63:11
1987 (1)
17:7
1990 (1)
38:24
1997 (1)
37:16
1998 (1)
42:2
1st (1)
86:24

2

20 (3)
7:17;27:1;37:17
200 (7)
14:7;19:13;27:16,17;
29:14;36:12;45:4
200.105 (2)
101:20,24
200.26 (1)
16:23
200.60 (2)
75:16,20
2003 (1)
64:18
2004 (1)
50:1
2005 (1)
44:10
2006 (1)
80:18
2008 (1)
64:21
2009 (1)
86:24
2011 (1)
82:24
2013 (1)
64:25
2014 (5)
14:24;52:7,7;67:3,5
2015 (2)
52:10;67:6
2016 (6)
14:22;19:21;52:14,
19;57:12;67:8
2017 (1)
52:22
20th (1)
57:12
21 (3)
26:23;37:18,18
210 (1)
19:13
220 (5)
14:7;19:13;26:17;
27:16,21
24 (1)
18:14
24/7 (1)
39:8
240 (2)
17:16;19:13
241 (12)
14:7;19:13;28:14,16;
29:1,10;79:7,9,18,25;
80:5;102:8
25 (5)
78:22;79:13,16,22;
102:22
28 (3)
19:3;75:19,25
28-yard (1)
68:14
29 (2)
19:7;101:20

3

3.22 (1)
12:11
3:24 pm (1)
61:24
3:37 (1)
61:24
30 (1)
50:12
300 (2)
27:21;45:4
301.1 (1)
27:24
301.4 (1)
28:6
302 (1)
17:21
302j (1)
18:9
308.3 (1)
30:17
30-day (1)
71:22
30th (1)
21:2
310 (1)
90:21
33 (2)
20:15;56:24
34 (3)
56:24,24;57:8

4

4- (1)
66:2
4:30 (1)
7:16
4:55 (1)
111:10
40 (8)
15:5;22:7;30:22;
32:9;36:14;65:25;
68:10;79:15
400 (1)
43:15
405 (1)
26:21
405.2 (1)
27:1
405.3 (1)
26:22
41 (1)
14:8
415th (1)
57:7
42211 (1)
16:9
435 (3)
80:22;81:10,17
49.457 (1)
33:11
49-457 (3)
86:8;104:6,20
4950 (1)
59:21
4959 (1)
59:21
4961 (1)
60:17

5

50 (1)
65:25
500 (1)
66:2
51.165 (3)
15:5;22:7;101:17
5a (1)
104:9

ED_001509B_00010891-00047

6

60 (3)
17:15;30:22;79:18
61 (1)
30:22

7

70 (1)
59:18

8

83 (1)
81:13
84 (2)
68:8,13
85354 (1)
16:9