

**Environmental Justice/Title VI Review**  
**Arnold Magnetic Technologies Corporation**  
**I.D. No.: 111095AIR**  
**Application No.: 24070027**

*1. Introduction*

This document describes the various Environmental Justice (EJ) and Title VI<sup>1</sup>-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 2024<sup>2</sup> 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:*

Arnold Magnetic Technologies Corporation (Arnold Magnetic) proposes to construct a new magnetic alloys manufacturing facility at 1005 Courtaulds Drive in Woodstock, Illinois. The company has historically operated a permitted magnetic alloys manufacturing facility in nearby Marengo, Illinois but will be relocating most of the emission units from the Marengo facility to the new site. Woodstock is a largely residential community of roughly 25,000 people and is known as a long-standing tourist attraction due to past efforts at persevering local history and architecture. Commercial establishments and some light manufacturing enterprises are located throughout the town.

Arnold Magnetic is engaged in the business of manufacturing magnets, electromagnets, magnetic assemblies, and precision thin metals for a variety of commercial transportation applications, as well as for use in batteries, solar panels, and other products. The current project proposes a facility that is comprised of three distinct operations: (1) a Precision Thin Metals department, where thin metals are formed through the use of rolling mills, treated by annealing furnaces and cleaned through the use of conveyORIZED degreasers and other activities; (2) a Cast Alnico department, where an electric induction furnace (EIF), mold-making and heat-treating furnace operations, controlled by baghouses and a scrubber, are used to make magnets; and (3) an Arkomax department, where an EIF, a heating oven, a kiln and

---

<sup>1</sup> 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.

<sup>2</sup> The negotiated terms of this IRA involved a Title VI disparate impacts complaint filed with the United States Environmental Protection Agency (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).

mold-making operations, controlled by baghouses, make cast magnetic parts for further processing in the Cast Alnico department. These operations are generally classified as Fabricated Metal Products Not Classified Elsewhere, Code 3499, under the Standard Industrial Classification system.

For this construction permit, Arnold Magnetic is limiting its annual emissions of volatile organic material (VOM) and Hazardous Air Pollutants (HAPs) to annual emission thresholds that are less than major source levels, for purposes of the Illinois Clean Air Act Permit Program (CAAPP) and Title I of the federal Clean Air Act, as authorized by 35 Ill. Adm. Code Parts 203 and 204. This means that the source is limiting emissions from its manufacturing facility to assure that it is a minor source (or nonmajor), which is in keeping with its permitting status maintained at its previous facility.

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

<b>Pollutants</b>	<b>Proposed Emissions Increase (Tons per Year (tpy))</b>
Nitrogen Oxides (NOx)	2.44
Sulfur Dioxide (SO <sub>2</sub> )	0.01
Carbon Monoxide (CO)	2.05
Volatile Organic Material (VOM)	24.89
Particulate Matter (PM)	0.46
HAPs (combined)	0.44

The company is obliged to submit a Federally Enforceable State Operating Permit (FESOP) application for its new source within 12 months after commencing operation of any equipment authorized by the construction permit. See, 415 ILCS 5/39.5(5)(x). The source will be allowed to operate the facility under the terms of the construction permit until the Illinois EPA acts on the operating permit application.

### 3. EJ Screen Results:

A copy of the USEPA’s EJ Screen’s Community Report was retrieved by the Illinois EPA for the facility’s location utilizing a one-mile radius. For this location, a review of the EJ Indexes (combining data on low income and people of color populations with selected environmental indicators) and of the Supplemental Indexes (combining data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator) does not reveal percentiles greater than 80%<sup>3</sup> based on Illinois averages for any indicators.

A review of the Environmental Burden Indicators data from the Community Report, which provides estimated values for pollution impacts and proximity to other sources, reveals percentiles greater than

---

<sup>3</sup> According to USEPA’s EJ Screen technical manual [EJScreen Technical Documentation for Version 2.3 \(epa.gov\)](https://www.epa.gov/ej/ej-screen-technical-documentation-for-version-2.3), 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.

80% based on Illinois averages for the following indicator: Superfund proximity (site count/km distance) at 80%.

#### *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 49 separate groups, individuals, and elected officials on August 22, 2024. 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 USEPA's EJ Screen community data for the area within one mile of the facility. The number of Limited English-Speaking is 3%, which is below the threshold for language access service found in the LAP.

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

At the Illinois EPA's request, the project underwent a comprehensive air quality modeling analysis to predict the air quality impacts from the project. In this regard, the modeling addressed the source impact of relocating the Precision Thin Metals, Cast Alnico, and Arkomax departments from Marengo to Woodstock.

Arnold Magnetic's consultant performed an air quality dispersion modeling analysis, which the Modeling Unit of the Permit Section audited, and a source impact analysis of relevant National Ambient Air Quality Standards (NAAQS) and their respective averaging periods. This review found that one pollutant, NO<sub>2</sub>, exceeded the significant impact level (SIL) for both its 1-hour and annual averaging periods. An evaluation of the project's impact on ozone (O<sub>3</sub>) formation from NO<sub>x</sub> and SO<sub>2</sub> emissions, as well as secondary PM<sub>2.5</sub> formation from the same pollutants, did not reveal significant impacts. A subsequent cumulative impact analysis of NO<sub>2</sub> emissions revealed that modeled impacts from the permitted source and inventoried sources (i.e., located within a 20-kilometer radius except for intermittent sources evaluated in the 1-hr NO<sub>x</sub> analysis) would be below their respective standard and respective averaging period values.

An air toxics analysis was also performed by the consultant to evaluate the impact of multiple metallic and organic HAPs from the project. Modeled impacts were compared to reference exposure levels (RELs) and/or Minimum Risk Levels (MRLs) adopted by USEPA's Health Hazard Assessment, the Agency for Toxic Substances and Disease Registry, and the State of California. Results of the toxics analysis showed modeled concentrations of all measured HAPs being below the RELs/MRLs for their respective averaging periods.

For additional discussion of the modeling analysis, see the appended Memorandum from the Modeling Unit to the State Permits and FESOP Unit of the Permit Section, dated November 25, 2024.

#### 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 on VOM usage and emissions from the three basic processes of the manufacturing facility. Special Condition 10(b), 10(c) and 10(d) provides for separate limits on the VOM usage (for tons/month and for tpy) and VOM emissions (tons/month and tpy) for the Precision Metals department, the Cast Alnico department and the Arkomax department respectively. Special Condition 10(g) establishes a limit for combined HAPs from the source at the nominal emission rates of 0.1 pounds/hour (lb/hr) and 0.44 tpy.

Arnold Magnetic also must observe a limitation on its operating hours as a condition of the air quality modeling analysis. Special Condition 10(a) of the construction permit lists a table setting the daily operating hours allowed for the various permitted activities at the facility.

#### 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.

A review of Arnold Magnetic's history involving air pollution at the Marengo facility does not reveal any prior adjudications or the entry of agreed consent orders by Illinois state courts, federal courts, or by the PCB. Similarly, a review of the applicant's past compliance history for air-related matters for the Marengo facility (per USEPA's Enforcement and Compliance History Online (ECHO)) does not reveal any recent involvement by the source in the pre-enforcement processes of either the Illinois EPA or USEPA.

An Agreed Preliminary Injunction Order was entered against Arnold Magnetic by the McHenry County Circuit Court on August 23, 2013, for apparent chemical spills/releases from its Marengo facility. A second such order was entered on June 11, 2014. Both orders culminated from a lawsuit filed by the Illinois Attorney General's Office and focused on assuring that the company performed water sampling monitoring and distributing potable drinking water to private well owners in the nearby vicinity. Given that the case involved matters outside of the purview of current air programs, as well as its remoteness to the current permit proceeding, the Illinois EPA cannot find cause to condition or deny the permit application on the basis of the court orders or the history of litigation surrounding the same.

#### 8. *Additional Considerations:*

Increased emissions of PM (especially PM<sub>2.5</sub>) 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<sub>2.5</sub> 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. For this project, there is only a negligible increase in permitted hourly or annual emissions of PM (i.e., 0.1 lb/hr and 0.46 tpy) from the source. The air quality modeling analysis confirmed that modeled maximum concentrations of PM<sub>10</sub> would not exceed a significant impact level for the 24-hour averaging period and that primary and secondary emissions impact from PM<sub>2.5</sub> from this project would not have a significant impact on the NAAQS for PM<sub>2.5</sub>.

HAP-related emissions from a construction project may also pose public concerns due to their individual or collective impacts. For this project, the company addressed air quality modeling for several metallic and organic HAPs. As previously noted, the modeling analysis confirmed that modeled concentrations for these HAPs were below the REL/MRLs used for comparison in the analysis. It can be noted that the construction permit contains a standard permit condition that is based on the source emitting less than 10 tpy of any single HAP and 25 tpy of any combined HAPs to avoid triggering the requirements of Section 112(g) of the CAA and, additionally, a separate emissions limit for combined HAPs restricting the facility to negligible emissions (i.e., less than 0.1 lb/hr and 0.44 tpy).

#### *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 of VOM and, to a much lesser degree, CO, PM, NO<sub>x</sub>, SO<sub>2</sub>, and combined HAP emissions. However, based on the air quality modeling analysis, increased emissions from the project will not violate the NAAQS or relevant RELs for evaluated HAPs. The construction permit will also limit VOM usage, VOM emissions and operating hours from its manufacturing processes to assure that the facility is a minor source (nonmajor) for purposes of air permitting programs. 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 believed to be associated with the proposed facility, such that a claim of statutory or common law nuisance could be demonstrated.