

Environmental Justice/Title VI Review
Viridis Chemical Company
I.D. No: 143065BYP
Application No.: 24120011

1. Introduction

This document describes the various Environmental Justice (EJ) and Title VI¹-related considerations undertaken by the Illinois EPA's Bureau of Air in evaluating the above-referenced construction permit application. Because the proposed project will be located in an EJ area of concern, the Illinois EPA's policies for enhanced public outreach and evaluating potential impacts to overburdened communities were addressed in the permit review process. In addition, a Title VI-related settlement agreement (i.e., Informal Resolution Agreement or IRA) entered between the Illinois EPA and the USEPA in February 2024² was applied to this review process and resulted in a written analysis of the applicant's history of prior adjudications and past compliance, as discussed later.

2. Permitting Project:

Viridis Chemical Company (Viridis) proposes to construct an ethyl acetate plant in Peoria, Illinois, near the site of a dry mill ethanol plant operated by BioUrja. Peoria is a mid-sized city with a robust local economy comprised of equipment manufacturing, transportation, and health care providers. The relocation of the chemical manufacturing facility owned by Viridis in Columbia, Nebraska, to the Peoria metropolitan area is a significant boost to Illinois' economy. The facility will use corn-based alcohols from the nearby ethanol plant to produce renewable ethyl acetate, which are used as highly distilled solvents for paints, nail polish removers, as well as cleaning agents for circuit boards.

Viridis proposes to build a chemical manufacturing plant that will consist of numerous storage tanks, loadout facilities for truck, barge and rail-based transport, a Reactive Distiller process, a Methyl Ethyl Ketone (MEK) extraction process, a dehydration process, a product Distillation Purification process, a gas-fired heater, a closed vent routing system, a Cooling tower and paved roadways.

For this construction permit, Viridis will operate the facility at emission levels less than major source thresholds. Viridis will also limit its hazardous air pollutants (HAP) emissions to less than major source thresholds (less than 10 tons per year (tpy) for any single HAP and less than 25 tpy for any combination of HAPs). The final construction permit establishes multiple throughput and emission limits on the various

¹ Title VI refers generally to the requirements of Title VI of the federal Civil Rights Act of 1964, which is one of eleven titles to the law and is entitled "Nondiscrimination in Federally Funded Programs." See, 42 U.S.C. §§2000d to §§2000d-7.

² The negotiated terms of this IRA involved a Title VI disparate impacts complaint filed with USEPA in 2020 stemming from the issuance of a construction permit to General III for the relocation of a scrap metal recycling facility to Chicago's Southeast Side. The *General III* IRA memorializes the Illinois EPA's commitment to consider additional factors in its review of certain construction permit applications, as well as to enhance its public participation policies, for the purpose of improving transparency and assuring meaningful public access to its programs and activities. Additional information concerning the settlement agreement can be found on the Illinois EPA's webpage (i.e., use the Environmental Justice tab from the General Information drop-down menu).

emission units and processes at the proposed facility, including storage tanks, truck/rail and barge loadout operations, the Dehydration and Product Distillation Purification processes, the Reactive Distillation process, the Methyl Ethyl Ketone (MEK) Extraction process, the Hot Oil Heater, a Cooling Tower, Flares and fugitive equipment leaks.

This construction project would result in proposed increases in annual permitted emissions of criteria pollutants from the facility, as follows:

Pollutants	Proposed Emissions Increase
	(Tons per Year)
NOx	13.19
Carbon Monoxide (CO)	35.06
Particulate Matter (PM)	11.29
Volatile Organic Material (VOM)	69.59
Sulfur Dioxide (SO ₂)	0.24
Single HAP (acetaldehyde from the Reactive Distillation and Dehydration processes)	1.29
Combined HAPs	1.94

Under the Illinois Environmental Protection Act, 415 ILCS 5/39 and 39.5, Viridis must obtain both construction and operating permits for its emissions-related activities. The issued construction permit will allow the facility to operate its permitted equipment until a Federally Enforceable State Operating Permit (FESOP) is issued, provided that the company timely submits a Clean Air Act Permit Program (CAAPP) operating permit application to the Illinois EPA within 12 months after commencing operation. See, 415 ILCS 5/39.5(5)(x).

3. EJ Screen Results:

At the time of this permit review, EJ Screen results previously obtained through the U.S. Environmental Protection Agency’s EJScreen webpages are no longer available. Other federal agency screening guides, including the Environmental Justice Index administered by the Centers for Disease Control (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) and the Climate and Environmental Justice Screening Tool administered by the White House Council for Environmental Quality (CEQ), are also unavailable.

The Illinois EPA continues to implement its EJ Policy through the use of EJ Start, which relies on census data for identifying potential areas of EJ concern based on low income and minority populations. In this case, the Illinois EPA conducted enhanced public outreach because the mapping tool identified the area surrounding the proposed site as a potential area of EJ concern. See, EJ Outreach below.

4. EJ Outreach and Public Participation Process:

The Illinois EPA conducted enhanced outreach through the EJ notification process. The EJ notification letter was sent to 46 separate groups, individuals, and/or elected officials on January 23, 2025. No inquiries were received in response to the EJ notification letter.

In accordance with the Illinois EPA Language Access Plan (LAP), Illinois EPA reviewed the American Community Survey results from the 2020 Census Bureau for the area of the proposed site. The percentage of households who speak English less than very well at home is 13% (i.e., combined number of affected languages shown at 6,451 divided by population total 49,577).

5. Air Quality Modeling Analysis:

At the Illinois EPA's request, the project underwent an air quality modeling analysis to predict the air quality impacts from the project. An initial modeling analysis and modeling files were submitted by Viridis' consultant, PROtect, to the Illinois EPA in February 2025. An auditing of the modeling analysis by the Bureau of Air/Permits Section's Modeling Unit led to a revised modeling assessment and updated modeling files submitted by Viridis in late March 2025.

The source impact analysis of the relevant NAAQS and their respective averaging periods showed modeled concentrations of select criteria pollutants from the proposed facility and their comparison to USEPA's significant impact levels (SILs) for the various pollutants. In addition, the Illinois EPA evaluated SO₂ emissions at the 24-hour and annual averaging periods and PM₁₀ emissions at the annual averaging period. These results indicated that project's maximum modeled impact would not exceed the respective SILs. The Illinois EPA also considered the impact of an increase of precursor pollutants (i.e., NO_x, SO₂, and VOM) from the proposed project relative to the effects of secondarily formed ozone (O₃) and PM_{2.5} on the NAAQS. These results indicated no significant impacts from the secondary formation of O₃ or PM_{2.5}.

An air toxics analysis was performed by Viridis' consultant at the request of the Modeling Unit. For this project, a screening analysis conducted by the Modeling Unit recommended a dispersion modeling analysis for Cadmium, hexavalent Chromium (Chromium VI) and 1,4-Dichlorobenzene. Modeled concentrations from the modeling analysis showed results below the reference thresholds for all three HAPs.

For additional details concerning the modeling analysis, see the Memorandum from the Modeling Unit to the State Permits and FESOP Unit of the Permit Section, April 3, 2025.

6. Permit Enhancements:

Permit enhancements consist of permit conditions that are incorporated into construction permits by the Illinois EPA to assure that a source can achieve compliance with applicable requirements, or that are necessary to accomplish the purposes of the Illinois Environmental Protection Act (Act) and are not

inconsistent with Illinois Pollution Control Board (PCB) regulations. The Illinois EPA frequently considers permit enhancements when authorized by existing law.

The issued construction permit contains limitations restricting both throughput and emissions limits to assure that the proposed project is a minor source of emissions. The permit also contains a condition recognizing the facility's potential HAP emissions as being below the thresholds for Section 112(g) of the Clean Air Act (Special Condition 1.a).

It can also be noted that the issued construction permit generally requires Viridis to control emissions from its chemical manufacturing processes, which the source will accomplish by routing emissions to conventional control equipment, including a scrubber, hot oil heater, and flares. Both the scrubber and hot oil heater will be tested after the source becomes operational to assure that they are meeting applicable requirements. In conjunction with these controls, the permit sets forth numerous emissions standards and related requirements that apply to Viridis' chemical manufacturing processes. These standards and requirements include following:

New Source Performance Standards (NSPS) for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, codified found at 40 CFR Part 60, Subparts A and Dc;

NSPS for Volatile Organic Liquid Vessels for which Construction, Reconstruction, or Modification Commences After October 4, 2023, codified at 40 CFR Part 60, Subpart Kc;

NSPS for Equipment Leaks of Volatile Organic Chemicals in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced after April 25, 2023, codified at 40 CFR Part 60, Subpart VVb;

NSPS for Volatile Organic Compound Emissions from Synthetic Chemical Manufacturing Industry Distillation Operations for which Construction, Reconstruction, or Modification Commenced after April 25, 2023, codified at 40 CFR Part 60, Subpart NNNa;

NSPS for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes for which Construction, Reconstruction, or Modification Commenced after April 25, 2023, codified at 40 CFR Part 60, Subpart RRRa;

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources, codified at 40 CFR Part 63, Subpart VVVVVV.

The emission standards and related requirements for a chemical manufacturer covered by the above-referenced regulations are voluminous, both in the applicable regulations and in their carry-over placement to a construction or operating permit. Such regulations or permit conditions can also be complicated for a layperson to understand. Anyone encountering difficulty in following or understanding

the requirements set forth in the issued construction permit may contact the permit analyst at the phone number identified on or near the signature page at the end of the document.

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

Because the construction project implicated the requirements of the *General III* IRA, the EJ/Title VI review document for this permitting action affirmatively considered the prior adjudications and past compliance history of the permit applicant, consistent with existing permit authorities found in the Act.

In this instance, the applicant does not have a history of past operation in the Peoria area or in the State of Illinois, as the permitted facility is a new source.

8. *Additional Considerations:*

In general, increased emissions of PM (especially PM_{2.5}) and HAP-related emissions from a permitting project may present concerns to people residing in the vicinity of a project's planned location, particularly where there are other industrial sources located nearby. PM_{2.5} is often a pollutant of concern in communities that border areas of industrial or manufacturing activity because of the adverse effects that smaller-sized particles of PM may pose to the environment or to human health. The air quality modeling analysis confirmed that modeled concentrations of PM_{2.5} and PM₁₀ emissions for this project, including haul road emissions, would be below the applicable NAAQS standard and respective averaging period for both components of PM. In a similar regard, the modeling also found there to be no significant impact from NO_x, SO₂, or VOM emissions associated with the project on secondary PM_{2.5} formation.

In addition, HAP-related emissions from a construction project may also pose public concerns due to their individual or collective impacts. For this project, modeled concentrations from the modeling analysis showed results below the comparison thresholds for all three HAPs. As noted earlier, the issuance of the final permit was based on the project's potential-to-emit for HAPs being less than 10 tpy for any single HAP and 25 tpy for any combination of total HAPs, assuring that the source avoids major source status under the requirements of Section 112(g) of the Clean Air Act. HAP emissions from the facility's various chemical manufacturing processes are quite small and are limited accordingly by the permit's conditions.

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

As described by the Overview and Implementation webpage for the *General III* IRA, the criteria for evaluating whether agency action is responsible for disparate impact discrimination is 1) identifying the policy or practice at issue, 2) a showing of adversity/harm, 3) a showing of disparity and 4) a showing of causation. Although this examination can be complicated, the operative criterion in most cases involving the permitting of air pollution sources is adversity/harm. The Illinois EPA's analysis in this review document examines the issue of alleged adversity/harm by assessing whether circumstances would support an enforcement action brought under existing environmental laws and regulations.

a. *Substantive Standards*

The issued construction permit will increase annual permitted emissions from the newly constructed source of NO_x, CO, VOM, PM/PM_{2.5} and PM₁₀ emissions associated with the project. However, based on

the air quality modeling analysis, these increased emissions from the project will not violate the NAAQS. As noted, the final construction permit will limit throughput and emissions limits of the proposed facility to less than major source status. Nothing presented in the permit review indicates that the proposed project would cause a violation of air emission standards addressed by the Act, the PCB's Subtitle C (Air Pollution) regulations, or applicable federal regulations adopted by USEPA and enforceable by the Illinois EPA under state law.

b. Narrative Standards

The Illinois EPA has no information that would demonstrate a violation of a narrative standard of air pollution based on possible health impacts.

c. Nuisance-Based Standards

There is no history of odor complaints or nuisance associated with the proposed facility, such that a claim of statutory or common law nuisance could be demonstrated.