

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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|---------------------------------|---|---------------------|
| IN THE MATTER OF: |) | |
| |) | |
| Petition of Emerald Polymer |) | |
| |) | AS 19-002 |
| Additives, LLC for an Adjusted |) | |
| |) | (Adjusted Standard) |
| Standard from 35 Ill. Adm. Code |) | |
| |) | |
| 304.122(b) |) | |

NOTICE OF ELECTRONIC FILING

TO: Persons Identified on the Attached Certificate of Service

PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Illinois Pollution Control Board this **Notice of Electronic Filing** and the attached **Emerald's Pre-Hearing Statement of Proposed Amendments to Adjusted Standard**, copies of which are attached herewith and served upon you.

Respectfully submitted,

Emerald Polymer Additives LLC

Date: December 30, 2019

By: /s/ Thomas W. Dimond
One of Its Attorneys

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
Petition of Emerald Polymer)
Additives, LLC for an Adjusted) AS 19-002
Standard from 35 Ill. Adm. Code) (Adjusted Standard)
304.122(b))

**EMERALD'S PRE-HEARING STATEMENT OF
PROPOSED AMENDMENTS TO ADJUSTED STANDARD**

Emerald Polymer Additives, LLC (“Emerald”) hereby submits this Pre-Hearing Statement of Proposed Amendments to Adjusted Standard (the “Pre-Hearing Statement”) in accordance with the Hearing Officer Order dated November 19, 2019. By way of explanation, Emerald states as follows:

1. The Hearing Officer ordered that certain documents be filed with the Board no later than December 30, 2019. Among the documents to be filed was a document with the “proposed amendments to the existing adjusted standard.” *See* Hearing Officer Order dated November 19, 2019.
2. Attached as Exhibit A is a document that reflects the adjusted standard conditions established by the Pollution Control Board (“Board”). *See Petition of Emerald Performance Materials LLC for an Adjusted Standard from 35 Ill. Adm. Code 304.122, AS-2013-002, Opinion and Order of the Board (December 1, 2016) (“AS 13-2”)*. These conditions were slightly modified from those imposed by the Board on April 16, 2015 to conform to the ruling of the Appellate Court in *Emerald Performance Materials, LLC v. The Illinois Pollution Control Board*, 2016 IL App (3d) 150526.
3. Attached as Exhibit B is a document that reflects the adjusted standard conditions that Emerald proposes the Board adopt after hearing in granting the requested adjusted standard.

4. Attached as Exhibit C is a document that reflects a redline of all the changes from Exhibit A to Exhibit B.

5. Emerald proposes the adjusted standard conditions reflected in Exhibit B and the changes reflected in Exhibit C for the following reasons.

6. Emerald proposes three changes to Condition 1. First, the name of the recipient of the adjusted standard should be changed to reflect the transfer of the facility from Emerald Performance Materials, LLC to its subsidiary, Emerald. *See* Petition, 2. The change is also consistent with the issuance of NPDES Permit No. IL0001392 to Emerald on September 28, 2016. *See* Petition, Exhibit 3. Second, Emerald proposes to reduce the load limits adopted in AS 13-2 by 25% for the reasons explained in the Written Testimony of Galen Hathcock, ¶ 51. This would reduce the daily maximum load limit from 1,633 to 1,225 lbs/day and the 30-day average load limit from 841 to 631 lbs/day.

7. Thirdly, Emerald proposes to delete the last sentence of Condition 1, which established an expiration date for the adjusted standard granted in AS 13-2. In contrast to variances, which are expressly to be of limited duration, adjusted standards are not. *Compare* 415 ILCS 5/36(b) (variances provide temporary relief for up to five years) *with* 415 ILCS 5/28.1 (adjusted standard authority makes no reference to a time limitation); *see also* *Petition of Ill. Power Co. (Vermilion Power Station) for Adjusted Standards from 35 Ill. Adm. Code 302.208(E)*, Ill. Pollution Control Bd. Op. AS 92-7, 1993 WL 411263 (Oct. 7, 1993) (the result of an adjusted standard is the same as site-specific rulemaking, i.e. permanent relief from a rule). Moreover, by the end of the hearing in this matter, Emerald will have proven three times that an adjusted standard from 35 Ill. Adm. Code 304.122(b) is warranted. Considering that (1) the Board has recognized that the scientific basis for the adoption of the ammonia effluent standards

in 35 Ill. Adm. Code 304.122(a) and (b) has been refuted, *see* AS 13-2, Opinion and Order of the Board, 40-41 (April 16, 2015); (2) Emerald has investigated and evaluated at least 16 treatment alternatives over more than 20 years without finding one that is both technically feasible and economically reasonable, *see* Petition, 22-27 and Petitioner's Hearing Exhibit 12; and (3) all the sampling data shows that the ammonia in Emerald's discharge does not adversely impact the environment, *see* Petition, 28-29, this adjusted standard relief should be made permanent.

8. Emerald proposes non-substantive changes to Condition 2.b to better describe the equipment to be maintained and to expressly allow for routine replacements of that equipment that do not increase ammonia nitrogen in Emerald's wastewater discharge. The fluid bed dust collector replaced the BBTS wet scrubber over a decade ago. *See* Petition, Exhibit 5 (Letter from Emerald to Illinois EPA dated 12/24/07, Item 6). Reference to the BBTS wet scrubber is unnecessary since it was the equipment *replaced* rather than the equipment to be maintained and is potentially confusing. In addition, both the fluid bed dust collector and the acetonitrile recovery column may need to be replaced-in-kind or upgraded to address routine wear and tear or to comply with air pollution control regulations. Without this proposed change in Condition 2.b, such routine changes might be thought to require a technical modification to this adjusted standard. Emerald does not believe that was the intent of the Board in adopting Condition 2.b or that requiring such a technical modification accomplishes any environmental goal. It would merely add an unproductive procedural requirement. Thus, Emerald proposes to modify Condition 2.b to make clear that such routine changes do not require a modification of the adjusted standard so long as the changes do not increase ammonia nitrogen discharges.

9. Emerald proposes non-substantive changes to Condition 2.d to better describe the nature of the investigation to be performed by Emerald with regard to any new treatment technologies that might be identified.

10. Emerald proposes to eliminate Condition 2.e of AS 13-2 because the evaluations of those specific control technologies were completed by Emerald or its consultants. *See* Petitioner's Hearing Exhibit 11 (Letter from Emerald to Illinois EPA dated April 17, 2018 and the attached Technical Memorandum of Brown & Caldwell dated April 13, 2018) and Petitioner's Hearing Exhibit 12 (Expert Report of Houston Flippin). Emerald proposes that it be replaced by a new condition 2.e that requires monitoring of the Illinois River to demonstrate compliance with the General Use ammonia water quality standards under 35 Ill. Adm. Code 302.212. Emerald performed monitoring of this nature from 2007-2015 pursuant to a condition in its then-effective NPDES permit. That monitoring showed the water quality standards were met. *See* Written Testimony of Galen Hathcock, ¶ 39. While this monitoring is complicated and involves some risks due to the need for individuals to take a boat into the Illinois River to collect the samples, Emerald is prepared to undertake the monitoring if the Board deems it appropriate. The proposed condition specifies the location for the monitoring as a distance between 300 and 310 feet from the multi-port diffuser based on a mixing zone study performed by AquaEter. *See* AS 13-2 Petition, Exhibit 4, page vi ("All water quality standards are met at less than 300 feet from the diffuser under the maximum ammonia discharge limit."). Emerald proposes that the sampling be performed twice each year: once during each of the two seasonal periods for the General Use ammonia water quality standard.

11. Emerald proposes to delete Conditions 2.g and 2.h of AS 13-2 because they are inappropriate and unnecessary. Condition 2.g of AS 13-2 purports to authorize the Agency to

request a modification to the adjusted standard issued by the Board based on new, post-hearing information contained in annual reports to be submitted by Emerald. Such a modification of a Board order is inconsistent with the Board's procedural rules. Outside of motions for reconsideration, which must be made within a short period after a Board ruling, the procedural rules only allow modification of a final Board order in limited circumstances and then usually because information has come to light that was available (though undiscovered) *at the time of the Board hearing*. See 35 Ill. Adm. Code 101.904(b). A modification based on new, post-hearing information is not allowed under the Board rules. Given that the Board previously held that the Henry Plant discharge poses no adverse threat to the environment, AS 13-02, Opinion and Order of the Board, 61-62 (April 16, 2015), and that subsequent sampling has confirmed that conclusion, Petition, 28-29, omitting this condition does not negatively impact the environment.

12. As to Condition 2(h), it purports to incorporate into the adjusted standard requirements that do not relate to the subject of the adjusted standard, i.e., the plant's ammonia discharge, and that are otherwise already applicable to Emerald pursuant to law or NPDES Permit No. IL0001392. The legislature authorized the Board to impose conditions on the grant of an adjusted standard "as may be necessary to accomplish the purposes of the Act." 415 ILCS 5/28.1(a). Emerald finds it difficult to understand how a condition unrelated to the subject of an adjusted standard and that merely incorporates already applicable requirements accomplishes any purpose at all, much less a purpose under the Act. Adopting duplicative requirements is just unnecessary duplication. It accomplishes nothing.

13. For the reasons elaborated above and based on the evidence to be presented at hearing, Emerald requests that the Board grant the adjusted standard with the conditions reflected in Exhibit B.

Respectfully submitted,

Emerald Polymer Additives LLC

Date: December 30, 2019

By: /s/ Thomas W. Dimond
One of Its Attorneys

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CERTIFICATE OF SERVICE

I, the undersigned, certify that on December 30, 2019, I have served the attached **Notice of Electronic Filing and Emerald's Pre-Hearing Statement of Proposed Amendments to Adjusted Standard** upon the following persons by electronic mail:

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/s/ Thomas W. Dimond

EXHIBIT A

*In the Matter of: Petition of Emerald Polymer Additives, LLC
for an Adjusted Standard from 35 Ill. Adm. Code 304.122(b), AS 19-2*

Adjusted Standard Conditions, AS13-2, Opinion and Order of the Board, Dec. 1, 2016

1. Pursuant to Section 28.1 of the Environmental Protection Act (415 ILCS 5/28.1 (2012)), the Board grants Emerald Performance Materials, LLC (Emerald) an adjusted standard from 35 Ill. Adm. Code 304.122(b). Under this adjusted standard, the total ammonia nitrogen effluent standard at 35 Ill. Adm. Code 304.122(b) does not apply to the discharge of effluent into the Illinois River from the Emerald facility at 1550 County Road 1450 N. in Henry, Marshall County. Instead, Emerald's effluent for total ammonia nitrogen must comply with a daily maximum of 140 milligrams per liter (mg/L) and 1633 pounds per day (lbs/day), as well as a 30-day average of 110 mg/L and 841 lbs/day. This adjusted standard takes effect on April 16, 2015, and expires on April 16, 2020.
2. The adjusted standard granted in paragraph 1 of this order is subject to the following conditions:
 - a. Emerald must continue to maintain the high-rate, multi-port diffuser for the discharge into the Illinois River to achieve an effluent dispersion necessary to meet the applicable ammonia nitrogen water quality standards at the edge of the mixing zone and zone of initial dilution (ZID).
 - b. Emerald must maintain the following ammonia reduction measures: replacement of the BBTS Wet Scrubber with a dust collector; and upgrade of instrumentation for the acetonitrile recovery column.
 - c. Emerald must investigate new production methods and technologies that generate less ammonia and nitrification inhibitors in Emerald's discharge. The nitrification inhibitors such as MBT are the chief cause of inhibiting nitrification in the treatment system which allows for ammonia to discharge.
 - d. Emerald must investigate new treatment technologies and evaluate implementation of new and existing treatment technology based on current plant conditions.
 - e. By April 16, 2018, Emerald must investigate and submit to the Illinois Environmental Protection Agency (Agency) the following studies:
 - i) A study evaluating the use of granulated activated carbon to treat the polymer chemicals tank waste water before it combines with non-polymer chemicals tank waste water to determine if this treatment alternative effectively removes inhibitors, including MBT, which would

then allow for biological treatment. The study must include a technical feasibility evaluation and an economic reasonableness analysis;

- ii) A study evaluating the technical feasibility and the economic reasonableness of a spray irrigation program. The studies must include an evaluation of compliance with the applicable design standards for slow rate land application of treated wastewaters (35 Ill. Adm. Code 372); and
 - iii) A study evaluating the addition of water from the Illinois River to the wastewater to determine the potential for subsequent single-stage nitrification in light of the potential dilution. The study must include a technical feasibility evaluation and an economic reasonableness analysis.
- f. Emerald must prepare and submit to the Agency annual reports summarizing its activities to comply with paragraphs 2(c) through 2(e).
 - g. If, upon review of the annual reports required by condition 2(f), the Agency determines that new technology to treat ammonia is available that is economically reasonable and technically feasible, the Agency may petition the Board to modify the relief granted by this order.
 - h. Emerald must operate in full compliance with the Clean Water Act, its National Pollutant Discharge Elimination System permit, the Board's water pollution regulations, and any other applicable requirement.

EXHIBIT B

*In the Matter of: Petition of Emerald Polymer Additives, LLC
for an Adjusted Standard from 35 Ill. Adm. Code 304.122(b), AS 19-2*

Adjusted Standard Conditions Proposed by Emerald, December 30, 2019:

1. Pursuant to Section 28.1 of the Environmental Protection Act (415 ILCS 5/28.1 (2012)), the Board grants Emerald Polymer Additives, LLC (Emerald) an adjusted standard from 35 Ill. Adm. Code 304.122(b). Under this adjusted standard, the total ammonia nitrogen effluent standard at 35 Ill. Adm. Code 304.122(b) does not apply to the discharge of effluent into the Illinois River from the Emerald facility at 1550 County Road 1450 N. in Henry, Marshall County. Instead, Emerald's effluent for total ammonia nitrogen must comply with a daily maximum of 140 milligrams per liter (mg/L) and 1,225 pounds per day (lbs/day), as well as a 30-day average of 110 mg/L and 631 lbs/day.
2. The adjusted standard granted in paragraph 1 of this order is subject to the following conditions:
 - a. Emerald must continue to maintain the high-rate, multi-port diffuser for the discharge into the Illinois River to achieve an effluent dispersion necessary to meet the applicable ammonia nitrogen water quality standards at the edge of the mixing zone and zone of initial dilution (ZID).
 - b. Emerald must maintain the following air pollution control equipment as additional ammonia reduction measures: the fluid bed dust collector, the acetonitrile recovery column instrumentation upgrades, any replacements-in-kind of the above control equipment, or any alternative replacement control equipment that does not increase ammonia nitrogen in Emerald's wastewater discharge.
 - c. Emerald must investigate new production methods and technologies that generate less ammonia and nitrification inhibitors in Emerald's discharge. The nitrification inhibitors such as MBT are the chief cause of inhibiting nitrification in the treatment system which allows for ammonia to discharge.
 - d. Emerald must investigate the technical feasibility and economic reasonableness of new treatment technologies to reduce ammonia discharges, including evaluation of implementation of those new treatment technologies based on current plant conditions.
 - e. Emerald must conduct monitoring of ammonia nitrogen in the Illinois River to demonstrate compliance with the ammonia water quality standards in accordance with 35 Ill. Adm. Code 302.212. The river water samples for this monitoring shall be collected within 10 feet from the edge of the approved mixing zone, i.e., within 310 feet downstream of the

multi-port diffuser. The monitoring shall be performed twice per year; once during the Early Life Stage Present period (March through October) and once during the Early Life Stage Absent period (November through February).

- f. Emerald must prepare and submit to the Agency annual reports summarizing its activities to comply with paragraphs 2(c) through 2(e).

EXHIBIT C

*In the Matter of: Petition of Emerald Polymer Additives, LLC
for an Adjusted Standard from 35 Ill. Adm. Code 304.122(b), AS 19-2*

**Adjusted Standard Conditions, AS13-2, Opinion and Order of the Board, Dec. 1, 2016
Proposed by Emerald, December 30, 2019:**

1. ~~1.~~ Pursuant to Section 28.1 of the Environmental Protection Act (415 ILCS 5/28.1 (2012)), the Board grants Emerald Performance ~~Materials~~Polymer Additives, LLC (Emerald) an adjusted standard from 35 Ill. Adm. Code 304.122(b). Under this adjusted standard, the total ammonia nitrogen effluent standard at 35 Ill. Adm. Code 304.122(b) does not apply to the discharge of effluent into the Illinois River from the Emerald facility at 1550 County Road 1450 N. in Henry, Marshall County. Instead, Emerald's effluent for total ammonia nitrogen must comply with a daily maximum of 140 milligrams per liter (mg/L) and ~~16331,225~~ pounds per day (lbs/day), as well as a 30-day average of 110 mg/L and ~~841631~~ lbs/day. ~~This adjusted standard takes effect on April 16, 2015, and expires on April 16, 2020.~~
2. ~~2.~~ The adjusted standard granted in paragraph 1 of this order is subject to the following conditions:

 - a. Emerald must continue to maintain the high-rate, multi-port diffuser for the discharge into the Illinois River to achieve an effluent dispersion necessary to meet the applicable ammonia nitrogen water quality standards at the edge of the mixing zone and zone of initial dilution (ZID).
 - b. Emerald must maintain the following air pollution control equipment as additional ammonia reduction measures: replacement of the BBTS Wet Scrubber with a fluid bed dust collector; and upgrade of instrumentation for the acetonitrile recovery column instrumentation upgrades, any replacements-in-kind of the above control equipment, or any alternative replacement control equipment that does not increase ammonia nitrogen in Emerald's wastewater discharge.
 - c. Emerald must investigate new production methods and technologies that generate less ammonia and nitrification inhibitors in Emerald's discharge. The nitrification inhibitors such as MBT are the chief cause of inhibiting nitrification in the treatment system which allows for ammonia to discharge.
 - d. Emerald must investigate the technical feasibility and economic reasonableness of new treatment technologies to reduce ammonia discharges, including evaluation of implementation of those new treatment

~~technologies and evaluate implementation of new and existing treatment technology-based on current plant conditions.~~

- ~~e. By April 16, 2018, Emerald must investigate and submit to the Illinois Environmental Protection Agency (Agency) the following studies:~~
- i) ~~A study evaluating the use of granulated activated carbon~~
- ~~e. Emerald must conduct monitoring of ammonia nitrogen in the Illinois River to demonstrate compliance with the ammonia water quality standards in accordance with 35 Ill. Adm. Code 302.212. The river water samples for this monitoring shall be collected within 10 feet from the edge of the approved mixing zone, i.e., within 310 feet downstream of the multi-port diffuser. The monitoring shall be performed twice per year; once during the Early Life Stage Present period (March through October) and once during the Early Life Stage Absent period (November through February).~~
- ~~to treat the polymer chemicals tank waste water before it combines with non-polymer chemicals tank waste water to determine if this treatment alternative effectively removes inhibitors, including MBT, which would then allow for biological treatment. The study must include a technical feasibility evaluation and an economic reasonableness analysis;~~
- ~~ii) A study evaluating the technical feasibility and the economic reasonableness of a spray irrigation program. The studies must include an evaluation of compliance with the applicable design standards for slow rate land application of treated wastewaters (35 Ill. Adm. Code 372); and~~
- ~~iii) A study evaluating the addition of water from the Illinois River to the wastewater to determine the potential for subsequent single-stage nitrification in light of the potential dilution. The study must include a technical feasibility evaluation and an economic reasonableness analysis.~~
- f. ~~Emerald must prepare and submit to the Agency annual reports summarizing its activities to comply with paragraphs 2(c) through 2(e).~~
- ~~g. If, upon review of the annual reports required by condition 2(f), the Agency determines that new technology to treat ammonia is available that is economically reasonable and technically feasible, the Agency may petition the Board to modify the relief granted by this order.~~
- ~~h. Emerald must operate in full compliance with the Clean Water Act, its National Pollutant Discharge Elimination System permit, the Board's water pollution regulations, and any other applicable requirement.~~