

IN THE MATTER OF: )  
 )  
 WATER QUALITY STANDARDS AND )  
 EFFLUENT LIMITATIONS FOR THE )  
 CHICAGO AREA WATERWAY SYSTEM )  
 AND THE LOWER DES PLAINES RIVER; )  
 PROPOSED AMENDMENTS TO 35 ILL. )  
 ADM. CODE PARTS 301, 302, 303 )  
 AND 304. )

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 Pollution Control Board

TRANSCRIPT OF PROCEEDINGS held in the  
 above-entitled cause before Hearing Officer  
 Marie Tipsord, taken before Sharon L. Berkery,  
 CSR, at 160 North LaSalle Street, Room N-502,  
 Chicago, Illinois, on the 28th day of July, A.D.,  
 2009 commencing at 12:45 p.m.

1 APPEARANCES:

2

3 ILLINOIS POLLUTION CONTROL BOARD

4 Ms. Marie Tipsord, Hearing Officer

5 Mr. G. Tanner Girard, Acting Chairman

6 Ms. Andrea S. Moore, Board Member

7 Mr. Thomas E. Johnson, Board Member

8 Mr. Shundar Lin, Board Member

9 Mr. Gary L. Blankenship, Board Member

10 Ms. Alisa Liu, Environmental Scientist

11

12 HODGE, DWYER & DRIVER,

13 3150 Roland Avenue

14 P.O. Box 5776

15 Springfield, Illinois 62705-5776

16 217-523-4900

17 MS. KATHERINE D. HODGE,

18 MR. MATTHEW C. READ,

19 appeared on behalf of Corn Products

20 International.

21

22 ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

23 Ms. Stefanie Diers

24 Ms. Deborah Williams

1 APPEARANCES: (Cont'd.):

2

3 ENVIRONMENTAL LAW AND POLICY CENTER,

4 33 East Wacker Drive

5 Suite 1300

6 Chicago, Illinois 60601

7 312-795-3707

8 MS. JESSICA DEXTER,

9 appeared on behalf of ELPC, Prairie Rivers  
10 Network, and Sierra Club;

11

12 BARNES & THORNBERG, LLP,

13 One North Wacker Drive

14 Suite 4400

15 Chicago, Illinois 60606

16 312-357-1313

17 MR. FREDRIC ANDES,

18 appeared on behalf of the Metropolitan  
19 Water Reclamation District of Greater  
20 Chicago;

21

22 MR. ANDREW ARMSTRONG,

23 appearing on behalf of the People of the  
24 State of Illinois;

1 APPEARANCES (cont'd.):

2

3 FRANZETTI LAW FIRM, PC,  
4 Ten South LaSalle Street  
5 Suite 3600  
6 Chicago, Illinois 60603  
7 312-251-5590

8 MS. SUSAN FRANZETTI,  
9 appeared on behalf of Midwest  
10 Generation, LLC;

11

12 MS. CANDACE BOWER,  
13 appeared on behalf of USEPA Region 5.

14

15 ALSO PRESENT:

16 Mark K. Bosse, Tom A. Siil, Chai H. Rhee.

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23 REPORTED BY: SHARON BERKERY, C.S.R.

24

CERTIFICATE NO. 84-4327.

1 MS. TIPSORD: We are back on the  
2 record. Welcome, everybody, back. Thank you  
3 for promptly getting back after lunch.

4 And at this point in time, I think  
5 we are ready to move on to the prefiled  
6 testimony of Corn Products from James Huff.  
7 There you are. And do I pronounce it,  
8 Mr. Jirik and Mr. Idaszak?

9 Thank you very much. Ms. Hodge,  
10 Mr. Read?

11 MS. HODGE: Hearing Officer Tipsord  
12 and Board Members, thank you very much for  
13 the opportunity today to allow Corn Products  
14 to present testimony. My name is Katherine  
15 Hodge with the law firm Hodge, Dwyer &  
16 Driver. I'm here on behalf of Corn Products  
17 International, Inc.

18 My witnesses today are Mr. Alan  
19 Jirik, vice president of regulatory affairs  
20 for Corn Products; Mr. James Huff, vice  
21 president of Huff & Huff, Inc., a consultant  
22 for Corn Products; and Mr. Joseph Idaszak,  
23 general manager of Ambitech Engineering  
24 Corporation, another consultant of Corn

1 Products. As you may recall, Mr. Huff  
2 previously testified on behalf of Citgo in  
3 this proceeding, but he is here today to  
4 present testimony solely for Corn Products.

5 Also present are Mr. Mark Bosse,  
6 who is the safety and engineering manager at  
7 Corn Products, Mr. Tom Siil, staff engineer  
8 Corn Products, and Mr. Chai Rhee, of  
9 Ambitech. All are available to assist in  
10 answering questions today, if needed.

11 Matt Read, an associate from my  
12 firm, is here also. Mr. Jirik, Mr. Huff, and  
13 Mr. Idaszak are appearing as a panel today  
14 and for questions other than prefiled by  
15 Illinois EPA. They will answer questions  
16 collectively as appropriate.

17 Today's testimony will focus on  
18 the Agency's proposed use designation. And  
19 Corn Products reserves the right to provide  
20 testimony as to the Agency's proposed water  
21 quality standards at a later time.

22 Mr. Jirik, Mr. Huff, and  
23 Mr. Idaszak have brief summaries of their  
24 prefiled testimony that they would like to

1 offer for the record today. And then they  
2 would be happy to answer any questions.

3 We have copies of the prefiled  
4 testimony that we'd like to offer.

5 MS. TIPSORD: Could we swear in the  
6 witnessess first?

7 MS. HODGE: Certainly. And I would  
8 also like these gentlemen (indicating) to be  
9 sworn.

10 MS. TIPSORD: Swear if all witnesses,  
11 please.

12 (WHEREUPON, the witnesses  
13 were duly sworn.)

14 MR. READ: This is prefiled  
15 testimony --

16 MS. TIPSORD: Okay.

17 MR. READ: -- of Alan Jirik.

18 (WHEREUPON, the document was  
19 tendered to the Board.)

20 MS. TIPSORD: If there's no objection,  
21 we will mark that as Exhibit 303.

22 Seeing none, it is Exhibit 303.

23

24

1 (WHEREUPON, a certain document  
2 was marked Exhibit No. 303 for  
3 identification, as of 7/28/09.)

4 (WHEREUPON, the document was  
5 tendered to the Board.)

6 MR. READ: James Huff prefiled  
7 testimony.

8 MS. TIPSORD: No objections? If  
9 there's no objection, we'll mark that as  
10 Exhibit 304.

11 Seeing none, it is Exhibit 304.

12 (WHEREUPON, a certain document  
13 was marked Exhibit No. 304 for  
14 identification, as of 7/28/09.)

15 (WHEREUPON, the document was  
16 tendered to the Board.)

17 MR. READ: And Joseph Idaszak's  
18 prefiled testimony.

19 THE COURT: And if there is no  
20 objection, we will mark that as Exhibit 305.

21 Seeing none, it is Exhibit 305.

22 (WHEREUPON, a certain document  
23 was marked Exhibit No. 305 for  
24 identification, as of 7/28/09.)



1 MS. TIPSORD: And, actually, I noticed  
2 that some people did make it back in. So  
3 before we get into your summaries, we do have  
4 another exhibit that the people wanted to  
5 submit.

6 And you can identify yourself,  
7 again, for the record today.

8 MR. ARMSTRONG: Andrew Armstrong, for  
9 the People of the State of Illinois. And I  
10 have more papers prepared in connection with  
11 the prefiled testimony of Kevin K. Boyle,  
12 Ph.D., on behalf of the People of the State  
13 of Illinois.

14 MS. TIPSORD: If there's no objection?  
15 I know you're all just getting this book of  
16 material. If I am correct, Mr. Armstrong,  
17 this is material that was asked for during  
18 his testimony -- oral testimony?

19 MR. ARMSTRONG: Yes, it was discussed,  
20 and it is including data that was used.

21 MS. TIPSORD: If there's no objection,  
22 we will mark this as Exhibit 306.

23 Seeing none, it is Exhibit 306.  
24

1 (WHEREUPON, a certain document  
2 was marked Exhibit No. 306 for  
3 identification, as of 7/28/09.)

4 MS. TIPSORD: Thank you,  
5 Mr. Armstrong.

6 MR. READ: Madam Hearing Officer, we  
7 also have two more exhibits that we'd like to  
8 put in before we start.

9 MS. TIPSORD: Let me catch up.  
10 Thanks.

11 Okay. Go ahead, Mr. Read.

12 (WHEREUPON, the document was  
13 tendered to the Board.)

14 MR. READ: We have the resume of  
15 Joseph Idaszak.

16 MS. TIPSORD: All right. If there's  
17 no objection, we will mark the resume of  
18 Ambitech Engineering Corporation's, Joseph B.  
19 Idaszak as Exhibit No. 307.

20 Seeing none, it's Exhibit 307.

21 (WHEREUPON, a certain document  
22 was marked Exhibit No. 307 for  
23 identification, as of 7/28/09.)

24

1 (WHEREUPON, the document was  
2 tendered to the Board.)

3 MR. READ: And we also have the resume  
4 of Chai Rhee, of Ambitech.

5 MS. TIPSORD: If there's no objection,  
6 we will mark the resume of Ambitech  
7 Engineering Corporation's Chai H. Rhee as  
8 Exhibit 308.

9 Seeing no objection, we will mark  
10 that as Exhibit 308.

11 (WHEREUPON, a certain document  
12 was marked Exhibit No. 308 for  
13 identification, as of 7/28/09.)

14 MS. TIPSORD: Go ahead, gentlemen --  
15 or Ms. Hodge?

16 MS. HODGE: I have one more thing,  
17 too, please, Ms. Tipsord.

18 And this is just for  
19 clarification, that, as I mentioned before,  
20 Mr. Huff has testified previously in this  
21 proceeding for Citgo. And his report that's  
22 entitled Thermal Evaluation of the Chicago  
23 Sanitary and Ship Canal and the Calumet-Sag  
24 Channel, as it pertains to fishery quality.

1                   It has been admitted previously as  
2                   Exhibit 285. And that's the same report that  
3                   we'll be relying on today.

4                   MS. TIPSORD: Thank you.

5                   MS. HODGE: And, with that, Mr. Jirik?

6                   MR. JIRIK: Good afternoon. I'm Alan  
7                   Jirik, and I'm the vice president of  
8                   regulatory affairs at Corn Products  
9                   International, Inc.

10                   I'm here today on behalf of Corn  
11                   Products to discuss the aquatic life use  
12                   designation proposed by the agents of the  
13                   Chicago Sanitary and Ship Canal and it's  
14                   potential impact on Corn Products'  
15                   operations. Corn Products' Argo Plant is  
16                   located on Archer Avenue in Bedford Park, and  
17                   it has operated continuously at that location  
18                   for almost 100 years.

19                   The facility processes corn and  
20                   produces a variety of food products and  
21                   ingredients. And the plant is directly and  
22                   indirectly responsible for providing  
23                   approximately 3,000 jobs. As a part of its  
24                   operations, the facility is capable of

1 withdrawing up to 65 million gallons of water  
2 per day from the Sanitary and Ship Canal for  
3 noncontact cooling, and returns the warmed  
4 noncontact cooling water back to the canal  
5 pursuant to the conditions of the facility's  
6 NPDES permit.

7 The Sanitary and Ship Canal is a  
8 unique waterway. It is a manmade channel  
9 that was constructed primarily for the  
10 purpose of reversing the flow of the Chicago  
11 River to transport waste and diseases away  
12 from Lake Michigan.

13 The canal receives discharges from  
14 several facilities, including two Midwest  
15 Generation facilities upstream of Corn  
16 Products and the MWRDGC Stickney waste water  
17 treatment plant. In fact, according to  
18 Page 18 of the Agency's statement of reasons,  
19 the waste water treatment plants contribute  
20 70 percent of the total annual flow of the  
21 canal at the Lockport Powerhouse and Lock.

22 As you were aware, the Agency's  
23 proposal to designate a portion of the  
24 Sanitary and Ship Canal into which Corn

1 Products discharges, as incidental contact  
2 recreation waters and CAWS and Brandon Pool  
3 Aquatic Life Use B Waters. The proposal to  
4 characterize the canal as a Use B Water is  
5 inappropriate, because it fails to  
6 distinguish the unique characteristics of the  
7 canal from the characteristics of the other  
8 waters designated as Use B.

9           Significantly, as Mr. Huff will  
10 explain, the fisheries in the canal are  
11 impacted by habitat limitations and other  
12 nonthermal stressors, and thus designating  
13 the canal as a Use B waterway will provide no  
14 meaningful improvement to the fishery  
15 relative to current conditions. Further, the  
16 record does not support a Use B designation  
17 for the canal.

18           In addition, designating the  
19 Sanitary and Ship Canal as a Use B water,  
20 will jeopardize Corn Products' current use of  
21 canal water for noncontact cooling purposes.  
22 The canal does not meet the proposed Use B  
23 water quality standard for temperature. That  
24 is, the water at Corn Products' intake often

1 exceeds the proposed thermal water quality  
2 standard for Use B waters.

3 Accordingly, as I understand it, a  
4 no mixing zone would then be allowed. Even  
5 if the Sanitary and Ship Canal were to  
6 marginally meet the Use B thermal standard,  
7 the result would be that the canal water at  
8 or near the thermal standard, would not  
9 provide sufficient capacity to assimilate  
10 additional heat. Consequently, the proposed  
11 designation would eliminate Corn Products'  
12 current use of the canal for noncontact  
13 cooling water.

14 The Agency has testified that  
15 thermal water quality standards are  
16 technically feasible and economically  
17 reasonable because they can be met by using  
18 cooling towers, which have been employed at  
19 other facilities in Illinois. Corn Products  
20 consultant, Ambitech, has evaluated several  
21 options for compliance with the Agency's  
22 proposed rule and determined that the  
23 installation of cooling towers for Corn  
24 Products will cost approximately \$24 million.

1                   In another option, not only would  
2                   a cooling tower be necessary to comply with  
3                   the proposed rule, but Corn Products would  
4                   also have to install a mechanical cooling  
5                   system. The combined cost and installation  
6                   of the cooling tower and a mechanical cooling  
7                   system is approximately 44 to \$46 million and  
8                   does not reflect additional operating costs  
9                   as necessary to run the equipment to meet the  
10                  thermal standards.

11                  The Canal serves an important  
12                  social and industrial purpose in its receipt  
13                  of treated wastewater and dissipation of  
14                  thermal energy from industrial processes and  
15                  electrical generation. The Agency's proposed  
16                  Use B does not have a basis in the record and  
17                  would serve to deprive Corn Products of its  
18                  current use of the canal.

19                  In particular, the Agency provided  
20                  no fish data or other technical justification  
21                  for the setting of nonsummer thermal limits.  
22                  The Agency has not fully considered the  
23                  economical reasonableness or technical  
24                  feasibility of Corn Products' compliance with



1 the proposed aquatic use designation for the  
2 Sanitary and Ship Canal. Corn Products is  
3 quite interested in continuing to work with  
4 the Agency to develop a use and designation  
5 that recognizes the unique features and uses  
6 of the Sanitary and Ship Canal.

7 I thank you for the opportunity to  
8 testify, and look forward to your questions  
9 on these issues.

10 MR. HODGE: Thank you, Mr. Jirik.

11 Mr. Huff?

12 MR. HUFF: Good afternoon.

13 I am James Huff of Huff & Huff,  
14 Inc., an environmental consulting firm. I am  
15 here today on behalf of Corn Products to  
16 discuss the Use B designation proposed by the  
17 Agency for the Chicago Sanitary and Ship  
18 Canal.

19 The Sanitary and Ship Canal is a  
20 manmade channel carved from limestone,  
21 resulting in steep walls and a harsh aquatic  
22 environment with limited habitat. The  
23 physical habitat in the canal is core and  
24 limits the diversity of the aquatic life.

1                   Because of assessed limitation,  
2                   the balance of an indigenous population of  
3                   fish cannot be attained, as acknowledged by  
4                   the Agency at the hearing on January 28,  
5                   2008, the testimony of Scott Twait. In  
6                   addition, the Canal has an electric field  
7                   barrier to prevent nuisance species from  
8                   migrating into Lake Michigan and from Lake  
9                   Michigan into the Mississippi River basin.  
10                  It also prevents movement of all species  
11                  through the Canal.

12                   Special consideration should be  
13                   given to the thermal issues of the Sanitary  
14                   and Ship Canal because of the heat added to  
15                   the Canal by the discharges of industrial  
16                   users upstream of Corn Products, including  
17                   MWRDGC and Midwest Generation facilities.  
18                   However, the proposed Use B designation was  
19                   based largely in part on the data analysis of  
20                   the Agency's consultant, which was based on a  
21                   literature search of laboratory temperature  
22                   studies. The Use B designation was then  
23                   proposed based on what the Agency believes is  
24                   necessary to protect eight fish species and

1 then was discounted to incorporate what the  
2 Agency perceives as, quote, "background"  
3 temperature. In practice, the incorporation  
4 of background temperatures sets nonsummer  
5 temperature high enough so the NWRDGC would  
6 not need to install cooling towers.

7 The Agency's decision to discount  
8 its consultant's analysis implies that the  
9 cost of installing cooling towers at MWRDGC  
10 would not be justified -- to their question  
11 regarding whether the Agency considered other  
12 existing uses of the Canal. In addition, the  
13 Agency provided no fish data or other  
14 technical justification for setting nonsummer  
15 limits. Had the Agency factored in the  
16 thermal loading on the canal instead of  
17 arbitrarily setting the spring, fall months  
18 at MWRDGC effluent temperatures, the  
19 different regulatory proposal would have  
20 resulted.

21 The report compiled by my firm  
22 compares the temperature levels of fish found  
23 in the Sanitary and Ship Canal and the  
24 Calumet-Sag Channel. Both the Sanitary and

1 Ship Canal and the Calumet-Sag Channel are  
2 deep-draft man-made waterways with different  
3 thermal characteristics. The report assumes  
4 that the aquatic habitat in the Sanitary and  
5 Ship Canal and the Calumet-Sag Channel are  
6 similar and that temperature is the primary  
7 variable between the two waterways, so a  
8 comparison of the fisheries quality between  
9 the two waterways would be expected to  
10 identify limitations as caused by thermal  
11 stress. Likewise, within the Sanitary and  
12 Ship Canal, by comparing fish data for  
13 sampling points for different thermal  
14 characteristics, we would expect to identify  
15 limitations caused by thermal stress.

16 Our study concludes that the  
17 Sanitary and Ship Canal, Calumet-Sag Channel  
18 have similar fisheries quality. Thus, it  
19 appears that existing thermal inputs into the  
20 Canal are not a controlling or limiting  
21 factor in fisheries qualities.

22 Based on the Agency's proposed  
23 aquatic use designation and the associated  
24 proposed thermal standard, the Sanitary and

1 Ship Canal is thermally impaired and will  
2 necessitate that all dischargers whose  
3 temperatures exceed the proposed water  
4 quality standards reduce their thermal  
5 loading. A separate use category for the  
6 Canal is needed to address the uniqueness of  
7 the Canal and recognize existing uses and  
8 limitations of the Canal itself.

9 I would be happy to answer  
10 questions regarding my prefiled testimony.

11 MS. HODGE: Thank you, Mr. Huff.

12 Mr. Idaszak?

13 MR. IDASZAK: Good afternoon. My name  
14 is Joe Idaszak, and I am the general manager  
15 of Indiana operations for Ambitech  
16 Engineering Corporation, a company  
17 specializing in process industry retrofits  
18 for revamp projects.

19 Ambitech was obtained by Corn  
20 Products to evaluate the available options  
21 and maintain its current use of noncontact  
22 cooling water from the Chicago Sanitary and  
23 Ship Canal. In order for Corn Products to  
24 comply with the proposed thermal standard, it

1 would need to achieve end of pipe compliance  
2 since no mixing zone would be available.

3           Ambitech considers four options to  
4 determine the feasibility of continued use of  
5 the Sanitary and Ship Canal water for  
6 noncontact cooling. In Option 1, the current  
7 use case, Corn Products could not continue  
8 use of the Canal water for process cooling  
9 because the discharge would exceed the  
10 Agency's proposed water quality standards.

11           In Option 2, we evaluated the use  
12 of a cooling tower, which would require a  
13 suitable location for a tower that could  
14 handle 45,000 gallons per minute. To power  
15 the tower foundation structural supports and  
16 associated pumps, piping, and electrical  
17 service, Option 3 considered the use of a  
18 closed loop cooling system, which would  
19 consist of approximately 12 cooling towers,  
20 smaller in size than the cooling tower  
21 considered in Option 2, to service  
22 approximately 36 process units.

23           Option 4 considered the addition  
24 of a mechanical cooling system to the cooling

1 tower considered in Option 2. This would  
2 consist of a refrigerant compressor and  
3 evaporator system. Approximately 12,000  
4 375,000 tons of mechanical cooling would be  
5 required to meet period average temperature  
6 standards, and a building would also need to  
7 be constructed to provide shelter for the  
8 equipment from the weather.

9 To focus of Ambitech's evaluation  
10 was Option 2, because Corn Products needs to  
11 reduce canal water discharge temperature to  
12 maintain its current use, thereby eliminating  
13 Option 1, the installation, operation, and  
14 maintenance of multiple cooling towers and  
15 associated equipment required by Option 3  
16 would reasonably be expected to be higher  
17 than the costs associated with Option 2. So  
18 Option 3 was eliminated.

19 For Option 2, we completed an  
20 analysis to determine the capital cost to  
21 purchase and install a new cooling tower  
22 system. We based our conceptual engineering  
23 on the most likely area at the Argo site for  
24 a cooling tower for noncontact water from the

1 Canal. We provided rough design parameters  
2 to a cooling tower vendor and a candidate  
3 cooling tower was selected.

4 We also selected pumps based on  
5 hydraulic calculations and estimated the  
6 amount of electrical power and the quantity  
7 of concrete and steel needed, based on  
8 various factors. Ambitech concluded that the  
9 estimated cost of the installation of the  
10 cooling tower is approximately \$24 million  
11 dollars. The estimate does not account for  
12 the equipment outages, shutdown maintenance,  
13 or malfunction. An additional \$2 million  
14 would be needed for redundancy measures to  
15 ensure maximum system availability. Even if  
16 the approximately \$26 million was deemed  
17 economically reasonable and Corn Products  
18 installed the cooling tower, the engineering  
19 analysis indicated that there will be times  
20 of the year when the period average  
21 temperatures will still be exceeded.

22 Finally, as I stated in the  
23 prefiled testimony regarding Option 4, a  
24 mechanical cooling system would be installed



1 in addition to the cooling tower. The  
2 installation of the mechanical cooling system  
3 is estimated to cost an additional \$20  
4 million dollars.

5 It may be possible to maintain the  
6 current use of the Canal by combining Options  
7 2 and 4 and providing necessary redundancy to  
8 provide secure plant operation at a probable  
9 cost of approximately \$46 million. However,  
10 in my opinion, such a high cost is not  
11 reasonable, considering that the requirements  
12 for this system is intermittent on an  
13 unpredictable basis.

14 I'm happy to answer questions on  
15 my prefiled testimony. Thank you.

16 MS. HODGE: Thank you, Mr. Idaszak.

17 We are now ready to answer the  
18 Agency's prefiled questions, and we suggest  
19 that we go in the same order as our summaries  
20 of testimony, Mr. Jirik, Mr. Huff, and  
21 Mr. Idaszak.

22 MS. TIPSORD: That's fine.

23 MS. WILLIAMS: Good afternoon, Alan.

24 MR. JIRIK: Good afternoon.

1 MS. WILLIAMS: I'm going to start with  
2 our prefiled questions, so I'll start with  
3 No. 1.

4 Your testimony indicates that Corn  
5 Products uses the waters of the Chicago  
6 Sanitary and Ship Canal at its Argo plant for  
7 noncontact cooling proposes. Does Corn  
8 Products take intake temperature measurements  
9 of these waters? And if you want to answer  
10 the whole subpart, we also ask, does Corn  
11 Products take effluent temperature  
12 measurements? How frequently and at what  
13 sampling location?

14 MR. JIRIK: Regarding the intake  
15 temperature measurements, yes, we do take  
16 those. Regarding effluent, yes, we take  
17 those, as well.

18 The frequency is the monitoring  
19 device census temperature continues. And the  
20 sampling device location, the monitoring  
21 devices referred to are mounted inside the  
22 pipe, one on the intake pipe, the other on  
23 the discharge pipe located within the plant  
24 boundary about 1,000 lineal feet of pipe run

1 inland from the edge of the Sanitary and Ship  
2 Canal.

3 MS. WILLIAMS: Can you explain a  
4 little bit about the length of the pipe?

5 MR. JIRIK: Sure.

6 MS. WILLIAMS: Maybe just explain  
7 physically how that's set up for us.

8 MR. JIRIK: We have an intake  
9 structure on the bank, which contains the  
10 pump and the all the hardware necessary to  
11 take the water out, places it into a fairly  
12 large diameter pipe that then runs into the  
13 plant. The sensing devises, we -- it's  
14 somewhat circuitous, so we're trying to get  
15 the run of pipe as opposed -- so it wouldn't  
16 misrepresent so many feet in.

17 So it's -- from the point we would  
18 withdraw from the Canal, we're about a  
19 thousand feet of pipe inland. That would be  
20 the lineal feet. And our intake and out  
21 effluent are measured about the same point.  
22 And that's within our plant property.

23 So it's very accessible and easy  
24 for us to get to.

1 MS. WILLIAMS: How do you get to it,  
2 if you need to...

3 MR. JIRIK: Well, personally, either  
4 walk or take a vehicle. It's still kind of  
5 in the back remote parts of the plant. But  
6 it is within the plant perimeter within our  
7 security model.

8 MS. WILLIAMS: On Page 4, Paragraph 1  
9 of your testimony, you state, quote, "The  
10 cooling tower enabled Argo to avoid adding  
11 additional thermal loads of existing NPDES  
12 discharge and allows Corn Products to remain  
13 in compliance with the thermal limits in its  
14 NPDES permit. Thus, it is Corn Products'  
15 opinion that Argo is near the approximate  
16 limit of it's allowable thermal discharge to  
17 the Sanitary and Ship Canal water for cooling  
18 purposes at Argo."

19 What restrictions are placed in  
20 Corn Products' NPDES permit regarding intake  
21 and effluent temperatures?

22 MR. JIRIK: The NPDES permit requires,  
23 under special conditions on Page 3, the  
24 following regarding temperature. Quote,

1 "Temperature shall not exceed 93 degrees  
2 Farenheit, 34 degrees Celsius, more than five  
3 percent of the time, or 100 degrees  
4 Farenheit, 37.8 Celsius at any time at the  
5 edge of the mixing zone, which is defined by  
6 Rule 302.102 of the above regulations."

7 MS. WILLIAMS: So --

8 MS. HODGE: Excuse me. Ms. Williams,  
9 we do have copies of the facilities NPDES  
10 permit we can make available for the record.

11 (WHEREUPON, the document was  
12 tendered to the Board.)

13 MS. TIPSORD: If there's no objection,  
14 we will mark Corn Products International  
15 NPDES permit cover letter from the IEPA,  
16 March 24th, 2005, signed by Alan Keller, PE,  
17 Division of Water to Corn Products -- we will  
18 mark that as Exhibit 309, if there's no  
19 objection.

20 Seeing none, it's Exhibit 309.

21 (WHEREUPON, a certain document  
22 was marked Exhibit No. 309 for  
23 identification, as of 7/28/09.)

24 MS. TIPSORD: Go ahead, Ms. Williams.

1 MS. WILLIAMS: I know that you didn't  
2 write this special condition, but can you  
3 explain for us today what you believe it  
4 requires?

5 MR. JIRIK: Understanding, again, that  
6 I did not write it, but I can tell you what I  
7 believe the intent is, is that it establishes  
8 two limitations applicable at the edge of the  
9 mixing zone. The first limitation is  
10 93 degrees five percent of the time, the  
11 other limitation is 100 degrees at any time  
12 at the edge of the mixing zone.

13 MS. WILLIAMS: Would you agree to the  
14 statement that, essentially, the condition  
15 requires that Corn Products not cause a  
16 violation of the water quality standard in  
17 the stream? Is that, essentially, what  
18 you're saying? The special condition would  
19 prohibit Corn Products from causing that  
20 water quality violation, is that...

21 MR. JIRIK: I would believe that the  
22 permit draft of this was looking at the  
23 current standards and attempted to draft  
24 language commensurate with the current

1 standard to achieve a compliance with the  
2 limits that are on the books at the present  
3 time.

4 MS. WILLIAMS: How is compliance with  
5 this special condition determined?

6 MR. JIRIK: Using the data described  
7 in our response to your first question, Corn  
8 Products prepares a mixing zone calculation  
9 and compares the result of the limits that  
10 we -- to the limits of the NPDES that we  
11 previously discussed.

12 MS. WILLIAMS: Does Corn Products  
13 submit the results of those calculations to  
14 the Agency?

15 MR. JIRIK: Yes.

16 MS. WILLIAMS: Can you describe what  
17 format those are presented in?

18 MR. JIRIK: It is included in our  
19 Discharge Monitoring Report, our DMR.

20 MS. WILLIAMS: Does that take the form  
21 of just a single maximum value for the month,  
22 or do you provide more detailed calculations?

23 MR. JIRIK: We provide a weekly value  
24 in the DMR.

1 MS. WILLIAMS: And by "weekly," do you  
2 mean a weekly maximum or an average?

3 MR. JIRIK: The value reported is  
4 consistent with what the permit requires.

5 MS. HODGE: It's on Page 3.

6 MS. TIPSORD: It's the last sentence  
7 on the Special Condition No. 2.

8 MR. JIRIK: I would refer you to  
9 Page 2, the effluent limitations and  
10 monitoring.

11 MS. WILLIAMS: And this refers to --  
12 for temperature purposes, you're required to  
13 take a single reading once a week; is that  
14 correct?

15 MR. JIRIK: Yes.

16 MS. WILLIAMS: But then, in Special  
17 Condition No. 2, it talks about reporting a  
18 monthly maximum value on the DMR form; is  
19 that correct?

20 MR. JIRIK: It contains the language,  
21 "The monthly maximum value shall be reported  
22 on the DMR," correct.

23 MS. WILLIAMS: And I'm not trying to  
24 get tedious with this. I think our



1           understanding was that the data that is  
2           submitted is monthly maximum data, and you  
3           have testified that you have -- you collect  
4           continuous data.

5                        Would Corn Products be willing to  
6           provide, for the record, some reasonable  
7           period of continuous data as part of this  
8           proceeding?

9                        MR. JIRIK:  First of all, I would  
10          clarify that it senses continuously with any  
11          data recorder.  It's not a strip chart, it's  
12          in the world of electronics, where --

13                       MS. WILLIAMS:  Mr. Smoger was telling  
14          me I should ask you how often, and I said no.

15                       MR. JIRIK:  Unless it's the old world  
16          you could; but in the modern electronic  
17          world, it's much more complicated.  But I do  
18          believe that we have provided that  
19          information, it's part of Mr. Idaszak's --  
20          one of the attachments.

21                        So can we identify specifically --

22                       MS. HODGE:  We certainly can.

23                       MR. JIRIK:  Attachment B to Ambitech,  
24          that should already be in your possession.

1 MS. HODGE: It's the Ambitech report.

2 MR. READ: We have the report on CD.

3 MS. TIPSORD: Is that the same as what  
4 was prefiled?

5 MR. READ: Yes.

6 MS. HODGE: Yes.

7 MS. TIPSORD: Do we want to enter this  
8 as a separate exhibit, do you think, or --  
9 the report itself is already a part of his --  
10 although, you just gave me -- never mind.  
11 Let me stop and restate, just because I have  
12 it.

13 We will mark this as Exhibit 310  
14 if there's no objection.

15 Seeing none, it's Exhibit 310.

16 (WHEREUPON, a certain document  
17 was marked Exhibit No. 310 for  
18 identification, as of 7/28/09.)

19 MS. TIPSORD: I'm just confusing what  
20 I got printed off with what I actually have  
21 in the hearing record.

22 MS. WILLIAMS: Maybe it would be  
23 helpful, just for the record, for either  
24 witness to help explain which columns we

1 looked at for which type of data. Does that  
2 make sense? Because it's very tiny print.

3 MR. IDASZAK: To be perfectly honest,  
4 I had to blow it up so I could see it.

5 MS. WILLIAMS: That makes me feel  
6 better.

7 MS. TIPSORD: Can you give us an idea  
8 of where Attachment B is in this  
9 (indicating)?

10 MR. IDASZAK: Exactly, no. But  
11 approximately.

12 MR. READ: It would be Page 79.

13 MR. IDASZAK: Thank you.

14 MS. TIPSORD: I'm still not finding  
15 it. I'm sorry, can I see what it looks like?  
16 Have you guys found it?

17 MS. WILLIAMS: Yeah.

18 MS. DIERS: Attachment B.

19 MS. HODGE: Show the cover page --

20 MR. JIRIK: To help us, can I --

21 MS. HODGE: -- so we can answer your  
22 question better, please --

23 MR. JIRIK: Are you looking from which  
24 column is the influent data that we monitored

1 and which column is the effluent data that we  
2 monitored, is that the question?

3 MS. WILLIAMS: Make sure we all  
4 understand that, yes.

5 MR. JIRIK: Joe?

6 MR. IDASZAK: The fifth column is the  
7 discharge or effluent temperature. And the  
8 sixth column -- I'm looking at Page 1 of  
9 Attachment B.

10 The sixth column is the inlet  
11 influent temperature. The third column is  
12 the GPM flow rate.

13 MS. WILLIAMS: And you have one -- one  
14 point per day or one line across in the table  
15 per day?

16 MR. JIRIK: Daily average.

17 MS. WILLIAMS: So that represents the  
18 daily average?

19 MR. IDASZAK: Column 5 and Column 6  
20 represent the daily maximum.

21 MS. WILLIAMS: And how -- did we  
22 clarify how often recordings are taken, the  
23 maximum of how many values, if we know?

24 MR. JIRIK: My understanding is the

1 recordation of the stream of information, the  
2 stream of data, is not set on a fixed time  
3 sequence. But rather, the device will record  
4 data when it detects a change in temperature.

5 The system then is able to do a  
6 time-weighted average.

7 MS. TIPSORD: Can I ask a follow-up,  
8 Mr. Idaszak?

9 You were talking about what each  
10 of these columns represents. Just so I'm  
11 clear, I'm going to look at the very first  
12 line, 9/26/03.

13 MR. IDASZAK: Okay.

14 MS. TIPSORD: We have 32,045 gallons  
15 per minute; right?

16 MR. IDASZAK: Correct. Yes.

17 MS. TIPSORD: The first column with  
18 temperature, the 104 degrees, is that  
19 influent into Corn Products or effluent?

20 MR. IDASZAK: Effluent.

21 MS. TIPSORD: So they discharge at 104  
22 degrees?

23 MR. IDASZAK: That was the maximum  
24 reading.

1 MS. TIPSORD: And what they bring in  
2 from the Canal is 74 degrees?

3 MR. IDASZAK: That was the maximum for  
4 that day.

5 MS. TIPSORD: Okay.

6 MR. IDASZAK: This is at the end of  
7 the pipe temperature -- at the device.

8 MS. TIPSORD: Okay. Thank you.

9 MS. WILLIAMS: And then, moving to the  
10 next column where it says "Delta." Would  
11 that be what we talked about as Delta D or  
12 the change in temperature as a result of the  
13 process?

14 MR. IDASZAK: No. There's a  
15 difference between those two readings.

16 MS. WILLIAMS: Okay.

17 MS. FRANZETTI: I'm sorry,  
18 Ms. Williams, just for clarification on that.

19 So, Mr. Idaszak, when you say the  
20 difference between those two readings, the  
21 delta that appears in that column is the  
22 difference between the intake temperature  
23 daily max value and the discharge temperature  
24 daily max volume for that day?

1 MR. IDASZAK: That's correct.

2 MS. TIPSORD: Ms. Franzetti, you need  
3 to identify yourself for the record, please.

4 MS. FRANZETTI: Oh, I'm sorry. Susan  
5 Franzetti, counsel for Midwest Generation.

6 MS. WILLIAMS: So let's explain that  
7 last column now. Where it says, "RMZ 2  
8 degrees F."

9 MR. BOSSE: That's the temperature at  
10 the end of the mixing zone, using the core  
11 mix model, EPA's model, to determine that  
12 temperature. Using that method, that's what  
13 RMZ means.

14 MS. WILLIAMS: What do you plug in?

15 MR. BOSSE: You plug in the inlet  
16 temperature --

17 MS. TIPSORD: You need to face the  
18 court reporter and speak up.

19 MR. BOSSE: -- and the outlet  
20 temperature of the pipe and the discharge  
21 flow value of gallons per minute, and make an  
22 assumption for the Canal flow. You use a  
23 delusion ratio of core mix and come up with  
24 the temperature at the end of mixes.

1 MS. WILLIAMS: Can you just explain a  
2 little more how the delusion ratio is  
3 determined?

4 MR. BOSSE: The delusion ratio is  
5 based on -- the delusion ratio is from the  
6 core mix model -- are you familiar with that?  
7 Mr. -- got together and got a water model.

8 MS. WILLIAMS: We've heard of it.

9 MR. BOSSE: The delusion is provided  
10 by the model. So we don't go out and  
11 actually sit and measure it -- find out where  
12 it is and measure it.

13 MS. WILLIAMS: Can you tell us what  
14 the Canal --

15 MR. BOSSE: It tells you the delusion  
16 ratio. A bunch of parameters.

17 MS. WILLIAMS: I'm just trying to  
18 understand this.

19 The Canal flow is constant, or  
20 does the model assume various --

21 MR. BOSSE: We use seven Q10 values.

22 MS. WILLIAMS: Okay.

23 MS. FRANZETTI: If I may follow up  
24 again to make sure I understand?



1                   So if I understand correctly,  
2                   every time you run the model, you are using a  
3                   constant flow value for the Sanitary and Ship  
4                   Canal, which is the equivalent of its seven  
5                   Q10 volume?

6                   MR. BOSSE: That's essentially  
7                   correct.

8                   MS. FRANZETTI: Okay.

9                   So would you agree, then, that  
10                  your calculations tend to be a bit  
11                  conservative?

12                 MR. BOSSE: Yes. For compliance they  
13                 have to be --

14                 THE COURT REPORTER: I'm sorry, I  
15                 can't hear you.

16                 MR. BOSSE: Yes, for compliance they  
17                 have to be somewhat conservative, and that's  
18                 how we use it.

19                 MS. FRANZETTI: Thank you.

20                 MS. WILLIAMS: And so, the assumption  
21                 would be that -- and would it be correct to  
22                 say that any time the flow in the Canal is  
23                 greater than the seven Q10, Corn Products  
24                 could have additional mixing available to it

1 at the same time, that it does not rely on in  
2 it's analysis. Is that correct?

3 MR. BOSSE: Possibly.

4 MR. JIRIK: Can I try?

5 It's my understanding that if  
6 there was more volume in the Canal then the  
7 values you were seeing, there would likely be  
8 lower temperature. So you had used the term  
9 "more mixing." We're not calculating mixing,  
10 we were looking at the temperature at the  
11 edge of the mixing zone. The higher volume  
12 has a lower temperature, so the values you  
13 have are conservative.

14 MS. WILLIAMS: But the temperatures  
15 that you're reporting are not occurring at  
16 seven Q10 flows in your table; correct?

17 MS. FRANZETTI: Objection. Sometimes  
18 they are.

19 MS. WILLIAMS: I mean, they're not all  
20 occurring at seven Q10; correct? They are  
21 occurring at whatever the flow happens to be  
22 on the day the temperatures are taken.

23 MR. BOSSE: That's correct. We don't  
24 have access to flow data in the Canal, so we

1 don't know what it is every day.

2 MS. WILLIAMS: I am agreeing with you.  
3 I think I am agreeing with you, that the  
4 values are conservative.

5 MR. JIRIK: Right.

6 MS. WILLIAMS: Which is then why I  
7 asked the next question, doesn't that  
8 conservatism mean that when the flows are  
9 higher there could be more mixing available  
10 to Corn Products that you are not at this  
11 time trying to take advantage of in an effort  
12 to make sure you're in compliance?

13 MS. FRANZETTI: Just for the record,  
14 I'm going to object to the form of the  
15 question. Because I think you also have to  
16 take into account in answer to that question  
17 what the ambient temperature at that higher  
18 flow value in the receiving stream, as well  
19 as, potentially, some other factors that  
20 counsel isn't including in the hypothetical.

21 MS. WILLIAMS: We have the actual  
22 temperatures, but we don't have the actual  
23 flows. I'm not trying to --

24 MS. FRANZETTI: They don't have the

1 temperature on the receiving stream. You  
2 have your intake and their discharge.

3 You don't have the temperature at  
4 your hypothetical higher flow.

5 MS. WILLIAMS: I'm not trying to  
6 hypothesize the higher flow. I'm trying to  
7 suggest that -- well, I mean, I -- if  
8 Mr. Jirik doesn't understand, that's fine.

9 MR. JIRIK: One moment.

10 MS. FRANZETTI: Ms. Williams, I'm only  
11 trying to suggest that, at best, they can say  
12 their calculations are a bit conservative.  
13 And I don't know that you can get more  
14 precise than that, unless you go into a lot  
15 of detail. That's all I'm suggesting.

16 MR. JIRIK: So if I understand your  
17 question, again, I'm framing it so you  
18 understand the basis of my answer.

19 If -- all of the things being  
20 equal, if the flow volume in the Canal were  
21 greater than seven Q10, would we generate the  
22 same numbers you're seeing there? The answer  
23 is no. We believe the numbers would be  
24 lower.

1 MS. WILLIAMS: Does corn -- I mean, I  
2 think the answer has already been addressed,  
3 but Subpart H says that Corn Products  
4 collects temperature data. The answer to  
5 that is no?

6 MR. JIRIK: No, we calculate it.

7 MS. WILLIAMS: Let's go back up to  
8 Subpart D.

9 Have the effluent temperatures at  
10 Corn Products ever exceeded the proposed CAWS  
11 Aquatic Life Use B daily maximum temperature  
12 of 90.3 degrees Farenheit?

13 MR. JIRIK: As we measured at the  
14 sampling location I previously described,  
15 yes.

16 MS. WILLIAMS: If so, did the  
17 exceedances occur for more than two percent  
18 of the hours on the previous flow period?

19 MR. JIRIK: Yes.

20 MS. WILLIAMS: Does this incur in  
21 certain months of the year or throughout the  
22 year?

23 MR. JIRIK: I do not know. We  
24 established that it was greater than two

1           percent, that's as far as being irrigated,  
2           the data.

3                       MS. WILLIAMS: That's fine.

4                       MS. BOWER: Can I ask a question?

5                       THE COURT REPORTER: Will you identify  
6           yourself, please?

7                       MS. BOWER: Yes. Candace Bower, USEPA  
8           Region 5.

9                               Are you talking about the  
10          temperature that is at the end of the pipe,  
11          or are you talking about the temperature that  
12          they're reporting at the edge of the mixing  
13          zone?

14                       MS. TIPSORD: I believe the question  
15          is -- at the monitoring point.

16                       MS. BOWER: Thank you.

17                       MS. TIPSORD: Because that's the data  
18          we have at the monitoring point.

19                       MS. BOWER: Thank you.

20                       MR. JIRIK: No, we're not able to take  
21          it any further than that.

22                       MS. WILLIAMS: Okay. Subpart E.

23                               Does Corn Products effluent  
24          temperature ever exceed 93.9 degrees

1 Farenheit?

2 MR. JIRIK: As measured at the  
3 sampling location, as we previously  
4 described, yes.

5 MS. WILLIAMS: And Question F asks  
6 what the highest recorded effluent is in the  
7 last five years?

8 MR. JIRIK: To the best of our  
9 knowledge, the highest daily average was 111  
10 degrees Farenheit. This was in July 2005.

11 Please note, this is the effluent  
12 sampling location, not the mixing zone.

13 MS. FRANZETTI: Susan Franzetti again.

14 I'm sorry, Mr. Jirik, did you say  
15 the highest daily average or daily max?

16 MR. JIRIK: Daily average.

17 MS. FRANZETTI: Daily average, okay.

18 MS. WILLIAMS: Do you know about the  
19 highest daily max?

20 MR. JIRIK: We did not determine that.  
21 I'm not prepared to answer that question.

22 MS. WILLIAMS: How far in the  
23 distance, on the Sanitary and Ship Canal, is  
24 the intake pipe from the effluent discharge

1 pipe, approximately?

2 MR. JIRIK: A couple of hundred feet,  
3 is that as much -- I'd say 100 maybe 200  
4 hundred feet, they're quite close together.

5 MS. TIPSORD: Can I ask -- excuse me.  
6 Can I ask a follow-up question, it may be a  
7 silly question.

8 Is the influent upstream of the  
9 effluent?

10 MR. JIRIK: Yes.

11 MS. TIPSORD: Thank you.

12 MS. WILLIAMS: So have you done an  
13 analysis of whether the intake is impacted at  
14 all by the effluent? Do you know what I'm  
15 saying?

16 MR. JIRIK: Based on our visual  
17 observations, we do not believe that that  
18 phenomenon is occurring.

19 MS. WILLIAMS: Okay. And by "visual,"  
20 does that mean, you know, the steam coming  
21 up? Do you see where it's headed, or what do  
22 you mean by visual?

23 MR. JIRIK: At the point of discharge,  
24 there's an energy diffuser, if you will, that



1 creates like a great splashing, if you will,  
2 in the water. So that gives you kind of a  
3 visual marker as the water is -- it's kind of  
4 a big splash, and you see it go out into the  
5 Canal.

6 MS. WILLIAMS: Thank you.

7 What is the design average flow of  
8 the Argo plant?

9 MR. JIRIK: If, by that question, you  
10 mean what is the design pumping capacity of  
11 the water withdrawal pumps taking water from  
12 the Sanitary and Ship Canal for noncontact  
13 cooling, our answer is, the peak design value  
14 is about 65 million gallons per day.

15 MS. WILLIAMS: So when you say the  
16 "peak design value," was this a maximum as  
17 opposed to an average?

18 MR. JIRIK: It's the summation of the  
19 rated capacity of each of the pumps.

20 MS. WILLIAMS: Part of this question  
21 asks do you know what the seven Q10 flow of  
22 the Chicago Sanitary and Ship Canal is at the  
23 Corn Products facility?

24 MR. JIRIK: We believe that it is

1 1,014, that's one zero one four, cubic feet  
2 per second. I personally have not verified  
3 this figure.

4 My understanding is this value  
5 came from a person called Jan Nelly at the  
6 IEPA and was provided to us in August of  
7 2004.

8 MS. WILLIAMS: What portion of the  
9 Chicago Sanitary and Ship Canal does Corn  
10 Products use for cooling water?

11 MR. JIRIK: At a typical canal flow of  
12 approximately 2,100 CFS, and considering Corn  
13 Products average of 36 million gallons per  
14 day, it would yield a typical usage of 2.8  
15 percent.

16 MS. WILLIAMS: And Subpart B of that  
17 question asks, what proportion of the Argo  
18 Plant effluent is discharged to the Chicago  
19 and Sanitary and Ship Canal, as opposed to  
20 being sent to MWRDGC for treatment?

21 MR. JIRIK: If the intent of the  
22 question is to determine or ask what portion  
23 of the water withdrawn from the Sanitary and  
24 Ship Canal is returned to the Canal, what

1           portion is evaporated, and what portion is  
2           discharged to the MWRD, then our answer is  
3           that approximately 99.4 percent is returned  
4           to the Sanitary and Ship Canal, approximately  
5           2/10 of one percent is sent to the MWRD, and  
6           approximately 4/10 of one percent is  
7           evaporated.

8                   MS. WILLIAMS:   Could you please repeat  
9           the caveat of that?  You said that's the  
10          percentage of water withdrawn for cooling  
11          purposes?

12                   MR. JIRIK:   The percentage of water  
13          that is withdrawn from the Sanitary and Ship  
14          Canal.

15                   MS. WILLIAMS:   Period, the total.

16                   MR. JIRIK:   So I'm giving you the --  
17          per -- when we have our pumps, we take all  
18          that water out.  What I'm giving you, then,  
19          is the distribution of what happens to the  
20          water we withdraw.

21                   MS. WILLIAMS:   So...

22                   MR. JIRIK:   So 99.4 goes back, 2/10 of  
23          one percent goes to the MWRD and 4/10 is lost  
24          to the atmosphere.

1 MS. WILLIAMS: And then the 2/10 of a  
2 percent are a particularized process stream  
3 that's sent to MWRD?

4 MR. JIRIK: Yeah, it's blow-down from  
5 a cooling tower.

6 MS. WILLIAMS: So am I incorrect  
7 that -- I think I was under the impression  
8 that Corn Products used water for other  
9 process systems than noncontact cooling. Is  
10 other water used for those purposes, not the  
11 Sanitary and Ship Canal water?

12 MR. JIRIK: Well, we have focused on  
13 the Sanitary and Ship Canal, because that is  
14 the focus of the rulemaking.

15 MS. WILLIAMS: Right.

16 MR. JIRIK: We do have water -- for  
17 example, it's Lake Michigan water supplied by  
18 the Village of Bedford Park. But those are  
19 separate springs, and they do not comingle.

20 So the reason for my decision was  
21 to answer the question relative to the Ship  
22 and San.

23 MS. WILLIAMS: Thank you.

24 And the -- I mean, just to finish

1 up the point.

2 The water that's used from Bedford  
3 Park is all sent to Metropolitan Water  
4 Reclamation; is that correct?

5 MR. JIRIK: It's not discharge. It  
6 doesn't go to the Ship Canal, but some of it  
7 would go out with our product, for example.

8 MS. WILLIAMS: Oh.

9 MR. JIRIK: Some may be lost in  
10 evaporation. So I can't say that all --

11 MS. WILLIAMS: But you can say that  
12 none of it goes to the Ship Canal?

13 MR. JIRIK: To give an absolute that  
14 none goes, we would need to check a  
15 particular process. We believe there may be  
16 some authority to do it, we're not aware that  
17 it does occur.

18 But, to be accurate, we can follow  
19 up with that after we do a proper  
20 investigation. And we'll provide that answer  
21 later.

22 MS. WILLIAMS: Thank you.

23 MS. TIPSORD: Ms. Williams, Ms. Moore  
24 has a follow-up.

1 MS. MOORE: I just had a question,  
2 because I think maybe I've gotten myself  
3 mixed up with my notes, so I need to clarify.

4 Did I understand you say under  
5 Question 2A what portion of the  
6 Chicago Sanitary and Ship Canal does Corn  
7 Products use for cooling? You put 36 million  
8 gallons a day?

9 MR. JIRIK: Using our average  
10 intake -- and this is an average, understand,  
11 of 36 million gallons per day, that -- if you  
12 look on a longer-term basis, in the last year  
13 or so, that was an average amount per day  
14 that we were pumping out of the Canal.

15 MS. MOORE: Okay.

16 MR. JIRIK: And then, for my other  
17 answer, 99.4 of that went back.

18 MS. MOORE: Right. But then up a  
19 little bit earlier I wrote 65 million gallons  
20 per day intake.

21 MR. JIRIK: That is our rated  
22 capacity. So we are capable -- we have  
23 equipment that is capable of pumping as much  
24 as 65.

1 MS. MOORE: Okay.

2 MR. JIRIK: But we have not -- as  
3 based on the average, we have not run at the  
4 capacity of those, we've been averaging --  
5 again, around 36, that was the last year.

6 MS. MOORE: Okay. So you just,  
7 generally, mix a small amount of cooling  
8 water from Bedford -- or from the  
9 municipality?

10 MR. JIRIK: The municipality is  
11 separate and is not discharged. There's one  
12 small source we need to verify, because I  
13 can't say with absolute certainty.

14 So, by and large, the lake water  
15 in Bedford, being a pure water, is used more  
16 where you have -- than for a food plant. And  
17 so, we're using that water more in the direct  
18 content of the manufacture of food and  
19 ingredients.

20 MS. MOORE: So it's not necessarily  
21 used for cooling as much?

22 MR. JIRIK: Not necessarily. I'm not  
23 saying there aren't places where we may use  
24 it for that. But the sanitary water is used

1 primarily for food.

2 MS. MOORE: Thank you.

3 MS. TIPSORD: Go ahead, Ms. Williams.

4 MS. WILLIAMS: I'm going to skip  
5 Question 3.

6 In Question 4 on Page 8 of your  
7 testimony you say that the Chicago Sanitary  
8 and Ship Canal is more like an aqueduct than  
9 a natural stream or river. Can you explain  
10 what you mean by "natural" in this context?

11 MR. JIRIK: According to the American  
12 Heritage Dictionary of the English Language,  
13 a river is, quote, "A large natural stream of  
14 water emptying into an ocean, lake, or other  
15 body of water, and is usually fed along its  
16 course by converging tributaries," end quote.

17 Natural streams result from  
18 geomorphology of the land circuit and develop  
19 over thousands of years. Such geomorphology  
20 often results in tinuosity and gradual flow.

21 MS. WILLIAMS: Does natural, in this  
22 context, as being used in that definition or  
23 in your definition, allow room for man -- the  
24 influence of man, such as channelization?



1 MR. JIRIK: A natural river can  
2 experience changes or modifications due to  
3 the activities of man. The water in this  
4 case preceded man, and the water body was not  
5 created by man. But the naturally created  
6 body of water, man may experience some  
7 influences, yes.

8 MS. WILLIAMS: Can you explain in this  
9 regard how the Sanitary and Ship Canal would  
10 be different from -- and I have listed a  
11 variety of water bodies here, the Chicago  
12 River, the North Branch below the North  
13 Avenue Turning Basin, South Branch Chicago  
14 River, South Fork of South Branch, Brandon  
15 Pool, Lake Calumet connecting channel?

16 MR. JIRIK: I believe that the  
17 majority of the segments you have listed  
18 resulted from natural geomorphological  
19 processes and evolved and matured over  
20 thousands of years. Thus, these are natural  
21 rivers or streams.

22 They may have experienced some  
23 changes due the influence of people, but  
24 their origin is natural.

1 MS. WILLIAMS: Would you agree that  
2 many of these branches have very steep side  
3 channels that have been -- vertical walls and  
4 steep -- deep vertical walls, deep draft  
5 segments? You'd agree with that statement;  
6 correct?

7 MR. JIRIK: I don't have knowledge  
8 that enables me to answer that question.

9 MS. WILLIAMS: So you don't know if  
10 these water bodies have vertical-sided walls,  
11 but you know they're of natural origin?

12 MR. JIRIK: If you're asking me do I  
13 know that the list of segments that you read  
14 previously are constructed in the way you  
15 explain, I do not have personal knowledge  
16 relative to a design and structure of these  
17 water bodies. I do not.

18 MS. WILLIAMS: Can you point to  
19 something in the use designation proposed for  
20 the Sanitary and Ship Canal by the Agency  
21 that attempts to consider that body of water  
22 a natural river or capable of attaining the  
23 status of a natural river?

24 MS. FRANZETTI: Object to form. I

1 don't understand the question.

2 MS. WILLIAMS: Isn't it Subpart D,  
3 Mr. Jirik?

4 MR. JIRIK: So the question, where in  
5 the proposed use designation is the Chicago  
6 Sanitary and Ship Canal considered a natural  
7 river?

8 MS. WILLIAMS: That's the question I  
9 was trying to ask.

10 MR. JIRIK: My reply is the use  
11 designation seeks to characterize similar  
12 bodies of water. And having characterized  
13 them, then proceed to group them for the  
14 purposes of establishing water quality  
15 standards consistent with and appropriate for  
16 the group.

17 The Chicago Sanitary and Ship  
18 Canal was dry land 110 years ago. Most of  
19 the segments listed in the prior question are  
20 waters that arose from natural  
21 geomorphological processes.

22 While these natural waters have  
23 been modified, they are natural in origin and  
24 do maintain vestiges of a natural river. The

1 Chicago Sanitary and Ship Canal is a hand and  
2 machine carved stone wall lined conduit  
3 through which water flows as a result of the  
4 works of people. We believe the segment is  
5 of sufficient difference to merit a separate  
6 classification -- and I would note Mr. Huff's  
7 testimony provided more specific and further  
8 detail regarding this.

9 MS. WILLIAMS: What vestiges of a  
10 natural river do these other segments retain  
11 that you're referring to in that?

12 MS. HODGE: I'm going to object. I  
13 think Mr. Jirik has already testified he  
14 doesn't have personal knowledge --

15 MS. WILLIAMS: And then he went on to  
16 say those other water bodies, unlike this  
17 one, retain these vestiges of a natural  
18 river.

19 MR. JIRIK: Off the top of my head,  
20 their physical location was derived by  
21 natural geomorphological processes. So  
22 they're not naturally dry land or naturally a  
23 place where water moves.

24 MS. WILLIAMS: Wasn't the Cal-Sag

1 Channel also once dry land?

2 MR. JIRIK: I am not familiar with the  
3 Cal-Sag.

4 MS. WILLIAMS: Do you know whether the  
5 Des Plaines River at one time flowed through  
6 portions of the area currently covered by  
7 Chicago Sanitary and Ship Canal?

8 MR. JIRIK: I know that the Chicago  
9 Sanitary and Ship Canal was dug. And, by  
10 inference, it was dry.

11 If you go back to the place to --  
12 the whole area was under water. I don't know  
13 how to answer the question beyond that.

14 MS. WILLIAMS: I think -- I think I'm  
15 just trying to get at the core of what you're  
16 seeing as the uniqueness of the Sanitary and  
17 Ship Canal. So if I am understanding your  
18 testimony, the full -- you know, the focus of  
19 the significance is that it was dug from  
20 land; is that correct?

21 MR. JIRIK: That would not be the  
22 sole -- and our expert, Mr. Huff, I  
23 believe --

24 MS. HODGE: Mr. Huff has testified to

1 this in his prefiled testimony.

2 MR. JIRIK: And I'm deferring to his  
3 expertise. But I believe that he said it  
4 contains limited shallow areas along the  
5 shoreline, it contains a lack of suitable  
6 physical habitat for a more diverse aquatic  
7 community, experiences frequent disturbances  
8 caused by a high degree of the barge traffic,  
9 contains poor substrate -- contains poor  
10 substrate material, provides little in-stream  
11 coverage, is channelized, exhibits no  
12 sinuosity, contains no backwater areas at the  
13 tributary mouth, requires routine dredging to  
14 maintain channel depth, contains normal slope  
15 and low flow velocity, is bordered by  
16 predominantly commercial and industrial  
17 shoreline, is manmade, contains pollution  
18 loads from combined overflows, carries  
19 treated wastewater effluent that represents  
20 70 percent of the flow on an annual basis,  
21 contains thermal discharges from multiple  
22 coal-fired power plants, contains electric  
23 fish barrier, and is important to the  
24 economic wellbeing of the Chicago area. And

1 taken in total, when one considers all of  
2 those, as a collective, we feel those were  
3 unique and distinguishing features.

4 MS. TIPSORD: I would like to note for  
5 the record that Mr. Huff's prefiled testimony  
6 for Citgo was admitted as Exhibit 285.

7 MS. WILLIAMS: And I'll just say also,  
8 for the record, you said that they would be  
9 available at the panel for other questioners.  
10 And that's fine. If you're uncomfortable at  
11 some point, if you want Mr. Huff to answer,  
12 that would be fine.

13 MS. HODGE: Thank you.

14 MR. GIRARD: So, in summary,  
15 Mr. Jirik, what you're proposing is that  
16 there be an Aquatic Life Use C for the  
17 Chicago Sanitary and Ship Canal. Is that  
18 what you're proposing?

19 MR. JIRIK: We believe that would be  
20 merited and we would be quite interested to  
21 work with the Agency in creating that  
22 possibility -- you know, if we're able to  
23 accomplish that, yes.

24 MR. GIRARD: So my second question is,

1 at some time in the future, are you going to  
2 present proposed language for that kind of a  
3 regulation?

4 MR. JIRIK: We would want to -- we  
5 would -- a preferred path would be to spend  
6 some time working with the Agency in that  
7 regard to see what may be able to be  
8 developed and brought forward. If that is  
9 the optimum way to do this, that would be  
10 quite positive.

11 If one looks further into the  
12 biological justification for the nonsummer  
13 thermal limits, and looks through all of the  
14 stream segments, you know, maybe there are  
15 some things to look at there. What we are  
16 looking for at the end of the day, is a  
17 technically, biologically-justified standard  
18 to address thermal on the Sanitary and Ship  
19 Canal, recognizing it's very peculiar --  
20 because that strikes me as peculiar -- a  
21 collection of attributes that it  
22 demonstrates.

23 So that's our ultimate desire with  
24 regards to this proceeding.



1 MR. GIRARD: Thank you.

2 MS. WILLIAMS: To follow up on that,  
3 would you still feel a UC designation was  
4 needed if Corn Products was more comfortable  
5 with the thermal standard under consideration  
6 by the Board or as proposed by the Agency?

7 MR. JIRIK: If the proposal moving  
8 forward contained differing thermal limits  
9 than those contained in the role as to  
10 presently, we would carefully and  
11 appropriately re-evaluate our position.

12 MS. WILLIAMS: With regard to the  
13 description of the Sanitary and Ship Canal as  
14 being more like an aqueduct, in your  
15 experience, Mr. Jirik, are you aware of other  
16 water bodies in the state that also would  
17 resemble what you consider an aqueduct, or  
18 are more like an aqua duct, that may actually  
19 be characterized as a general use water body?

20 MR. JIRIK: I --

21 MS. WILLIAMS: \_ You don't know one way  
22 or the other? \_

23 MR. JIRIK: I'm not aware of any. I  
24 don't know.

1 MS. WILLIAMS: Question 5.

2 Your testimony states on Page 8  
3 that the Chicago Sanitary and Ship Canal  
4 provides a commercially important navigation  
5 function. Is this different from Upper  
6 Dresden Island Pool, Brandon Pool, South  
7 Branch Chicago River, Cal-Sag Channel?

8 MR. JIRIK: My testimony sites to  
9 Page 32 of the CDMUAA report Attachment B to  
10 Illinois EPA's initial filing, which explains  
11 the primary purposes for constructing the  
12 Sanitary and Ship Canal for transport waste  
13 downstream of Chicago and to provide a  
14 commercial navigation conduit between the  
15 Great Lakes and the Mississippi River.  
16 Furthermore, the CDMUAA report clarifies that  
17 the Chicago Sanitary and Ship Canal serves as  
18 a primary passage with the transport of sand,  
19 gravel, coal, cement, fuel oils, and other  
20 industrial materials.

21 While other water use  
22 rulemakings -- other waters waste use  
23 rulemakings are addressed in the CDMUAA  
24 report, we believe that the Sanitary and Ship

1 Canal is extreme with regards to these  
2 purposes and uses.

3 MS. WILLIAMS: Does that mean you  
4 think there's more barge traffic?

5 MR. JIRIK: Yes.

6 MS. WILLIAMS: More than the Illinois  
7 River or the Mississippi River?

8 MR. JIRIK: I don't know how much  
9 barge traffic occurs on either of those.

10 MS. WILLIAMS: Question 6.

11 In the first full paragraph on  
12 Page 8, you state that MWRDGC leases land  
13 along the Chicago Sanitary and Ship Canal to  
14 industrial users who do not support or  
15 encourage public or pedestrian activities  
16 along the Chicago Sanitary and Ship Canal.  
17 Are you aware that there are public boat  
18 ramps at Archer Avenue, River mile 320.6?

19 MR. JIRIK: I am not aware of any  
20 industrial users that encourage or support  
21 public or pedestrian activities on lands  
22 owned or leased along the Sanitary and Ship  
23 Canal. I am, likewise, not aware that any  
24 industrial users are operating boat ramps.

1 MS. WILLIAMS: Are you aware MWRDGC  
2 leases boat ramps along the Sanitary and Ship  
3 Canal?

4 MR. JIRIK: I am aware of one  
5 facility, it's near our plant, I'm guessing,  
6 around Summit. You had referenced the  
7 second, and that I am not aware of.

8 MS. WILLIAMS: So would that be the  
9 one at River mile 313 in the question?

10 MR. JIRIK: That's near Archer Avenue,  
11 so I believe it would be 313. I don't know  
12 precisely what mile.

13 MS. WILLIAMS: I think we have your  
14 first -- Summit boat launch previously?

15 MR. JIRIK: Yes.

16 MS. WILLIAMS: Question 7.

17 In your updated testimony, there  
18 is no reference to your position on the  
19 Agency's recreational use designation for the  
20 Chicago and Sanitary Ship Canal.

21 Has Corn Products withdrawn its  
22 objection to the Agency's recreational use  
23 designations for the Chicago Sanitary and  
24 Ship Canal?

1 MR. JIRIK: Our testimony on file  
2 represents our position. However, in  
3 preparation for this hearing, I recently  
4 arranged for a visit on the Sanitary and Ship  
5 Canal in a small watercraft.

6 During the trip, we encountered  
7 barge traffic. At the moment of this  
8 encounter, it struck me that the Canal was  
9 quite narrow, that the barges are quite wide,  
10 and that the cut walls of the Canal didn't  
11 afford me any opportunity to escape, should I  
12 enter the water.

13 And I will actually tell you that  
14 my initial thought was, "I'm going to die."

15 MS. WILLIAMS: Mr. Sulski wasn't  
16 driving your boat; was he?

17 MR. JIRIK: He was not. And  
18 fortunately -- well, I am not a seasoned  
19 water person, okay? But, fortunately, my  
20 watercraft operator was quite experienced and  
21 we successfully navigated around the barge  
22 and continued our journey.

23 And it gave me great insight into  
24 the Sanitary and Ship Canal. I do have a few

1 pictures of my close encounter with the  
2 barge, just for the purview of the Board.

3 (WHEREUPON, the documents were  
4 tendered to the Board.)

5 MS. BOWER: And where did that happen  
6 on Sanitary and Ship Canal?

7 MR. JIRIK: I do not know the --

8 MS. TIPSORD: I'm sorry. I did not  
9 hear her question.

10 MS. BOWER: I was asking where you  
11 were on the system.

12 MR JIRIK: I can tell you that at that  
13 moment that was not what I was thinking  
14 about. I was concentrating on other things.

15 I can tell you we were downstream  
16 of Corn Products, you know, upstream of the  
17 confluence where it joins the Cal-Sag. How  
18 far downstream Corn Products, I don't know,  
19 and it's not what I was focusing on at that  
20 moment.

21 MS. TIPSORD: If there's no objection,  
22 we will mark these pictures as Exhibit 311.  
23 They're captioned Response to IEPA prefiled  
24 Question 7A Equipment for Corn Products

1 International, Inc.

2 Seeing no objection, it's  
3 Exhibit 311.

4 (WHEREUPON, a certain document  
5 was marked Exhibit No. 311 for  
6 identification, as of 7/28/09.)

7 MS. WILLIAMS: Could you answer my  
8 question?

9 MR. JIRIK: Sure.

10 MS. WILLIAMS: Could you answer my  
11 question?

12 MS. TIPSORD: About -- as far as?

13 MR. JIRIK: Oh, the question was --  
14 our testimony on file represents our  
15 position.

16 MS. WILLIAMS: So your position is  
17 that you're silent on that issue?

18 MR. JIRIK: Our testimony does not  
19 reference it, that is correct.

20 MS. WILLIAMS: Thank you. Question 8.

21 The last paragraph on Page 10  
22 states -- of your testimony, states that Corn  
23 Products testimony supports supplying a Use B  
24 designation to the Sanitary and Ship Canal as

1 both inappropriate and unwarranted.

2 And I have -- there's a typo in  
3 this question, I don't site properly to the  
4 section in the proposal. But what I'm trying  
5 to ask is if you look at Section 303.325 of  
6 the proposal, could you explain to us which  
7 portions of that definition are unwarranted?  
8 And if you want me to read it, I can.

9 MR. JIRIK: It's not the definition,  
10 it's the grouping of the Sanitary and Ship  
11 Canal with the other segments that is the  
12 concern. I previously referenced Mr. Huff's  
13 testimony -- I'm not going to repeat those --  
14 but would come back to the long list of  
15 things that I read that collectively,  
16 considering all of those together, we  
17 believe, distinguishes as a unique segment.

18 MS. WILLIAMS: So if you were to  
19 define the uniqueness of the segment for the  
20 purposes of Use C, can you -- and I know  
21 you've already said that you were not  
22 presenting language at this time, but can you  
23 provide any light onto how you would go about  
24 defining the uniqueness of this water body



1 for purposes of a regulatory definition?

2 MR. JIRIK: Actually, I would want to  
3 very dutifully consider and have an  
4 appropriate time to develop that. I don't --  
5 I really don't feel that I could do it  
6 justice to do it quickly at this time.

7 MS. WILLIAMS: Do you have -- do you  
8 know what types of aquatic organisms the  
9 Use C would need to protect? That's  
10 Subpart A of No. 10.

11 MR. JIRIK: Well, I would defer to my  
12 expert in that, Jim, working as a panel.

13 MR. HUFF: Jim Huff.

14 It would be the existing aquatic  
15 uses.

16 MS. WILLIAMS: Would that include the  
17 bluntnose minnow?

18 MR. HUFF: Yes.

19 MS. WILLIAMS: I think you've already  
20 answered Subpart B. In my mind the answer is  
21 yes.

22 So maybe I will ask it, if you  
23 disagree -- would you agree that it is not  
24 the proposed designated use that you disagree

1 with, but rather the proposed water quality  
2 standards for that proposed designated use?

3 MR. JIRIK: We disagree with the  
4 characterization of the Sanitary and Ship  
5 Canal as a Use B water, believing that it is  
6 sufficiently unique from the other water  
7 bodies included in Use B to the point of  
8 meriting its own designation. The water  
9 quality standards should be specific and  
10 address the characteristics of this water  
11 body.

12 Now, for logistical reasons, water  
13 standards are going to come later, so I don't  
14 want to stray off into that at this point.

15 MS. WILLIAMS: Did you want to add  
16 something?

17 MR. JIRIK: I'm good.

18 MS. WILLIAMS: Let's move on to  
19 Question 13.

20 MS. TIPSORD: You know what,  
21 Ms. Williams, we've been at it for quite  
22 awhile, actually. Let's take a ten-minute  
23 break.

24 (WHEREUPON, a recess was had.)

1 MS. TIPSORD: We are ready to go back  
2 on the record. Is everyone ready?

3 Ms. Williams?

4 MS. WILLIAMS: Question 13.

5 In the last paragraph on Page 4  
6 you state that categorizing the Chicago  
7 Sanitary and Ship Canal as a Use B water will  
8 provide no meaningful improvement of  
9 fisheries relative to current conditions.  
10 What types of fish, such as intolerant,  
11 tolerant, et cetera, are currently present in  
12 the Chicago Sanitary and Ship Canal?

13 MR. JIRIK: I'll defer that to our  
14 expert.

15 Jim?

16 MR. HUFF: I think they're outlined in  
17 Table 32 of our report that was Exhibit 285.

18 MS. WILLIAMS: I just want to make  
19 sure I remember, because I know we talked  
20 previously about various tables in your  
21 report. Is this table within the text of  
22 your report, or is it an attachment?

23 MR. HUFF: Page 16.

24 MS. WILLIAMS: What page?

1 MR. HUFF: Sixteen of the report.

2 MS. WILLIAMS: Sorry.

3 MS. HODGE: Within the text of the  
4 report.

5 MS. FRANZETTI: Can I ask a follow-up  
6 while you look at it?

7 Mr. Huff, the question posed was,  
8 what types of fish are currently present? Am  
9 I correct that in answering that question  
10 you're using that data collected over  
11 approximately a five-year period of any fish  
12 that had been collected at any time in that  
13 five-year period?

14 MR. HUFF: That's correct. And more  
15 specifically, the Metropolitan Water  
16 Reclamation District data.

17 MS. FRANZETTI: Would you agree it  
18 might be more accurate to say that this table  
19 lists the types of fish that are either  
20 currently present or -- and some that occur  
21 occasionally?

22 MR. HUFF: Yes.

23 MS. FRANZETTI: Okay.

24 MS. WILLIAMS: What types of aquatic

1 life is considered to be predominating in  
2 Aquatic Life Use C waters?

3 MR. HUFF: In the Use C waters?

4 MS. WILLIAMS: Well, why don't you --  
5 if the answer is different for the Sanitary  
6 and Ship Canal than the other Use B waters,  
7 then explain for both. The question asked  
8 about the Use B waters as they've been  
9 proposed, so let's answer that first.

10 MR. HUFF: Well, primarily tolerant.

11 MS. WILLIAMS: And what would your  
12 answer be for the Sanitary and Ship Canal?

13 MR. HUFF: Primarily tolerant.

14 MS. WILLIAMS: Mr. Jirik, I think I'll  
15 be going back to you for Question 14 -- maybe  
16 not.

17 In reference to the end of  
18 Paragraph 1 on Page 5, can you explain what  
19 you mean by fishery, quote, "above average  
20 quality" and "below average quality"?

21 MR. JIRIK: And again, that was  
22 covered in our expert's testimony, so I'll go  
23 back to Jim.

24 MS. WILLIAMS: Okay.

1 MR. HUFF: I'm sorry, could you repeat  
2 the question?

3 MS. WILLIAMS: I'll just quote from  
4 that paragraph in Mr. Jirik's testimony. It  
5 says, "Additionally, Mr. Huff will show that  
6 within the Sanitary and Ship Canal,  
7 temperature is not limiting the quality of  
8 the fisheries, since the fisheries at the  
9 warmest point are above average in quality,  
10 while fisheries that use cooler but otherwise  
11 similar conditions in the Sanitary and Ship  
12 Canal are below average in quality."

13 So I'm asking what does above  
14 average in quality and below in average mean  
15 in this sentence?

16 MR. HUFF: I believe Mr. Jirik was  
17 referring to the average number of species  
18 collected.

19 MS. WILLIAMS: So above average would  
20 mean there's more than the average number of  
21 species found, and below would mean below the  
22 average?

23 MR. HUFF: Compared to the average in  
24 the entire Ship Canal, yes.

1 MS. WILLIAMS: Do you know offhand  
2 what the average in the entire Ship Canal is?

3 MR. HUFF: Per station or across the  
4 entire Ship Canal?

5 MS. WILLIAMS: However you are  
6 determining what the average --

7 MR. HUFF: Well, I think that refers  
8 to Table 41 from Exhibit 285.

9 MS. WILLIAMS: Do you have a page  
10 number on that?

11 MS. HODGE: Page 26.

12 MR. HUFF: Twenty-six.

13 MS. WILLIAMS: So how do I find the  
14 average on this table?

15 MR. HUFF: Well, you add up 5.6 plus  
16 5.0 plus 9.2 and divide by three and you get  
17 approximately seven.

18 MS. WILLIAMS: So seven.

19 MR. HUFF: Yes.

20 MS. WILLIAMS: More than seven above  
21 average, less than seven, below.

22 Did you look at other measures of  
23 quality or is this statement purely referring  
24 to number of species?

1 MR. HUFF: I'm sorry, to whom is that  
2 question directed?

3 MS. WILLIAMS: I think Mr. Huff, at  
4 this point.

5 MR. HUFF: Well, we certainly looked  
6 at other measures, including the IBI scores.

7 MS. WILLIAMS: Let's move on to  
8 Question 15.

9 On Page 10, Paragraph 2, you  
10 state, Mr. Jirik, "As our expert will  
11 testify, Sanitary and Ship Canal fisheries  
12 are not limited by the current thermal  
13 environment."

14 Would the presence of only  
15 thermally tolerant species indicate an impact  
16 to aquatic life, Mr. Jirik?

17 MR. JIRIK: The dominant fish species  
18 on the Chicago Sanitary and Ship Canal are  
19 similar to those present in the Cal-Sag  
20 Channel, as testified to by our expert,  
21 Mr. Huff, which, I believe, suggests that  
22 habitat, not thermal, is limiting the fish  
23 community.

24 MS. WILLIAMS: Do you know, Mr. Jirik,



1 if there are differences in the dissolved  
2 oxygen conditions between Cal-Sag Channel and  
3 the Chicago Sanitary and Ship Canal?

4 MR. JIRIK: I do not know.

5 MS. WILLIAMS: Do you know if they  
6 have the same dissolved oxygen standards  
7 today?

8 MR. JIRIK: I believe the fish would  
9 be more responsive to actual conditions, as  
10 opposed to a regulatory limit. And, again,  
11 I don't have knowledge of environmental  
12 conditions.

13 MS. WILLIAMS: Do you have knowledge  
14 of the regulatory limits?

15 MR. JIRIK: I could look them up. I  
16 was aware of them, but I cannot quote them  
17 with authority.

18 MS. WILLIAMS: If the actual dissolved  
19 oxygen conditions were different, could that  
20 be an explanation for why the -- would the  
21 presence of different stressors also be a  
22 distinguishing factor between these two water  
23 bodies?

24 MR. JIRIK: I would have to defer to

1 my expert regarding that question.

2 MS. WILLIAMS: I think I've already  
3 asked your expert, a couple moments ago.

4 MR. JIRIK: Well, I'd have to defer to  
5 him. I don't have the knowledge in that  
6 area.

7 MS. WILLIAMS: So you're relying on  
8 Mr. Huff's position for your conclusion that  
9 the Cal-Sag channel and the Sanitary and Ship  
10 have similar fish communities; is that  
11 correct?

12 MR. JIRIK: I do believe my testimony  
13 so stated --

14 MS. WILLIAMS: Okay.

15 MR. JIRIK: -- as Mr. Huff's  
16 feelings --

17 MS. WILLIAMS: So --

18 MR. JIRIK: -- that is correct.

19 THE COURT REPORTER: Please try not to  
20 talk on top of each other. Thank you.

21 MS. WILLIAMS: You quote from the  
22 Board opinion in AS, for Adjusted Standard,  
23 9610, to conclude that the Board has  
24 recognized the unique character of the

1 Chicago Sanitary and Ship Canal.

2 Did this opinion distinguish the  
3 Chicago Sanitary and Ship Canal from the  
4 Lower Des Plaines River or the South Branch  
5 Chicago River?

6 MR. JIRIK: The Board's opinion states  
7 that, quote, "The upstream reaches of the  
8 South Branch of the Chicago River, Chicago  
9 Sanitary and Ship Canal, and the Des Plaines  
10 River, is greatly modified by use as a  
11 shipping channel with habitat limited to deep  
12 pools without shallows, structures, ripples,  
13 or suitable substrates. The area affected by  
14 the proposed adjusted standard is heavily  
15 developed with industries, including a  
16 refinery, a chemical plant, and a boat yard,"  
17 end quote.

18 MS. WILLIAMS: Is that a no?

19 It's a yes or no question, and the  
20 answer I heard sounded like a no, but I would  
21 just like to be clear that the Board opinion  
22 does not distinguish between these three  
23 water bodies.

24 MR. JIRIK: The quote that I read, I

1 believe, discusses all three water bodies.

2 MS. WILLIAMS: Together, correct.

3 MR. JIRIK: And characterizes them in  
4 a particular fashion. It does not  
5 specifically call out one particular water  
6 body.

7 MS. WILLIAMS: Thank you.

8 Question 17 asks whether AS 9610  
9 applies to Corn Products and why or why not?

10 MS. HODGE: And I'm going to object to  
11 that question. I believe that it calls for a  
12 legal conclusion.

13 MS. TIPSORD: I'm going to sustain  
14 that objection. I think the AS can speak for  
15 itself.

16 MS. WILLIAMS: Does the thermal  
17 discharge from Corn Products Argo facility  
18 impact compliance with general use thermal  
19 standards below the I-55 bridge?

20 MR. JIRIK: I have not been made aware  
21 of any such issues regarding our discharge.

22 MS. WILLIAMS: Does that mean you  
23 think the answer is no or that no one has  
24 ever said to you, "Hey, Alan, I think you

1           impacted the I-55 bridge standards"? Is it  
2           your belief that the answer is no?

3                       MR. JIRIK: I am not aware of any  
4           difficulty, any impact of any issue. I have  
5           no personal knowledge that I've gained from  
6           anything in my professional experience to  
7           indicate that there is a problem.

8                       So I have no awareness of an issue  
9           or problem.

10                      MS. WILLIAMS: Thank you.

11                      MS. FRANZETTI: Just to follow up,  
12           Mr. Jirik.

13                      Has Corn Products studied whether  
14           or not there are any impacts regarding  
15           thermal standards below the I-55 bridge? Is  
16           that something your company or you has ever  
17           even studied?

18                      MR. JIRIK: I have not studied that  
19           issue. No, I have not.

20                      MS. FRANZETTI: Okay, thank you.

21                      MS. WILLIAMS: On Page 5, Paragraph 2,  
22           you state, quote, "There is ample evidence in  
23           the record that demonstrates that the  
24           Sanitary and Ship Canal does not meet the

1 proposed Use B thermal water quality  
2 standards."

3 And the question is, which station  
4 are you referring to?

5 MR. JIRIK: Corn Products intake data  
6 shows that the Agency's proposed standards  
7 are exceeded. Please refer to my exhibit  
8 containing Revised Attachment 1 and  
9 corresponding data.

10 MS. HODGE: Which we have right here.

11 (WHEREUPON, the document was  
12 tendered to the Board.)

13 MS. TIPSORD: I've been handed Revised  
14 Attachment 1 to the prefiled testimony of  
15 A. Jirik, witness for Corn Products  
16 International, Inc., water analysis proposal  
17 limits.

18 If there's no objection, we will  
19 mark this as Exhibit 312.

20 Seeing none, it is Exhibit 312.

21 (WHEREUPON, a certain document  
22 was marked Exhibit No. 312 for  
23 identification, as of 7/28/09.)

24 MS. MOORE: Would you ask them to add

1 to the numbers, because the last few times --

2 MR. JIRIK: I apologize.

3 I'll continue my answer. The  
4 chart illustrates that exceedances are not  
5 only occurring in summer months but also  
6 nonsummer months. It's my understanding the  
7 Agency set the nonsummer temperatures to  
8 affect growth amniogenesis and spawning, but  
9 chose to protect only growth and  
10 amniogenesis -- I need some water, that's a  
11 word I stumble over -- in Use B waterways,  
12 such as the Sanitary and Ship Canal. The  
13 hearing transcript from March 12th, 2008 CAWS  
14 rulemaking at 13.

15 Since there is only extremely  
16 limited fish data, the Agency chose to use  
17 what they believe were background  
18 temperatures in the waterways. However, as  
19 illustrated by the chart, the Agency's choice  
20 of background is much lower than the current  
21 temperature and is resulting in our measuring  
22 exceedances currently at our plant.

23 MS. WILLIAMS: Can you explain what's  
24 been revised in Attachment 1 for us?

1 MR. JIRIK: What if I do the current  
2 one, explain the colors. We attempted to use  
3 the same colors for consistency -- and then  
4 I'll follow up with what changes, if that is  
5 okay.

6 The bright blue is the -- our  
7 graphing of the proposed thermal limitations.  
8 The thinner darker blue are the inlet, as  
9 measured in our weekly sampling.

10 And the -- I'm going to say pink,  
11 that's the only other color on there. My  
12 wife accuses me of being colorblind. I'm  
13 going to call it pink for lack of a better --  
14 if you average the data as the Rule allows,  
15 and for the period of time beginning in  
16 January of '04, running through November  
17 of '07, and --

18 MS. DEXTER: Before you move on, these  
19 are maximum intake temperatures that you've  
20 taken --

21 MR. JIRIK: The pink is the average --

22 MS. DEXTER: -- of them?

23 MR. JIRIK: Right.

24 MS. DEXTER: And the thin blue one is



1 the --

2 MR. JIRIK: The individual data  
3 points.

4 MS. DEXTER: Of what? Is it a maximum  
5 number?

6 MR. JIRIK: It's the -- no, it's not  
7 these.

8 The inlet is data we collected as  
9 part of our weekly monitoring as part of our  
10 DMR, pursuant to our NPDES. So that's what  
11 the graphs are.

12 Again, looking at this shows that  
13 the inlet -- I'll give you a bit of an  
14 interpretation, if that's all right. That if  
15 you look at the current chart, the inlet  
16 closely approximates or exceeds the proposed  
17 limits, in some cases in excess, some cases  
18 very close, some cases under.

19 There's a bit more margin during  
20 peak of summer. But throughout much of the  
21 rest of the year, we're at or above the  
22 proposed limitation.

23 What's changed --

24 MS. WILLIAMS: Wait, let me ask a

1 follow-up --

2 MR. JIRIK: Sure.

3 MS. WILLIAMS: Before we talk about  
4 what changes, because I may lose this.

5 MR. JIRIK: Sure.

6 MS. WILLIAMS: So there was data in  
7 Attachment B, that we discussed earlier, that  
8 was daily values, and I know we also  
9 discussed that the permit talks about weekly  
10 sampling. But I'm still a little bit unclear  
11 how we got to weekly values and this table  
12 from the daily numbers that were discussed  
13 earlier.

14 MS. TIPSORD: And, Mr. Jirik, before  
15 you answer that, let's be clear, because  
16 we've again talking about attachment to  
17 Mr. Huff's testimony and an attachment -- and  
18 Attachment B that you're referring to is to  
19 Mr. Idaszak. It's his attachment to his  
20 prefiled testimony that has been admitted as  
21 Exhibit 310.

22 Go ahead. Sorry.

23 MR. JIRIK: As we conduct our weekly  
24 data gathering, pursuant to the reporting

1 under the -- as the NPDES requires, and as we  
2 report in our DMR, we do get the weekly  
3 sample as explained -- as required on Page 2  
4 of our NPDES permit. For the purposes of  
5 constructing the chart, I took the weekly  
6 values for each period to prepare this graph.

7 MS. WILLIAMS: But how do we get to  
8 the weekly values that you report from the  
9 near continuance and daily recordings that  
10 you're doing?

11 MR. JIRIK: Pursuant to the NPDES, we  
12 are to do flow and MGB once per week,  
13 measured flow monitoring. Temperature is one  
14 per week, single reading.

15 And so we get that reading, we do  
16 our mixing calculation, we prepare a DMR. So  
17 that it's -- I was drafting the DMR data  
18 collected pursuant to our NPDES.

19 MS. WILLIAMS: And who collects that  
20 data?

21 MR. JIRIK: Who collects the weekly  
22 data?

23 We have one of the chemists in the  
24 plant. I don't know the person's name.

1 MS. WILLIAMS: So -- I mean, what  
2 we're just trying to understand, we're not  
3 trying to -- obviously, you monitor much more  
4 than you're required. So we're just trying  
5 to understand how Corn Products decides which  
6 sample.

7 MR. JIRIK: Whatever person is  
8 assigned. I'll tell you, to the best of my  
9 knowledge, and please advise that this is  
10 sufficient.

11 We have a person who is -- part of  
12 his assigned job duties, you know, is to go  
13 out and get data. And so, along with the  
14 other things -- but this is part of the  
15 duties to gather, collect, prepare, file, you  
16 know, do all of the things necessary to  
17 satisfy our --

18 MS. FRANZETTI: Can I ask a couple  
19 follow-ups? Mr. Jirik, your permit simply  
20 says take one sample a week to record -- to  
21 sample for temperature of your discharge;  
22 correct? --

23 MR. JIRIK: Correct.

24 MS. FRANZETTI: So you -- I take it

1           Corn Products has set up some sort of  
2           internal procedure, whereby, once a week they  
3           record a representative sample from their  
4           monitoring of their discharge; correct?

5                   MR. JIRIK: Per the permit, the  
6           measurements are while monitoring. So we  
7           have a couple of parameters we need to  
8           monitor. We collect all of that at that  
9           point, as the permit requires.

10                   MS. FRANZETTI: But my point being,  
11           you've got an internal procedure for doing  
12           the once-a-week sampling that your permit  
13           calls for. You just, as you sit here, don't  
14           exactly know the details of whether that's  
15           done on a certain day of the week, whether  
16           you're taking the average -- as you talked  
17           about, your time-weighted average of the  
18           daily temperature readings or something else;  
19           right?

20                   MR. JIRIK: I do not know the  
21           specifics of that procedure, correct.

22                   MS. FRANZETTI: That's what I thought  
23           you were saying.

24                   MS. WILLIAMS: And when you look at

1 the pink line, that would be an average of  
2 the number of weeks in the period that you're  
3 looking at? Is that how you determine the  
4 average intake?

5 MR. JIRIK: It's an average of the  
6 data points, yes.

7 MS. WILLIAMS: Average of the weekly  
8 data points.

9 MS. DEXTER: What, on average? Over  
10 what time period? That's what I can't  
11 understand.

12 MR. LIN: How many days?

13 MR. JIRIK: Understand that we take a  
14 weekly date point.

15 MS. DEXTER: Right.

16 MR. JIRIK: And depending on, you  
17 know, how the weeks are relative to the  
18 period average, some of these period averages  
19 are 15 days, some of them are 30, 31 days.  
20 So you could have, you know, two data points,  
21 four data points. I mean, some number of  
22 them.

23 These were inlet temperatures,  
24 understand. And so we would take these --

1 not because we're doing them pursuant to a  
2 guess, but if we need to do a mixing zone, we  
3 need to record them. So there's not a  
4 regulatory obligation to collect this data,  
5 except where we need to rely upon it to a  
6 mixing zone calculation.

7 MR. GIRARD: I think what we're trying  
8 to understand is what's different between the  
9 skinny spikey line, which I can't tell what  
10 color it is, and the pink line. So let me  
11 just see if I understand.

12 The skinny spikey line is one data  
13 point per week plotted on this graph; is that  
14 correct?

15 MR. JIRIK: Correct.

16 MR. GIRARD: So what we're trying to  
17 understand now is the pink line. And if  
18 that's an average, it must be a moving  
19 average or a running average of some sort.

20 I mean, that -- is it that kind of  
21 an average -- is it -- you know, you're doing  
22 a running average over ten data points, over  
23 20 data points, how is that an average?

24 MR. JIRIK: It would be the average of

1 a number of data points that fell into a  
2 particular period average pursuant to the  
3 proposed rule. So if it were a month --  
4 there would be four weeks in the month --  
5 there would be four data points.

6 So the pink line would be the  
7 average of those four readings. If it were  
8 one of those 15-day, shorter, then there most  
9 likely would be two data points, it would be  
10 the average of the two.

11 So it represents a smoothing of  
12 the data and averaging it commensurate with  
13 the proposed period average.

14 MS. DEXTER: So it's the proposed  
15 temperature period average that it was  
16 supposed to be --

17 MR. JIRIK: No, it's the average of  
18 the data with the data points grouped to  
19 match the proposed period average.

20 MS. DEXTER: If that was what was  
21 occurring, I don't understand why it wouldn't  
22 be the same shape as -- be the same level.

23 MR. JIRIK: No. If I may explain.  
24 The dark blue line --



1 MS. DEXTER: I'm talking about the --

2 MR. JIRIK: The skinny blue, spikey  
3 line are individual data points.

4 MS. DEXTER: That we got.

5 MR. JIRIK: The pink averages those,  
6 blocking them into the calendar dates  
7 pursuant to the proposed rules. So it's real  
8 data averaged by calendar date, so it mirrors  
9 the time periods.

10 MS. DEXTER: Which makes sense when I  
11 look at this in some parts of the graph, but  
12 the sort of tall parts in the summer, that  
13 doesn't look like that's the same time  
14 period.

15 MR. JIRIK: The blue line.

16 MS. TIPSORD: Okay, everyone.

17 MR. JIRIK: Oh, I'm sorry.

18 MS. TIPSORD: No, go ahead. I was  
19 trying to get them so we could hear your  
20 answer.

21 MR. JIRIK: The blue line graphs the  
22 IEPA proposal. The heavy -- the lighter,  
23 heavy, powdery blue. The pink line graphs  
24 the average of measured intake data over the

1 same time periods.

2 See, if you compare the pink and  
3 the blue, the blue shows what the proposed  
4 rule requires. The pink shows what we are  
5 measuring at our intake.

6 Comparing those two, allows one  
7 insight into a comparison of what difference  
8 exist between what we are monitoring today  
9 and what would be required under the Rule.  
10 And we believe that it shows over much of the  
11 year -- not peak of summer, but outside the  
12 peak summer -- that the water body presently  
13 is at or exceeds what EPA is proposing.

14 MS. DEXTER: I don't want to belabor  
15 this, but I am trying to understand what we  
16 are looking at here.

17 If this pink line is graphed over  
18 the same period as the light blue line, which  
19 is what you're saying -- and it looks like  
20 that's true for most of it -- but over the  
21 summer months, if it was averaged over what  
22 seems to be June through August, it should be  
23 a straight line, like the blue line averaged  
24 over the same period. Do you understand what

1 I'm saying? They don't seem to be over the  
2 same period of time.

3 MR. JIRIK: The flat top, though, of  
4 this, if you will --

5 MS. DEXTER: Right.

6 MR. JIRIK: -- consists of several  
7 periods with the same limit. So they have  
8 the appearance of being the same period,  
9 when, in actuality, they are multiple periods  
10 with the same numerical meaning.

11 MS. DEXTER: Thank you.

12 MS. WILLIAMS: Before we go further,  
13 let's go back to talking about why the new  
14 attachment is different than the old one.

15 MR. JIRIK: And I have the answer.

16 IEPA had asked the question -- 25,  
17 I'm guessing, if that's where we are. And in  
18 response to Question 25, we reviewed the  
19 information, it's on the reference of the  
20 spreadsheet, the CAWS in error for the period  
21 of February 2004. The correct value should  
22 have been 52.8.

23 This was the only period we could  
24 identify where the period average intake was

1           erroneously shown as being higher than the  
2           individual samples. We updated the chart to  
3           reflect this.

4                       We also, even though you haven't  
5           asked for it, we provided the individual  
6           data, as well. I believe that was handed  
7           in -- that was part of the attachment.

8                       MS. WILLIAMS: Let's -- so if you look  
9           at the old attachment, in February of 2004,  
10          there's a spike where the pink line goes way  
11          up above the dark blue spikey line.

12                      MR. JIRIK: Correct. We corrected  
13          that.

14                      MS. WILLIAMS: It seems like if you  
15          look at other parts of the -- there seem to  
16          be other places in the chart where the pink  
17          line is higher than the blue spikey line.  
18          Can you explain what the cause of that is?

19                      MR. JIRIK: My only possible  
20          explanation would be just in the width of the  
21          line and the tightness of the graph may give  
22          that impression.

23                      When you look at the raw data that  
24          Excel plotted, I did not find such

1           occurrences. So it may just be more of a  
2           visual effect, if you will.

3                       In some cases, there are very few  
4           data points. And the change, particularly in  
5           the spring and the fall, is moving a fair  
6           number of degrees per period.

7                       Again, with a limited number of  
8           samples and the thickness versus the  
9           thinness, there may be an appearance. But  
10          looking at the raw data, I could not see that  
11          those were occurring, so I couldn't identify  
12          any other areas.

13                      MS. WILLIAMS: And the raw data is  
14          provided in Exhibit 312; correct?

15                      MS. HODGE: Correct.

16                      MR. JIRIK: Yes.

17                      MS. HODGE: The second page.

18                      MR. JIRIK: Yes.

19                      MS. WILLIAMS: And that's the only  
20          place -- I mean, you're not going to correct  
21          another portion of your testimony with just  
22          raw data; right? That's only provided here  
23          in this exhibit.

24                      MR. JIRIK: Yeah, this is the first

1 time we are providing the raw data.

2 MS. WILLIAMS: So let's go back. This  
3 all sort of started at Question 19.

4 And, in that question, I was  
5 looking at your testimony where you had said  
6 there is ample evidence in the record that  
7 demonstrates that the Sanitary and Ship Canal  
8 does not meet the proposed Use B. And when I  
9 asked what the ample evidence in the record  
10 was, you referred me to Exhibit 312 and Corn  
11 Products data; is that correct?

12 MR. JIRIK: That is one example,  
13 correct.

14 MS. WILLIAMS: Were you referring to  
15 other types of evidence in the record when  
16 you made that statement?

17 MR. JIRIK: I believe Mr. Huff's  
18 report also contained exhibits demonstrating  
19 the same.

20 MS. TIPSORD: Could you close the  
21 door?

22 MR. JIRIK: Exhibit 285.

23 MS. WILLIAMS: And that -- Mr. Huff's  
24 report contained water quality station data

1 from MWRD; is that correct?

2 MR. HUFF: Among other, yes.

3 MS. WILLIAMS: What others would it  
4 have?

5 MR. HUFF: Well, there's some Midwest  
6 Generation data in the appendices and then  
7 also there's some information from the use  
8 attainability analysis done by CBF.

9 MS. WILLIAMS: Subpart A of that  
10 question asks, have you looked at data from  
11 Romeoville Road or River mile 302.6?

12 MR. JIRIK: We had our consultant look  
13 at that data in the vicinity of the Argo  
14 Plant and the belief that the Agency would  
15 use data in close proximity to characterize  
16 this stretch of the Sanitary and Ship Canal.  
17 We did this as opposed to ignoring nearby  
18 data and using more distant data for such  
19 characterization.

20 In looking at a map, it appears to  
21 me that everything beyond 303.5 is past the  
22 confluence of the Sanitary and Ship Canal and  
23 the Cal-Sag Channel. Thus, we do not believe  
24 that the locations raised in your question

1 would be representative of the Sanitary and  
2 Ship Canal at our location.

3 MS. WILLIAMS: And wouldn't any  
4 ambient data that is representative of the  
5 Sanitary and Ship Canal at your location be  
6 impacted by thermal discharges from the  
7 Midwest Generation Plant?

8 MS. FRANZETTI: Objection. Lack of  
9 foundation for this witness to answer that  
10 question.

11 MS. WILLIAMS: I don't think there's a  
12 lack of foundation.

13 MS. TIPSORD: I think we are going to  
14 allow him to answer it, if he can.

15 MS. FRANZETTI: Well, can I first ask  
16 him some foundational questions?

17 MS. TIPSORD: Sure. Go ahead.

18 MS. FRANZETTI: Mr. Jirik, have you  
19 studied the thermal discharges from the  
20 Midwest Generation Plant upstream from Corn  
21 Products and the extent of any thermal  
22 impacts from those plants?

23 MR. JIRIK: My understanding is that  
24 there are two Midwest Generation Plants



1 upstream and that both of those plants  
2 utilize the Canal water for the purposes of  
3 cooling. I do not know the details of how  
4 they handle such water.

5 My understanding is that they do  
6 transfer some heat energy to the water and  
7 return it to the Canal. I'm not in a  
8 position to state if that is an impact or  
9 not.

10 MS. FRANZETTI: All right. Have you  
11 studied the thermal plumes from the  
12 discharges at the Midwest Generation stations  
13 upstream of Corn Products facility?

14 MR. JIRIK: I would understand that  
15 the discharge would enter the water body, but  
16 I have not studied their thermal plumes.

17 MS. FRANZETTI: Okay. No further  
18 questions.

19 Again, I renew my objection. Lack  
20 of foundation for the witness to answer the  
21 question.

22 MS. WILLIAMS: I'll rephrase.

23 MS. TIPSORD: Go ahead and rephrase,  
24 Ms. Williams.

1 MS. WILLIAMS: Does your testimony  
2 assume that there will be no decrease in  
3 intake temperatures should the Agency's  
4 proposal be adopted by the Board?

5 MR. JIRIK: Can I have the question  
6 read back?

7 (WHEREUPON, the record was  
8 read by the reporter.)

9 MS. WILLIAMS: I had intended to say  
10 that there would be -- would there be no  
11 decrease in intake temperatures. I'm not  
12 sure if I misspoke or if there was a  
13 transcription error.

14 MS. FRANZETTI: I'm sorry,  
15 Ms. Williams, I am having trouble -- are you  
16 trying to ask him would the intake  
17 temperatures stay the same as they are now if  
18 your proposed standards were adopted?

19 MS. WILLIAMS: I believe that was my  
20 question.

21 MS. FRANZETTI: Okay.

22 MS. WILLIAMS: But I phrased it would  
23 they decrease.

24 Would they stay the same? What

1 are you assuming about the future?

2 MR. JIRIK: We pondered that question.  
3 And, as we have testified to earlier, a  
4 goodly portion of the water in the Canal is  
5 wastewater. The Stickney plant puts out a  
6 considerable amount of water. And in the  
7 cooler seasons, it has certain thermal  
8 characteristics. Likewise, there are to  
9 power plants upstream.

10 We did not feel comfortable that  
11 we could speculate with regards to what any  
12 of those entities would do, nor could we, for  
13 the purposes of assessing what it meant to  
14 Corn Products, make an assumption in that  
15 regard. I'm not aware that they've made any  
16 public pronouncements about what they will or  
17 will not do.

18 So to determine what it meant for  
19 Corn Products, we looked at the water coming  
20 in now, and as our experts have testified,  
21 Mr. Idaszak will testify later, conducted an  
22 analysis using the real actual data that we  
23 had available to us today. So I guess the  
24 shorter answer is, no, we did not presume

1           that the water would be changing in the  
2           future.

3                       MS. WILLIAMS: Question 21 says, what  
4           impact would the possible shuttering of the  
5           Crawford and/or Fisk Generating Stations have  
6           from the thermal assimilative capacity at the  
7           point of the Corn Products' intake from the  
8           Chicago Sanitary and Ship Canal?

9                       MR. JIRIK: If these plants shut down,  
10          it is reasonable to assume that the water at  
11          our intakes would become cooler. However,  
12          how much cooler is not known.

13                      So I cannot answer to what degree  
14          it would provide additional assimilative  
15          capacity. On the contrary, if both plants  
16          stayed open and the Board granted them a  
17          variance from the Rule, then the water would  
18          likely remain unchanged from current  
19          conditions.

20                      Note further that wastewater  
21          treatment plant discharge dominates the flow  
22          in the Sanitary and Ship Canal. That's noted  
23          at the Agency Statement of Reasons on  
24          Page 18.

1                   By setting the thermal limits  
2                   equal to the MWRD discharge temperature, it's  
3                   my belief that you may have deprived nearby  
4                   downstream users of the use of water for  
5                   cooling, as water at the regulatory limit has  
6                   no assimilative capacity.

7                   MS. WILLIAMS: To follow up on that  
8                   answer, one of them is -- isn't it true that  
9                   the Agency used data from Route 83 on the  
10                  Sanitary and Ship Canal in addition to the  
11                  MWRD effluent data in setting winter limits?

12                  MR. JIRIK: I believe the answer is  
13                  yes.

14                  MS. WILLIAMS: So, then, I would like  
15                  to clarify back to our quote that I  
16                  referenced in Question 19. And when you're  
17                  saying there is ample evidence in the record  
18                  that the Sanitary and Ship Canal does not  
19                  meet the proposed Use B thermal standards,  
20                  you're referring to current conditions?

21                  MR. JIRIK: Correct.

22                  MS. WILLIAMS: Is it possible that if  
23                  Midwest Generation came into compliance with  
24                  the Agency's proposed thermal limits, that

1           there would not be an issue with the Sanitary  
2           and Ship Canal complying with the Use B  
3           proposal?

4                   MS. FRANZETTI: Same objection, in  
5           terms of lack of foundation, Madam Hearing  
6           Officer. He's never studied the thermal  
7           discharge.

8                   MS. TIPSORD: I understand that,  
9           Ms. Franzetti, but he also did testify about  
10          the impact of -- in his testimony -- of the  
11          other dischargers along the Canal. Again,  
12          with the understanding that he has not  
13          studied it, if he can answer it based on his  
14          knowledge, we are going to go ahead and let  
15          him.

16                   MS. FRANZETTI: Well, again, that's my  
17          point. I don't think he has any knowledge of  
18          what the affect of shuttering the Crawford or  
19          Fisk Station Plants.

20                   MS. TIPSORD: Then he can say that.

21                   MS. FRANZETTI: Okay. All right.

22                   MS. WILLIAMS: And that wasn't this  
23          question. This question was, is it possible  
24          that if those stations come into

1 compliance --

2 MS. FRANZETTI: I'm sorry, I was  
3 looking down at your prefiled question.  
4 You're right. But -- same issue, I don't  
5 think he's studied that either.

6 MS. WILLIAMS: Is it possible, that's  
7 all I'm asking.

8 MR. JIRIK: Is it possible that -- can  
9 I have the question read?

10 (WHEREUPON, the record was  
11 read by the reporter.)

12 MS. WILLIAMS: I think I can repeat  
13 it.

14 MR. JIRIK: Okay.

15 MS. WILLIAMS: If the Crawford and  
16 Fisk Station were to come into compliance  
17 with the Agency's proposed thermal limit, is  
18 it possible that the Use B waters will meet  
19 those limits?

20 MR. JIRIK: It is possible, under this  
21 hypothesis, that the water at our intakes  
22 would comply with the period average limits.  
23 However, if compliance is marginal, it has  
24 the same affect as being noncompliant,

1           because of, essentially, no or very little  
2           thermal assimilated capacity.

3                       MS. WILLIAMS:   Okay.   How far upstream  
4           from Corn Products are the dischargers of  
5           Midwest Generation Fisk and Crawford Plants?  
6           This is 21A.

7                       MR. JIRIK:   Using Google Earth  
8           toolbars, we estimated that the MWRDGC  
9           Stickney Plant is about 4.1 miles of canal  
10          distance measuring along the length of the  
11          Canal upstream.   Crawford is about 6.8 miles  
12          and Fisk is about 10.6 miles.

13                      MS. WILLIAMS:   What was Crawford  
14          again?

15                      MS. FRANZETTI:   Ten point six.

16                      MR. JIRIK:   Crawford was 6.8, Fisk was  
17          10.6, Stickney is 4.1.

18                      We do have a graphic, it only goes  
19          as far as MWRD, but, again, to show you the  
20          proximity of how far four miles is.

21                                       (WHEREUPON, the document was  
22                                       tendered to the Board.)

23                      MS. TIPSORD:   We have an aerial view  
24          of Corn Products International, Inc., Argo



1 facility on the Chicago Sanitary and Ship  
2 Canal, which we'll mark as Exhibit 313, if  
3 there's no objection.

4 Seeing none, it's Exhibit 313.

5 (WHEREUPON, a certain document  
6 was marked Exhibit No. 313 for  
7 identification, as of 7/28/09.)

8 MS. WILLIAMS: Mr. Jirik, do you work  
9 at the Argo facility? Is that where your  
10 office is located? This is Question 22.

11 MR. JIRIK: Most of the time I work at  
12 our offices in Westchester, Illinois.  
13 However, I do work at the Argo plant on many  
14 occasions.

15 MS. WILLIAMS: And for how many years  
16 have you worked at the Argo plant?

17 MR. JIRIK: I've worked for Corn  
18 Products International for 16 and one half  
19 years. Prior to that, I worked for a  
20 consulting firm that did considerable work  
21 for Argo. My first project at Argo was in  
22 1978.

23 MS. WILLIAMS: I think I may be done.  
24 But I want to take a second to review.

1                   Okay. I think we're done with the  
2                   questions for Mr. Jirik. I don't know if you  
3                   want to move on to other people?

4                   MS. TIPSORD: Does anyone else have  
5                   any questions for Mr. Jirik?

6                   All right. Let's move on then.

7                   MS. DIERS: Stefanie Diers for  
8                   Illinois EPA. I am going to begin with  
9                   Prefiled Question No. 1.

10                   Beginning in the final paragraph,  
11                   Page 2 of your testimony, you say, "Illinois  
12                   EPA is proposing to classify the Sanitary and  
13                   Ship Canal as an Aquatic Life Use B water, a  
14                   group that also includes the North Branch  
15                   Chicago River, the Chicago River, the South  
16                   Branch Chicago River, the Calumet River to  
17                   Torrence Avenue, the Lake Calumet Connecting  
18                   Channel, and the Lower Des Plaines River from  
19                   the Sanitary and Ship Canal to the Brandon  
20                   Road Lock and Dam."

21                   You go on to state that with the  
22                   exception of Lake Calūmet Connecting Channel  
23                   and the Sanitary and Ship Canal, all the  
24                   waterways in this group are natural

1 waterways. A proper consideration of the  
2 uniqueness of the artificially created and  
3 physically constrained Sanitary and Ship  
4 Canal, all the waterways in this group are  
5 natural waterways.

6 Question A. Do the following  
7 waterways resemble their natural conditions,  
8 the North Branch Chicago River, the Chicago  
9 River, the South Branch Chicago River, the  
10 Calumet River to Torrance Avenue and the  
11 Lower Des Plaines River from the Sanitary and  
12 Ship Canal to the Brandon Road Lock and Dam?

13 MR. HUFF: I believe that all the  
14 segments listed in Question 1A are natural  
15 water bodies and they still exhibit certain  
16 natural characteristics. However, all of  
17 those segments have experienced the affects  
18 of your urbanization over time, and,  
19 therefore, they may exhibit certain  
20 differences, as compared to fully natural  
21 conditions, i.e., conditions prior to human  
22 habitation of the region.

23 MS. DIERS: How are you using the term  
24 "natural condition"?

1 MR. HUFF: Well, it is natural,  
2 meaning that it wasn't manmade, that it was  
3 made through the natural geologic processes  
4 that resulted over a period of time.

5 MS. DIERS: Is there a difference  
6 between the list of segments above and the  
7 segments you describe as artificially  
8 created?

9 MR. HUFF: Yes, there is a significant  
10 difference between the water bodies listed  
11 above and the Sanitary and Ship Canal. The  
12 segments listed in 1A were created by natural  
13 geologic processes that resulted in a mature  
14 and well-developed ecosystem that evolved  
15 over thousands of years.

16 Less than 110 years ago, the Ship  
17 Canal was completed in 1900. The area where  
18 the Ship and Sanitary Canal now occupies was  
19 dry land with no aquatic habitat. The  
20 manmade origin of the Sanitary and Ship Canal  
21 marks it as a significantly different  
22 waterway than any of the others in the  
23 region, say, the Cal-Sag Channel, which was  
24 also manmade.

1 From a biological prospective,  
2 significant differences are that the Sanitary  
3 and Ship Canal has very poor habitats,  
4 including the vertical channel walls. It was  
5 designed to move ships and human waste.

6 It was built as a straight, deep,  
7 and narrow channel canal lacking in ripples,  
8 meandering shallows, and other aquatic  
9 habitat features. Due to the canal's other  
10 primary function, flood control is a subject  
11 too abrupt and often enormous changes in  
12 level, flow, and velocity, a situation which  
13 is unfavorable for most forms of aquatic  
14 life.

15 MS. DIERS: Is there a difference  
16 between what you just described as compared  
17 to the Brandon Pool?

18 MR. HUFF: The Brandon Pool, I  
19 believe, that's the area downstream of the  
20 Lockport Lock and Dam. That was more of a  
21 natural waterway.

22 MS. DIERS: Moving on to Question  
23 No. 2 on Page 3 of your testimony.

24 The last paragraph states, "If the

1 lower Des Plaines River was deemed hopeless  
2 due to the contributions from the Sanitary  
3 and Ship Canal, what does that imply about  
4 the potential of the Sanitary and Ship Canal  
5 itself? Have the aquatic communities in the  
6 Lower Des Plaines River improved since this  
7 comment was made in the 1970s?"

8 MR. HUFF: My understanding is yes.

9 MS. DIERS: How about in the Chicago  
10 Sanitary and Ship Canal?

11 MR. HUFF: Yes.

12 MS. DIERS: Question Three.

13 Do you believe that no improvement  
14 in the aquatic community in these waters is  
15 attainable?

16 MR. HUFF: There's no evidence that an  
17 option of these standards will improve the  
18 aquatic communities. The habitat quality is  
19 a significant limiting factor.

20 If one accepts that there are  
21 limited financial resources for water quality  
22 improvements in urban areas, we could be  
23 expending these resources on the higher  
24 quality streams rather than manmade channels

1           where the result may be no improvement in the  
2           aquatic community.

3                       MS. DIERS:  You state on Page 4 that,  
4           "Taken from a biological perspective, the  
5           Sanitary and Ship Canal, essentially,  
6           terminates at the fish barrier."

7                       Please explain what is meant by  
8           this statement.

9                       MR. HUFF:  The electric barrier was  
10          designed to prevent fish passage, which  
11          limits the functional ability of the upstream  
12          segments and also impacts the continuity of  
13          the Canal as a biological conduit in the  
14          downstream direction.

15                      MS. DIERS:  Can fish swim in the  
16          Cal-Sag Channel?

17                      MR. HUFF:  From where?

18                      MS. DIERS:  From the Sanitary and Ship  
19          Canal.

20                      Can they go from the Sanitary and  
21          Ship Canal into the Cal-Sag Channel?

22                      MR. HUFF:  Yes.

23                      MS. DIERS:  Question 5.

24                      You also indicate on Page 4 that,

1 due to habitat limitations in the Chicago  
2 Sanitary and Ship Canal, a balanced  
3 indigenous population of fish cannot be  
4 obtained. What do you mean by a "balanced  
5 indigenous population"?

6 MR. HUFF: I use the term "balanced  
7 indigenous population" as it is defined in  
8 Federal Environmental Regulation 40 CFR  
9 125.71C. The term "balanced indigenous  
10 population" means, quote, "A biotic  
11 community, typically characterized by an  
12 adversity, the capacity to sustain itself  
13 through cyclical seasonal changes, present  
14 themselves a necessary food chain species, and  
15 by a lack of domination by pollution-tolerant  
16 species.

17 "Such a community may include  
18 historically nonnative species introduced in  
19 connection with a program of wildlife  
20 management and species whose presence or  
21 abundance results from substantial  
22 irreversible environmental modifications.  
23 Normally, however, such a community will not  
24 include species whose presence or abundance



1 is attributable to the introduction of  
2 pollutants that will be eliminated by  
3 compliances by all sources with Section 301B2  
4 of the Act, and may not include species whose  
5 presence or abundance is attributable to  
6 alternative effluent limitations and posed  
7 pursuant to Section 316(a)," end quote.

8 A fish population that has made it  
9 to the region, able to sustain itself in the  
10 presence of necessary food change species and  
11 is not overrepresented by very tolerant  
12 species, would be considered a balanced and  
13 indigenous population. The poor habitat of  
14 the Sanitary and Ship Canal precludes the  
15 attainment of such a population in this water  
16 body.

17 MS. DIERS: Question 6. And this is  
18 going to refer back to Exhibit 285, which is  
19 your report.

20 With regard to Tables 3-2 and 3-3  
21 of the federal report for each year and river  
22 mile, what were the numbers of fish  
23 collections?

24 MR. HUFF: We don't have that

1 information. We have requested that from the  
2 MWRDGC.

3 MS. DIERS: And A, do you know the  
4 temperatures present during the fish  
5 collection?

6 MR. HUFF: No, I don't.

7 No, we do not know the  
8 temperatures present during a fish  
9 collection. But again, we have requested  
10 that information from the MWRDGC.

11 MS. DIERS: And once you get that  
12 information, you'll then submit it to the  
13 Board?

14 MR. HUFF: Yes.

15 MS. DIERS: Question B.

16 Was the water temperature warmer  
17 or cooler than the proposed water quality  
18 standards at the time of the fish collection?

19 MR. HUFF: Same answer.

20 MS. DIERS: Would it be the same  
21 answer for Question C, as well?

22 MR. HUFF: Well, I -- the older data  
23 that the MWRDGC collected to the '90s was  
24 predominantly summer, but there was also some

1 spring and fall. For the 2001 through 2005  
2 data, again, I have requested that  
3 information, yes.

4 MS DIERS: Question 7.

5 You state on Page 6 of your  
6 testimony that, in essence, Illinois EPA  
7 discounted Mr. Yoder's analysis and set the  
8 nonsummer temperatures so that MWRDGC would  
9 not have to install cooling towers. Implicit  
10 in this decision was the cost of such cooling  
11 towers could not be justified.

12 What evidence do you have that  
13 Illinois EPA considered the cost of  
14 installing cooling towers by MWRDGC?

15 MR. HUFF: According to the Illinois  
16 EPA, the background temperature was set  
17 according to MWRDGC's discharge. So I  
18 believe that it is implicit in this decision  
19 that cost of installing cooling towers by  
20 MWRDGC was too great to justify setting  
21 background temperatures otherwise.

22 I am here representing Corn  
23 Products, and as such, feel that the second  
24 question should be referred to the District.

1           And then, I would also refer you to  
2           Mr. Twait's testimony, where he indicates  
3           that directly on Pages 13 and 14.

4                     And I'll read from Mr. Twait's  
5           testimony. "The effluent data used was  
6           submitted by the Agency to the MWRDGC on  
7           May 22, 2007, and is included in Attachment W  
8           to the AC statement of reason.

9                     "Had the Agency not made this  
10          alteration to the recommendations, Chris  
11          Yoder's temperature report and developing our  
12          water quality standards, the water quality  
13          standards for the Pre-aquatic Life Use  
14          Designations proposed for the CAWS in the  
15          Lower Des Plaines River would have been lower  
16          than the MWRDGC effluence and would have  
17          required installation and cooling towers or  
18          other treatment technologies to reduce the  
19          temperature of these effluence."

20                    MS. TIPSORD: Mr. Twait's testimony is  
21          Exhibit 2, for the record.

22                    MR. HUFF: Two?

23                    MS. DIERS: And -- go ahead.

24                    MR. ANDES: So, Mr. Huff, the

1 statement that you just read didn't say  
2 anything about the cost of installing cooling  
3 towers; did it?

4 MR. HUFF: No, sir.

5 MR. ANDES: Basically, it's a  
6 statement of fact that if they had made their  
7 alterations and recommendations, it could  
8 have acquired installing cooling towers by  
9 the District?

10 MR. HUFF: Yes, sir.

11 MR. ANDES: Thank you.

12 MS. DIERS: Let's go to B.

13 In your opinion, should the Agency  
14 have relied on the Route 83 Chicago Sanitary  
15 and Ship Canal station data alone in setting  
16 background temperatures rather than also  
17 using MWRDGC data?

18 MR. HUFF: I believe the Agency should  
19 have used all the temperature data available  
20 on the CSSC to establish the existing thermal  
21 regime of the waterway. The entire stretch  
22 has temperatures which are heavily influenced  
23 by anthropogenic activities, arbitrarily  
24 setting thermal loads at some, quote unquote,

1 "background temperature" has no basis for  
2 protecting the biological community.

3 MS. DEXTER: So are you saying, just  
4 to be clear, that you want the temperature  
5 standards to be based on biological data?  
6 What the fish need as opposed to setting them  
7 based on something else?

8 MR. HUFF: Could you repeat that  
9 question?

10 (WHEREUPON, the record was  
11 read by the reporter.)

12 MR. HUFF: Well, there has to be a  
13 biological component in the establishment of  
14 the standards. And my recommendation would  
15 be that that's based on full scale, if you  
16 will, real stream data as an opposed to  
17 laboratory tests.

18 MS. DEXTER: And when you say "real  
19 stream data," are you saying real fish stream  
20 data or real...

21 MR. HUFF: Fish stream data.

22 MS. DEXTER: We were talking before --  
23 I don't know if you were here -- rather than  
24 looking at the thermal standards developed in

1 the laboratory, you want field data about  
2 what the thermal requirements are for fish?

3 MR. HUFF: Yes.

4 MS. DIERS: Shouldn't the field data  
5 be absent of all stressors when you're doing  
6 your analysis?

7 MR. HUFF: I don't know how you could  
8 do the analysis if there were no stressors.

9 MS. DIERS: Should the Agency have  
10 excluded Route 83 and the Chicago Sanitary  
11 and Ship Canal, where allowed, for higher  
12 background temperature values than the MWRDGC  
13 effluent data?

14 MR. HUFF: No. MWRDGC discharges must  
15 be considered when assessing the temperatures  
16 in the CSSC. However recalling Route 83 at  
17 CSSC, quote unquote, "background" is not  
18 accurate.

19 Arbitrarily setting thermal limits  
20 as some background temperature has no basis  
21 for protecting the biological community.

22 MS. DIERS: So you disagree with  
23 Mr. Yoder's use of looking at backgrounds to  
24 establish the standards we're discussing for

1 the nonsummer months?

2 MR. HUFF: Yes.

3 MS. DIERS: Can you explain why?

4 MR. HUFF: Well, I think that there's  
5 got to be some biological basis behind those  
6 temperatures that you're establishing in  
7 those off-summer months. If you established  
8 them at Route 83, then are you saying that at  
9 areas where you have temperatures warmer than  
10 Route 83 that the fish aren't going to be  
11 able to grow or reproduce if you're over  
12 those temperatures?

13 And there's no biological evidence  
14 that I see that would suggest that those  
15 background temperatures are necessary for the  
16 fish population that's currently there.

17 MS. FRANZETTI: If I can just --  
18 Mr. Huff, did I also correctly understand  
19 what was one of your prior answers to  
20 Ms. Dire's questions, that you also think  
21 it's relevant here that there really isn't  
22 truly a valid background temperature for the  
23 Sanitary and Ship Canal, given its entirely  
24 manmade nature and the fact that it's been



1 heavily influenced by anthropogenic activity?

2 MR. HUFF: I don't know necessarily  
3 about the manmade aspects with respect to  
4 temperature, but certainly the anthropogenic  
5 activities have to be considered in  
6 establishing the background temperatures.

7 MS. DIERS: Do you think that  
8 temperatures should be the same all year?

9 MR. HUFF: No, not necessarily.

10 MS. DIERS: How would you set it if  
11 you don't believe it should be the same all  
12 year?

13 MS. HODGE: I believe that that is  
14 getting into an area that's going to be more  
15 directly covered in the water quality  
16 standards. And I know that it's related, but  
17 I think we'd like to wait to answer on that.

18 MS. DIERS: Okay.

19 Do you know the needs of fish in  
20 the nonsummer months in this waterway?

21 MR. HUFF: Could you repeat the  
22 question?

23 (WHEREUPON, the record was  
24 read by the reporter.)

1 MS. DIERS: I'll clarify. Do you know  
2 the temperature needs of the fish in the  
3 nonsummer months?

4 MR. HUFF: Well, if you go back to  
5 Mr. Yoder's analysis, he's talking about that  
6 you want some cyclical temperatures --  
7 seasonal temperature changes so that the --  
8 from fish spawning, in the amneotosis  
9 perspective, as well as for growth.

10 MS. DIERS: So do you agree with  
11 Mr. Yoder that some cooler temperatures are  
12 needed by the fish in the nonsummer months?

13 MR. HUFF: I've just -- I'm not  
14 holding myself out as a fish expert, but that  
15 seems -- I don't have any disagreement with  
16 that.

17 MS. FRANZETTI: Just -- while you're  
18 talking, can I ask Mr. Huff?

19 Mr. Huff, do you know whether --  
20 of the eight resident aquatic species that  
21 Mr. Yoder was basing his proposed thermal  
22 standards on, do you know whether any of  
23 those eight need the cooling-off period for  
24 purposes of spawning?

1 MS. WILLIAMS: Objection. She's  
2 characterizing that Mr. Yoder proposed  
3 thermal standards.

4 MS. FRANZETTI: I'm sorry, thermal  
5 values you then cut from the usual standards.

6 MS. WILLIAMS: But I'm objecting,  
7 because he never said that this water body  
8 should have these values, this segment should  
9 have these values. He also used his work to  
10 apply -- we applied his work to certain  
11 segments ourselves.

12 MS. FRANZETTI: Got it.

13 But the gist of my question still  
14 stands.

15 MS. WILLIAMS: Do you want to rephrase  
16 it?

17 MS. FRANZETTI: I'll try.

18 Mr. Huff, with respect to the  
19 eight resident aquatic species that Mr. Yoder  
20 used for his, I think it was limited use  
21 waters, I'm not sure what he called it. But  
22 do you know which category, for thermal value  
23 purposes I'm referring to, from Mr. Yoder,  
24 Mr. Huff?

1 MS. WILLIAMS: I would be willing to  
2 stipulate it was called the secondary  
3 contact.

4 MS. FRANZETTI: Thank you.

5 For those waters, did any of those  
6 eight resident species need a cooling-off  
7 period for purposes of comedogenic with their  
8 spawning?

9 MR. HUFF: I have no knowledge on it.

10 MS. FRANZETTI: Okay. Thank you.

11 MS. DIERS: Moving on to Question 8.

12 On Page 6 through 7 of your  
13 testimony you state, "No attempt was made to  
14 look at the Sanitary and Ship Canal  
15 temperatures at the edge of the mixing zones  
16 from these industrial dischargers."

17 Please provide any data you have  
18 that was selected at the edge of the mixing  
19 zone from any of the industrial discharges on  
20 the Chicago Sanitary Ship Canal and the map  
21 of the applicable mixing zone.

22 MR. HUFF: I'm going to let Mark Bosse  
23 answer that question with respect to Corn  
24 Products.

1 MR. BOSSE: Mark Bosse.

2 We don't have any data on any  
3 other dischargers. The data we have you have  
4 on Attachment B.

5 MS. TIPSORD: Clarification,  
6 Attachment B to...

7 MR. BOSSE: To the Ambitech -- and  
8 that's not measured as the mixing zone, that  
9 is calculated, as we discussed earlier. And  
10 since the size of the mixing zone varies with  
11 a lot of different factors, you know, our  
12 discharge into it is going to change, so  
13 there's not one map that we can provide.

14 MS. DIERS: Question 9.

15 You state on Page 7 that, "Had  
16 Illinois EPA factored in the thermal loadings  
17 on the Sanitary and Ship Canal instead of  
18 arbitrarily setting the spring/fall months at  
19 the MWRDGC effluent temperatures, a very  
20 different regulatory proposal would have  
21 resulted."

22 Please explain how to go about  
23 factoring in the thermal loading on the  
24 Chicago Sanitary and Ship Canal into a

1 regulatory proposal and define what such a  
2 proposal would look like?

3 MR. HUFF: First, you factor in the  
4 existing uses, which would include the  
5 thermal loadings that are on there. Then  
6 you'd have to establish what is limiting the  
7 fish community on the CSSC, is it habitat or  
8 water quality.

9 Assuming one concludes that  
10 thermal is the controlling factor based on  
11 field studies not laboratory studies, then a  
12 projection of the improvements in fish  
13 quality would need to be made followed by a  
14 cost in benefit analysis of attaining a  
15 necessary thermal regime to support these  
16 improvements. Our study was an attempt to  
17 compare two similar waterways that have those  
18 thermal regimes.

19 From the study, there was no  
20 evidence that with lower temperatures the  
21 fish quality will improve on the CSSC. Thus  
22 this evidence indicates the thermal is not  
23 the limiting factor to attaining an improved  
24 fish population.

1                   This comparison again indicates,  
2                   as the Agency itself has testified in the  
3                   prefiled testimony of Scott Twait on Page 11,  
4                   that the primary factor here in determining  
5                   the appropriate use classification is quality  
6                   of habitat. Further, with respect to any  
7                   proposed lowering of temperature in the CSSC,  
8                   the cost of attaining lower temperatures in  
9                   the CSSC must be weighed against the benefits  
10                  that would accrue in accordance with the  
11                  requirements of the Illinois Environmental  
12                  Protection Act Section 27.

13                   We understand that this hearing is  
14                   about use designation. And as Mr. Jirik has  
15                   indicated, Corn Products is looking forward  
16                   to working with the Agency on specific  
17                   thermal limits for the Sanitary and Ship  
18                   Canal.

19                   MS. DIERS: Mr. Huff, you've said a  
20                   couple times that -- it sounds like you have  
21                   a preference for, I guess, the field data  
22                   compared to lab -- using lab information.  
23                   Can you explain why you have favoritism over  
24                   the one compared to the other?

1 MR. HUFF: Well, if you go back to  
2 Mr. Yoder's work, he noted that very few of  
3 the thermal laboratory studies have had the  
4 slow heating process there. And if you look  
5 at his end points, we shouldn't see the --  
6 the bluntnose minnow is a good example, that  
7 with the temperature regime we have, it  
8 shouldn't be present on that ship canal, and  
9 it is present.

10 So that says to me that the  
11 laboratory data is not accurately predicting  
12 what we're seeing out in the field.

13 MS. DIERS: Could you use the two in  
14 conjunction with each other to get a better  
15 understanding?

16 MR. HUFF: A better understanding than  
17 just using laboratory data? Positively yes.

18 MS. DIERS: Or just using the stream  
19 data. When you use the two, would you get a  
20 better analysis?

21 MR. HUFF: Possibly. It would depend  
22 on how you set that up.

23 MS. DIERS: Are the fish finding  
24 refugia in the Chicago Sanitary and Ship



1 Canal.

2 MR. HUFF: Define "refugia" for me?

3 MS. DIERS: A place where it's not as  
4 warm as some of the surrounding water.

5 MR. HUFF: Possibly, yes.

6 MS. DEXTER: Have you ever designed  
7 one of these field tests that you're saying  
8 you need?

9 MR. HUFF: No, I have not.

10 MS. DIERS: Question 10.

11 Please explain why you conclude on  
12 Page 7 that the Sanitary and Ship Canal will  
13 be determined to be thermally impaired  
14 throughout its entire length.

15 Question A. During what periods  
16 did you find the temperatures at Route 83 and  
17 the Chicago Sanitary and Ship Canal violates  
18 the proposed thermal standards?

19 MR. HUFF: Occasions during December  
20 through March. And that's on Page 4-73,  
21 Figure 4-29 in the Chicago Area Waterway  
22 Study Report from 2007.

23 MS. WILLIAMS: Would you repeat the  
24 citation for us?

1 MR. HUFF: Chicago Area Waterway Study  
2 Report of 2007.

3 MS. WILLIAMS: I'm sorry, the pages or  
4 tables that you cited?

5 MR. HUFF: Page 4-73, which should be  
6 Figure 4-29.

7 MS. DIERS: Why is the same color used  
8 on Attachment 1 for Route 83 on the Chicago  
9 Sanitary and Ship Canal and the Illinois EPA  
10 proposal?

11 MR. HUFF: That was an electronic  
12 transmission distortion. It wasn't like  
13 that -- I believe we have that same figure  
14 but with a color scheme that's clearer.

15 (WHEREUPON, the document was  
16 tendered to the Board.)

17 MS. DIERS: Thank you.

18 MS. TIPSORD: If there's no objection,  
19 we will go ahead and mark this as  
20 Exhibit 314.

21 Seeing none, it's Exhibit 314.  
22 And it's answers to IEPA prefiled  
23 Question 10B for James Huff, witness for Corn  
24 Products International, Inc.

1 (WHEREUPON, a certain document  
2 was marked Exhibit No. 314 for  
3 identification, as of 7/28/09.)

4 MS. DIERS: Question C.

5 Why does the figure in  
6 Attachment 1 only present temperature data  
7 from August 1998 through 2002, when data is  
8 available through June 2007?

9 MR. HUFF: We had data through 2007  
10 for Route 83 and that was used. For Cicero  
11 and Lockport, we only had data from 1998 to  
12 2002.

13 MS. DIERS: And was that data you  
14 obtained from MWRDGC?

15 MR. HUFF: Yes, ma'am.

16 MS. DIERS: Looking at Exhibit 314,  
17 why is the blue line set for Cicero so much  
18 higher than the others?

19 MR. HUFF: Because the temperature is  
20 warmer at that location.

21 MS. DIERS: Do you know why the  
22 temperature is warmer there?

23 MR. HUFF: Because of the upstream  
24 discharges.

1 MS. DIERS: Did you look at  
2 temperature data from River mile 302.6 on the  
3 Chicago Sanitary and Ship Canal for  
4 compliance with the proposed standards?

5 MR. HUFF: Yes. The standard was  
6 exceeded several times during the winter  
7 months for several years but not every year.

8 MS. DIERS: Do you know what years it  
9 was exceeded?

10 MR. HUFF: I don't have that.

11 MS. DIERS: How about the Romeo Road  
12 station?

13 MR. HUFF: Same answer.

14 MS. DIERS: It was exceeded, but you  
15 don't have the years?

16 MR. HUFF: Correct. Not handy.

17 MS. DIERS: Was it only in the winter  
18 months that there was an exceedance?

19 MR. HUFF: That's correct.

20 MS. DIERS: How would your conclusion  
21 about impairment in the entire Chicago and  
22 Sanitary Ship Canal for temperature change if  
23 Midwest Generation reduced its thermal  
24 loadings upstream of Corn Products to comply

1 with the proposed standards by IEPA?

2 MR. HUFF: During the seasons when the  
3 temperature standard is set based upon the  
4 MWRDGC Stickney Plant effluent temperature,  
5 there would still be no assimilative capacity  
6 for Corn Products' thermal input. Corn  
7 Products would end up with a water quality  
8 standard for effluence.

9 MS. TIPSORD: I want to ask a  
10 follow-up just so that -- and maybe I want to  
11 be clear on this point.

12 So your position is, Mr. Huff,  
13 that even if there were no other upstream  
14 dischargers, other than the MWRDGC, which  
15 without the District would probably be very  
16 little flow in the Sanitary and Ship Canal,  
17 even if they were the only discharger, that  
18 Corn Products would still have difficulty  
19 meeting proposed standards?

20 MR. HUFF: During the fall months and  
21 the spring months, the MWRDGC data is used  
22 for the period October 1st through 15th. I  
23 believe Mr. Jirik testified that the Stickney  
24 Plant is approximately 4.1 miles upstream.

1 We can certainly have a warm first two weeks  
2 if October.

3 You're not going to get any  
4 cooling in that water if we set the  
5 temperature at MWRDGC's discharge location.  
6 If we have an above average two-week period  
7 in temperature, there will be no cooling in  
8 that water, and therefore, there will be no  
9 assimilative capacity for product.

10 In the winter months that would be  
11 different where, presumably, you're going to  
12 get more cooling. So in the winter months --  
13 well, and that would be probably December, in  
14 the case where they're using MWRDGC, as well  
15 as January and February there would be more  
16 assimilative capacity for Corn Products.

17 But my concern would be in that  
18 October period. And then you'd have the same  
19 thing if you are setting the temperatures at  
20 Route 83, you're likely to have similar  
21 temperatures at -- where the water goes by  
22 Corn Products, you'd have the same problem,  
23 there would be no assimilative capacity.

24 MS. TIPSORD: Thank you.

1 MS. DIERS: Question 11.

2 On Page 7, you state that the  
3 highest temperatures on the Sanitary and Ship  
4 Canal are downstream of the Crawford Power  
5 Plant. How did you arrive at this conclusion  
6 since Attachment 6 does not contain  
7 temperature data upstream of Cicero Avenue?

8 MR. HUFF: Cicero is approximately one  
9 mile downstream of Crawford. A major thermal  
10 loading guides the two power plants upstream,  
11 Crawford and Fisk.

12 I'm unaware of any temperature  
13 data upstream of Cicero Avenue.

14 MS. DIERS: Are fish and continuous  
15 monitoring data available on the South Branch  
16 Chicago River at Loomis Street about  
17 0.6 miles downstream of the Fisk Power Plant?

18 MR. HUFF: I don't believe fish are  
19 consistently monitored at that location.  
20 There's -- 2002 MWRDGC collected fish at  
21 Damen Avenue and that was in Appendix A to  
22 the Huff & Huff Report, Exhibit 285.

23 MS. DIERS: Is there temperature data  
24 collected there, do you know?

1 MR. HUFF: I'm sorry?

2 MS. DIERS: Is there temperature data  
3 collected there? You said fish.

4 MR. HUFF: Not to my knowledge.

5 MS. DIERS: Okay. I'm going to go  
6 to C.

7 Why was your analysis limited only  
8 to the Chicago Sanitary and Ship Canal?

9 MR. HUFF: My analysis focused on the  
10 Sanitary and Ship Canal because that is where  
11 Corn Products discharges. Also the CSSC is  
12 unique due to all the factors discussed in my  
13 testimony and responses today, such that it  
14 is deserving a water body specific  
15 consideration with regard to establishing  
16 aquatic life uses and associated water  
17 quality standards.

18 MS. DIERS: Question 12.

19 MS. TIPSORD: Ms. Diers, you know  
20 what, it's almost 4:30. It's clear we're not  
21 going to get done with Corn Products today,  
22 which I sort of hoped we might.

23 But we're not. So let's go ahead  
24 and adjourn for the day.



1                   And I know that the Agency wants  
2                   to take a look at some of the information  
3                   that Mr. Huff has given them. We are in  
4                   N-505, which is next door, tomorrow, instead  
5                   of this room. We'll start at 9:00 tomorrow  
6                   morning. Thank you very much.

7                   Have a good evening. For those of  
8                   you visiting, have fun in Chicago.

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1 STATE OF ILLINOIS )  
2 ) SS:  
3 COUNTY OF COOK )

4 I, SHARON BERKERY, a Notary Public within  
5 and for the County of Cook, State of Illinois, and a  
6 Certified Shorthand Reporter of said state, do  
7 hereby certify:

8 That previous to the commencement of the  
9 examination of the witness herein, the witness was  
10 duly sworn to testify the whole truth concerning the  
11 matters herein;

12 That the foregoing deposition transcript  
13 was reported stenographically by me, was thereafter  
14 reduced to typewriting under my personal direction  
15 and constitutes a true record of the testimony given  
16 and the proceedings had;

17 That the said deposition was taken before  
18 me at the time and place specified;

19 That I am not a relative or employee of  
20 attorney or counsel, nor a relative or employee of  
21 such attorney or counsel for any of the parties  
22 hereto, nor interested directly or indirectly in the  
23 outcome of this action.

24 IN WITNESS WHEREOF, I do hereunto set

1 my hand and affix my seal of office at Chicago,  
2 Illinois, this 4th day of August, 2009.

3

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*Sharon B. edley*  
7 Notary Public, Cook County,

8

Illinois.

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My commission expires 7/22/2010.

10

11 C.S.R. Certificate No. 84-4327

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