

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

BEFORE THE POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD  
IN THE MATTER OF: )  
PETITION OF BEMA FILM SYSTEMS, INC., )  
FOR AN ADJUSTED STANDARD FROM 35 )  
ILLINOIS ADMINISTRATIVE CODE )AS0011  
SECTIONS 218.401(a), (b) and (c), )Adjusted  
THE FLEXOGRAPHIC PRINTING RULE )Standard

The following is a transcript of  
proceedings from the hearing held in the  
above-entitled matter, taken stenographically by  
ROSEMARIE LAMANTIA, CSR, a notary public within  
and for the County of Cook and State of  
Illinois, before JOHN C. KNITTLE, Hearing  
Officer, at 209 North York Street, Elmhurst,  
Illinois, on the 13th day of November 2000,  
A.D., scheduled to commence at the hour of 1:00  
p.m.

1           A P P E A R A N C E S:

2           HEARING TAKEN BEFORE:

3           ILLINOIS POLLUTION CONTROL BOARD,  
4           209 North York Street  
5           Elmhurst, Illinois 60126  
6           BY: JOHN C. KNITTLE, HEARING OFFICER

7           MEMBERS OF THE ILLINOIS ENVIRONMENTAL PROTECTION  
8           AGENCY AS WELL AS OTHER INTERESTED ENTITIES AND  
9           AUDIENCE MEMBERS WERE PRESENT AT THE HEARING,  
10          BUT NOT LISTED ON THIS APPEARANCE PAGE.

11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

1	INDEX
2	GLEN GALLOWAY
3	Direct Examination by Ms. Horn. 16
4	FURLON CLEMONS
5	Direct Examination by Ms. Horn. 20
6	RICHARD TRZUPEK
7	Direct Examination by Ms. Horn. 26, 52
8	Cross-Examination by Ms. Sawyer. 48, 53
9	
10	GLEN GALLOWAY
11	Direct Examination by Ms. Sawyer. 58
12	Cross-Examination by Ms. Horn. 60
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

1 HEARING OFFICER KNITTLE: We're on the  
2 record.

3 My name is John Knittle. I'm Chief  
4 Hearing Officer with the Illinois Pollution  
5 Control Board. I am also the assigned hearing  
6 officer for this matter, Pollution Control Board  
7 Docket Number Adjusted Standard 2000-11 in the  
8 matter of the petition of BEMA Film Systems,  
9 Incorporated, for an adjusted standard from 35  
10 Illinois Administrative Code Sections  
11 218.401(a), (b) and (c) and we have in paren the  
12 Flexograph Printing Rule.

13 Today's date is November 13. It's  
14 approximately 1:18 p.m. We're getting started a  
15 little bit late.

16 I want to note for the record that we  
17 have from the Illinois Pollution Control Board  
18 Brad Halloran here today, who is a Hearing  
19 Officer with the Pollution Control Board. We  
20 have no other members of the board here at this  
21 time. I also want to note for the record that  
22 we have no members of the public present today,  
23 is that correct? I see nobody raising their

24 hands. Everybody here is at least peripherally

L.A. REPORTING, 312-419-9292

5

1 affiliated with one of the parties here today.

2 I'm going to be running this hearing  
3 in accordance with Section 106.806, which is  
4 entitled order of hearing. It's in the Board's  
5 Sub-part G, general adjusted standard  
6 provisions. This is involving air but I take it  
7 we're going to work on the assumption this is  
8 not an air adjusted standard as defined by  
9 106.501, which we talked about preliminary to  
10 this hearing, which is an adjusted standard  
11 brought pursuant to Illinois 5 Administrative  
12 Code 212.126.

13 Ms. Horn, do you have any objection to  
14 running the hearing that way?

15 MS. HORN: That's fine.

16 HEARING OFFICER KNITTLE: Ms. Sawyer?

17 MS. SAWYER: No objection.

18 HEARING OFFICER KNITTLE: We're going  
19 to run it then, 106.806, which, to the best of  
20 my knowledge, is the appropriate way we ought to  
21 be running it anyway, just wanted to get it  
22 down.

23                   You all know this but I'm going to say  
24                   it anyway. I'm not going to be making the

L.A. REPORTING, 312-419-9292

6

1                   ultimate decision on this matter. The ultimate  
2                   decision on this matter will be made by the  
3                   Illinois Pollution Control Board, which is a  
4                   board in the State of Illinois comprised of  
5                   seven members throughout the state chosen for  
6                   their expertise in environmental matters. My  
7                   job, among other things, is to rule on the  
8                   evidence and insure that we have an orderly and  
9                   hopefully productive hearing here today.

10                   That being said, I'm going to want the  
11                   parties to identify themselves starting with the  
12                   Petitioner and then we'll get going on opening  
13                   statements.

14                   MS. HORN: My name is Susan Horn. I  
15                   am an attorney with Johnson & Bell of Chicago.  
16                   I represent BEMA Film Systems, Inc.

17                   HEARING OFFICER KNITTLE: Ms. Sawyer.

18                   MS. SAWYER: My name is Bonnie Sawyer.  
19                   I represent the Illinois Environmental  
20                   Protection Agency.

21                   HEARING OFFICER KNITTLE: Thank you.

22 Are there any preliminary matters  
23 before we start with the hearing proper? Ms.  
24 Horn?

L.A. REPORTING, 312-419-9292

7

1 MS. HORN: You want me to identify --

2 HEARING OFFICER KNITTLE: Yes, please,  
3 that would be helpful.

4 MS. HORN: We have Mr. Glen Galloway,  
5 who is the president of BEMA. To his right is  
6 Furlon Clemons, who is the plant manager of  
7 BEMA. To my right is Rich Trzupsek, who is an  
8 environmental consultant with Huff & Huff.

9 HEARING OFFICER KNITTLE: Ms. Sawyer,  
10 next to you.

11 MS. SAWYER: With me today is David  
12 Bloomberg, he is an environmental engineer with  
13 our agency. And he is here essentially to  
14 provide technical assistance to me, is not  
15 actually providing testimony.

16 HEARING OFFICER KNITTLE: Okay. Thank  
17 you.

18 Ms. Horn, you can start with your  
19 opening statement.

20 MS. HORN: Thank you.

21 BEMA Film Systems, Inc., is seeking an  
22 adjusted standard from 35 Illinois  
23 Administrative Code, Subpart H, Sections  
24 218.401(a), (b) and (c), which is known as the

L.A. REPORTING, 312-419-9292

8

1 Flexographic Printing Rule, as it applies to the  
2 emissions of volatile organic material or VOM  
3 from its two central impression Flexographic  
4 Printing presses.

5 The evidence will show that BEMA  
6 operates these Flexographic Printing presses to  
7 print images using ink on a high slip  
8 polyethylene film, which is then converted into  
9 a package for food and other consumer goods.

10 The evidence will show that BEMA has  
11 been working with the Illinois Environmental  
12 Protection Agency to discuss difficulties with  
13 the Flexographic Printing Rule.

14 On May 17, 1999, BEMA filed a petition  
15 seeking variance from the rule. Following  
16 subsequent negotiations with the IEPA, BEMA  
17 realized that the proposed relief that it was  
18 seeking was better applied as an adjusted  
19 standard, therefore, BEMA dismissed its petition

20 for variance and filed the present petition for  
21 an adjusted standard.

22 The specific regulation from which  
23 BEMA seeks an adjusted standard requires the  
24 Flexographic printers to use inks that contain

L.A. REPORTING, 312-419-9292

9

1 either: (1) no more than 40% VOM (excluding  
2 water) by volume or (2) no more than 25% VOM by  
3 volume of the volatile content of the ink. If a  
4 source cannot use water-based inks, then the  
5 source must design and apply an approved control  
6 device. If a source chooses to comply with the  
7 Flexographic Printing Rule by equipping the  
8 Flexographic Printing press with an add-on  
9 control, then that control device must reduce  
10 the captured VOM emissions by at least 90% by  
11 weight (for approved carbon adsorption or  
12 incinerator systems) or achieve an overall  
13 reduction of 60% in VOM emissions by  
14 "alternative" control systems that have been  
15 approved by the IEPA and the U.S. EPA.

16 As the evidence will show the  
17 regulation from which BEMA requires an adjusted  
18 standard applies to sources with a potential to

19 emit 25 tons per year or more of VOM. The  
20 initial RACT regulations applied to major  
21 sources with actual VOM emissions in excess of  
22 100 ton per year. In response to the adoption  
23 of the Federal Implementation Plan, the Board  
24 amended the RACT rules to require that all

L.A. REPORTING, 312-419-9292

10

1 Chicago area sources with maximum theoretical  
2 emissions of at least 100 tons per year  
3 implement RACT. Pursuant to Section 182(d) of  
4 the Clean Air Act, individual states within  
5 severe ozone nonattainment areas are required to  
6 include all sources with the potential to emit  
7 at least 25 tons per year as major sources, and  
8 those states must also adopt RACT regulations  
9 applicable to those sources. Therefore, the  
10 Illinois Pollution Control Board established the  
11 requirements in the Flexographic Printing Rule.

12 The evidence will show that BEMA is  
13 located in Elmhurst, Illinois, in DuPage County,  
14 which is part of the Chicago area designated as  
15 a severe ozone nonattainment area. Therefore,  
16 it is subject to the requirements of the  
17 Flexographic Printing Rule.

18                   The regulation of general  
19                   applicability from which BEMA seeks an adjusted  
20                   standard does not specify a level of  
21                   justification for an adjusted standard.  
22                   Therefore, the requirements in Section 28.1 of  
23                   the Illinois EPA, 35 ILCS 5/28.1, apply.  
24                   Section 28.1 of the Act states that the Board

L.A. REPORTING, 312-419-9292

11

1                   may grant individual adjusted standards upon  
2                   proof that: (1) the factors relating to the  
3                   Petitioner are substantially and significantly  
4                   different; (2) the existence of those factors  
5                   justifies an adjusted standard; (3) the  
6                   requested standard will not result in adverse  
7                   environmental or health effects; and (4) the  
8                   proposed adjusted standard is consistent with  
9                   federal law.

10                   As the evidence will show, these four  
11                   factors in Section 28.1 of the Act have been met  
12                   because BEMA cannot use water-based inks for its  
13                   products and because the approved control  
14                   technologies will work only at unreasonable  
15                   costs. Therefore, an adjusted standard is  
16                   necessary for BEMA.

17 HEARING OFFICER KNITTLE: Thank you,  
18 Ms. Horn.

19 Ms. Sawyer, do you have an opening  
20 statement?

21 MS. SAWYER: Yes, I have a brief  
22 opening statement.

23 Good afternoon. My name is Bonnie  
24 Sawyer. I'm representing the Illinois EPA in

L.A. REPORTING, 312-419-9292

12

1 this matter.

2 Our agency has reviewed the petition  
3 submitted by BEMA and we have filed a response  
4 with the Pollution Control Board.

5 In our response, we have recommended  
6 that the Board grant an adjusted standard for  
7 BEMA subject to certain conditions.

8 In addition to that, we've also worked  
9 with these facilities over the last several  
10 years and we are fairly familiar with  
11 difficulties these facilities have applying  
12 compliant inks. We've also conducted an  
13 independent investigation to try to find viable  
14 means for these facilities to comply and we have  
15 not discovered anything as of yet, but we'll

16 continue our search.

17 The conditions that we're recommending  
18 the Board impose, 1, relates to the record  
19 keeping requirements that would be required  
20 under the adjusted standard. The petition filed  
21 by BEMA had requested that record keeping be  
22 done as a monthly average. We are recommending  
23 that the Board not grant the adjusted standard  
24 allowing for a monthly average record keeping

L.A. REPORTING, 312-419-9292

13

1 but require daily record keeping similar to the  
2 record keeping that is required under the rule  
3 of general applicability for Flexographic  
4 Printing operations.

5 The second condition is if this  
6 facility becomes subject to the emissions  
7 reduction market system, we are recommending  
8 that a special provision be imposed in the  
9 adjusted standard that would establish how the  
10 baseline for the facility would be calculated  
11 and that the baseline would be lower than the  
12 emissions level allowed under the adjusted  
13 standard, we think that this is important,  
14 because that would allow for the -- at least

15 seasonal, meaning May through September,  
16 emissions from this facility to be minimized  
17 through the emission reduction market system.

18 Third, I wouldn't say exactly a  
19 condition, but an area where we are requesting  
20 that the Board do something a little different  
21 than was originally requested by the Petitioner,  
22 they had requested an annual limitation on VOM  
23 emissions of 100 tons per year. First of all,  
24 we note that their permit currently requires

L.A. REPORTING, 312-419-9292

14

1 them to meet a lower limitation than that and  
2 what we are recommending to the Board is that  
3 this adjusted standard not include any annual  
4 limitation on emissions and the permit will  
5 continue to impose the appropriate limitation on  
6 annual emissions.

7 We also have included within our  
8 response 12 other conditions that we think  
9 should be part of any adjusted standard granted  
10 by the Board.

11 As I stated earlier, we are not  
12 intending to present testimony today, and the  
13 reason for that is that it is our understanding

14 that the Petitioner is agreeing to all of the  
15 conditions that we have recommended to the  
16 Board. And it's our hope that we will get some  
17 clarification on the record that Petitioner is,  
18 in fact, agreeing to the conditions that we have  
19 recommended in our response.

20 That is all I have.

21 HEARING OFFICER KNITTLE: Okay. And  
22 Ms. Horn, you can address that if you want in  
23 closing arguments or do you want to address it  
24 now?

L.A. REPORTING, 312-419-9292

15

1 MS. HORN: I'll address it now. For  
2 the record, yes, we are agreeing to the  
3 conditions.

4 HEARING OFFICER KNITTLE: The 12  
5 conditions plus the 3 outlined at the beginning?

6 MS. HORN: I think they're all in the  
7 agency's --

8 MS. SAWYER: They are part of the 12  
9 conditions. I just kind of highlighted 3 of  
10 them.

11 HEARING OFFICER KNITTLE: My mistake.  
12 Okay. And Ms. Horn, you did say you were going

13 to agree with those?

14 MS. HORN: Yes.

15 HEARING OFFICER KNITTLE: Well, let's  
16 proceed then with Petitioner's case in chief.  
17 Ms. Horn, do you want to call your first  
18 witness?

19 MS. HORN: We'd like to call Glen  
20 Galloway.

21 HEARING OFFICER KNITTLE: Swear the  
22 witness in, please.

23

24

L.A. REPORTING, 312-419-9292

16

1 (Witness sworn.)

2 GLEN GALLOWAY,

3 called as the witness herein, having been first  
4 duly sworn, was examined and testified as  
5 follows:

6 DIRECT EXAMINATION

7 BY MS. HORN:

8 Q. Please state your name for the record.

9 A. Glen Galloway.

10 Q. Where do you live?

11 A. 85 Charlemagne Circle in Roselle.

12 Q. Where are you employed?

13 A. BEMA Film Systems.

14 Q. What is your position at BEMA?

15 A. I am the president and owner of BEMA  
16 Film Systems.

17 Q. What are your duties as president and  
18 owner?

19 A. Basically to cover the daily  
20 operations, financially, production-wise, as  
21 well as any other things associated with the  
22 company itself.

23 Q. Mr. Galloway, where is BEMA located?

24 A. 744 North Oak Lawn Avenue in Elmhurst.

L.A. REPORTING, 312-419-9292

17

1 Q. How many employees does BEMA have?

2 A. Thirty employees.

3 Q. Does BEMA use any type of printing  
4 presses in its operation?

5 A. Yes.

6 Q. How many?

7 A. Two.

8 Q. What types of presses are they?

9 A. They're central impression  
10 Flexographic Presses.

11 Q. For what are they used?  
12 A. For printing on high slip polyethylene  
13 film.  
14 Q. Is BEMA a large printer in the  
15 Flexographic Printing industry?  
16 A. No, we're not.  
17 Q. What would you term BEMA?  
18 A. BEMA is more geared towards the job  
19 shop type of facility.  
20 Q. What does job shop mean?  
21 A. Job shop basically means we run very  
22 small jobs, continuously changing the press,  
23 continually changing over jobs on a regular  
24 basis.

L.A. REPORTING, 312-419-9292

18

1 Q. How many jobs does BEMA complete in  
2 its typical day?  
3 A. It varies, but typically four, five  
4 jobs, maybe up to ten jobs in a specific day.  
5 Q. What would be the longest job and the  
6 shortest job?  
7 A. The shortest job would be in our  
8 presses for about an hour and the longest job  
9 might take a full day.

10 Q. Do you have any jobs that go more than  
11 one day?

12 A. On rare occasions, yes, we do.

13 Q. For what type of products does BEMA  
14 produce packaging?

15 A. Our packages range from the food  
16 packaging industry, hardware packaging industry,  
17 some of our mail industry. We do a lot of  
18 packaging for mailers and other commercial type  
19 products.

20 Q. Have you participated in the  
21 proceedings leading up to this adjusted  
22 standards hearing?

23 A. Yes, I have.

24 Q. Since when, what date?

L.A. REPORTING, 312-419-9292

19

1 A. Since purchasing the company August  
2 31st of last year, 1999.

3 Q. And how have you participated in these  
4 hearings or these proceedings?

5 A. Well, I've visited the Illinois EPA  
6 down south and I've consulted with Mike  
7 Cisileana, who is our consultant for this  
8 particular -- these hearings.

9 Q. From whom did you buy BEMA?

10 A. A gentleman by the name of Sam Shaw.

11 Q. Is it your understanding that Mr. Shaw  
12 was involved in the proceedings prior to selling  
13 the business?

14 A. It's my understanding that Sam was one  
15 of the instrumental people and one of the first  
16 people to start this process back in 1994.

17 Q. Do you know at all what he did?

18 A. Again, it's my understanding that Sam  
19 was one of the investigators to work with the  
20 Illinois EPA and to help train and educate  
21 people on our process and our facility as well  
22 as other processes associated with printing  
23 polyethylene film.

24 Q. Did BEMA host any gatherings or

L.A. REPORTING, 312-419-9292

20

1 consult with other printing press printers?

2 A. It's my understanding that Sam did  
3 host lunches and training sessions and  
4 educational sessions associated with printing,  
5 again on polyethylene film.

6 MS. HORN: Thank you, Mr. Galloway. I  
7 have no further questions.

8 HEARING OFFICER KNITTLE: Ms. Sawyer,  
9 do you have cross-examination for this witness?

10 MS. SAWYER: No.

11 HEARING OFFICER KNITTLE: Thank you,  
12 sir, you can step down.

13 MS. HORN: At this time I'd like to  
14 call Furlon Clemons.

15 HEARING OFFICER KNITTLE: Sir, if  
16 you'd have the seat in the same place.

17 (Witness sworn.)

18 FURLON CLEMONS,  
19 called as the witness herein, having been first  
20 duly sworn, was examined and testified as  
21 follows:

22 DIRECT EXAMINATION

23 BY MS. HORN:

24 Q. State your name for the record.

L.A. REPORTING, 312-419-9292

21

1 A. Furlon Clemons.

2 Q. Where do you live?

3 A. 1820 Concordia Lane, Schaumburg,  
4 Illinois.

5 Q. Where are you currently employed?

6 A. BEMA Film Systems.

7 Q. What is your position at BEMA?  
8 A. General manager.  
9 Q. What are your job duties as general  
10 manager?  
11 A. Supervision of printing, oversight of  
12 bag making, supervision of QA.  
13 Q. What brand are BEMA's products?  
14 A. PCMC, Hudson Sharp.  
15 Q. How old are they?  
16 A. Approximately 30, 35 years.  
17 Q. How do they work?  
18 A. They're a six color Flexographic  
19 printer, print one color out of each deck, in  
20 between dryer and one, forced air drying for the  
21 next color and then on offset.  
22 Q. How fast do they work?  
23 A. Approximately 250 to 400 feet per  
24 minute.

L.A. REPORTING, 312-419-9292

22

1 Q. So how many seconds per drying  
2 station?  
3 A. Per drying station, less than a  
4 second.  
5 Q. How do the drying stations work?

6 A. It's forced hot air.

7 Q. And the hot air does what?

8 A. It's blown through a dryer system and  
9 it's evac'd at the same time that actually dries  
10 the alcohol content out of itself.

11 Q. On what type of film does BEMA print?

12 A. Low density polyethylene.

13 Q. What does that mean?

14 A. It's a flexible plastic material.

15 Q. Please explain the type of ink that  
16 BEMA uses.

17 A. Solvent ink made up of -- well, there  
18 is three different types of systems on it. It's  
19 a pigment. There is a solvent added to it and  
20 then there is a solid that is also in the ink.

21 Q. Please explain the difference between  
22 virgin ink and recycled ink.

23 A. Virgin ink is ink that we receive from  
24 the ink company that we do not open. Recycled

L.A. REPORTING, 312-419-9292

23

1 ink is inks that have been in the press and  
2 we've already added alcohol to them.

3 Q. If you had to guess sitting here  
4 today, how many containers of virgin ink and

5 recycled ink does BEMA have in its ink room?

6 A. Probably virgin ink we may have about  
7 20 to 25. Recycled ink, probably have 200, 250.

8 Q. Do the solvents in the inks contain  
9 VOM?

10 A. Yes, they do.

11 Q. Why is additional solvent often added  
12 to the ink?

13 A. To be able to obtain the color that  
14 the customer requires.

15 Q. Additional solvent, does it have  
16 anything to do with the speed of the job?

17 A. Yes, it does.

18 Q. And how does it?

19 A. If we did not add the solvent in  
20 there, we'll not be able to dry the ink fast  
21 enough to print the next color without having  
22 offset.

23 Q. When did you begin working at BEMA?

24 A. August of 2,000.

L.A. REPORTING, 312-419-9292

24

1 Q. Where did you work prior to August of  
2 2000?

3 A. Hormel Industries.

4 Q. What were your job duties at Hormel?

5 A. Production manager.

6 Q. Did you participate in any water-based  
7 ink trials while at Hormel?

8 A. Yes.

9 Q. Can you explain what you did?

10 A. We set the press up from the  
11 beginning. We attempted to print them but we  
12 were very unsuccessful in doing it.

13 Q. Approximately how many trials -- did  
14 you supervise them or --

15 A. I actually did set up the press myself  
16 in many of the trials. A few of them I did  
17 supervise them.

18 Q. And you said that they were not  
19 successful?

20 A. No, ma'am.

21 Q. Could you tell me why?

22 A. We had offsetting of the inks. We had  
23 pick off of the inks. We could not actually  
24 print the ink on the material. It picked off

L.A. REPORTING, 312-419-9292

25

1 the tape. We could scuff it off. It would not  
2 adhere to the material in any form.

3 Q. Did the water-based ink effect the  
4 cleanup time of the press?

5 A. Yes, ma'am. Sometimes it made it 3 to  
6 4 times longer and a lot harder to clean up than  
7 a solvent-based ink is.

8 Q. Is water-based ink more or less  
9 expensive to dispose of?

10 A. More expensive because there is no  
11 BTUs in the water system as opposed to the  
12 solvents, you can burn the solvent system off  
13 and use it as image.

14 MS. HORN: Thank you, Mr. Clemons. I  
15 have no further questions.

16 HEARING OFFICER KNITTLE: Ms. Sawyer?

17 MS. SAWYER: We may have a couple of  
18 questions. Can we take a moment?

19 (Off the record.)

20 MS. SAWYER: No questions.

21 HEARING OFFICER KNITTLE: Sir, you can  
22 step down. Thank you.

23 Ms. Horn, we're moving right along.

24 MS. HORN: As our last witness, I'd

L.A. REPORTING, 312-419-9292

1 like to call Rich Trzupsek.

2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

(Witness sworn.)

RICHARD TRZUPEK,

called as the witness herein, having been first  
duly sworn, was examined and testified as  
follows:

DIRECT EXAMINATION

BY MS. HORN:

Q. State your name for the record.

A. It's Richard Trzupsek.

Q. Spell your last name.

A. T-R-Z-U-P-E-K.

Q. Where do you live?

A. I live in Streamwood, Illinois.

Q. What is your occupation?

A. I'm an environmental consultant.

Q. Where do you currently work?

A. I work at Huff & Huff, Incorporated,  
of LaGrange, Illinois.

Q. Please describe your educational  
background?

A. I have a bachelor's degree in  
chemistry from Loyola University of Chicago.

Q. Do you have any training or experience

1 in air regulations specifically with regard to  
2 the printing industry?

3 A. I do. I've been working in the  
4 printing industry with regard to air regulations  
5 for the last 18 years.

6 Q. Are you familiar with BEMA's printing  
7 operations?

8 A. I am.

9 Q. How long have you worked with BEMA?

10 A. I've worked with BEMA since 1997.

11 Q. Please describe your involvement with  
12 these adjusted standards.

13 A. I have been consulting for BEMA  
14 regarding the regulations and how they can  
15 comply with the regulations or what a reasonable  
16 adjusted standard would be in the event they  
17 could not comply with the regulations.

18 Q. In that capacity were you involved  
19 with the negotiations and the analysis and  
20 calculations that form the basis for BEMA's  
21 petition for an adjusted standard?

22 A. I was.

23 Q. Please describe how.

24 A. I participated with the agency, legal

1 and technical personnel, in evaluating the cost  
2 of compliance should they use add-on controls  
3 and the availability and efficiency of  
4 water-based inks.

5 Q. Please briefly describe the  
6 Flexographic Rule.

7 A. The Flexographic Rule presents three  
8 basic control options.

9 One is the use of water-based inks  
10 that meet certain VOM standard -- VOM  
11 percentage.

12 Two is the use of add-on control that  
13 need a certain control requirement.

14 And the third is the use of a mixture  
15 of compliant and noncompliant inks that on a  
16 daily basis meet a certain average VOM content.

17 Q. Why does the rule apply to BEMA?

18 A. The rule applies to BEMA because they  
19 are a Flexographic Printer with potential to  
20 emit greater than 25 tons per year of VOM.

21 Q. Is BEMA located in a nonattainment  
22 area?

23 A. It is.

24 Q. Please explain what that is and why is

1 it important.

2 A. Nonattainment area is designated in  
3 this case as not attaining the national ambient  
4 air quality standard for ozone, which requires  
5 higher level of control for VOM than NOX. In  
6 the case of the Chicago nonattainment area for  
7 ozone, NOX is exempted by virtue of waiver under  
8 Section 182F of the Clean Air Act but the higher  
9 level of control required for VOM remains and  
10 that is what prompts the promulgation of the  
11 Flexographic Rule.

12 Q. Please explain the three types of  
13 printing and how they differ, surface, reverse  
14 and lamination.

15 A. Thank you.

16 Surface printing is printing meant to  
17 go on the outside surface of a package subject  
18 to whatever environment the outside surface of  
19 the package would be subject to.

20 Reverse printing goes on the inside  
21 surface of the package, the inside.

22 Lamination printing is printing which  
23 the image is centrally sandwiched between two  
24 layers of plastic film, in essence protected on

1 both sides.

2 Q. What type of printing does BEMA do?

3 A. BEMA is primarily engaged in surface  
4 printing.

5 Q. And how does the Flexographic Printing  
6 Rule then effect BEMA? What are their two  
7 choices?

8 A. BEMA's two choices are to use  
9 compliant inks or to use add-on control.

10 Q. Could you explain the difference  
11 between printing using solvent-based inks and  
12 water-based inks?

13 A. Specifically in the case of plastic  
14 films, solvent inks flash off more quickly at  
15 the drying stations we described. And that  
16 quick flashing off is important in order to set  
17 the image and leave a protective film on the  
18 image as you progress very quickly through each  
19 printing station.

20 Water-based ink works through a  
21 chemical action so rather than just the  
22 evaporation of the water setting the image there  
23 is a catalytic action where the chemistry of the  
24 ink itself links, cross-links to set the image.

1 It is by it's nature a longer process and a more  
2 brittle process and very difficult to  
3 effectively set in ink using water-based ink on  
4 film. That is the major problem that we have  
5 seen and the printers have seen and most people  
6 have seen in attempting to print with  
7 water-based inks on any type of plastic  
8 substrate.

9 Q. The inks -- do the inks come from the  
10 manufactures with solvent in them?

11 A. They do.

12 Q. Do you know approximately what  
13 percentage they are from the manufacturer?

14 A. It varies depending on the ink. It  
15 can run anywhere from 50 percent to 70 percent  
16 typically.

17 Q. Mr. Clemons testified that they add  
18 solvents to those inks to complete their jobs.  
19 Do you know about what percentage VOM those inks  
20 are when they're finished?

21 A. They will blend to a finished VOM  
22 content of anywhere from 60 to 80 percent,  
23 depending on the specifics of the job, the  
24 humidity, and that, again, just gives you an

1 average range. It can vary outside of that  
2 range as well.

3 Q. Did you hear Mr. Clemons' testimony  
4 regarding the problems associated with  
5 water-based inks he has had in his experience?

6 A. Yes, I did.

7 Q. Based on your experience, do you agree  
8 with his conclusions?

9 A. Yes, I do.

10 Q. Are you familiar with BEMA's current  
11 state permit limiting its air emissions?

12 A. Yes.

13 Q. Do you know what the current permit  
14 limit is?

15 A. The current permit limits it to the  
16 language of the Flexographic Rule, and as I  
17 recall, 77 tons of annual emissions.

18 Q. That's correct.

19 Do you know approximately what BEMA's  
20 emissions were last year?

21 A. I believe BEMA's emissions last year  
22 were approximately 18 tons.

23 Q. What are the three add-on control  
24 options available to BEMA?

1           A.       There is some form of oxidation,  
2           either regenerative or recuperative oxidation.  
3           There is carbon absorption and there is some  
4           form of a scrubber or gas absorption.

5           Q.       Could you explain each type and  
6           whether they would not or could or would not be  
7           appropriate to BEMA.

8           A.       Gas absorption or scrubber utilizes  
9           some type of water-based spray to absorb the  
10          gas, the VOM content as they pass through the  
11          control device, and then hopefully you later  
12          recover the VOM from the water that is -- as  
13          it's recycled. We deem this would not -- it  
14          would be a possible control option but it would  
15          not -- we do not feel it would meet the  
16          requirements of the rule because the volatility  
17          of solvents that BEMA uses are so great that  
18          they would not effectively remain absorbed in  
19          the water.

20                   Carbon absorption utilizes a carbon  
21          bed, which the gas -- the exhaust gas from the  
22          process is passed through, the VOM  
23          preferentially absorbs on the carbon and then is

24 later desorbed through the use of steam. The

L.A. REPORTING, 312-419-9292

34

1 steam recondenses the water. The VOM is  
2 recovered from the water. Again, we deem this  
3 one entirely technically infeasible because the  
4 absorption rate of alcohol that BEMA uses on  
5 carbon is very low and the carbon -- the alcohol  
6 that would be absorbed would be very difficult  
7 to keep in the water as it was with the  
8 scrubber. Oxidation, which is thermally or  
9 catalytically destroying the VOM through high  
10 temperature catalytic action, we did deem to be  
11 technically feasible.

12 Q. Did you do any analysis of the cost of  
13 either of those three?

14 A. We did.

15 Q. Could you explain what your  
16 conclusions were?

17 A. Looking at the cost of the effectively  
18 feasible options, and I am sorry, I must amend  
19 to say that catalytic oxidation option we deem  
20 as technically infeasible because of the  
21 possibility of contamination to catalyst with  
22 the various inks and additives that BEMA uses.

23                               So of the remaining technically  
24                               feasible options, the ones that we felt could

L.A. REPORTING, 312-419-9292

35

1                               actually be treated, controlled, required  
2                               recuperative and regenerative thermal oxidizers,  
3                               the least expensive of these was a regenerative  
4                               thermal oxidizer, which we agreed to a control  
5                               cost of \$15,233 per ton -- strike that, \$15,223  
6                               per ton, using United States EPA cost control  
7                               evaluation methodology.

8                               Q.           In your opinion would this cost  
9                               control be reasonable?

10                              MS. SAWYER:  I don't think we should  
11                              really be asking that question.  Object to that.  
12                              I mean, that is the ultimate decision of this  
13                              matter, whether it is reasonable or not.

14                              HEARING OFFICER KNITTLE:  Ms. Horn.

15                              MS. HORN:  That's fine.

16                              HEARING OFFICER KNITTLE:  You withdraw  
17                              that question?

18                              MS. HORN:  Withdraw.

19                              BY MS. HORN:

20                              Q.           In your opinion is the adjusted  
21                              standard necessary?

22           A.       In my opinion an adjusted standard is  
23 necessary for BEMA.

24           Q.       What are the basic terms of the

L.A. REPORTING, 312-419-9292

36

1           adjusted standard that the IEPA and BEMA are  
2 proposing?

3           A.       It agrees to a VOM limit in the inks,  
4 the as applied inks that BEMA would use at 82  
5 percent as applied.

6           Q.       Does the proposed adjusted standard  
7 exceed the annual emissions limit for BEMA?

8           A.       The proposed adjusted standard does  
9 not contain an annual adjustment -- annual  
10 emission limit data.

11          Q.       And why is that?

12          A.       One is already contained within BEMA's  
13 current operating plan.

14          Q.       Does the Flexographic Printing Rule  
15 require daily record keeping or monthly record  
16 keeping?

17          A.       If daily weighted average is being  
18 used for compliance, it requires daily record  
19 keeping.

20          Q.       And why is daily record keeping --

21           A.       Because the ozone standard, which the  
22           rule is meant to achieve compliance with, is a  
23           daily standard.

24           Q.       In your opinion will this daily record

L.A. REPORTING, 312-419-9292

37

1           keeping requirement be difficult for BEMA?

2           A.       In my opinion it will be difficult for  
3           BEMA.

4           Q.       At this time I'd like to show --  
5           actually it's already in the VCR, Mr. Trzupsek,  
6           what is marked for identification as  
7           Petitioner's Exhibit 1. It is the videotape  
8           that is actually ready to roll.

9                   HEARING OFFICER KNITTLE: Okay. And,  
10           Ms. Sawyer, you stated earlier you have no  
11           objection to this videotape, is that correct?

12                   MS. SAWYER: That's correct.

13                   HEARING OFFICER KNITTLE: Just before  
14           we start the showing of, we haven't admitted it  
15           yet but we'll go over that, at the time being,  
16           but as long as we can show it, you don't have an  
17           objection to that?

18                   MS. SAWYER: I have no objection.

19                   HEARING OFFICER KNITTLE: Do you need

20 the lights out?

21 MS. HORN: No.

22 Could I just let the record reflect  
23 that I've previously provided Ms. Sawyer and Mr.  
24 Bloomberg a copy of this exhibit.

L.A. REPORTING, 312-419-9292

38

1 HEARING OFFICER KNITTLE: The record  
2 will so note.

3 Sir, if you want to stand up and do  
4 your thing, now is the time.

5 (Off the record.)

6 HEARING OFFICER KNITTLE: You just  
7 want to note -- back on, sir, if you want to  
8 start the videotape, please.

9 BY MS. HORN:

10 Q. Do you know what this is?

11 A. This is a video of operations at BEMA  
12 Film Systems.

13 Q. Were you present when the video was  
14 made?

15 A. I was.

16 Q. Did you act as the narrator on the  
17 video?

18 A. I acted in that capacity, yes.

19 Q. What does the video show?

20 A. The video shows a typical job, typical  
21 for a job at one of -- on one of BEMA's presses.

22 Q. Why did BEMA make the video?

23 A. To document what they do as far as  
24 measuring the amount of ink and solvent that is

L.A. REPORTING, 312-419-9292

39

1 used on a typical job.

2 MS. HORN: Excuse me while I get my  
3 Exhibit No. 2.

4 At this time, I'd like to show Mr.  
5 Trzupsek what is marked as Petitioner's No. 2.  
6 Please let the record reflect that I've just  
7 given this afternoon Ms. Sawyer and Mr.  
8 Bloomberg a copy.

9 BY MS. HORN:

10 Q. Can you identify that exhibit?

11 A. This is the bag that was printed  
12 during the time the video was shot at BEMA.

13 Q. Is it substantially similar to the  
14 product produced on the video?

15 A. It is.

16 MS. HORN: At this time I'd like to  
17 request that Petitioner's Exhibit Nos. 1 and 2

18 be entered into evidence.

19 HEARING OFFICER KNITTLE: Take them  
20 one at a time.

21 Petitioner's 1, the video, Ms. Sawyer,  
22 any objection to that?

23 MS. SAWYER: No objection.

24 HEARING OFFICER KNITTLE: That will be

L.A. REPORTING, 312-419-9292

40

1 admitted.

2 Petitioner's 2 is a bag that was  
3 produced during the filming of the Petitioner's  
4 Exhibit 1, any objection to that?

5 MS. SAWYER: No objection.

6 HEARING OFFICER KNITTLE: They will  
7 both be admitted.

8 MS. HORN: At this time I request the  
9 Hearing Officer's permission to have Mr. Trzupsek  
10 play the video and explain the printing  
11 operation shown on the video.

12 HEARING OFFICER KNITTLE: You have  
13 that permission as well. Ms. Sawyer, you don't  
14 have any objection to this line of testimony, do  
15 you?

16 MS. SAWYER: No.

17 HEARING OFFICER KNITTLE: Proceed,  
18 sir.

19 THE WITNESS: There is a running line  
20 of commentary recorded on the video but I'll  
21 spare the assembly that commentary. It is there  
22 for the Board.

23 Our purpose was to, again, document  
24 what is done as far as keeping records of ink

L.A. REPORTING, 312-419-9292

41

1 and solvent usage on the press. We certainly  
2 understand that it is a daily requirement and  
3 how accurate those records can be I think is the  
4 primary -- the primary record we're trying to  
5 establish here.

6 This is the press itself. At this  
7 point in the tape the various parties who were  
8 present are identifying themselves and I will  
9 fast forward through that.

10 HEARING OFFICER KNITTLE: Sir, just --  
11 no, keep going. When you can, if you have  
12 something you want to point out, identify the  
13 hour on the videotape.

14 THE WITNESS: I will do that.

15 This is 9:03:55 on the videotape, and

16 we're now looking at inks being measured. This  
17 is a pressman withdrawing ink from a virgin ink  
18 drum, called white in this case, into the  
19 typical 5 gallon pail that these printers use on  
20 the presses.

21 We're now at the press where the  
22 pressman is putting the pump into the tail and  
23 he'll shortly be fixing a return line. The way  
24 the process works is the ink, when it is finally

L.A. REPORTING, 312-419-9292

42

1 mixed and blended the right color, it is pumped  
2 up into the pan at a particular color station  
3 and then returned to 5 gallon bucket, constant  
4 circulation, and with the constant circulation  
5 of ink, you have constant evaporation of the  
6 solvent in the ink.

7 In order to meet the print  
8 characteristics that they need for any  
9 particular job, in order to meet the colors that  
10 we see here now at 9:06:50, there is constant  
11 adjustment of solvent necessary. The basic  
12 reason being that solvents evaporate more  
13 quickly than the pigment. So to stay in the  
14 correct viscosity to meet the color, to meet the

15 drying requirements, requires they're constantly  
16 adding solvent to make up for the solvent that  
17 is lost as the ink recirculates.

18 Again, you can see the surface area at  
19 9:16 of printing ink established and the reason  
20 the solvent is lost disproportionately to the  
21 amount of pigment that is laid down. What this  
22 means in terms of the rule is that at any given  
23 time the amount of solvent added versus the  
24 amount lost is not going to be an exact balance

L.A. REPORTING, 312-419-9292

43

1 and we only know with this certain amount of  
2 precision the exact VOC content of the ink.  
3 The control that the press uses in effect is to  
4 time the viscosity of the ink.

5 As we describe in the video at 9:45,  
6 the pressman will measure viscosity with what is  
7 called a number 2 Zoncup, and, actually, let me  
8 see if I can get you a better part that will  
9 show it. Fast forwarding now.

10 We now have at 10:31 pressman again  
11 making viscosity adjustment. What the pressman  
12 does at this point is to draw a sample of the  
13 ink in a cup of a predetermined size with a

14       predrilled hole in the bottom and time how long  
15       that ink takes to drain out of the cup. That  
16       time in seconds corresponds to viscosity, that  
17       viscosity roughly corresponds to the VOC content  
18       of the ink and establishes the target VOC  
19       content of that ink for that job. It is the  
20       best control, the best handle that we  
21       effectively have on the VOC content of the ink  
22       at any one point, as the withdrawals and  
23       evaporations are constantly in flux.

24                   Most of the remainder of the video

L.A. REPORTING, 312-419-9292

44

1       from here forward is showing the number of  
2       solvent adjustments that are made, the number of  
3       additions. As a rule of thumb, BEMA makes a  
4       check viscosity and solvent addition  
5       approximately once every 15 minutes. There are  
6       also ink additions that are made. For this  
7       particular job we counted about 100 or so  
8       additions that would be made through the course  
9       of the entire job, which presents a great  
10       challenge for accurate measurement of the exact  
11       amount of solvent added and reduced, the exact  
12       VOC content at any one time.

13 I think that's all we have to look at  
14 on the tape. Continuous record of more  
15 additions and more checking but I don't think we  
16 need to go any further than that, do we?

17 BY MS. HORN:

18 Q. Why don't you fast forward through it  
19 just to be sure.

20 Would you perhaps want to go to the  
21 last portion of them printing the Exhibit 2?

22 A. To show the ink room and the --

23 Q. The drying stations?

24 A. -- drying stations.

L.A. REPORTING, 312-419-9292

45

1 HEARING OFFICER KNITTLE: How long is  
2 the video in total?

3 MS. HORN: Half an hour in total.

4 (Off the record.)

5 HEARING OFFICER KNITTLE: Back on the  
6 record.

7 THE WITNESS: We're at 11:06 a.m.,  
8 11:06:46 on the tape. Now 11:08 a.m. And we're  
9 looking at the printing stations and the drying  
10 stations, just illustrating how close in  
11 proximity they are to each other.

12                   At 11:08:26, we're looking at the  
13                   actual drying station for one of the stages.  
14                   This being a central impression press, the web  
15                   comes around with less than a second to pass  
16                   through what is usually very small drying  
17                   station.

18                   There is the intake and exhaust that  
19                   is being pointed to at 11:08:53, that feeds the  
20                   hot air and then withdraws the solvent latent  
21                   air from the drying station.

22                   We're at 1:10:05 and we're looking at  
23                   some of the virgin ink drums that were used to  
24                   formulate some of the inks used for the job.

L.A. REPORTING, 312-419-9292

46

1                   Finally, we're at 1:15:20 p.m. and  
2                   we're looking at the ink room with a number of  
3                   the reworkings, as many as you can get in the  
4                   shop that are stored after being made up.

5                   BY MS. HORN:

6                   Q.        Could you summarize the time from when  
7                   the job was started to when it was running?

8                   A.        If my memory serves, we started at a  
9                   little before 9:00 o'clock, and the job began  
10                  running somewhere around 1:00 o'clock. It's

11 probably a little longer for the setup time  
12 probably because of our presence than normal but  
13 it took awhile before they got the colors to  
14 where they wanted them.

15 Q. You can sit back down.

16 Now that we've seen the exciting video  
17 showing BEMA's printing operations and Mr.  
18 Trzupsek has explained how they operate and how  
19 they print a typical job, Mr. Trzupsek, in your  
20 opinion are the factors relating to BEMA  
21 substantially and significantly different than  
22 those printing operations considered by the  
23 Flexographic Printing Rule?

24 A. Yes, they are.

L.A. REPORTING, 312-419-9292

47

1 Q. In your opinion, do the existence of  
2 these factors justify an adjusted standard?

3 A. In my opinion, yes, they do.

4 Q. In your opinion, will the requested  
5 adjusted standard result in adverse environment  
6 and health effects?

7 A. In my opinion, it will not.

8 Q. In your opinion is the proposed  
9 adjusted standard consistent with federal laws,

10 specifically the Clean Air Act?

11 A. In my opinion, it is.

12 MS. SAWYER: Never mind.

13 BY MS. HORN:

14 Q. I just have one more question.

15 MS. SAWYER: Okay.

16 BY MS. HORN:

17 Q. Will the Board's granting of the  
18 proposed adjusted standard be submitted to  
19 United States EPA for review, do you know?

20 A. My understanding is that it will.

21 MS. HORN: Thank you. I have no  
22 further questions.

23 HEARING OFFICER KNITTLE: Ms. Sawyer,  
24 do you need a minute before cross-examination?

L.A. REPORTING, 312-419-9292

48

1 I know you had a -- sort of an  
2 objection there that you didn't end up making  
3 so.

4 MS. SAWYER: Yes.

5 HEARING OFFICER KNITTLE: If you want  
6 to address that particular point in  
7 cross-examination, you will be more than welcome  
8 to do so.

9 MS. SAWYER: I may have a question  
10 relevant to the partial or withdrawn objection  
11 that I started to make, but I do have a couple  
12 of questions that I wanted to ask.

13 CROSS-EXAMINATION

14 BY MS. SAWYER:

15 Q. During your testimony you stated that  
16 BEMA primarily performs surface printing. Does  
17 BEMA do other forms of printing such as reverse  
18 image or lamination?

19 A. I can't speak with an expert's voice  
20 whether they have ever done anything else other  
21 than -- but surface. I do not know the answer  
22 to that question.

23 Q. Would you have known if their printing  
24 presses are capable of doing these other forms

L.A. REPORTING, 312-419-9292

49

1 of printing, lamination or reverse image?

2 A. I am not -- I don't know anything that  
3 would preclude them from doing the reverse image  
4 job or doing a job that would eventually be  
5 laminated but, again, that is beyond my  
6 expertise.

7 MS. HORN: Would you perhaps want to

8 call Mr. Galloway or Mr. Clemons for these  
9 questions?

10 MS. SAWYER: Well, it might be helpful  
11 to get clarification on that point in terms of  
12 whether that is the only form of printing they  
13 do, yes. After we're done with this, if we can  
14 do that for a moment, that would be great.

15 HEARING OFFICER KNITTLE: Sure. We  
16 can either have you recall them or you can call  
17 them in your case in chief, however you two want  
18 to work it out.

19 Let's finish this gentleman up first  
20 and then we'll proceed.

21 BY MS. SAWYER:

22 Q. Okay. In the video there were a  
23 number of different pails containing inks that  
24 were used in the printing process. At the point

L.A. REPORTING, 312-419-9292

50

1 that the pails are connected to the press, can  
2 these pails be covered?

3 A. Yes, and they are.

4 Q. And does that prevent some  
5 evaporation?

6 A. It prevents some, but I'd say most of

7 your evaporation exists at the ink pan on the  
8 roller, but, yes, it does.

9 Q. The pan -- the ink pan on the roller,  
10 which I believe was a fairly open space that you  
11 showed there, can that pan be covered to prevent  
12 some evaporation of solvents?

13 A. It can and they are.

14 Q. They are covered?

15 A. Yes.

16 Q. The pans on the presses, the ink pans  
17 that the pails feed into?

18 A. Yes, while we were there we saw them  
19 actually installing the covers over them.

20 Q. Okay. I believe in your testimony you  
21 stated that there is a correlation between the  
22 viscosity test that the facility performs and  
23 the amount of VOM in the ink at that time?

24 A. Right.

L.A. REPORTING, 312-419-9292

51

1 Q. So can this viscosity test be used to  
2 determine the VOM content of the ink at any  
3 given time?

4 A. I believe that that could serve as a  
5 very useful surrogate.

6 Q. Just a couple more questions.

7 I actually don't know if they showed  
8 this part of the video here today, but we've  
9 reviewed it and throughout the process on  
10 different -- throughout the process BEMA will  
11 add solvent to the ink pails and it seems like  
12 they always use the same container that they --  
13 to add that solvent during that job?

14 A. Yes.

15 Q. Is that -- or is that container a  
16 standard size that they use?

17 A. I can't speak to that for BEMA. I  
18 think BEMA would be better to answer that.

19 Q. Okay. Do you know if it is possible  
20 for BEMA to measure the amount of solvent that  
21 is in the can at the beginning of the job and  
22 the amount of solvent that is in the can at the  
23 end of the job?

24 A. The qualification to that would be

L.A. REPORTING, 312-419-9292

52

1 that that can will be refilled several times,  
2 but if -- so I guess if I take that to can they  
3 know the amount of solvent used from that can in  
4 a given day, is that a fair way to state it?

5 Q. Or for a given job I guess.

6 A. For a given job, yes, that -- the  
7 total amount of solvent used that has been  
8 added, I think that is something BEMA can know.

9 Q. Okay. This is somewhat related to the  
10 earlier objection I had but, Mr. Trzupsek, do you  
11 have any legal background?

12 A. No.

13 MS. SAWYER: That's all we have.

14 HEARING OFFICER KNITTLE: Any  
15 redirect, Ms. Horn?

16 MS. HORN: I just have one question  
17 following up on Ms. Sawyer's question about  
18 total solvent added.

19 REDIRECT EXAMINATION

20 BY MS. HORN:

21 Q. Is that -- is that accurate -- in your  
22 opinion is that an accurate way to measure the  
23 amount of solvent in the ink?

24 A. It would not tell you how much solvent

L.A. REPORTING, 312-419-9292

53

1 is actually contained in the ink as applied.

2 Q. Why not?

3 A. Because the evaporation rate -- the

4 reason you add solvent is to maintain a certain  
5 VOM content. So you're adding solvent because  
6 solvent you previously added has evaporated.  
7 The VOM content is, therefore, a moving target,  
8 and if you counted all of the solvent that you  
9 added throughout the day against the total VOM  
10 content in the ink, you would show a much higher  
11 actual -- you'd show a much higher theoretical  
12 VOM content than what the actual VOM content as  
13 applied is.

14 MS. HORN: I have nothing further.

15 HEARING OFFICER KNITTLE: Ms. Sawyer,  
16 any recross?

17 MS. SAWYER: Yes, if I can just have  
18 one moment

19 RE-CROSS-EXAMINATION

20 BY MS. SAWYER:

21 Q. Mr. Trzupsek, I believe you already  
22 stated that the viscosity test could be used to  
23 determine the VOM content of ink at the time the  
24 test is taken, is that correct?

L.A. REPORTING, 312-419-9292

54

1 A. Yes.

2 Q. And does BEMA take a viscosity test

3 every time that they add solvent to the inks or  
4 shortly thereafter?

5 A. It's actually the reverse, the  
6 viscosity test is done and if it doesn't match  
7 the viscosity that they're shooting for, then  
8 they add solvent so then it will.

9 Q. And then afterward will they take  
10 another viscosity test?

11 A. I can't speak to whether that is  
12 always done or not, I believe it is, but I think  
13 Mr. Galloway might be better --

14 Q. It's your understanding that in most  
15 instances after they add solvent they would take  
16 another viscosity test?

17 A. I believe that is right.

18 Q. And wouldn't it be true that after  
19 they've added solvent, that would be the highest  
20 VOC content for that ink, is that --

21 A. Yes, I would agree, and that -- within  
22 the limits of the accuracy of that which I think  
23 we understand that I think is a very useful  
24 surrogate.

L.A. REPORTING, 312-419-9292

55

1 MS. SAWYER: Just take one more

2 moment.

3 BY MS. SAWYER:

4 Q. I just have a quick question about the  
5 82 percent limitation on VOM content that you  
6 are requesting as part of this adjusted  
7 standard.

8 In terms of how you're going to  
9 determine whether that 82 percent was met, were  
10 you including all of the additions of solvent  
11 that occur with a given ink in that average?

12 A. You mean not counting for -- just to  
13 clarify your question, as if none of it  
14 evaporated? So assuming that all additions  
15 stayed in the ink?

16 Q. No, I don't think that's what I mean.

17 Maybe this will help out. How did you  
18 reach that 82 percent monthly average?

19 A. We got that number by looking at their  
20 actual usage of both inks and solvent and  
21 picking what we thought would be a reasonable  
22 high number based on that usage.

23 Q. So you took essentially an inventory  
24 of product at the beginning of one month and

1           then an inventory at the end of that month and  
2           determined what was used both in terms of inks  
3           and solvents?

4           A.       It was a longer period of time, it was  
5           actually over a year, but, yes.

6           Q.       So to some extent, you may have  
7           included emissions that occurred outside of the  
8           actual printing process?

9           A.       Correct.

10          Q.       Evaporation that occurred?

11          A.       I wouldn't say outside of the actual  
12          printing process but if you're saying emissions  
13          that were not -- I mean, I see where you're  
14          going. Emissions that were not contained within  
15          the ink in a given moment, yes, I would say that  
16          is accurate, they would average in there.

17          Q.       So is this 82 percent number that is  
18          in the -- that you're requesting as an adjusted  
19          standard, is that an as applied number?

20          A.       Yes.

21          Q.       Although, as you calculated it for  
22          purposes of this petition, you didn't really  
23          calculate it as an as applied number?

24          A.       We estimated what the as applied

1           number should be based on the broadest set of  
2           records we could have.  You're saying did we  
3           look at as applied at the press?  No, there is  
4           no way we could do that for every ink we've ever  
5           used.

6           Q.       So is it possible that they would be  
7           able to meet a lower monthly number if you  
8           really looked at the as applied VOM content?

9           A.       In the sense that this is an estimate,  
10          anything is possible, but we believe this  
11          estimate represents most realistically of what  
12          is as applied.

13          MS. SAWYER:  I have no further  
14          questions.

15          HEARING OFFICER KNITTLE:  Ms. Horn,  
16          any re, redirect?

17          MS. HORN:  No.

18          HEARING OFFICER KNITTLE:  Thank you,  
19          sir.  You can step down.

20          Off the record.

21          (Off the record.)

22          HEARING OFFICER KNITTLE:  Back on the  
23          record.  Ms. Horn, do you have any further  
24          witnesses at this time?

1 MS. HORN: I do not.

2 HEARING OFFICER KNITTLE: Thank you.

3 Ms. Sawyer, we've talked off the  
4 record that you have one witness you'd want to  
5 call now.

6 MS. SAWYER: I would, yes. I would  
7 like to recall Mr. Galloway.

8 HEARING OFFICER KNITTLE: Sir, if you  
9 could step up and we're going to reswear you in.

10 (Witness sworn.)

11 GLEN GALLOWAY,  
12 called as the witness herein, having been first  
13 duly sworn, was examined and testified as  
14 follows:

15 HEARING OFFICER KNITTLE: Ms. Sawyer,  
16 your witness.

17 DIRECT EXAMINATION

18 BY MS. SAWYER:

19 Q. Good afternoon, Mr. Galloway, I just  
20 have a couple of questions and I've already  
21 asked them of Mr. Trzupsek but since you're more  
22 familiar with BEMA he suggested you would be the  
23 better person.

24 Does BEMA print using a lamination

1 technique on any occasions?

2 A. We don't have the capability of  
3 lamination.

4 We do have -- your second, next  
5 question about reverse printing, we have the  
6 capability of reverse printing.

7 Q. So your printing presses are not  
8 capable of printing with lamination?

9 A. Correct.

10 Q. Do you actually do reverse image  
11 printing?

12 A. In some cases.

13 Q. And how common is that, how frequent  
14 is that?

15 A. It's not very frequent. The  
16 difference between is where the customer would  
17 want the print, either on the surface or  
18 reversed, depending on where the -- what the  
19 application is. For example, if they want it  
20 surface printed, they don't want the print, the  
21 ink to touch the product that is inside the  
22 package. If they want it reverse printed, they  
23 wouldn't want the print or ink to come in  
24 contact with what is outside the package. So

1 basically the polyethylene is protecting the ink  
2 itself at that point.

3 Q. Could you give me any estimate on the  
4 percentage of your jobs that you use reverse  
5 image printing?

6 A. Out of 100 jobs we probably might do  
7 one job. Very, very rare, very rare.

8 Q. I also asked Mr. Trzupsek about the  
9 size of the containers that contain solvent that  
10 is added during printing jobs. Are those  
11 standard sized containers?

12 A. Yes, they are.

13 MS. SAWYER: Okay. That's all the  
14 questions we have.

15 HEARING OFFICER KNITTLE: Ms. Horn, do  
16 you have cross-examination?

17 MS. HORN: I have one very brief  
18 question.

19 CROSS-EXAMINATION

20 BY MS. HORN:

21 Q. In the containers that were shown on  
22 the video, is there a measurement on them?

23 A. Yes. So we can determine the volume  
24 of VO -- volume of solvent we put in there, yes.

1 MS. HORN: No questions.

2 HEARING OFFICER KNITTLE: Any  
3 follow-up?

4 MS. HORN: No.

5 HEARING OFFICER KNITTLE: You may step  
6 down.

7 Ms. Sawyer, any other witnesses you  
8 want to call at this point in time?

9 MS. SAWYER: No further witnesses.

10 HEARING OFFICER KNITTLE: You close  
11 your case in chief then?

12 You closed yours?

13 MS. SAWYER: Yes.

14 HEARING OFFICER KNITTLE: Anything in  
15 rebuttal?

16 MS. HORN: I have nothing.

17 HEARING OFFICER KNITTLE: We're not  
18 going to have any rebuttal testimony.

19 Are there any interested persons who  
20 have any testimony they wish to present at this  
21 point in time? I see none raising their hand.  
22 If in fact they were here, we'd allow them to  
23 come here and provide testimony on what they

24 want to provide.

L.A. REPORTING, 312-419-9292

62

1 But since we don't see anybody, we're  
2 going to move on to motions. Do we have any  
3 motions at the hearing?

4 MS. HORN: No.

5 HEARING OFFICER KNITTLE: Ms. Sawyer?  
6 No?

7 MS. SAWYER: No.

8 HEARING OFFICER KNITTLE: Which takes  
9 us to closing statements. You both know that  
10 you are not obligated to provide a closing  
11 statement. You will have opportunity to provide  
12 a closing brief as well. But if you want to  
13 provide a closing statement, Ms. Horn, now is  
14 your opportunity.

15 MS. HORN: I'd like a very brief one.

16 HEARING OFFICER KNITTLE: Please  
17 proceed.

18 MS. HORN: BEMA requested that the  
19 Board grant an adjusted standard as an  
20 alternative to the RACT regulation, which is  
21 known as the Flexograph Printing Rule.

22 To require BEMA to comply with the

23 requirements of 35 Illinois Administrative Code  
24 Subpart H, Section 218.401, would result in

L.A. REPORTING, 312-419-9292

63

1 substantial economic hardship to BEMA with no  
2 corresponding or adverse environment or health  
3 effects.

4 It is technically infeasible for BEMA  
5 to comply with the Flexograph Printing Rule  
6 because, 1, water-based inks do not work for  
7 their products, and 2, an oxidizer is the only  
8 control device that would work, 3), presents an  
9 unreasonable expense for design and  
10 installation. The presses were not designed  
11 with control in mind.

12 BEMA has met the four factors in  
13 Section 28.1 of the act, and therefore, BEMA  
14 respectfully requests that the Board grant BEMA  
15 an adjusted standard from 35 Illinois  
16 Administrative Code, Subpart H, Section 218.401  
17 as that rule applies to the emissions of VOM  
18 from the Flexographic Printing operations at  
19 BEMA located in Elmhurst, in DuPage County,  
20 Illinois.

21 HEARING OFFICER KNITTLE: Thank you,

22 Ms. Horn.

23 Ms. Sawyer, do you have any closing  
24 statement at this time?

L.A. REPORTING, 312-419-9292

64

1 MS. SAWYER: I do have a couple of  
2 statements.

3 As I believe the Petitioner has  
4 stated, they intend to do daily record keeping  
5 at their facility. And as I stated earlier,  
6 that is one of the areas that we think the Board  
7 should consider the adjusted standard.

8 We have had an opportunity to review  
9 the video fully for BEMA and we think that there  
10 are means that are feasible for this facility to  
11 do daily record keeping. What we intend to do  
12 is, you know, work with the facility to develop  
13 a method that would be workable for them to do  
14 daily record keeping.

15 Another thing that I'd like to add as  
16 this facility -- if they are granted an adjusted  
17 standard, as they begin the process of using  
18 daily record keeping, to the extent that this  
19 daily record keeping indicates that a lower  
20 monthly average than the 82 percent VOM content

21 currently under consideration is feasible, we  
22 would recommend that the facility come back in  
23 to revise the adjusted standard as appropriate  
24 if that were to incur.

L.A. REPORTING, 312-419-9292

65

1 And I think that is all I have to add.

2 HEARING OFFICER KNITTLE: Thank you.

3 Let's go off the record.

4 (Off the record.)

5 HEARING OFFICER KNITTLE: Back on the  
6 record.

7 We've had an off the record discussion  
8 about posthearing comments and briefs. Ms. Horn  
9 and Ms. Sawyer both informed me they do not  
10 intend to file posthearing briefs. Is that  
11 correct, Ms. Horn?

12 MS. HORN: That's correct.

13 HEARING OFFICER KNITTLE: Ms. Sawyer?

14 MS. SAWYER: That's correct.

15 HEARING OFFICER KNITTLE: So based on  
16 that representation I'm not going to set up a  
17 posthearing briefing schedule.

18 Posthearing comments pursuant to  
19 106.807 are allowed and both of you or any

20 interested party may file a posthearing comment  
21 within 14 days after the close of the hearing,  
22 which would take us to November 27th. So all  
23 public comments will be due by November 27,  
24 2000. If we receive any comments, and we've

L.A. REPORTING, 312-419-9292

66

1 also discussed this off the record, I'm going to  
2 allow either party to contact me by November  
3 27th to set up a limited briefing schedule to  
4 address that comment if they so desire.

5 That's all I have.

6 I do have to make a credibility  
7 determination based on my legal experience and  
8 judgment. I find no credibility issues with any  
9 of the witnesses here today and I note for the  
10 last time there are no members of the public  
11 wishing to provide comment. It's approximately  
12 2:40 p.m. That's all I have. Thank you very  
13 much.

14 I do want to note, and I almost  
15 forgot, we've had two exhibits offered,  
16 Petitioner's 1, which was a video and admitted,  
17 Petitioner's 2, which was the bag that was  
18 printed during the making of the video, which

19 was also admitted, I'm going take them both back  
20 with me to the Board. If you need them in the  
21 interim, please let me know. Thanks.  
22  
23  
24

L.A. REPORTING, 312-419-9292

67

1 STATE OF ILLINOIS )  
 )SS:  
2 COUNTY OF DU PAGE )

3 I, ROSEMARIE LA MANTIA, being first  
4 duly sworn, on oath says that she is a court  
5 reporter doing business in the City of Chicago;  
6 that she reported in shorthand the proceedings  
7 given at the taking of said hearing, and that  
8 the foregoing is a true and correct transcript  
9 of her shorthand notes so taken as aforesaid,  
10 and contains all the proceedings given at said  
11 hearing.

12  
13 -----  
14 ROSEMARIE LA MANTIA, CSR  
15 License No. 84 - 2661

16 Subscribed and sworn to before me  
17 this day of , 2000.

-----

18 Notary Public

19

20

21

22

23

24

L.A. REPORTING, 312-419-9292