

Environmental Justice/Title VI Review
Crysalis Biosciences
I.D. No: 163121ABS
Application No.: 23090009

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. The EJ-related policies are administered voluntarily by the Illinois EPA through an EJ Policy, a current 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 concerns 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 permitting project and its location is 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 a 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 goals. Permitting programs are often on the front-line of national, state and local interest in environmental regulatory activities, often owing to the nature of the permitting project and/or the location of the project site. For this reason, EJ policies developed by regulatory agencies are frequently tailored to address the 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."

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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 concerns regarding the presence 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 will not threaten or compromise existing National Ambient Air Quality Standards (NAAQS). In response to this request, the applicant and its modeling consultant performed an air quality dispersion modeling analysis to assess the projected impact of project emissions, including carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂) and sulfur dioxide (SO₂) emissions. The applicant and modeling consultant also evaluated the impact of toxic air pollutant emissions from the facility for the following five pollutants: acetaldehyde, acrolein, benzene, formaldehyde, and xylene. 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 discusses 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, which the Illinois EPA voluntarily agreed to undertake, are in furtherance of the Illinois EPA's obligations with USEPA under Title VI of the federal Civil Rights Act of 1964 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 that are made to address concerns regarding regulatory requirements, past compliance history or potential impacts to an EJ area of concern. 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.¹ 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

¹ 415 ILCS 5/39(a).

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 under the Act’s provisions is authorized in a 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.² 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.

The enabling authority to consider past compliance history applies whenever the Illinois EPA may wish to impose permit conditions in an issued permit that will prevent or correct the applicant’s compliance issues. Consent decrees are considered part of a permit applicant’s compliance history,³ as are pre-enforcement notices and compliance commitment agreements.⁴

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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 of the Civil Rights Act of 1964 and USEPA’s implementing regulations.⁵ The disparate impact analysis highlighted by the IRA determines whether the Illinois EPA must consider additional mitigation measures aimed at preventing or minimizing environmental effects from the project’s permitting.⁶

The criteria for assessing disparate impact discrimination are as follows: identifying the policy or practice at issue, a showing of adversity/harm, a showing of disparity and causation. As described by various guidance documents generated by the 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 the implementing the IRA, the operative criteria in most cases involving the permitting of

² *See, Merriam-Webster On-line Dictionary* (www.merriam-webster.com)(act or process of adjudicating a dispute).

³ 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.

⁴ 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.

⁵ *See*, IRA at Section IV(5).

⁶ 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.

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)."⁷ 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).^{8 9}

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...".¹⁰ 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

⁷ See, <https://www.justice.gov/crt/fcs/T6Manual7> at Section VII(C)(1)(b).

⁸ 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)⁸ and the National Emission Standards for Hazardous Air Pollutants (NESHAP).

⁹ 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 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").

¹⁰ 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.

create a remedial action based on “unreasonable” pollution conditions caused to another’s interests in the use or enjoyment of property.¹¹

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1. *Permitting Project:*

Crysalis Biosciences (Crysalis) is proposing to restart a former dry mill ethanol facility located at 231 Monsanto Avenue, in Sauget, Illinois. An application for a construction permit was received on September 12, 2023. The former facility was previously operated by an unaffiliated company, Center Ethanol Company, LLC, (Center Ethanol). The construction project will employ the same equipment that was utilized at the former facility and will generate roughly the same air pollutant types and air emissions profile as before. 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 and will implement significant improvements in the facility’s operations as compared to the former plant.

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 and Hazardous Air Pollutants (HAPs) was conducted at the Illinois EPA’s request. Permitting enhancements were subsequently developed to assure that the “construction” and future operation of the facility will be consistent with representative conditions observed during the air quality modeling. An evaluation of the company’s prior adjudications and past compliance history was also made, consistent with the Illinois EPA’s obligation under the IRA.

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% based on Illinois averages for the following indicators: diesel particulate matter at 92%, air toxics cancer risk at 94%, air toxics respiratory hazard index at 98%, toxic releases to air at 90%, Superfund proximity at 98%, risk management program (RMP) proximity at 97%, hazardous waste proximity at 97% and underground storage tanks at 85%.

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

¹¹ 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 (1st 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).

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%¹² based on Illinois averages for the following indicators: Superfund proximity at 99%, RMP proximity at 99% and hazardous waste proximity at 92%. 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 forty-eight (48) separate groups and individuals on October 5, 2023. No inquiries were received in response to the EJ notification letter.

In accordance with the Illinois EPA Language Access Plan (<https://epa.illinois.gov/about-us/accessibility/language-access.html>), a review of the community information for the number of Limited English Speaking household identified none. Languages spoken at home were 100% English, therefore language access services, such as translation of this document, are not provided.

5. Air Quality Modeling Analysis:

Crysalis performed an air quality modeling analysis to assess the environmental impact of CO, PM₁₀ and PM_{2.5}, NO₂, SO₂, and HAPs from its proposed restart and operation of the existing dry mill ethanol facility. This analysis included a consideration of secondarily formed PM_{2.5}. These air quality analyses show that the emissions of this proposed project would not cause or contribute to a violation of the NAAQS for CO, PM₁₀, PM_{2.5}, NO₂ and SO₂. The Illinois EPA also independently evaluated the project's precursor emission impacts on ozone formation. The results of this analysis show that the impact of the emissions of the proposed project for ozone air quality would also not contribute to a violation of the NAAQS for ozone.

As part of the air quality analysis, Crysalis evaluated the impacts of HAP emissions from the proposed project. Based on emission calculations for potential HAP emissions from the proposed project and relevant guidance, Crysalis conducted an air dispersion modeling analysis for the following five pollutants: acetaldehyde, acrolein, benzene, formaldehyde, and xylene. The results of this analysis show that the impact of the emissions from the proposed project would be below federal and state reference concentration levels for these pollutants. For additional discussion of the modeling analysis, see the Memorandum from David Mihelsic, Modeling Unit, Permits Section/Bureau of Air (BOA) to Jocelyn

¹² 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.

Stakely, Working Supervisor, State Permits/FESOPs Unit, Permits Section/BOA regarding Crystals Biosciences Inc, Sauget, IL – 163121ABS, Permit Application #23090009, dated April 15, 2024.

6. *Applicability of IRA:*

The current permit application seeks a construction permit for a new source that is located in an area of EJ concern and that will require a Federally Enforceable State Operating Permit (FESOP). The type of permit application addressed here therefore meets the criteria set forth in Section III(C)(1) of the IRA, which identifies those projects falling within the scope of the agreement.

7. *Permit Enhancements:*

The issued permit will require Crystals to meet several operating and pollution control measures that were not required of the previous owner of the facility. These requirements consist of the following:

- Limiting ethanol production to 55 million gallons per year of undenatured ethanol.
- Limiting annual natural gas usage from the two boilers.
- Limiting operating hours for grain receiving and handling, dry feed (grain) conveyance, DDGS baghouses and DDGS loadout from 7 am to 3 pm on Monday through Friday.
- Limiting operating hours for hammermills.
- Limiting operating hours for the emergency generator fire pump.
- Requiring all roads to be paved with the implementation of a fugitive dust plan requiring watering, sweeping or treatment of roadways as necessary.
- Increasing stack heights for the boilers, hammermills, vent gas scrubber, and diesel engine generator.
- Use of a drift eliminator designed to limit the drift loss of fugitive PM emissions from the cooling towers to 0.001 percent or less.
- Use of good engineering practices and replacement of baghouse filters to ensure PM emissions are less than 0.002 grains/dscf from baghouses.
- Requiring all grain receiving operations to be via truck. Requiring all doors to be kept closed to the receiving house upon receipt of grain and loadout of trucks.
- Allowing limited rail loadout of spent material from the DDGS. Requiring all doors to be kept closed during loadout of spent materials from the facility into trucks.

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

A review of the applicant's history does not reveal any prior adjudications by Illinois state or federal courts, or by the Illinois Pollution Control Board. Similarly, a review does not reveal any compliance history by the applicant pertaining to the Act's provisions.

A review of the history relating to the former facility, Center Ethanol Company, L.L.C., revealed a federal consent decree that was entered in the U.S. District Court for the Southern District of Illinois on or about

September 9, 2021.¹³ The Illinois EPA finds that this consent decree plainly involves compliance allegations involving the Act's provisions.¹⁴ However, the decree did not explicitly require that the decree's compliance obligations be carried over into, or made a part of, any state permit or approval.¹⁵ And although the decree contains a general "successors and assigns" clause,¹⁶ it appears that Center Ethanol went through bankruptcy before being able to effectuate any successor or transferee to oversee the facility under the decree's terms. Because it is not clear that the applicant can be considered a successor or transferee by the terms of the decree,¹⁷ the Illinois EPA will not rely upon it to impose additional conditions to the permit.

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

It is the Illinois EPA's position that there is no evidence to support the finding that issuance of the construction permit will result in actionable harm, as contemplated for purposes of Title VI. This is because the project's increased emissions do not violate the NAAQS, as shown by the air quality modeling analysis performed by the company and audited by the Illinois EPA. Moreover, there do not appear to be any potentially viable causes of action for violations of any state or federal environmental emission requirements (numerical or narrative-based) or for nuisance based on a review of the administrative record.

¹³ USA v. Center Ethanol Company, LLC, 3-21-cv-115. The decree indicates that the lawsuit alleged violations of federal regulations found at 40 CFR Part 60, Subpart Kb (Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction or Modification Commenced After July 23, 1984) and Subpart VV (Equipment Leaks of Volatile Organic Compounds in the Synthetic Organic Chemicals Manufacturing Industry).

¹⁴ Although the regulatory provisions plainly derive from USEPA regulations, the Act incorporates the requirements of the federal NSPS regulations into state law and makes them enforceable. See, 415 ILCS 5/9.1(b) ("provisions of Section 111... relating to standards of performance for new stationary sources... are applicable in this State and are enforceable under this Act").

¹⁵ Based on the Illinois EPA's experience, had the parties intended for the compliance terms of the decree, notably Appendix A containing a Leak Detection and Repair program, to be carried over in subsequent permitting and survive the decree, the decree's requirements would contain more exacting detail. Typically, contemporary consent decrees involving the CAA seek to ensure permanency of a defendant's compliance terms by making the defendant obtain a state construction permit (also referred to as Title I permits) and/or a Clean Air Act Permit Program (also known as Title V) state operating permit incorporating the decree's terms into the same.

¹⁶ See, Consent Decree at Section II, Applicability, paragraph 3. A related clause governs the transfer of ownership or operation of the facility, which serves to commit Center Ethanol to the decree's obligations unless a "transferee" agrees to commit to the same obligations and is substituted, with the approval of the government, for Center Ethanol as a party and "bound" to the terms of the decree. *Id.* at Section II, Applicability, paragraph 4.

¹⁷ The decree reads as though it is tailored to specific circumstances in which the defendant, while remaining a viable entity bound by the decree, negotiates for a successor or assignee or, alternatively, negotiates with the federal government to accept a transferee. Insomuch as the Illinois EPA was not a party to the decree, the rights to enforcement of the decree's provisions are reserved to the federal government. If the Illinois EPA is mistaken as to the effects of the decree, a court order requiring the imposition of the decree's compliance terms on the restarted facility would provide a basis for reconsideration of this matter.

The Illinois EPA did not conduct additional technical evaluations referenced in the IRA for the following reasons. One is that EJ screening values are not evidence of environmental harm, as the purpose of EJ Screen and other screening programs is to help identify trends or areas suitable for additional study. The use of EJScreen in permitting actions is cautioned against by USEPA because of data uncertainty and the complexities inherent in environmental science.¹⁸

More fundamentally, the Illinois EPA believes that additional technical evaluations would not warrant imposing more meaningful permit enhancements beyond those already identified for this project. The construction permit in this transaction is representative of a minor (or synthetic) source construction project and the permit conditions authorized under Section 39(a) of the Act include practically enforceable conditions necessary to restrain the source from becoming a major source under the CAA's New Source Review programs. As for project emissions, Table I of the issued construction permit depicts the annual emissions limitations, expressed in tons per year, of the facility. Based on these limits, there is an annual increase in criteria pollutants and certain HAPs to the area as compared to baseline emissions since the former owner ceased operations. However, the issued permit is tighter in its emission limits and operating restrictions than that imposed upon the former facility. The permit's limits on the plant's ethanol production and the limitations on the operating hours for several of its operations will undoubtedly result in a lower emissions profile for the applicant as compared with the former facility. The emission limits for the baghouse filters, which are similar to the most stringent Best Available Control Technology (BACT) limits permitted for dry mill ethanol facilities, is especially robust. Permit conditions requiring the use of fugitive dust control practices, including road paving and door closures, will also assure fewer fugitive PM emissions than before.

¹⁸ 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. 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.