

COPY

**DEPOSITION OF
ANDREW KEYFAUVER
October 29, 2009**

11:20 a.m. to 4:05 p.m.

Before the Environmental Quality Council, State of Wyoming

**IN THE MATTER OF:
MEDICINE BOW FUEL & POWER, LLC
IAR PERMIT CT-5873**

Docket No. 09-2801

APPEARANCES:

Andrea Issod

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1 ANDREW KEYFAUVER,
2 called as a witness, being first duly sworn, testified
3 as follows:

4 EXAMINATION

5 BY MS. ISSOD:

6 Q Good morning, Mr. Keyfauver.

7 A Good morning.

8 Q Can you please state your full name and
9 address for the record.

10 A It's Andrew Keyfauver. My work address is
11 122 West 25th Street, Cheyenne, Wyoming 82002.

12 Q And you're currently employed by the Wyoming
13 Department of Environmental Quality, correct?

14 A Correct.

15 Q And have you appeared at a deposition before?

16 A No.

17 Q This is your first. So let me go over some
18 ground rules. I'm basically just going to ask you a few
19 questions about your job and about the permit for the
20 Medicine Bow facility, the Medicine Bow Fuel and Power
21 facility. If at any time you don't hear me or if you
22 don't understand the question, then just say so. Ask me
23 to repeat the question or tell me that you don't
24 understand it, and I will rephrase it.

25 Try to state your answers clearly. A nod of

1 the head doesn't work for the record. He's going to
2 take down your response. If you need to take a break at
3 any time, please just say so. If we have a question
4 pending, I'll ask you to answer the question before we
5 take a break, but whenever you need to.

6 If you ever realize that an answer you gave
7 was inaccurate or you'd like to add something, just tell
8 me you'd like to supplement an earlier answer, that you
9 just remembered something.

10 If you don't remember the information
11 necessary to answer the question, just say so, that you
12 don't recall.

13 And please do not answer a question unless
14 you're 100 percent sure that you understand it. Okay.
15 Do you understand all those instructions?

16 A Yes, I do.

17 Q Okay. Is there anything I should know about
18 your physical health or mental state today that will
19 impair your ability to respond to questions?

20 A I'm perfectly fine.

21 Q Great. Okay. In preparation for this
22 deposition, did you review any documents?

23 A These documents I have in this folder.

24 Q Okay.

25 A It's pretty much the application, the

1 public -- the application, the public notice, the
2 decision document, some of the other -- I think -- the
3 decision document, yeah. That's -- that's as best as I
4 recall --

5 Q Great.

6 A -- is currently in here.

7 Q Great. So is everything in here, in this
8 folder, in the administrative record?

9 A I believe all but the Deseret permit. I
10 looked at that.

11 Q Okay.

12 A I don't have a decision document.

13 Q Okay. So in the notice of this deposition,
14 we asked for you to bring certain documents with you,
15 including correspondence and notes. Did you bring any
16 correspondence with you today?

17 A No.

18 MS. VEHR: I brought all the admin record
19 stuff and that.

20 MS. ISSOD: Okay.

21 Q (By Ms. Issod) Do you have any handwritten
22 notes with you, outside of what is in the administrative
23 record already?

24 A No, I do not.

25 Q Okay. Do you have any handwritten notes

1 regarding this matter since the administrative record
2 was assembled?

3 A No, I do not.

4 Q Okay. So how long have you been working at
5 the DEQ?

6 A I've been working for Air Quality Division
7 for just over nine years.

8 Q Nine years. And what is your current job
9 title?

10 A I believe it is currently program engineer.
11 It's -- it's changed like four times in the last year
12 and a half.

13 Q Oh.

14 A That job classification status.

15 Q Can you discuss your responsibilities as a
16 program engineer?

17 A I am a senior permit engineer in Air Quality
18 Division. Reviews permit applications. Typically, PSD
19 or what they call more complex technical applications,
20 such as coal mines or synthetic minor type of
21 applications in regards to NSR.

22 Q Okay. Did you have primary responsibility at
23 DEQ for review of Medicine Bow's prevention of
24 significant deterioration permit?

25 A Yes.

1 Q Okay.
 2 A -- how he is -- how he does his compliance
 3 job.
 4 Q But part of your job is to ensure that he can
 5 do his compliance job.
 6 A I'd say that was part of my job, is to set
 7 conditions that he can enforce.
 8 Q Okay. In the third bullet under Gasifier, it
 9 reads, A low pressure and normal operating pressure
 10 check are required. Do you see that sentence?
 11 A Yes.
 12 Q Is there any numerical specificity in the
 13 plan regarding this pressure check?
 14 A I'd say no, there is not.
 15 Q Okay. How are the pressure checks
 16 enforceable if there's no numerical specificity?
 17 A I am not an expert, but I would -- I could
 18 only guess that the pressure checks are part of a safety
 19 procedure prior to sending the gas down to other units.
 20 Q But if there's no limit on the outcome of
 21 those pressure checks, how is that -- is that an
 22 enforceable requirement of this plan?
 23 A I believe the plan is to be reviewed in its
 24 entirety, not in pieces.
 25 Q Okay.

1 A To arrive at whether it's practically
 2 enforceable.
 3 Q Okay. So some aspects of the plan might not
 4 be enforceable; some aspects might be enforceable.
 5 MS. VEHR: Objection.
 6 MR. COPPEDE: Misstates his testimony.
 7 A When it comes to certain line items like this
 8 well pressure, probably say that would be hard to
 9 enforce.
 10 Q (By Ms. Issod) Okay. Move on to another
 11 subject. How do you estimate emissions from fugitive
 12 component leaks?
 13 A Using -- the applicant used AP 42
 14 emissions -- either AP 42 emission factors or SOCMI, as
 15 they're sometimes referred to.
 16 Q What does SOCMI stand for?
 17 A Synthetic -- I do not recall exactly, but
 18 synthetic organic chemical manufacturing industry, or
 19 something like that.
 20 Q Okay. So what -- what does the applicant do
 21 with these emission factors to estimate fugitive
 22 component leaks?
 23 A Could you reword ...
 24 Q Okay. In order to calculate fugitive
 25 component leaks, don't you need a count of the number of

1 components in the facility?
 2 A As I recall, the applicant provided counts
 3 for components.
 4 Q Is it true to estimate fugitive component
 5 leaks, you generally need three things: a component
 6 count; information about the design of each component;
 7 and emission factors for each component?
 8 A I'd ask for clarification what you mean by
 9 "design."
 10 Q Okay. Details about each component.
 11 A I would say that there are multiple factors
 12 that go into fugitive emission calculations, such as the
 13 type of service that the component is in. Is it a
 14 valve, a flange. The emission factors is just one piece
 15 that comes in that AP 42.
 16 Q Okay. So can you fully describe all the
 17 pieces that you need to calculate fugitive component
 18 leak emissions?
 19 A I'll try and recall all of them. But you
 20 need a count of the equipment. Whether it be pumps.
 21 Need to know if it's a pump, a valve, a flange. What
 22 type of service it's in, whether it's gas service,
 23 liquid service, gas and liquid service. The VOC
 24 constituent. Based on the type of valve and service,
 25 you can use the AP 42 factors to arrive at emission

1 factors -- or emissions based on counts.
 2 Q Okay. Do you recall the number of components
 3 Medicine Bow used to estimate its fugitive component
 4 leaks?
 5 A No, I do not.
 6 Q Is there a document that you could quickly
 7 look through to refresh your memory?
 8 A It would be in the application. Probably in
 9 Appendix B where all the emission calculations were.
 10 Q Okay. Well, regardless of the number, how
 11 did you verify this number?
 12 A I verified the emission factors that they
 13 used, based on what they say is the service and the EOC
 14 content and compared those with the known EPA factors.
 15 Q How did you verify the number of components?
 16 A That was provided to us by the applicant,
 17 based on their -- their latest design drawings.
 18 Q Did they provide to you their latest design
 19 drawing?
 20 A No.
 21 Q Did you ask for their latest design drawings?
 22 A No.
 23 Q Okay. Are emissions from fugitive component
 24 leaks a large source of volatile organic -- strike that;
 25 start over -- volatile organic compounds?

1 Q In this table, it refers to planned
2 maintenance emissions for the gasifiers. Do you know
3 what those emissions are?

4 A As I recall, the planned emissions were
5 emissions from when they had to take down the gasifier
6 change out nozzle or replace in the factory, and
7 during -- when they bring that gasification unit back on
8 line, those emissions would go over to the flare until
9 it met specifications.

10 Q So are these emissions included in the PTE,
11 the gasifier change-out emissions?

12 A Planned maintenance, yes.

13 Q And do you know those were included?

14 A Because they identified those as routine,
15 foreseeable emissions happening during a year.

16 Q And would this involve any startup or
17 shutdown for the gasifier?

18 A Those involve startup for the gasifiers.

19 Q So is it fair to say that routine startup
20 emissions are included in the PTE for sulfur dioxide?

21 A Yes.

22 MS. THRONE: I don't have any more questions.

23 MS. VEHR: Did you guys have any more
24 questions?

25 MR. COPPEDE: No.

1 A Yes.

2 Q Okay. And are there any points you want to
3 clarify in responses to any of the questions you've been
4 asked today?

5 A I think I'm good.

6 Q Okay. Could you just generally explain who
7 else would have been involved in the permitting process
8 for this --

9 A Permitting process? I was involved as the
10 application reviewer. Josh Nall was involved as the
11 modeler for the application. Darla Potter and Chad
12 Schlichtmeier were involved as the NSR program
13 supervisor and manager. Let's see. Kimberly Metz was
14 involved, as she is the NSR program administrative
15 assistant, so she was involved with the public notice
16 and assigning AP numbers, put the final permit together.
17 And Dave Finley and John Corra were involved in
18 assigning final permits.

19 Q So somebody reviewed your work before the
20 final permit got issued?

21 A There were a couple layers of review prior
22 to.

23 MS. VEHR: That's all the questions I have.

24 Thanks again.

25 MS. ISSOD: Dan?

1 EXAMINATION

2 BY MS. VEHR:

3 Q Okay. I just had a couple of questions on PM
4 2.5. Are you familiar with the term PM 2.5 precursors?

5 A Yes, I am.

6 Q And would you tell me what a PM 2.5 precursor
7 is?

8 A As I understand, EPA has identified PM 2.5
9 precursors as SOX and NOX emissions which can form
10 sulfates and nitrates downstream in a facility.

11 Q Okay. And does the Medicine Bow permit
12 account for SOX emissions?

13 A It -- yes.

14 Q And does the Medicine Bow facility account
15 for NOX emissions?

16 A Yes, it does.

17 Q And the permit contains emission limits for
18 those precursor pollutants?

19 A Yes, it does.

20 Q You were handed today five exhibits. Are
21 there other documents that you reviewed in processing
22 this permit?

23 A Yes, there were.

24 Q Okay. And when you were asked questions,
25 that was based on your best recollection as of today?

1 SPEAKER: Yes.

2 MS. ISSOD: Redirect? Anything?

3 SPEAKER: No, I'm fine.

4 MS. ISSOD: Great.

5 MS. VEHR: Thank you.

6 (The deposition adjourned at 4:05 p.m.)

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