

**Environmental Justice/Title VI Review  
Green Plains Madison, LLC  
I.D. No: 119465AAG  
Application No.: 23020028**

*Overview*

This document details a review undertaken in this permitting action pertaining to the Illinois EPA’s current policies and activities promoting the goals of Environmental Justice (EJ) in its permit programs, as well as measures to assure compliance with Title VI of the federal Civil Rights Act of 1964, 42 U.S.C. §§2000d to 2000d-7 (Title VI). The EJ-related policies are administered voluntarily by the Illinois EPA through an EJ Policy, an EJ Public Participation Plan providing for public engagement in EJ communities, a Language Access Plan providing for meaningful access for persons with limited English proficiency, and a Disability Plan providing for meaningful access for persons with disabilities. The Title VI-related matters are addressed by the Illinois EPA through its obligation with United States Environmental Protection Agency (USEPA) to comply with Title VI and its implementing regulations found at 40 CFR Parts 5 and 7, and, separately, through an Informal Resolution Agreement (IRA) voluntarily entered into by Illinois EPA and USEPA on February 14, 2024.

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This document generally highlights the Illinois EPA’s efforts in evaluating EJ in the review of this permit application. Collectively, these efforts form the basis for the EJ analysis that accompanied the review of the permit application. The nature of the project and its location are initially identified. Two additional steps that are common to EJ efforts undertaken by the USEPA and other states are discussed as well. One step involved the retrieval of screening data from the USEPA’s EJScreen program, which is reflected in an EJScreen Community Report available on the Illinois EPA’s website. The other one involved public outreach efforts undertaken by the Illinois EPA in the permitting action, which traditionally represent the Illinois EPA’s commitment to promote meaningful public involvement throughout the permit review process.

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This document discusses the applicability of the Illinois EPA’s EJ Policy. The Illinois EPA’s Office of Environmental Justice bears the primary responsibility for coordinating efforts aimed at advancing the Illinois EPA’s EJ goals. Permitting programs are often on the front-line of national, state, and local interest in environmental regulatory activities, particularly when the nature of the project and/or the location of the project site may be controversial. For this reason, EJ policies developed by regulatory agencies are frequently tailored to address their permitting process. The Illinois EPA’s EJ Policy applies to its permitting programs and to this permitting action, which is consistent with the goals of strengthening “the public’s involvement in environmental decision-making, including in permitting...” and striving to be “responsive to the communities [that the Illinois EPA] serves.”<sup>1</sup>

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<sup>1</sup> <https://epa.illinois.gov/topics/environmental-justice/ej-policy.html>

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A brief summary of the air quality modeling analysis that accompanied the review of the construction project is provided. Because of the facility's location in an EJ area of concern, the Illinois EPA requested that the applicant submit an air quality modeling analysis in support of its construction permit application to confirm that the project would not threaten or compromise existing National Ambient Air Quality Standards (NAAQS). The NAAQS serve to: (i) protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly and (ii) protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. In response to this request, the applicant and its modeling consultant performed an air quality dispersion modeling analysis to assess the project's impact of carbon monoxide (CO), nitrogen oxides (NOx), and sulfur dioxide (SO<sub>2</sub>) emissions. In addition, modeling was conducted of the project's precursor emissions impacts from SO<sub>2</sub> and NO<sub>x</sub> on secondary particulate matter 2.5 microns or less in diameter (PM<sub>2.5</sub>). A memorandum prepared by the Illinois EPA's Permits Section/Modeling Unit addressing these evaluations is available on the Illinois EPA's website.

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This document briefly addresses the applicability of the IRA mentioned above. The IRA entered into between the Illinois EPA and USEPA provides for the Illinois EPA's implementation of additional enhancements to the permit review process for certain air construction permits. The commitments set forth in the IRA arose from an administrative complaint alleging that the Illinois EPA violated Title VI and the USEPA's disparate impact requirements in issuing a construction permit to General III, LLC, (formerly General Iron) in June 2020. The Illinois EPA denied the complaint's alleged discrimination based on race, color or national origin but voluntarily agreed to undertake measures that would provide for additional assurance and transparency in implementing its responsibilities, as a federal funding recipient, with USEPA under Title VI and USEPA's implementing regulations. A copy of the IRA is posted to the Illinois EPA's website.

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A brief discussion of the permit enhancements made to the issued construction permit is presented below. As described in the IRA, permit enhancements consist of construction permit conditions to address regulatory requirements, past compliance history or potential impacts to an EJ area of concern. For well-controlled facilities, these conditions frequently involve operational or compliance assurance issues, such as monitoring, recordkeeping, reporting, or emissions testing, that are incorporated into the permit through agreement with the applicant or through the Illinois EPA's permit enabling authorities found in the Illinois Environmental Protection Act (Act), 415 ILCS 5/39.

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A discussion is presented concerning the Illinois EPA's review of the applicant's prior adjudications and past compliance history with the Act. Section 39(a) of the Act provides enabling authority for the Illinois EPA to consider past adjudications of the Act by an applicant involving a release of a contaminant into the

environment.<sup>2</sup> The same section of the Act also allows the Illinois EPA to impose “reasonable conditions specifically related to” an applicant’s past compliance history with the Act if it is “necessary” to “correct, detect or prevent” noncompliance. Under ordinary circumstances, these legal authorities may be used at the Illinois EPA’s discretion in its review of most air permitting programs. Under the IRA, the Illinois EPA committed to considering both adjudications and past compliance history for an applicant in certain construction projects outlined in the agreement (*see*, “affirmatively consider” language in IRA at Section IV(A)(3)(a) and (b)).

A review of past adjudications involving an environmental release in violation of the Act’s provisions is authorized in the context of a permit denial or a grant of a permit (i.e., “in making its decisions on permit applications”). The Illinois EPA regards an “adjudication” as a judgment by a court (or quasi-judicial body) that is final and on the merits.<sup>3</sup> Adjudications are usually distinguished from consent decrees or administrative orders in that the latter do not represent a judicial (or quasi-judicial) determination as to the merits of the dispute.<sup>4</sup>

The enabling authority to consider past compliance history with the Act’s provisions applies whenever permit conditions specifically related to such history are necessary to prevent or correct noncompliance. Deviation or excess emission reports are frequently considered part of a permit applicant’s compliance history,<sup>5</sup> as are pre-enforcement notices and compliance commitment agreements.<sup>6</sup>

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Lastly, a discussion is presented concerning the Illinois EPA’s evaluation of Title VI criteria for disparate impact discrimination. This evaluation was conducted to assess whether disproportionate and adverse effects from the permitting of the proposed project require additional agency action to avoid unlawful discrimination in the Illinois EPA’s administration of its programs or activities, as prohibited by Title VI and USEPA’s implementing regulations.<sup>7</sup> The disparate impact analysis highlighted by the IRA determines

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<sup>2</sup> 415 ILCS 5/39(a).

<sup>3</sup> *See, Merriam-Webster On-line Dictionary* ([www.merriam-webster.com](http://www.merriam-webster.com))(act or process of adjudicating a dispute).

<sup>4</sup> Judicial consent orders and administrative consent orders approved by the Pollution Control Board involving the State of Illinois frequently contain a negotiated clause with a respondent to accept the order as an adjudication for purposes of Section 39(a) and (i) of the Act. Notwithstanding the absence of a judicial determination of the merits of the case, the Illinois EPA construes such an order as a formal adjudication, consistent with the parties’ expressed intentions. Consent decrees lacking similar provisions would be considered as a part of the source’s compliance history.

<sup>5</sup> Federal consent decrees are included in this analysis to the extent that they relate to the Illinois State Implementation Plan and are therefore related to the Act’s provisions.

<sup>6</sup> In addition to the scope of review permitted by the language of the enabling authority, the Illinois EPA, as an administrative agency, is also obligated to ensure that its decision-making is not arbitrary, capricious or unreasonable.

<sup>7</sup> *See*, IRA at Section IV(5).

whether the Illinois EPA must consider additional mitigation measures aimed at preventing or minimizing environmental effects from the project's permitting.<sup>8</sup>

The criteria for assessing disparate impact discrimination are as follows: identifying the policy or practice at issue, a showing of adversity/harm, and a showing of disparity and causation. As described by various guidance documents generated by the United States Department of Justice (DOJ), USEPA, and other federal agencies, the considerations involved in evaluating these criteria can be far-reaching, nuanced, and highly complex. For purposes of implementing the IRA, the operative criterion in most cases involving the permitting of air pollution sources is adversity/harm. This is because the absence of adversity/harm for a given permitting project will mean that a showing of disparate impact cannot be made.

Environmental laws are usually a function of environmental science. Environmental science, through its many disciplines, studies and hypotheses, works to inform environmental laws as to their purpose, meaning and scope. Environmental laws, in turn, require objectively valid standards that can be made applicable to polluters through licensing programs and allow for enforcement through remedial rights of action. A showing of adversity/harm under Title VI must necessarily be viewed through the lens of these environmental standards and the accompanying legal framework that enforces them. As the DOJ's Title VI Legal Manual observes: "Adversity exists if a fact specific inquiry determines that the nature, size, or likelihood of the impact is sufficient to make it *an actionable harm* (emphasis added)."<sup>9</sup> This analysis therefore examines whether an alleged harm would support a remedial action under existing environmental laws and regulations.

In general, there are three types of remedial actions common to environmental laws. Because the permitting action affects only emissions-related aspects of the facility's operation, the relevant remedial actions in this context are those causing or threatening air pollution. The first is represented by the enforcement of substantive standards, such as emission standards, limitations, and related requirements, that are set forth in a statute or implementing regulations. These requirements are often expressed in numerical terms but sometimes can be narrative-based terms to reflect specific work practices. Such standards are frequently accompanied by compliance assurance requirements (i.e., monitoring, testing, and emissions reporting).<sup>10, 11</sup>

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<sup>8</sup> It should be noted that Section IV of the IRA does not specifically compel or allude to intentional discrimination (also known as disparate treatment). As a federal funding recipient, the Illinois EPA is committed to implementing its programs and activities free of discrimination based on race, color or national origin, which includes both disparate treatment and disparate effects. Nothing in the administrative record of this permit action reveals or infers evidence of intentional discrimination on the basis of race, color or national origin as prohibited by Title VI.

<sup>9</sup> See, <https://www.justice.gov/crt/fcs/T6Manual7> at Section VII(C)(1)(b).

<sup>10</sup> In Illinois, the Act establishes several emissions-related requirements, however, the lion's share of them originate in rules developed by the Illinois Pollution Control Board, who serves as a quasi-administrative body responsible for creating pollution standards in the State. Other substantive standards are found in federal regulations promulgated by USEPA, including the categorical emission standards found in the New Source Performance Standards (NSPS)<sup>10</sup> and the National Emission Standards for Hazardous Air Pollutants (NESHAP).

<sup>11</sup> A cause of action for violations of these standards can originate under either state or federal law. Federal enforcement derives from Title III of the Clean Air Act (CAA) (see, 42 U.S.C. §7604), while state enforcement derives

A second source of remedial action arises from a narrative form of an emission standard prohibiting air pollution. Of relevance here is the narrative standard of “air pollution” that is prohibited by the Act’s Section 9(a). The statutory term refers to “the presence of one or more contaminants in sufficient quantities and of such characteristics” as to cause or threaten injury to “human, plant or animal life, to health, or to property...”.<sup>12</sup> A third source of remedial action is a nuisance-based standard. Environmental remedial statutes adopted since the 1960s often borrowed from common or statutory nuisance laws to create a remedial action based on “unreasonable” pollution conditions caused to another’s interests in the use or enjoyment of property.<sup>13</sup>

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### 1. *Permitting Project:*

Green Plains Madison, LLC (Green Plains), is an existing ethanol production facility located at 395 Bissell Street in Madison, Madison County, Illinois. An application for a construction permit was received by the Illinois EPA from the company on February 3, 2023. Following a Notice of Incompleteness determination, Green Plains submitted a revised application on March 20, 2023, seeking to install new equipment, including new grain milling and fermentation equipment that would provide for an increase in utilization of certain existing equipment at the existing facility in order to expand ethanol production. Green Plains’ application also proposed the installation of a Maximum Stillage Coproducts (MSC) Production Operation for production of a new specialty product (MSC Protein).

The construction project would result in increases in emissions of criteria pollutants emitted by the facility. However, at the Illinois EPA’s request, the applicant underwent an extensive air quality modeling analysis to estimate the air quality impacts from the project. The modeling analysis and resulting permit enhancements are described later in this document.

### 2. *Applicability of EJ Policy:*

The current construction permit application has benefitted from the consideration of the EJ Policy’s strategies for implementing EJ activities, namely, the implementation of the EJ Notification Process. In addition, extensive air quality modeling of criteria pollutants was conducted at the Illinois EPA’s request. An evaluation of the company’s prior adjudications and past compliance history was also made, consistent

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from Title X of the Act (see, 415 ILCS 5/33 and 42). For example, see 415 ILCS 5/9(a) (“cause, or threaten or allow... the emission of any contaminant into the environment... so as to violate regulations or standards adopted by the Board under this Act”).

<sup>12</sup> See, 415 ILCS 5/3.115. The focus in these cases is on a chemical, biological or other type of physical harm caused to, or threatening, the environment, public health or property.

<sup>13</sup> In the case of the Act, the definition applicable here is to pollution that “unreasonably interferes with the enjoyment of life or property” (415 ILCS 5/3.115), language which one Illinois court found was meant “to introduce into the statute an objective quality of the common law.” See, *Hillside Stone Corporation v. Illinois PCB*, 1 Ill. Dec. 816, 819 (1<sup>st</sup> Dist. Ct. App. 1976). Under this standard, the interference must be “substantial,” *Hillside Stone*, citing *Incinerator, Inc. v. PCB*, 59 Ill.2d 290 (Ill. 1974), and not merely an annoyance or minor discomfort. *Processing and Books, Inc., v. PCB*, 64 Ill.2d 68, 77 (Ill. 1976).

with the Illinois EPA's obligation under the IRA. Permitting enhancements were developed as a result of both the air quality modeling and the review of past compliance history.

### *3. EJ Screen Results:*

A copy of the USEPA's EJScreen Community Report was retrieved by the Illinois EPA for the facility's location utilizing a one-mile radius. A review of the EJ indexes for this location reveals percentiles greater than 80%<sup>14</sup> based on Illinois averages for the following indicators: particulate matter (PM) at 82%, ozone at 87%, diesel PM at 90%, air toxics cancer risk at 97%, air toxics respiratory hazard index at 96%, lead paint at 84%, Superfund proximity at 99%, risk management program (RMP) proximity at 99%, hazardous waste proximity at 99% and wastewater discharge at 86%.

An EJ index combines demographic factors with a single environmental factor. An EJ index does not combine various environmental factors into a cumulative score-- each environmental indicator has its own EJ index. The EJ index is higher in block groups with large numbers of mainly low-income and/or people of color residents with a higher environmental indicator value. To calculate a specific EJ index, USEPA's EJScreen uses a formula to combine a single environmental factor with the demographic index (which averages low income and people of color populations).

A review of the Environmental Indicators data from the Community Report, which provides estimated values for pollution impacts and other sources at the selected location, reveals percentiles greater than 80% based on Illinois averages for the following indicators: Superfund proximity at 98%, RMP proximity at 98% and hazardous waste proximity at 98%. In comparison to the EJ indexes, this data removes the demographic factors from the screening analysis and focuses only on environmental factors.

### *4. EJ Outreach and Public Participation Process:*

As noted above, enhanced outreach was conducted by Illinois EPA through the implementation of the EJ notification process, which is a key feature of the EJ Policy that is designed to notify elected officials, community groups, and persons who request to be notified concerning the receipt of permit applications in an EJ area of concern. The EJ notification letter was sent to 51 separate groups and individuals on February 9, 2023. No inquiries were received in response to the EJ notification letter.

It should be noted that the initial permit application submitted to the Illinois EPA did not clearly address whether the project would represent a major project under the regulations for Major Stationary Sources Construction and Modification, 35 Ill. Adm. Code Part 203. Consequently, a statement was inserted into the EJ notification letter indicating the project would require public comment. The rules governing the applicability of public participation in the air pollution control permit program are promulgated at 35 Ill. Adm. Code Part 252. Through a review of a later permit application, the Illinois EPA verified that the

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<sup>14</sup> According to USEPA's EJScreen technical manual (<https://www.epa.gov/system/files/documents/2023-06/ejscreen-tech-doc-version-2-2.pdf>), USEPA identified the 80th percentile filter as an initial starting point when screening for EJ concerns. In other words, an area with any of the 13 EJ Indexes at or above the 80th percentile should be considered as a potential candidate for further review.

proposed construction project would not result in a major project, thus revealing that public comment would not be required by rule.

The reference to a public comment period in the EJ notification letter was only revealed in the later stages of finalizing the review of the permit and preparing the accompanying review documents. Because facts relied upon in evaluating the need for notice of public comment and/or hearing can and do frequently change due to changes to a permit application, EJ notification letters seldom make reference to a future notice of comment and/or hearing. If a notice of public comment or hearing in a permit proceeding is determined necessary, it is made known through the public notice document that is prepared for the public comment and/or hearing. In this instance, the Permit Section ultimately determined that public comment was not necessary because the minor source project did not fall into an applicable source category listed in the Illinois EPA public participation rules and because the project did not otherwise appear to be of public interest.

In accordance with the Illinois EPA's Language Access Plan (LAP) (<https://epa.illinois.gov/about-us/accessibility/language-access.html>), Illinois EPA reviewed the EJScreen's community data for the area within one mile of the facility. The number of Limited English-Speaking households is 1%, which is below the threshold for language access service found in the LAP.

#### *5. Air Quality Modeling Analysis:*

Green Plains performed an air quality dispersion modeling analysis to assess the environmental impact of increasing its CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions associated with its proposed MSC Project. Green Plains also evaluated the project's precursor emission impacts (SO<sub>2</sub> and NO<sub>x</sub>) on secondary PM<sub>2.5</sub> formation. The Illinois EPA conducted an ozone analysis to address the impacts from the project's higher VOM and NO<sub>x</sub> emission rates. No dispersion modeling was performed to determine impacts for particulate matter 10 microns or less in diameter (PM<sub>10</sub>), direct PM<sub>2.5</sub>, acetaldehyde and total HAPs as part of the proposed project given there would be no increase in potential emissions of these pollutants at the facility.

For additional discussion of the modeling analysis, see the Memorandum from Rain Sevenshadows, Modeling Unit, Permit/BOA to Minesh Patel, Major Source Construction Unit, Permits/BOA regarding Green Plains Madison LLC, ID 119465AAG, Permit Application 23020028 dated May 2, 2024.

#### *6. Applicability of IRA:*

The current permit application seeks a construction permit for an existing source that is located in an area of EJ concern, that will result in an increase in annual permitted emissions and that will require a new Clean Air Act Permit Program (CAAPP) permit for the first time. The type of permit application addressed here therefore meets the criteria set forth in Section III(C)(3) of the IRA, which identifies one of the three project types falling within the scope of the agreement.

#### *7. Permit Enhancements:*

Green Plains agreed to work with the Illinois EPA on solutions to avoid or minimize environmental impacts from the project. Consequently, Green Plains consented to the inclusion of certain terms in the issued permit that would subject Green Plains to the performance of additional measures that seek to assure that the proposed project would not create disproportionate and adverse impacts to the local community.

Green Plains applied to install multiple pieces of pollution control equipment as part of this project. This equipment includes: (1) new baghouses for the replacement hammermills; (2) a new wet scrubber and new regenerative thermal oxidizer (RTO) for the MSC Protein mechanical separation and drying processes; and (3) a new baghouse for the MSC Protein loadout process. As part of the additional measures referenced above, Green Plains agreed to install new baghouses for the MSC Protein cooling and storage processes. Although the affected processes would use pneumatic transfer for product movement, which would make the baghouses a form of inherent process equipment rather than pollution control, they would represent a means of reducing emissions from these processes that are beyond compliance. The new baghouses, together with the project's wet scrubber, would be used to control PM, PM<sub>10</sub> and PM<sub>2.5</sub>, while the new RTO would be used to control volatile organic material (VOM) and HAPs. Green Plains also voluntarily agreed to install low NOx burners in the MSC Protein dryer and associated RTO to reduce NOx emissions from the project.

Green Plains also agreed to undertake additional facility enhancements, contemporaneous with the project's implementation, that would minimize or limit the emissions profile of the facility. Although these commitments are not reflected as permit enhancements, they are mentioned here because they offer beneficial impacts to the community. The projects consist of converting the facility's existing fleet of internal combustion engine vehicles to newer electric vehicles (i.e., two existing pick-up trucks and two forklifts would be replaced with electric counterparts) and implementing a no idling policy for any delivery vehicles operated on its property.

#### 8. *Past Adjudications and/or Past Compliance History of Applicant:*

A review of the applicant's history for air-related matters at the Madison facility does not reveal any prior adjudications by Illinois state or federal courts, or by the Illinois Pollution Control Board.

A review of the applicant's past compliance history for air-related matters at the Madison facility reveals several pre-enforcement matters that have occurred since 2019. These include the occurrence of certain *force majeure* events<sup>15</sup> that were beyond the control of Green Plains and instances in which Green Plains may have failed to operate and maintain the mash preparation, feed dryers, rotary dryers, pre-fermentation scrubber (ceased operation), fermentation scrubber and distillation scrubber consistent with applicable requirements. Two Violation Notice (VN) letters, one from 2019 and the other one from 2020,

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<sup>15</sup> A *force majeure* event is a term that is frequently found in consent decrees, as well as in many contractual agreements. The term is of French origin, meaning "superior force," but is most often used by parties to consent orders to mean things or events that are not within a party's control. If something is identified as a *force majeure* event, its occurrence typically serves to excuse the party's obligations under the consent order. See, *Merriam-Webster On-line Dictionary* ([www.merriam-webster.com](http://www.merriam-webster.com))(event or effect that cannot be reasonably anticipated or controlled).



were referred for enforcement to the Illinois Attorney General's Office (AGO). A third referral was recently made for two additional VN letters, one from 2022 and another from 2023, and for deviation reports submitted by Green Plains from November 2023 through March 2024. A waiver of the Section 31 process was recently received from the company for matters alleged in the third referral. Those cases referred to the AGO are currently pending. For a more detailed discussion of Green Plains past compliance history, see Attachment A.

This consideration of Green Plains' past compliance history prompted the Illinois EPA to consider additional permit conditions to detect, correct or prevent future violations of the Act, the Board's implementing regulations and earlier construction permit requirements, consistent with Section 39(a) of the Act. After working with Green Plains in consultation with this review, the company agreed to the inclusion of additional monitoring and other operational requirements in the construction permit that should aid in assuring or verifying compliance with applicable requirements at the facility. These additional obligations include the:

- 1) installation, operation and maintenance of a visible and/or audible warning system that identifies when the scrubber water flow rate, rate of reagent addition, or differential pressure is not within each established operating range;
- 2) requirement to restore the scrubber within established operating parameter ranges within three hours if a scrubber is not operating within its operating parameter ranges;
- 3) requirement to stop introducing raw materials into the fermentation process if a scrubber is not operating within its operating parameter ranges;
- 4) requirement to perform quarterly inspections to verify proper operation of the chemical additive pump and check valve;
- 5) requirement to maintain spare parts on site for the primary water supply pump, chemical additive pump and check valve;
- 6) requirement to install, operate, and maintain a redundant cooling tower level transmitter;
- 7) requirement to operate a heat trace on the level transmitter for the facility's raw water tank to prevent freezing during cold weather;
- 8) requirement to operate the sulfuric acid pump at an established operating parameter level to ensure compliance with the SO<sub>2</sub> emissions limits at the RTO; and
- 9) installation, operation, and maintenance of a visible and/or audible warning system that identifies when the sulfuric acid flow rate exceeds the established operating parameter level.

*9. Evaluation of Title VI Criteria for Disparate Impact Discrimination:*

To summarize the air quality implications of the current project, the permitting of the modifications to the existing ethanol production facility will increase permitted emissions of several pollutants, including SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOM. However, based on the air quality modeling analysis, increased emissions from the project would not violate the NAAQS. Two NAAQS values (i.e., the one-hour standard for NO<sub>x</sub> and the one-hour standard for SO<sub>2</sub>) showed modeled exceedances but additional modeling demonstrated that the

applicant's contributions to modeled exceedances would not exceed their respective Significant Impact Levels (SILs), thus confirming that the project would not put the applicant in jeopardy of causing or contributing to an exceedance of those standards. The proposed project would also reduce permitted emission limits for PM<sub>2.5</sub>, PM<sub>10</sub>, acetaldehyde and total HAP permitted emission limits. A slight decrease in permitted emissions of these pollutants would occur because of the applicant's use of updated emission factors and supporting calculations.

In terms of actionable harm that could be redressed through traditional environmental laws and regulations, the air quality modeling analysis plainly reveals that there is no basis, either as a matter of federal law under the CAA or as a matter of state law under the Act, for asserting that the project's construction would violate the NAAQS. It should be noted that the combination of modeling and ambient air monitoring represents the chief, programmatic means of assessing air quality in the United States. These tools have been the backbone of air quality efforts for decades, and remain so today, because of their strong foundation in environmental science and practical utility to pollution control agencies.

The Illinois EPA is cognizant that reliance on air quality modeling, alone, does not speak to the issue, often of paramount concern in EJ communities overburdened by existing pollution, of whether issuance of a construction permit would cause some other form of adversity or increased risks to public health. Based on a review of the application, nothing suggests that emissions would cause a violation of non-air quality requirements of the Act or the Board's Subtitle C (Air Pollution) regulations. Although the area is highly industrialized and the facility has been located at its present location for several years, there is no history of odor complaints or nuisance believed to be associated with the source, such that a claim of state or common law nuisance could be brought. There is also no readily available repository of information that exists within which to assess harm or causation, as applied to this facility and to its proposed emissions increases of certain criteria pollutants, that would support a general claim to enforce the narrative standard of air pollution on the basis of possible health impacts.

The Illinois EPA acknowledges that EJScreen results show several EJ index values exceeding 80%. However, such screening values are not evidence of environmental harm *per se* and the use of EJScreen in permitting actions is cautioned against by USEPA because of data uncertainty and the complexities inherent in environmental science.<sup>16</sup> Rather, the purpose of EJScreen and other screening programs is to help identify trends or areas suitable for additional study. In this instance, nothing is suggestive of trends or outliers in the data that would warrant additional technical evaluation or studies, nor is there a reason to believe that such studies could result in more meaningful permit enhancements beyond those already identified for this project.

In many cases, PM<sub>2.5</sub> is the pollutant of concern because of its potential for harm to the environment and to human health. For this project, there are no increases in PM<sub>2.5</sub> emissions projected to occur, and as

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<sup>16</sup> For example, EJ Screen is meant as a screening level tool and USEPA expressly states that it is typically not acceptable to use the program for key decision-making, such as permitting or enforcement deliberations. See, [epa.gov/ejscreen/limitations\\_and\\_caveats\\_using\\_ejscreen](http://epa.gov/ejscreen/limitations_and_caveats_using_ejscreen). Similarly, USEPA acknowledges that its screening results "do not, by themselves, determine the existence or absence of environmental concerns in a given location." See, [epa.gov/ejscreen/purposes\\_and\\_uses\\_ejscreen](http://epa.gov/ejscreen/purposes_and_uses_ejscreen).

shown by EJScreen's Community Report profile, environmental indicators rank PM pollution as being below the state average for this location. The permit's requirement to install and operate process equipment for the MSC Protein cooling and storage processes providing for enhanced control of PM, PM<sub>10</sub> and PM<sub>2.5</sub> emissions is also supportive of the project in this regard. Similarly, HAP-related emissions from a project can often pose concerns due to their individual or collective (as in toxic hotspot) impacts. For this project, there are no increases in HAP emissions projected to occur, and as shown by EJScreen, the environmental indicators rank the air toxics respiratory hazard index and air toxics cancer risks as being higher than the state average but well below the 80% threshold for this location. The project's other emission increases are mitigated, at least to some extent, by the beneficial commitments of the low NOx burners to be installed in the MSC Protein process, the conversion of gas-powered vehicles to electric and implementation of a no-idling policy for delivery vehicles.



## ATTACHMENT A

### **VN A-2019-00150, dated October 15, 2019**

The Illinois EPA alleged that Green Plains may have failed to operate and maintain the pre-fermentation<sup>17</sup> scrubber and fermentation scrubber in a manner consistent with good air pollution control practices that led to emissions of volatile organic material (VOM), acetaldehyde and other hazardous air pollutants (HAPs) in excess of permitted limits. This matter is pending with the Illinois Attorney General's Office.

### **VN A-2020-00018, dated February 10, 2020**

The Illinois EPA alleged that Green Plains failed to retain all records for at least three years from the date of entry as required by its applicable construction permit. Further, Green Plains may have failed to submit complete, true and accurate Annual Emission Reports (AERs) to the Illinois EPA.

Green Plains may have failed to maintain an hourly average minimum scrubber water flow consistent with the levels at which emission testing demonstrated compliance with applicable requirements for the pre-fermentation,<sup>18</sup> fermentation and distillation scrubbers; may have failed to maintain records of all other data used or relied upon to determine emissions from the pre-fermentation,<sup>19</sup> fermentation and distillation scrubbers; and may have failed to notify the Illinois EPA of any deviations from applicable permit requirements and to include any such deviations with the quarterly compliance reports for the pre-fermentation,<sup>20</sup> fermentation and distillation scrubbers.

Green Plains may have failed to maintain the maximum temperature at the inlet of the feed dryers during operation at levels that are consistent with levels at which emission testing demonstrated compliance with applicable requirements. Green Plains may have failed to operate and maintain instrumentation to monitor the temperature of the combustion chamber in each dryer system. Green Plains may have failed to maintain records relied upon to determine emissions of the feed dryers and may have failed to include deviations from permit requirements in its quarterly compliance reports. This matter is pending with the Illinois Attorney General's Office.

### **VN A-2022-00018, dated May 25, 2022**

The Illinois EPA alleged that Green Plains may have caused or allowed VOM emissions from the corn oil separation to exceed permit limits of 0.1 lbs/hour and 0.44 tons/year and may have caused or allowed total HAPs other than acetaldehyde to exceed its permit limit of 0.22 tons/year. As a result, Green Plains may have failed to report deviations from these requirements and may have failed to submit complete, true and accurate AERs. On September 22, 2022, the Illinois EPA and Green Plains entered into a Compliance Commitment Agreement (CCA) requiring Green Plains to submit to the Illinois EPA an internal policy to ensure the prompt reporting of future deviations.

### **VN A-2022-00139, dated September 29, 2022**

The Illinois EPA alleged that Green Plains may have failed to operate the rotary dryers consistent with written procedures so as to minimize emissions and may have caused or allowed sulfur dioxide (SO<sub>2</sub>)

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<sup>17</sup> According to information submitted by Green Plains, the pre-fermentation (or mash preparation) scrubber was decommissioned in February 2020 when the pre-fermentation tank was converted to a second beer well to be controlled by the fermentation scrubber.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

emissions to exceed permit limits of 0.82 lbs/hour. This matter has been referred to the Illinois Attorney General's Office.

**VN A-2022-00144, dated October 25, 2022**

The Illinois EPA alleged that Green Plains may have failed to operate and maintain the inhibit meter pump in a manner consistent with good air pollution control practices such that Green Plains may have exceeded permit limits. Green Plains may have failed to operate capture and control equipment that achieves an overall reduction in VOM emissions of at least 81% and failed to control VOM emissions from the Fermentation Process by at least 98% by weight. On March 17, 2023, the Illinois EPA and Green Plains entered into a CCA requiring Green Plains to develop, implement and submit to the Illinois EPA a plan ensuring that the inhibit pump and check valve are inspected on a quarterly basis and that the Sodium Bisulfide (SBS) Flow Alarm Response Procedure is followed that includes checking the fermentation scrubber and chemical additive rate every two hours.

**VN A-2023-00062, dated August 3, 2023**

The Illinois EPA alleged that Green Plains caused or allowed the unloading of grain from "straight trucks" rather than hopper bottom trucks in an area not equipped with quick closing doors and an aspirated dump pit in contravention of permit requirements. Green Plains may have also failed to adequately perform the silt loading analysis required by its Fugitive Dust Plan and construction permit to account for the unloading of grain from straight trucks.

Green Plains may have failed to apply for and pay fees for a construction permit for its straight truck dump area and may have failed to submit a complete, true and accurate AER since its construction.

Green Plains may have caused or allowed emissions of VOM and various HAPs over permitted limits from both the fermentation scrubber and distillation scrubber. Green Plains may have failed to operate and maintain the fermentation and distillation scrubbers in accordance with good air pollution control practices; may have failed to maintain a scrubbant flow rate and rate of reagent addition for the fermentation and distillation scrubbers at or above the rate at which emissions testing demonstrated compliance with applicable requirements; and may have failed to operate capture and control equipment that achieves an overall reduction in VOM emissions of at least 81% and failed to control VOM emissions from the fermentation scrubber and distillation scrubber by at least 98% by weight. Green Plains may have caused or allowed the emissions of VOM over 8 lbs/hour from the fermentation and distillation scrubbers. Green Plains may have failed to report operating parameter exceedances from the fermentation and distillation scrubbers. These matters have been referred to the Illinois Attorney General's Office.

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**405 CAAPP Excess Emission, received November 27, 2023**

Green Plains reported an area-wide power outage resulted in the loss of flowing water and sodium bisulfate from pumps used to control emissions of VOM and HAPs from the fermentation scrubber. Green Plains reported excess VOM emissions of 0.16 tons and HAP emissions of 0.1 tons. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received December 6, 2023**

Green Plains reported that the water control flow valve to the distillation scrubber was not controlling well in automatic mode. Green Plains reported excess VOM emissions of 0.01 tons and HAP emissions of 0.0020 tons. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received December 7, 2023**

Green Plains reported a pump coupling failure that resulted in the loss of flowing water used to control emissions of VOM and HAPs from the fermentation scrubber. Green Plains reported excess VOM emissions of 0.02 tons and HAP emissions of 1.25 pounds. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received December 14, 2023**

Green Plains reported that the cooling tower basin level transmitter had failed that resulted in the loss of flowing water used to control emissions of VOM and HAPs from the fermentation scrubber. Green Plains reported excess VOM emissions of 0.13 tons and HAP emissions of 0.005 tons. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received January 19, 2024**

Green Plains reported that the level transmitter for the plant's raw water tank froze due to extreme cold weather conditions. This resulted in the loss of flowing water used to control emissions of VOM and HAPs from both the fermentation and distillation scrubber. Green Plains reported excess VOM emissions of 139.21 pounds and HAP emissions of 7.33 pounds. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received January 26, 2024**

Green Plains reported that the SBS flow to the fermentation scrubber had stopped that resulted in excess emissions of VOM and HAPs from the fermentation scrubber. Green Plains reported excess VOM emissions of 0.05 tons and HAP emissions of 3.92 pounds. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received March 4 and 18, 2024**

Green Plains reported that the water flow meter to the carbon dioxide (CO<sub>2</sub>) scrubber (S1401) was reading incorrectly inconsistent with the requirements of Construction Permit 20080024, Condition 2.3.8(a)(i) from January 31, 2024 to February 28, 2024 and again on March 7, 2024. This matter has been referred to the Illinois Attorney General's Office.

**405 CAAPP Excess Emission, received March 18, 2024**

Green Plains reported a site-wide power outage resulted in the loss of flowing water from pumps used to control emissions of VOM and HAPs from the fermentation scrubber. Green Plains reported excess VOM emissions of 43.53 pounds and HAP emissions of 1.78 pounds. This matter has been referred to the Illinois Attorney General's Office.