ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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DOUGLAS P. SCOTT, DIRECTOR

217-782-5544

February 16, 2009

Mr. Mark Madsen
Corn Products U.S.
6400 South Archer Avenue
Bedford Park, IL 60501

Re: Provisional Variance Application
Corn Products Argo Plant
Source I.D. No. 031012ABI

Dear Mr. Madsen;

On February 6, 2009, the Illinois Environmental Protection Agency ("Illinois EPA") received an application for a provisional variance from Corn Products U.S. ("Corn Products") (attached hereto as Exhibit A) relating to Boilers 6 and 10 at its Argo Plant, located in Bedford Park, Illinois. Corn Products supplemented this application on February 11, 2009 (attached hereto as Exhibit B), and Illinois EPA accepted the application and supplement thereto on this date. In its submissions, Corn Products requested a provisional variance from certain conditions in its CAAPP permit (permit no. 96010009), including its application for minor modification of this permit received by the Illinois EPA on March 3, 2008, and the construction permit for Boiler 10 (permit no. 03090020).

The Illinois EPA has reviewed the request pursuant to the Illinois Environmental Protection Act ("Act") and corresponding regulations at 35 Ill. Adm. Code Parts 104 and 180. The request is approved pursuant to Section 35(b) of the Act and 35 Ill. Adm. Code 104.302, for the reasons and condition stated below, for a 45-day period commencing on the date of this decision letter. This provisional variance is granted on the condition that within 15 days after expiration of the provisional variance term, Corn Products shall submit to Illinois EPA, Bureau of Air, Compliance Section, a report of actual emissions of NOx for each of Boiler 6 and Boiler 10, and SO2 and CO for Boiler 10, in tons over the period of the provisional variance.

Provisional variances may be granted by the Illinois EPA when compliance on a short-term basis with any rule or regulation, requirement or order of the Illinois Pollution Control Board, or with

any permit requirement, would impose an arbitrary or unreasonable hardship. 415 ILCS 5/35(b). Corn Products has requested a provisional variance from the following permit conditions:

CAAPP Permit No. 9601009
Condition 7.9.6(a): Boiler 6 NOx limit of 30 lb/hr

Construction Permit No. 03090020
Condition 1.1.3 d. iv., and 35 Ill. Adm. Code 214.121: 1.2 lb/mmbtu SO2 (1hr)
Condition 1.1.6 a. i. (and ii.): 501 lb/hr SO2 24-hr block average
Condition 1.1.6 a. i.: CO 167 lb/hr 24-hr block average
Condition 1.1.6 b.: SO2 0.30 lb/mmbtu 30 day rolling average
Condition 4.0 c. i.: Table II SO2 limits 0.30 lb/mmbtu and 501 lb/hr

Corn Products has requested a provisional variance from the above-referenced permit conditions due to a sudden failure of a limestone system that supports operation of the Argo plant's primary boiler, Boiler 10. The failure of the limestone system resulted in an inability to generate sufficient steam to operate the plant, which has risked damage to the plant infrastructure from potential freezing. In addition, the coal stored in the bunkers for Boiler 10 is wet, which presents a danger of spontaneous combustion if the coal is left in place for an extended period of time. Corn Products has presented a plan whereby it will empty the remaining coal by firing it in Boiler 10, without also using limestone. This will result in exceedances of permitted SO2 limits over a period of one week and roughly 90 hours. While Boiler 10 is operating at low loads on natural gas, Corn Products has also indicated it expects exceedances of CO permitted limits. Corn Products will need to perform further adjustments to Boiler 10 to operate efficiently on natural gas. Exceedances of SO2 emission rates, in lb/mmBtu, may also be experienced due to the need to reuse stored ash as the bed material for the boiler.

Finally, with respect to Boiler 6, at the time of the limestone system failure, the firing rate of Boiler 6, a natural gas fired backup boiler, was increased to prevent damage at the plant from freezing. However, due to a problem with flue gas recirculation dampers on Boiler 6, it is not operating properly, resulting in exceedances of the applicable hourly limit for NOx emissions. As a result, Corn Products also has included a request to exceed such NOx limits until it is able to effect repairs on Boiler 6. This likely will not be able to occur until the time coal is emptied from the bunkers and fired in Boiler 10. Therefore, Corn Products' request includes addressing removal of the remaining wet coal and adjustments to Boiler 10 to operate properly on natural gas, and repairs to Boiler 6.

Corn Products has met the application requirements of 35 Ill. Adm. Code 180.202. In addition, even though Boiler 6 will exceed the pounds per hour permitted limit for emissions of NOx, the combined emissions of NOx from Boilers 6 and 10 over the variance period are expected to be approximately 60 tons whereas the combined permitted NOx limit is approximately 151 tons over the variance period. Further, even though Boiler 10 will exceed the pounds per hour permitted limit for emissions of SO2, it is only expected to emit approximately 220 tons of SO2 over the period of the variance whereas the permitted SO2 limit is approximately 270 tons over this period. In addition, even though Boiler 10 will exceed permitted limits for CO over the 24 hour block average, it is only expected to emit approximately 60 tons of CO over the period of

the variance whereas the permitted CO limit for this period is approximately 90 tons. The Illinois EPA agrees with these calculations as presented in Table 2 of Corn Products' initial application and as further clarified in its supplement thereto.

Therefore, the Illinois EPA agrees that no adverse environmental impacts are likely to result from granting the requested relief as the total emissions required for the period of the variance are less than the total emissions that are allowed by the respective permits, and due to the relatively short duration to address the safety issue on Boiler 10 and execute repairs on Boiler 6. In addition, Corn Products has sufficiently endeavored to locate viable alternative methods of compliance and no such viable alternatives exist. Furthermore, inaction now presents serious safety issues and danger of damage to overall plant operation. Therefore, the Illinois EPA agrees that any impacts relating to the requested provisional variance are certainly outweighed by the arbitrary and unreasonable hardship Corn Products would suffer if it were denied the provisional variance.

If you have any questions regarding this decision, please contact Kent E. Mohr Jr. at 217-782-5544.

Very truly yours,

John J. Kim
Managing Attorney
Air Regulatory Unit

JJK:kem

Enclosures

Cc: N. LaDonna Driver, HDZ
David Bloomberg, IEPA
Chris Romaine, IEPA
Rob Kaleel, IEPA
Dean Hayden, IEPA
Kent Mohr, IEPA
John Therriault, Assistant Clerk, IPCB

– EXHIBIT A –

Corn products U.S.
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Mr. John Kim, Regulatory Manager
Legal Counsel #21
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794

Subject: Corn Products Argo Plant
ID 031012ABI
Application for Provisional Variance - Boiler 6 and Boiler 10

Dear Mr. Kim

Corn Products Argo plant has experienced a sudden failure of a limestone system that supports the operation of the plant's primary boiler. To allow us to protect our plant from freezing weather and enable us to recover from this event in compliance with our IEPA air permit and State requirements we have prepared an application for a provisional variance.

Attached please find two copies of an application for a provisional variance prepared in accordance with 35 IAC Subtitle A, Chapter II, Section 180.202.

If you have any questions or need additional information please contact Mark Bosse of my staff at 708-563-6751.

Sincerely

Mark Madsen
Argo Plant Manager

cc: David Bloomberg, IEPA
N. LaDonna Driver, HDZ
Alan Jirik, Corn Products International Inc.

Corn Products U.S.
6400 South Archer Avenue
Bedford Park, IL 60501
www.cornproductsus.com
Phone: (708) 563-2400

3) The quantity and types of materials used in the process or activity for which the variance is requested, as appropriate;

Response: The variance is for 2 fossil fuel boilers. One boiler fires natural gas and the other one coal. During the requested 45 day pendency of this variance request approximately 770 tons of coal would be combusted in Boiler 10 as explained in our response to question 7. During normal operations, Boiler 10 would typically burn 50,000 tons of coal in a 45 day period. Boiler 6 has a rated firing capacity of 0.6 mmscf of natural gas per hour. Actual operation varies and is less than this amount.

4) The quantity, types and nature of materials or emissions to be discharged, deposited or emitted under the variance, and the identification of the receiving waterway or land, or the closest receiving Class A and Class B land use, as appropriate;

Response: For the reasons provided in our response to questions 7 & 8 below, a period of time is likely to occur where emissions of SO2 from boiler 10 are expected to be in excess of the permit allowed hourly rate. However the total SO2 emissions for the period of the provisional variance are not expected to exceed the period total allowable tons established by the permit. Emissions of NOx on Boiler 6 will exceed the hourly limit established in the permit for the period of this provisional variance. However, total NOx emissions from the combination of boiler 6 and 10 will not exceed the overall amount of NOx that is authorized by the combined boiler 6 and 10 permits, due to considerably reduced NOx emissions from Boiler 10 during this emergency period. Because Boiler 10 is being operated at very low loads on natural gas we anticipate that periods of combustion instability, resulting in elevated CO levels, may occur. We expect these to be infrequent but to account for these we have include CO in the provisional variance request. The Table 2 below provides additional details on the quantity of materials to be discharged.

Table 2

Boiler 6 NOx limit:	30 lb/hr
Boiler 6 NOx expected:	30 to 55 lb/hr (typical)
Boilers 6+10 NOx limit:	151 tons/45 days
Boilers 6+10 NOx expected:	60 tons/45 days
Boiler 10 SO2 limit:	501 lb/hr
Boiler 10 SO2 expected:	2400 lb/hr (90 hours maximum)
Boiler 10 SO2 limit:	270 tons/45 days
Boiler 10 SO2 expected:	220 tons/45 days
Boiler 10 CO limit:	167 lb/hr (24 hour block average)
Boiler 10 CO expected:	280 lb/hr (24 hour block average)
Boiler 10 CO limit:	90 tons/45 days
Boiler 10 CO expected:	60 tons/45 days

for an internal investigation. Given the loss of boiler 10, it has not been possible to shut down gas boiler 6 for these inspections and repairs due to the risk of freezing damage to the plant. During the time the coal bunkers are being emptied, additional steam will be available for a short time to heat the plant. We plan to take boiler 6 down during that brief window to affect repairs. At the conclusion of these activities we anticipate that boiler 6 will return to compliance with the NOx limit.

8) A description of the proposed methods to achieve compliance with the Act, regulations or Board Order, and a timetable for achieving such compliance;

Response: We propose to run the coal out of the bunkers to eliminate the safety issue on boiler 10, and create enough steam to allow boiler 6 to be safely shut down and repaired without risking damage to our plant.

9) A discussion of alternate methods of compliance and of the factors influencing the choice of applying for a provisional variance;

Response: None have been identified.

10) A statement of the period, not to exceed 45 days, for which the variance is requested;

Response: The provisional variance is requested for 45 days commencing January 28, 2009.

11) A statement of whether the applicant has been granted any provisional variances within the calendar year, and the terms and duration of such variances;

Response: Corn Products has never before requested a provisional variance. This is our first request.

12) A statement regarding the applicant's current permit status as related to the subject matter of the variance request;

Response: As this matter relates solely to air, please be advised that we are a Title V source. A timely application for renewal was filed and is being reviewed by the Agency.

13) Any Board orders in effect regarding the applicant's activities and any matters currently before the Board in which the applicant is a party.

Response: None

– EXHIBIT B

Corn products U.S.
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February 11, 2009

Mr. Kent Mohr
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794

Subject: Corn Products Argo Plant
ID 031012ABI
Supplemental Information
Application for Provisional Variance - Boiler 6 and Boiler 10

Dear Mr. Mohr:

Corn Products is providing the following supplemental information relative to the provisional variance request as referenced above.

1) The Title V minor modification noted in our request did not change or modify any of the terms or numerical limits listed in Table 1 item 1 of the provisional variance application.

2) The Boiler 6 NOx limit in table 1 item 1 specifically relates only to condition 7.9.6 a. in Title V permit 960100009.

3) The reference for condition 1.1.3 d. iv. should correctly be 35 IAC 214.121.

4) In item 1 Table 1 of the provisional variance application Corn Products withdraws its request for provisional variance from 1.1.3 b. ii. A., condition 1.1.3 e., and condition 1.1.7 b. ii.

5) The statement in item 7 regarding the need to inspect the coal bunkers was for informational purposes only and is not an actionable request. This statement supports the need to empty the bunkers of coal so that they can be internally inspected. Similarly information provided regarding the limestone system is for informational purposes only and is also not an actionable request.

6) On item 8, the timetable requested is to accommodate multiple needs and issues. We envision that the coal can be run out of the bunker in 90 hours or less over the period of about a week. During this time boiler 6 will be repaired. We expect that to happen within 2 weeks of receiving a provisional variance. After the coal is run out, there may be issues of flame stability as we better understand operation of the boiler at minimal loads on natural gas. One concern we have identified is the need to refresh, maintain and manage the boiler bed materials. There may be brief elevated periods of carbon

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MKB
2/6/09

P 1 of 2

TABLE 2 BACKUP CALCS
LIMITS/45day VS EXPECTED

NOx

BOILER 6+10 NOx LIMIT (PERMIT LIMITS)

BOILER 6 30 lb/HR × 24 hr/d × 45days/2000 = 16.2 TONS

BOILER 10 250.5 lb/HR × 24 × 45 / 2000 = 135.12

151.3 TONS/45days

BOILER 6+10 EXPECTED NOx

BOILER 6 23 DAYS × 40 lb/HR × 24HR/2000 = 11.04 T (B6 CEMS AVG 1/28 - 2/5 = 36.2 lb/HR ← CALL IT 40 FOR CALC)

22 DAYS × 30 lb/HR × 24HR/2000 = 7.92 T

30 = PERMIT LIMIT

18.96 TONS/45 DAYS

BOILER 10

SNCR set to control at 0.13 lb/MMBtu VS 0.15 LIMIT WHEN BURNING COAL

ASSUME 90 HRS COAL FIRING BUNKER AT 0.13

Blr 10 ON GAS FROM CEMS AVG 25 lb/HR NOx 1/30 - 2/5

B10 ON GAS ((45days × 24 HR) - 90 HRS) × 25 lb/HR (B10 ON GAS) / 2000 = 12.375 TONS

B10 ON COAL (90 HRS)

90 HRS × 885 MMBtu/HR × 0.13 lb/MMBtu / 2000 = 5.18 TON

BASIS:
NEED 650,000 lb/HR STEAM FOR STABILITY IF B10
350,000 MUST FROM GAS
1.38 STEAM FROM GAS
1.38 × 350 = 483 MMBtu/HR
COAL 1340 Btu/1 lb STEAM
1340 × 350,000 lb = 402 MMBtu/HR
483 + 402 = 885

NOx EXPECTED B6+B10

B6 18.96 TONS

B10 12.375 TONS ON GAS

B10 5.18 TONS ON COAL FROM BUNKERS

36.515 TONS — CALL IT 60 TONS TO BE SAFE

SO2

Blr 10 SO2 LIMIT: 501 lb/HR × 24 HR/d × 45d/2000 = 270 TONS SO2 LIMIT

Blr 10 SO2 EXPECTED

CONSERVATIVE 300 lb/HR SO2 FROM BED MATERIAL (BEING USED AS FLUIDIZED BED ON GAS)

300 lb/HR × 24 HR/d × 45 days/2000 = 162 TONS SO2 from BED

See other spreadsheet for coal in bunker estimate and max lb/HR SO2 estimate → 41.38 TONS SO2 FROM COAL IN BUNKERS

203.38 → CALL IT 220 TONS TO BE SAFE!

CO

Blr 10

CO LIMIT lb/HR = 167 lb/HR 24 HR BLOCK AVG

CO Expected lb/HR = 280 lb/HR 24H BLOCK AVG (DOUBLE HIGHEST 24 HR BLOCK SEEN SO FAR ON GAS = 140 lb/HR × 2 = 280; SAW SOME 315 lb/HR INDIV HOURS SO FAR)

Blr 10 LIMIT = 167 lb/HR × 24 H/d × 45 d / 2000 = 90.18 TONS/45d

← CALL IT 60 lb/HR FOR CALCS TO BE CONSERV

Blr 10 CO EXPECTED = 47 lb/HR HOURLY AVG SINCE GOING TO GAS ONLY ON B10

HIGHEST 24 HR BLOCK AVG IS 140 lb/HR → DOUBLE IT TO BE SAFE 280 lb/HR

ASSUME: 35 DAYS AT 60 lb/HR (47 AVG TO DATE ROUNDED UP)

10 DAYS AT 280 lb/HR (DOUBLE HIGHEST 24 HR BLOCK AVG SEEN SO FAR)

35 Day × 24 HR × 60 lb/HR / 2000 = 25.2 TONS CO

10 Day × 24 HR × 280 lb/HR / 2000 = 33.6 TONS CO

58.8 TONS CO Expected

ROUND UP TO 60 TONS Expected