

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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STATE OF ILLINOIS
Pollution Control Board

**SOYLAND POWER
COOPERATIVE, INC.**

Petitioner,

vs.

**ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY,**

Respondent.

**PCB No.: 06- 55
(Permit Appeal-Air)**

PETITION FOR REVIEW OF FINAL PERMIT DECISION

COMES NOW the Petitioner, SOYLAND POWER COOPERATIVE, INC., by its attorneys, RAMMELKAMP BRADNEY, P.C., and pursuant to Section 39.5 of the Illinois Environmental Protection Act (415 ILCS 5/39.5) and 35 Ill. Adm. Code, Part 105, Subpart C, hereby requests review by the Illinois Pollution Control Board of the final decision by the Respondent, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, to include certain terms, provisions, and conditions in the Clean Air Act Permit Program (CAAPP) Permit issued for Petitioner's electrical power generating station located near the town of Pearl, Pike County, Illinois. In support of this Petition, Petitioner states as follows:

1. Petitioner, SOYLAND POWER COOPERATIVE, INC. (Soyland), is an Illinois corporation authorized to do business in the State of Illinois. Soyland operates an existing electrical power generating facility located at Highway 100, Pearl, Pike County, Illinois.
2. On August 15, 1995, Soyland filed with the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (Agency), its application for a CAAPP Operating Permit for the above-referenced Pearl facility ("the facility").

3. On September 29, 2005, Donald E. Sutton, P.E., and Manager of the Agency's Permit Section, Division of Air Pollution Control, issued the final approval for Soyland's CAAPP Operating Permit, with I.D. No. 149817AAB.
4. The instant Permit Appeal is timely filed in accordance with Section 105.302(e) of the Illinois Pollution Control Board's Procedural Rules, which requires such appeals to be filed within 35 days of final Agency action.
5. With this Petition, Soyland seeks appeal and review of terms and conditions found in each of the following CAAPP Permit sections: Section 7.1.2; Section 7.1.4(c); Section 7.1.7(a)(i)(C); Section 7.1.8(b); Section 7.1.10-2; Section 7.1.11(d)(1); Section 7.1.12(b); and Sections 7.2.8, 7.3.8, 7.4.8, and 7.5.8. Each of these Sections will hereafter be addressed in turn.
6. **Section 7.1.2:** Boiler B1 is correctly identified in Section 7.1.2 as a "Foster Wheeler Boiler Nominal 278 mmBtu/hr" boiler. Also correctly identified is the presence of a multiclone and wet scrubber. The two additional pieces of emission control equipment identified in Section 7.1.2, however, are incorrectly listed and actually do not exist as part of Boiler B1. Boiler B1 is not equipped with "Low-NOx Burners or Over-Fired Air". These two additional controls for NOx emissions were the subject of a previously issued construction permit (Permit No. 0350084), which would have allowed Soyland, in conjunction with Air Products, to participate in a demonstration project involving this additional emission control equipment. The anticipated construction did not occur and, as a result, the emission control equipment was never installed. Soyland

requests that the CAAPP Permit be modified to correctly reflect the emission control equipment that is in place and utilized on Boiler B1. The reference to "Low-NOx Burners" and "Over-Fired Air" should simply be deleted from Section 7.1.2. The presence of this equipment is not necessary to accomplish the purposes of the Act and/or Board regulations and therefore, should be deleted from the CAAPP Permit.

It is worth noting that in Section 4.0 of the CAAPP Permit, the emission control equipment on Boiler B1 is correctly identified as consisting of only the multiclone and scrubber. It is only in Section 7.1.2 where the additional, non-existent equipment is mentioned.

7. **Section 7.1.4(c):** Section 7.1.4 provides the applicable emission standards for Boiler B1. Subparagraph (c) requires Soyland to restrict emissions of SO₂ to no more than 6.8 lb/mmBtu of actual heat input, pursuant to 35 Ill. Adm. Code 214.142, which contains the emissions limits for small sources located outside metropolitan areas. "Small sources" are identified in 35 Ill. Adm. Code 214.142 as those sources with actual heat input less than or equal to 250 mmBtu/hr. In fact however, Soyland's Boiler B1 is correctly identified in Section 4.0 of the CAAPP Permit as having actual heat input of 278 mmBtu/hr, a number that exceeds the "small source" classification. Accordingly, the applicable emission standards for Boiler B1 should be amended as to reflect an actual heat input of 278 mmBtu/hr, which would classify Soyland as a "large source located outside metropolitan areas", pursuant to 35 Ill. Adm. Code 214.143. Under Section 214.143, the emissions limits for Boiler B1 must be set in accordance with Subpart E of Part 214.

Pursuant to Subpart E of Part 214, allowable emission rates of sulfur dioxide may be determined by one of three formulas: a general formula (214.183); a special formula (214.184); or an alternative emission rate formula (214.185). Soyland does not qualify for an alternative emission rate. Accordingly, it would calculate its emission rate either by the general formula or by the special formula. However, Section 214.186 also provides that emission rates calculated pursuant to the general formula (214.183) or the special formula (214.184) cannot exceed the emission rate set forth in the previous Rule 204, which was effective April 14, 1972 until December 14, 1978, without the owner or operator first obtaining a new operating permit from the Agency.

As a result of the foregoing, Soyland understands that it must comply with the emission rate set forth in the previous Rule 204, which limits sulfur dioxide emissions to 6.0 lbs/mmBtu.

Accordingly, Soyland seeks a revision of its CAAPP Permit to reflect what Soyland believes to be the applicable sulfur dioxide limits of 6.0 lbs/mmBtu, as opposed to the present permit condition allowing up to 6.8 lbs/mmBtu. The revision requested herein would result in an accurate reflection of the actual heat input and emission levels permitted for the sulfur dioxide emissions from Boiler B1. The revisions requested herein are necessary to accomplish the purposes of the Act and/or Board regulations and therefore, should be included in the CAAPP Permit.

8. **Section 7.1.7:** Section 7.1.7 contains the testing requirements for PM, CO and SO₂. Soyland seeks review of these testing requirements as they are overly complicated and unreasonably burdensome without any

justification for the burden. The requirements in Section 7.1.7(a)(i)(C) appear to be arbitrary insofar as they are not based on any historic record of non-compliance at this facility. Requiring periodic testing of PM emissions based on a margin of compliance is unnecessary, overly complicated, and will not aid in achieving compliance with the Act or Board regulations. There is no indication given that the existing arbitrary requirements are based on any history of problems or noncompliance at the Soyland facility. Therefore, Soyland requests that these testing requirements be modified to reflect a testing scheme that is reasonably aimed at achieving compliance with applicable regulations.

9. **Section 7.1.8(b):** Monitoring requirements for Soyland's coal supply are contained in Section 7.1.8(b). Depending on the sulfur and heat content of the coal supply, the monitoring must be either weekly (7.1.8(b)(ii)) or monthly (7.1.8(b)(i)). Soyland appeals and seeks modification of the monitoring requirements set forth in Section 7.1.8(b). As written, the monitoring requirements are unreasonable and arbitrary and are not justifiable as furthering the purposes of the Act or Board regulations. In fact, the monitoring requirements are arguably inconsistent with applicable Board regulations. Specifically, in Section 7.1.8(b)(i), monthly sampling is required if the sulfur and heat content specifications for the coal supply would yield an expected emission rate of no more than 2.7lb of sulfur/mmBtu. The permit then specifies that this figure is "equivalent to 80 percent of the allowable limit in Condition 7.1.4(c)". This condition further states that the monthly sampling is "in accordance with 35 Ill. Adm. Code 214.101(e)".

Soyland seeks appeal and modification of the terms of Section 7.1.8(b)(i) because the requirement that the expected emission rate equal no more than 80% of the allowable SO₂ emission limit is arbitrary and is not required under Section 214.101(e). Furthermore, as stated in paragraph 7, herein, the SO₂ emission limit set forth in Section 7.1.4(c) is incorrect. Accordingly, not only is the imposed limit of 80% arbitrary, but it is based on an emission limit that is incorrectly calculated within Section 7.1.4(c) the CAAPP Permit.

Soyland requests that Section 7.1.8(b)(i) be modified to simply require monthly coal monitoring consistent with the 35 Ill. Adm. Code 214.101(e), as this regulation provides all necessary and reasonable guidance for determining compliance. Use of the existing standards, adopted by the Board and set forth in 35 Ill. Adm. Code 214.101(e), will neither jeopardize compliance with the Act and Board regulations, nor safety of the environment.

Additionally, with regard to Section 7.1.8(b)(ii), weekly monitoring is required if the heat and sulfur content of the coal is expected to result in emissions exceeding 2.7lb sulfur/mmBtu. According to the Permit, weekly monitoring would be required until Soyland was able to demonstrate "compliance with a 99 percent confidence level". The problem with this requirement is that the condition fails to provide any approved methodology or reliable assumptions that must be used in calculating the 99% confidence level required in order to return to a monthly monitoring schedule.

With regard to both subparagraphs, Soyland believes that the provisions of 35 Ill. Adm. Code 214.101(e) provide the appropriate measure of

compliance. Section 214.101(e) provides that the frequency of coal sampling will be determined solely by the size of a facility's boiler. Monthly analysis will apply to boilers with heat input between 50 and 500 mmBtu/hr. Weekly analysis is required for boilers with between 500 and 1500 mmBtu/hr of heat input. There has been no justification presented for the application of different monitoring requirements to Soyland's facility. Absent some reasonable justification, the existing Board regulations should apply. Section 7.1.8(b) should be amended to require coal supply monitoring pursuant to approved Board regulations, as codified in Section 214.101(e).

10. **Section 7.1.10-2:** Section 7.1.10-2 requires submission of quarterly reports during periods of normal operation. This represents an increase in the frequency of Soyland's reporting, which prior to issuance of the CAAPP Permit, was required on a semi-annual basis. Soyland requests a revision of this requirement so as to allow for the semi-annual reporting that was previously required. There is no justification or reasoning provided that would indicate a need for the increased frequency of reporting.

Likewise, there is no indication that more frequent reporting will aid in achieving compliance with the Act or Board regulations. The reports required under this Section are reports submitted during periods of "normal operations." If there is an incident of malfunction or breakdown, separate reports are already required under Section 7.1.10-1 of the CAAPP Permit. Accordingly, more frequent reports submitted during periods of normal operation are not necessary and will not result in any

additional environmental benefit. Soyland requests that this requirement be amended to allow for semi-annual reporting during periods of normal operation.

Under the circumstances, the additional reporting requirements during periods of normal operation impose an unreasonable burden on Soyland without providing any additional assurance of compliance or environmental benefit. Accordingly, the additional reporting requirements should be deleted and a semi-annual schedule imposed.

11. **Section 7.1.11(d)(1):** The operation of a pet coke demonstration project is permitted under this Section of the CAAPP Permit. Soyland's interpretation of this provision is that it will allow Soyland to operate the demonstration project after construction is completed and without having to apply for a modification to the CAAPP Permit. Soyland seeks to have this condition removed or modified. In fact, the condition is based on the conditions established by Construction Permit No. 03050084, which was issued in response to a proposal by Soyland and Air Products that would have allowed the pet coke demonstration project to move forward. While the Agency did approve this proposal and did issue the above-referenced construction permit, the construction never took place. Accordingly, Soyland believes the Construction Permit No. 03050084 has expired, thereby rendering the conditions in that permit void. Another issue with Condition 7.1.11(d)(1), is that it references a "permanent low-NOx combustion retrofit". Generally, a low-NOx retrofit would only become "permanent" upon applying for and obtaining a CAAPP modification. This procedure would allow Soyland, or others like

it, to first evaluate the efficiency of the low-NO_x retrofit before the burners become "permanent" under the existing CAAPP Permit. Then, if the retrofit does not allow the company to meet required efficiency levels, the new equipment could simply be removed and operations resumed as they were prior to the retrofit. However, under the present CAAPP Permit, the retrofit has already been deemed "permanent". Since the low-NO_x retrofit did not actually take place as previously anticipated, and since the low NO_x burner was never physically installed on Boiler B1, the condition is not applicable to the actual Boiler configuration and emission control equipment present today at the facility. Since Section 7.1.11(d)(1) does not accurately reflect the actual equipment present at the facility, said provision should be amended.

The amendment sought by Soyland will not jeopardize compliance with the Act or Board regulations, and in fact, will provide a more accurate permit which is of benefit to Soyland and the Agency, alike.

12. **Section 7.1.12(b):** Clarification is needed with regard to the conditions set forth in Section 7.1.12(b), which address compliance procedures for the SO₂ emission rate. Namely, as currently written, Section 7.1.12(b) specifies that a "complete conversion of sulfur" in the coal to SO₂ shall be assumed. However, AP-42 specifies an emission factor for Boiler B1 of 38S lb/ton of coal, which is the equivalent of 95% conversion of sulfur to SO₂. It has been the practice of both the Agency and the United States Environmental Protection Agency (USEPA) to consistently require the use of AP-42 emission factors, rather than require use of a mass balance

procedure when estimating emissions. The use of AP-42 is generally understood to provide a more accurate estimate of emissions.

Accordingly, Soyland believes that it would be more appropriate to require use of the AP-42 approach in Section 7.1.12(b). Use of the AP-42 factors will allow for a more accurate estimate of SO₂ emissions, and will therefore enhance Soyland's ability to comply with the Act and Board regulations, which is beneficial to the environment.


13. **Sections 7.2.8 (coal handling), 7.3.8 (coal processing), 7.4.8 (fly ash handling), 7.5.8 (lime handling):** Conditions set forth in Sections 7.2.8, 7.3.8, 7.4.8, and 7.5.8, require personnel not directly involved in the daily operations of processes and equipment to perform inspections of that equipment. While this sort of condition may be appropriate for large plants with numerous and varied pieces of equipment, it is not appropriate for a plant the size of Soyland's Pearl facility. At this particular facility, it would be most appropriate for those personnel dealing directly with the equipment on a daily basis to actually perform the inspections. This change would not compromise Soyland's ability to comply with its Permit, with the Act, or with Board regulations. In fact, requiring those persons most directly responsible for the daily operation of equipment to perform inspections of that equipment, would enhance Soyland's ability to ensure compliance with its Permit and to ensure proper and compliant operation of its facility.

14. Soyland requests a stay apply to the effectiveness of those provisions and conditions appealed herein. The stay is requested in order for Soyland to pursue the present appeal without being subject to enforcement for violations of these challenged provisions and conditions.

WHEREFORE, for the foregoing reasons, Petitioner, SOYLAND POWER COOPERATIVE, INC., hereby requests that the ILLINOIS POLLUTION CONTROL BOARD reverse the September 29, 2005 ILLINOIS ENVIRONMENTAL PROTECTION AGENCY permit decision and enter an Order directing the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY to revise the terms and conditions of the CAAPP Permit as required by the Act and Board regulations and as is consistent with the Petitioner's request herein.

SOYLAND POWER COOPERATIVE, INC.,
Petitioner,

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PROOF OF SERVICE

The undersigned certifies that the foregoing instrument was mailed for filing with the Pollution Control Board (Original and nine copies) and the Illinois Environmental Protection Agency on November 1, 2005, by:

<input type="checkbox"/> U.S. Mail	<input type="checkbox"/> FAX
<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Overnight Courier
<input checked="" type="checkbox"/> Federal Express	<input type="checkbox"/> Other: (Certified Mail/Return Receipt Requested)

Signature: _____

Julie Peterson