

ILLINOIS POLLUTION CONTROL BOARD  
February 6, 1992

THE VILLAGE OF SAUGET,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 91-252
	)	(Variance)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

OPINION AND ORDER OF THE BOARD (by J.C. Marlin):

This matter is before the Board on a petition for variance and extension of variance<sup>1</sup>, filed by the Village of Sauget (Sauget) on December 20, 1991. Sauget seeks a one-year extension of the variance granted by the Board on January 24, 1991, in PCB 90-181. Sauget requests further variance from 35 Ill. Adm. Code 304.106 as it relates to the color of the effluent discharged from Sauget's American Bottoms Regional Treatment Facility (AB Plant). Section 304.106 states:

In addition to the other requirements of this Part, no effluent shall contain settleable solids, floating debris, visible oil, grease, scum or sludge solids. Color, odor and turbidity must be reduced to below obvious levels.

Sauget also requests relief from 35 Ill. Adm. Code 302.203, the water quality standard for color. The Illinois Environmental Protection Agency (Agency) filed its recommendation on January 17, 1992, recommending an extension of the variance from Section 304.106. The Agency recommended denial of the variance requested from the water quality standard. On January 23, 1992 the petitioner filed a response to variance recommendation. Hearing was waived by the petitioner.

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<sup>1</sup> The petition also included a request for expedited decision or retroactive variance to January 31, 1992. The Board notes with some measure of impatience that Sauget filed its variance extension petition a mere 40 days prior to expiration of variance when a full 120 days should be given the Board for consideration of the merits. Nonetheless, by today's action, the Board grants the motion for expedited consideration despite this fact.

## Background

Sauget was originally granted a variance from Section 304.106, as it relates to color, on September 8, 1988 in PCB 88-18. That variance expired on September 8, 1989. The Board granted an extension of the color variance on September 13, 1989, in PCB 89-86. The variance was again extended in PCB 90-181 (January 24, 1992). That variance extension is to expire on January 31, 1992, or upon final action in United States and the State of Illinois v. The Village of Sauget, Illinois, Civil No. 88-5131 (S.D. Ill., filed May 13, 1988), whichever is sooner. It is this variance that Sauget seeks to extend.

The description and operation of the AB Plant was detailed in the Board's opinion in PCB 88-18, summarized in PCB 89-86, and again in PCB 91-252. It is not necessary to reiterate the full description here. In sum, the AB Plant is a regional wastewater treatment plant located in Sauget, Illinois. The AB Plant was designed to provide primary and secondary treatment to wastewater from the City of East St. Louis, the Village of Cahokia, and the Commonfields of Cahokia Public Water District. The AB Plant also provides secondary treatment to industrial flows from Sauget's Physical/Chemical (P/C) Plant. Several major industrial facilities are served by the AB Plant, including Monsanto's Krummrich Plant, located in Sauget. (Pet. at 4-5; PCB 89-86 at 2.) Effluent from the AB Plant is discharged into the Mississippi River. (Rec. at 3)

In addition to traditional biological treatment, the AB Plant was designed to utilize a powdered activated carbon treatment/wet air regeneration (PACT/WAR) system. On December 2, 1987, while Sauget was operating the PACT/WAR system, there was an explosion and fire in one of the six heat exchangers. The fire and explosion rendered one of the two WAR units inoperable, and Sauget has not operated the PACT/WAR system since that time. Instead, pursuant to an interim consent decree in the pending federal enforcement action, Sauget has been adding powdered activated carbon (PAC) prior to the aeration tanks. (Pet. at 3; Rec. at 3) Effluent discharge from the AB Plant to the Mississippi River now occurs through a diffuser, which, according to Sauget, became fully operational on December 12, 1991. (Pet., p. 8)

Pursuant to the terms of the variance granted in PCB 88-18, Sauget investigated the origin of the color in the AB Plant's effluent. Sauget concluded that the wastestream from Monsanto's Krummrich Plant was the most highly colored of the wastestreams. Monsanto identified three compounds as the major contributors of color to the AB Plant's effluent: orthonitroaniline (ONA), paranitroaniline (PNA), and 4-nitrodiphenylamine (4-NDPA). (Pet. at 6; PCB 89-86 at 2-3) Sauget investigated compliance options, and proposed the construction of an outfall extension and

diffusion system. Additionally, Monsanto undertook extensive actions designed to meet federal pretreatment limits for the organic chemicals, plastics, and synthetic fibers (OCPSF) category. Monsanto was required to meet these limits by November 5, 1990. Sauget and Monsanto anticipated that this program would result in significant reductions in the color of the Monsanto plant's wastestream. (PCB 89-86 at 4) On September 13, 1989, in PCB 89-86, the Board granted Sauget an extension of the original variance. During the term of this variance, the quality of the AB Plant effluent regarding color has continued to improve. Average monthly effluent color units appear to have stabilized, generally in the range of 40-90 units, with monthly average of 68 units. (Pet. p. 5) Sauget intends to continue its efforts with Monsanto to identify the source and nature of the remaining color. (Pet. at 10) Sauget and Monsanto both believe that the remaining color is due predominantly to a compound or compounds other than ONA, PNA and 4-NDPA. Sauget reports that Monsanto has recently indicated that it believes the compound(s) predominantly causing the remaining color will be identified within the next few weeks. Sauget now requests another extension of variance, based upon unforeseen delays in diffuser installation, its continuing efforts towards compliance and a delay in approval of the federal enforcement settlement decree. (Pet. at 6)

#### Compliance Plan

Sauget's compliance plan, as articulated in the PCB 89-86 variance proceeding and updated in the instant proceeding, has two distinct aspects. First, Sauget was to proceed to construct an outfall extension and diffuser. The diffuser is intended to reduce the impact of color by causing rapid mixing of the effluent into the receiving water--in this case, the Mississippi River. Sauget completed the design for the diffuser system, discussed the project with the Agency and the United States Environmental Protection Agency (USEPA), and applied for permits in 1989. The Agency granted a construction permit in January 1990, with the condition that Sauget conduct a biological and habitat study of the area. During the field work, however, USEPA expressed concern about the placement of the diffuser. USEPA asked Sauget to evaluate an alternative design--a single port diffuser placed in the main channel of the river. (PCB 89-86 at 4-5)

As part of its re-evaluation, Sauget met with the Army Corps of Engineers (Corps) in February 1990 to discuss placement of the diffuser into the main channel of the river. The Corps told Sauget that it would only grant a permit to place the diffuser to the harbor line, not into the main channel. This contradiction between the regulatory authorities resulted in negotiations between Sauget, USEPA, the Agency, and the Corps. On May 18, 1990, Sauget was notified that the Corps would grant Sauget a construction permit for the outfall extension and diffuser

system. In June 1990, Sauget was awarded a Build Illinois grant for 70% of the estimated \$1.5 million cost of the diffuser system. Sauget then advertised for and evaluated construction bids. On August 27, 1990, Sauget transmitted bid documents to the Agency. Construction of the outfall extension and diffuser began on October 22, 1990. The contract completion date is April 20, 1991, except as extended due to high water levels in the river. (PCB 90-181 at 3)

The second aspect of Sauget's compliance plan involves Monsanto's \$25 million program to meet federal pretreatment limits for the OCPSF category. That work was completed by early November 1990. Sauget and Monsanto had expected that this work would significantly reduce the discharge of ONA, PNA, and 4-NDPA (the major color-causing chemicals) from the Monsanto plant to the AB Plant. However, while color has been reduced, the reduction has not been as great as Sauget and Monsanto had anticipated. PNA and 4-NDPA have been reduced to below detectable levels, and ONA has been reduced to levels lower than predicted in the PCB 89-86 variance proceeding. Sauget believes that an additional, as yet unidentified, constituent or constituents are causing the remaining color in the effluent, and that this unidentified constituent is either not reducible by OCPSF controls or is not part of a wastestream which is controlled under that program. Monsanto and Sauget have committed to, and have already begun, a new program to identify the source of the remaining color and to determine further control options. (Pet., p. 4)

As stated above, Sauget states that it intends to continue its efforts with Monsanto to identify the source and nature of the remaining color and is optimistic that the predominant source of residual color will be identified in the near future. Once that is accomplished, Sauget and Monsanto will direct their efforts toward identifying and evaluating the technical feasibility and economic reasonableness of reducing or eliminating the remaining color. If no technically feasible and economically reasonable option is identified, Sauget will pursue an adjusted standard before the Board. If such relief is denied, Sauget will take whatever actions are necessary to demonstrate compliance. (Pet., p. 10)

Sauget does not present a specific timetable for these efforts and states that it is incapable of doing so. While Sauget is optimistic that the predominant source of residual color will be identified within the next few weeks, the timetable for identifying and evaluating compliance options is unknown. Once that is accomplished, however, Sauget anticipates that it can prepare and submit a petition for an adjusted standard within a few months, and the matter can be before the Board for decision within six months thereafter. (Pet., pp. 10-11)

### Environmental Impact

Sauget contends that the environmental impact, if any, has been lessened during the term of the previous variances. Effluent color appears to have stabilized in a range around 70 platinum-cobalt color units. Further, the effluent is now being discharged through a diffuser at the bottom of the Mississippi River. No color is visible at the surface of the River, Sauget states, thus eliminating any aesthetic impact. Due to the location of the flows, the now relatively faint color, and the lesser turbidity of Sauget's effluent as compared to the river water, there can be no measurable impact on photosynthetic activity. The Agency agrees that the environmental impact appears to be lessened from that shown at the time of grant of variance in PCB 90-181. The Agency, however, cannot verify Sauget's claims regarding photosynthetic activity or surface visibility since no field observations of the area have been made since December 12, 1991. (Rec., pp. 5-6)

### Hardship

Sauget argues that a denial of a variance extension would constitute an arbitrary or unreasonable hardship. Sauget submits that the variance extension would cause no adverse environmental impact. Sauget further maintains that there is presently no available means of assuring compliance by January 31, 1992 (the expiration date of the variance), except refusing to accept the influents from industries which contribute to the color of the AB Plant's effluent. Sauget contends that this would cause a major hardship to those industries and to the economy of southwestern Illinois. Sauget notes that in PCB 88-18, PCB 89-86 and PCB 90-181 the Board found that immediate compliance would impose an arbitrary or unreasonable hardship. Sauget states that this is true today. (Pet.Resp.Br., p.3)

Until Sauget is able to identify the remaining color compound or compounds, Sauget states that it cannot determine whether technically feasible and economically reasonable controls exist. Thus, Sauget remains unaware of any present means of assuring compliance by January 31, 1992, other than refusing to accept the influents from industries which contribute to the AB Plant's effluent color. The Agency agrees that immediate compliance would, with the effluent limitation for color, impose an arbitrary or unreasonable hardship. (Rec., p. 6)

### Consistency With Federal Law

Sauget has not stated whether this variance and variance extension may be granted consistent with federal law. The Board notes that Sauget has, in contrast to prior variance requests, requested variance from a water quality standard in addition to the effluent limitation on color. The Agency states that because

there are no federal laws specifically limiting color in effluent, the Board may grant the recommended relief from the effluent limitation consistent with federal law. (Rec. at 8) The Agency however recommends denial of variance from the water quality standard. (Rec. pp. 7-8)

#### Board Determination

Based upon the facts in the record, the Board finds that immediate compliance with 35 Ill. Adm. Code 304.106, as it pertains to color, would impose an arbitrary or unreasonable hardship on Sauget. The Board also finds that Sauget has demonstrated that satisfactory progress has been made towards compliance during the term of the present variance. The construction of the outfall extension and diffuser system were delayed by a conflict between regulatory authorities, and construction was recently completed. Additionally, Monsanto completed its OCPSF pretreatment program in a timely manner, although the reduction in color of the effluent was not as great as anticipated by Sauget and Monsanto. An additional variance term is necessary to examine ways to further reduce color of the effluent and to prepare a plan to do so. The Board grants extension of Sauget's existing variance.

The petitioner has not shown, however, that grant of variance from the water quality standard found at 35 Ill. Adm. Code 302.203 is warranted or consistent with federal law. Prior variances granted to Sauget did not include this term. Sauget believes grant of variance from the water quality standard is proper since recent amendments to 35 Ill. Adm. Code 302.203 preclude the use of the allowed mixing zone provisions of 302.102 to comply with the water quality standard for color. (Pet. at 2) The Agency states that variance from the standard is unnecessary as Sauget's petition claims that no color is present at the surface of the Mississippi. If so, no arbitrary or unreasonable hardship has been shown. (Rec. 7-8) Sauget counters that its statements did not imply that no violation of the standard was occurring and, should the Board not determine that Sauget's effluent is not causing a violation of the standard, Sauget has shown arbitrary or unreasonable hardship through its demonstration concerning its effluent. As an alternative, Sauget states that it could accept the Board's determination that lack of color at the surface of the Mississippi demonstrates compliance with the water quality standard. (Pet. Resp., pp. 2-3)

Relief from water quality standards could be considered a de facto water quality standard revision. Revision requires certain standards under the Federal Water Pollution Control Act be met. Petitioner's request for variance extension does not contain the necessary information that would be required before the Board could consider a change in the standard. No numerical water quality standard is suggested. Sauget merely requests that the standard not apply to it as it does to other sources. (See

NutraSweet Company v. IEPA, PCB 88-84, 94 PCB 47 (December 15, 1988) at 8)) The Board has granted variance from the standards in the past. The Board has also occasionally granted variance from the regulatory provision (35 Ill.Adm.Code 304.105) which prohibits effluents from causing violation of the related water quality standard. (citing Citizens Utilities Co. v. IEPA, PCB 78-313, 41 PCB 11 (March 5, 1981)). Here, however, Sauget has not made the requisite showing for the Board to conclude that such relief would be consistent with federal law. The Board also believes that it would be inappropriate to give an advisory opinion to Sauget regarding enforcement of the water quality standard relating to color. We therefore deny this portion of petitioner's request.

The Board does not believe that a pending enforcement action, before this Board or before a court, is sufficient reason to grant a variance. The Board emphasizes that the instant variance extension is granted because the Board finds arbitrary or unreasonable hardship, coupled with minimal environmental impact, not because other action would interfere with the pending federal enforcement action.

The Agency recommends that this variance extension be granted, with conditions, until August 1, 1992, or until the pending federal enforcement action is resolved, whichever comes first. Sauget does not object to the conditions the Agency recommends for variance extension. The Board will grant the term of the variance as proposed by Sauget and the Agency subject to the Agency's proposed conditions.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

#### ORDER

The Board hereby grants the Village of Sauget extension of the variance from 35 Ill.Adm.Code 304.106, as it relates to color only. The variance extension is subject to the following conditions:

1. This variance extension will begin on February 1, 1992 (upon expiration of the previous variance granted to Sauget in PCB 89-86, September 13, 1989), and continue until August 1, 1992 or until final action by the district court in United States of America and the State of Illinois v. The Village of Sauget, Civil No. 88-5131 (S.D. Ill., filed May 13, 1988), whichever is sooner.
2. Sauget shall submit to the Agency the results of the program to be conducted by Monsanto (as provided for in PCB 90-181 and as described in the instant variance petition, PCB 91-252) for identifying the principal causes of

remaining color and assessing possible controls. Results of this program shall be provided as progress reports. Each report shall include available sampling results, and to the extent reasonably feasible at the time of reporting, an assessment of the effectiveness and implementability of any further color controls identified as a result of this program.

3. Within 45 days of the date of this order, Sauget shall execute and forward to Bruce L. Carlson, Division of Legal Counsel, Illinois Environmental Protection Agency, 2200 Churchill Road, P.O. Box 19276, Springfield, Illinois 62794-9276, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. The 45-day period will be held in abeyance during any period that this matter is being appealed. Failure to execute and forward this Certificate within 45 days renders this variance null and void. The form of the Certificate shall be as follows:

CERTIFICATION

I (We), \_\_\_\_\_,  
 hereby accept and agree to be bound by all terms and  
 conditions of the Pollution Control Board's February 6, 1992  
 order in PCB 91-252.

\_\_\_\_\_  
 Petitioner

\_\_\_\_\_  
 Authorized Agent

\_\_\_\_\_  
 Title

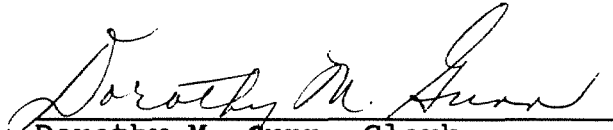
\_\_\_\_\_  
 Date

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act  
 (Ill.Rev.Stat. 1989, ch. 111 1/2, par. 1041) provides for the  
 appeal of final orders of the Board within 35 days. The Rules of  
 the Supreme Court of Illinois establish filing requirements.



I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 6<sup>th</sup> day of February, 1992, by a vote of 6-0.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board