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October 25, 2011

Mr. Barry D. Cooper
Regional Administrator, Great Lakes Region
Federal Aviation Administration
2300 East Devon Avenue
Des Plaines, IL 60018

Re: City of Park Ridge, Illinois Request that Federal Aviation Administration Prepare a Supplemental Environmental Impact Statement for the O'Hare Modernization Program

Dear Mr. Cooper:

It has now been six years since the Federal Aviation Administration published its Environmental Impact Statement and issued its Record of Decision concerning the O'Hare Modernization Program. Although work on the O'Hare Modernization Program (OMP) is proceeding, and the northern-most runway (9L/27R) has been opened, the project is still far from completion. Since the time that the Federal Aviation Administration completed the final Environmental Impact Statement (EIS) for the OMP, many significant changes have occurred that affect the environmental impact the OMP has had and will have on the communities surrounding O'Hare.

Because of those changes, some of which are detailed below, the City of Park Ridge, Illinois, through its attorneys, Hinshaw & Culbertson, requests that the FAA use its delegated authority under the National Environmental Policy Act (NEPA) and the regulations promulgated thereunder and begin a Supplemental Environmental Impact Study (SEIS) that will address the myriad of issues that have arisen since the completion of the EIS and the issuance of the Record of Decision for the OMP. While the City of Park Ridge believes it is the FAA's duty to prepare an SEIS, Park Ridge hopes that the FAA will take this opportunity to reach out to the communities surrounding O'Hare and address some of the communities' concerns through the preparation of an SEIS.

I. BRIEF OVERVIEW OF THE LAW SURROUNDING SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENTS

As you are well aware, the National Environmental Policy Act (NEPA) requires federal agencies to prepare an Environmental Impact Statement when a federal action will cause a significant impact on the environment. Most federal agencies' actions under NEPA are governed by NEPA, and the regulations promulgated by the Council on Environmental Quality ("NEPA Regulations"). The Department of Transportation has adopted the NEPA Regulations as being

applicable to the FAA's actions. In addition, the FAA has adopted at least two Orders that specify how the FAA must handle its obligations under NEPA: FAA Order 5050, 4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* (April 28, 2006) and FAA Order 1050.1E *Environmental Impacts: Policies and Procedures* (March 20, 2006). With respect to OMP, the Environmental Impact Statement for OMP (EIS) was published in July 2005, with the FAA issuing its ROD on September 30, 2005. Sometimes, however, after an environmental impact statement is issued, but before the federal action has been completed, the situation concerning the action changes. If this happens, NEPA *requires* that the federal agency prepare an SEIS. Before launching into the substantive reasons why the FAA should perform an SEIS for OMP, a brief overview of the administrative framework surrounding SEISs and the FAA's responsibilities is in order.

A. Federal Law and Regulations Require an SEIS When There Have Been Significant New Circumstances or Information

The subject of post-decision supplemental environmental impact statements is not expressly addressed in the National Environmental Policy Act (NEPA). However, as the U.S. Supreme Court pointed out in *Marsh v. Oregon National Resources Council*, 109 S.Ct. 1851 (1989), requiring such supplemental reports serves the twin goals of (1) ensuring that the agency will not act on incomplete information, only to regret its decision after it is too late to correct; and (2) allowing both the public and other governmental agencies to react to the effects of a proposed action at a meaningful time. 109 S.Ct. at 1858. In addition, the CEQ codified the requirement to prepare an SEIS in the NEPA Regulations. 40 C.F.R. §1502.9(c) states:

> (c) Agencies:
>
> (1) Shall prepare supplements to either draft or final environmental impact statements if:
>
> (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
>
> (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
>
> (2) May also prepare supplements when the agency determines that the purposes of [NEPA] will be furthered by doing so.

40 C.F.R. § 1502.9(c). The Supreme Court, in interpreting this regulation, held that the federal agency's decision to prepare an SEIS is similar to the decision to prepare an EIS. *Marsh*, 109 S.Ct. at 1859. The U.S. Supreme Court then concluded that, if there remains "major Federal action" to occur, and if the new information is sufficient to show that the remaining action will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared. *Id.; see also, Highway J Citizens Group v. Mineta,* 349 F.3d 938, 959 (7th Cir. 2003). Thus, since there still remains "major

federal action" with respect to OMP, and since there is new information that significantly[1] affects the quality of the human environment, an SEIS must be prepared for OMP.

B. FAA Orders Require At Least a Written Re-Evaluation Every Three Years for Long Term Projects.

The FAA has, by order, imposed further requirements upon itself for airport projects. Since some airport projects, like OMP, occur in phases or stages, the FAA has ordered that a "written re-evaluation" must be prepared if "more than 3 years elapse between the date of a final EA or EIS and one of those stages." FAA Order 5050.4B, ¶ 1401(c)(3); *see also*, FAA Order 1050.1E, ¶514b(2). This "written re-evaluation" focuses on the EIS's continued "adequacy, accuracy, and validity," and determines if an SEIS is necessary. *Id.* ("[t]his evaluation, signed by the responsible FAA official, will either conclude the contents of previously prepared environmental documents remain valid or that significant changes require the preparation of a supplement or new EIS").

According to the FAA Orders, the preparation of a new EIS or an SEIS is assumed to be necessary unless the written re-evaluation documents that the

> **(1)** Proposed action conforms to plans or projects for which a prior EIS has been filed and there are no substantial changes in the proposed action that are relevant to environmental concerns;
>
> **(2)** Data and analyses contained in the previous EIS are still substantially valid and there are no significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; and
>
> **(3)** Pertinent conditions and requirements (all) of the prior approval have, or will be, met in the current action.

FAA Order 1050.1E, ¶515a. There can be no doubt that OMP is a phased or staged project, such that these provisions are applicable. *See, e.g.,* OMP EIS, pp.1-56 ("significant projects associated with Phase 1 include: New Runway 9L; New Runway 10C"). Moreover, it has been

[1] "Significantly" is a defined term under the NEPA Regulations. In 40 C.F.R. §1508.27, "significantly" as used in NEPA requires considerations of both context and intensity: (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant. (b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity: (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. (2) The degree to which the proposed action affects public health or safety . . .(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial. (5) The degree to which the possible effects on the human environment is highly uncertain or involves unique or unknown risks. (6) The degree to which the actions may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.... (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

over six years since issuance of the final EIS and there are several more stages or phases of the OMP that have not been initiated. To Park Ridge's knowledge, no such written re-evaluation has been performed with respect to the OMP EIS. Thus, at a minimum, the FAA should perform a "written re-evaluation" to determine if an SEIS is required.

C. Based Upon the Provisions of Federal Law, CEQ Regulations and FAA Orders, the City of Park Ridge Contends that the FAA Must Prepare an SEIS for OMP.

There are three reasons why, pursuant to NEPA, CEQ Regulations and FAA Orders the FAA should prepare an SEIS. First, the FAA *must* prepare a supplement because there have been significant changes to the project. Second, pursuant to CEQ Regulations, an SEIS must be prepared because of the significant new information and circumstances that affect the quality of the human environment in and around O'Hare. Finally, if the FAA decides that it is not required to prepare an SEIS, the FAA should exercise its discretion and prepare an SEIS because it would further the purposes of NEPA.

II. THE SIGNIFICANT NEW INFORMATION AND CIRCUMSTANCES REQUIRE THAT AN SEIS BE PERFORMED.

Since the publication of the EIS, there have been significant changes in how federal agencies handle critical environmental impacts analyzed in the EIS. For example, since the publication of the EIS, the EPA has developed new criteria for assessing two "Criteria Pollutants": 8-hour ozone and particulate matter smaller than 2.5 microns (PM2.5). The impact that emissions from OMP may have on the Chicago area's ability to meet the federal standards must be reviewed in an SEIS. Likewise, since the EIS, there have been significant developments in understanding air toxics or Hazardous Air Pollutants (HAPs) and greenhouse gases. Both of these types of air pollutants are produced by the various air pollution sources operated at O'Hare, including aircraft and ground support vehicles. With the modernization and expansion authorized by the OMP, the increased emissions and associated impact on the surrounding population must be analyzed through performance of an SEIS. Finally, the noise contours created by the completion of 9L/27R have changed from when they were first modeled under the EIS. Each one of these elements is significant in its own right and provides the FAA with sufficient cause to prepare an SEIS. Taken together, they are a compelling statement that the FAA must take the changing environmental landscape into account by preparing an SEIS.

A. Since the completion of the OMP EIS, there have been significant changes to EPA rules and regulations with Respect to Two Criteria Pollutants that require a Supplemental EIS.

Separate and apart from NEPA, the FAA must determine that, prior to commencing a federal action, the project will "conform" to the Clean Air Act. EPA regulations state that so long as the project commences within five years of the Conformity Determination and is "showing continuous progress" thereafter, a new Conformity Determination is not necessary so long as the project remains "within the scope of the final conformity determination reported under §93.155." 40 C.F.R. §93.157. However, when EPA acts to revise or promulgate new National Ambient Air

Quality Standards (NAAQS) for the six criteria air pollutants, a new conformity determination must be made. *Id.* The FAA's conformity determination did not address OMP's conformity with (i) the revised NAAQS for ozone (8-hour ozone NAAQS); (ii) EPA's notice of plans to lower the 8-hour primary ozone NAAQS; (iii) the new primary and secondary NAAQS for PM2.5. The "federal activities" at O'Hare are not "within the scope of the final conformity determination reported under §93.155." 40 C.F.R. §93.157(c).

1. Ozone Air Pollution – New and Revised Eight-Hour Ozone Standard

Under §109 of the Clean Air Act, EPA is required to issue national ambient air quality standards (NAAQS) for six air pollutants: ozone, particulate matter, NOx, CO, sulfur dioxide, and lead. EPA is required to issue both primary and secondary standards. Primary standards are requisite to protect the public health with an adequate margin of safety. Secondary standards are requisite to protect the public welfare from any known or anticipated adverse effects of the pollutants. These adverse effects include effects on vegetation, wildlife, and visibility. EPA must review existing NAAQS and issue revised or new primary and secondary standards (as appropriate) every five years. Under the statute, the Clean Air Scientific Advisory Committee (CASAC) provided EPA with advice on NAAQS. If EPA proposes a standard that differs "in any important respect" from the advice provided by CASAC, then EPA must provide an explanation in the proposed standard for the difference.

The initial NAAQS for the air pollutant ozone was an exceedance-based calculation where a violation occurred if a monitor recorded more than three days where the 1-hour ozone values were greater than 124 parts per billion in a three-year period. This NAAQS was referred to as the 1-hour ozone standard. In 1997, the EPA adopted a more stringent 8-hour ozone NAAQS based on concentration levels averaged over an 8-hour period instead of the number of exceedances. The 8-hour ozone standard was considered more protective of public health for population groups especially sensitive to air pollution--children who are active outdoors, adults engaged in moderate to strenuous outdoor activities, and individuals with respiratory disease, such as asthma.

At the time of the EIS, the FAA determined, and the Illinois and United States Environmental Protection Agencies agreed, that the VOC and NOx emissions associated with the OMP conformed to the State Implementation Plan for One-Hour Ozone attainment. *See, Final EIS*, p. J-345, and *OMP ROD,* p. 59. However, on June 15, 2005, three months before the Record of Decision for the OMP was issued, the Chicago area, including O'Hare, became subject to the eight-hour ozone NAAQS.

In March of 2008, the EPA significantly strengthened the NAAQS for ground-level ozone based on new scientific evidence reviewed by CASAC about ozone and its effects on public health and the environment. The new strengthened NAAQS for ground-level ozone was set at 0.075 ppm for an 8-hour period. On January 6, 2010, EPA proposed to further lower the 8-hour primary ozone NAAQS from 0.075 ppm, set in 2008, to a level within the range of 0.060 – 0.0790 ppm to protect public health. EPA is also proposing a new cumulative, seasonal secondary standard, to protect sensitive vegetation and ecosystems, within the range of 7-15 ppm-hours. Because the 2008 ozone NAAQS revisions were not as restrictive as was recommended by CASAC, EPA

elected to reconsider the ozone NAAQS and follow CASAC's recommendations for even lower concentrations of ambient ozone.

The final conformity determination for the OMP failed to address multiple actions by EPA to strengthen the NAAQS for ozone. Because that conformity determination failed to address the 1997 eight-hour ozone NAAQS, the more stringent 2008 eight-hour ozone NAAQS, and EPA's recent proposal to follow the recommendation of CASAC and further lower the allowable levels of ambient ozone pollution, FAA must make that conformity determination now.

2. Fine Particulate Matter Air Pollution – New PM2.5 Standard

EPA introduced the National Ambient Air Quality Standards (NAAQS) for airborne particles by regulating annual and 24-hour total suspended particulate (TSP) in 1971 and in 1987 revised these to PM-10 standards. However, the most challenging particle standard was introduced in 1997 when EPA regulated much finer particles by setting NAAQS for particles with an aerodynamic diameter less than 2.5 μm (the PM2.5 NAAQS). In its Statement of Need, EPA indicated that due to enough scientific data the coarse and the fine fractions of PM-10 could be considered separately and as a result, established the new PM-2.5 NAAQS. EPA set a short-term, 24-hour standard for PM-2.5 at 65 micrograms per cubic meter (μg/m3) and the annual standard at 15 μg/m3. In 2006, EPA revised these standards to 35 μg/m3 (24-hour) and 15 μg/m3 (annual). On September 21, 2006, the USEPA promulgated the 24-hour PM2.5 standard with an effective date of December 18, 2006.

Although these PM2.5 standards were implemented after the approval of the Record of Decision for OMP, there is substantial concern about PM2.5 emissions due to OMP since PM2.5 emissions "have been associated with increased respiratory diseases such as asthma, bronchitis, and emphysema; cardiopulmonary disease (heart attack); and cancer." *See*, EIS, Environmental Consequences §5.6.6. According to EIS, PM2.5 emissions at O'Hare were recorded at 49-65 15 μg/m3 over a 5-year period. EIS, Table 5.6.6, pp.5.6-17. The FAA was cognizant at the time of the ROD that PM2.5 emissions were expected to increase with commencement of OMP. ROD, p.70.

Although at the time of the EIS, the measured PM2.5 emissions were below the 1997 USEPA standards of 65 15 μg/m3, as noted above, that standard changed in 2006 to 35 micrograms per cubic meter. Thus, OMP's PM2.5 emissions **substantially exceed** the allowable amount under the current NAAQS established by the USEPA at levels required to protect human health and the public welfare. Consequently, it is likely the Chicago metropolitan area will be redesignated as non-attainment for the PM2.5 NAAQS with ambient air quality in violation of the Clean Air Act.

3. Nitrogen Dioxide Air Pollution – Revised One-Hour NO2 Standard

On January 22, 2010, the EPA established a new one-hour NAAQS for Nitrogen Dioxide (NO2) at 100 parts per billion (approximately 189 μg/m3). The new one-hour standard is calculated on a data set of three years of ambient monitoring data. EPA based its decision to lower the one-hour NAAQS for NO2 based on studies showing increases in respiratory symptoms and hospital visits related to short-term exposure to high levels of NO2. The new one-hour NO2 NAAQS is a

primary standard which aims to protect public health associated with short-term exposure to NO2, including respiratory effects. EPA decided to retain the existing annual NO2 NAAQS of 53 ppb (100 μg/m3), and is separately reviewing the secondary NO2 standard.

Because of EPA's decisions to revise and strengthen the ozone NAAQS, promulgate the new PM2.5 NAAQS established for fine particulate matter, and revise and strengthen the NO2 NAAQS, the FAA should prepare an SEIS that addresses the individual and cumulative impacts to ambient air quality in Park Ridge and other communities surrounding O'Hare Airport that are associated with the OMP. Failure to do so ignores scientific evidence that ozone, inhalable particulates, and nitrogen oxides can cause significant risks to human health and the public welfare.

B. Since the publication of the EIS, the issue of air toxics or hazardous air pollutants from aircraft has undergone substantial scrutiny and should be the subject of a Supplemental EIS.

1. The City of Park Ridge's Air Toxics Study is Ignored by the FAA.

Prior to the issuance of the EIS and the ROD, the City of Park Ridge commissioned an air toxics study. The analyses and results of the Environ and Mostardi-Platt studies demonstrated that O'Hare is a major source of HAPs and that OMP will impose an undesirable increase in cancer risks on a vast area of residential communities in the Chicago metropolitan area. The Mostardi-Platt Study found that O'Hare already was a major emitter of HAPs, which needs to have its HAPs emissions controlled and reduced. The Executive Summary of the Mostardi-Platt Study concluded:

> While public health assessment and potential control measures need to be carefully evaluated and debated one thing is clear. Given the massive and widespread impact of O'Hare's toxic emissions on the health risk of hundreds of thousands of residents in almost 100 metro Chicago communities, O'Hare should not be expanded.

Mostardi-Platt Air Toxics Study, Vol. I, p.14.

The findings of the Mostardi-Platt Air Toxics Study were largely dismissed by the FAA when it was preparing the EIS. The FAA discounts the findings of the Mostardi-Platt Air Toxics Study because they were "preliminary" and did not follow AERMOD protocols. Final EIS, pp. I-38-I-39. "Because of the numerous variables in dispersion models, it is not known if the results would be higher or lower than reported in the Park Ridge analysis." *Id.* Aside from the fact that AERMOD was not adopted for use by FAA until September 2001,[2] after completion of the Mostardi-Platt Air Toxics Study, the FAA conclusions were based on a lack of evidence and

[2] See, http://www.faa.gov/about/office_org/headquarters_offices/aep/models/history/media/2005-06_Integration_of_AERMOD_into_EDMS.pdf)

methodology, not on the substantive position that air toxics would be increased significantly by OMP. Since recent research has established the deleterious effect HAPs from airports have on surrounding communities, the FAA's conclusions regarding the Mostardi-Platt Air Toxics Study should be amended and an SEIS should be prepared.

2. Recent studies indicate the Mostardi-Platt Air Toxics Study was correct and that air toxics need to be addressed by airports and the FAA.

Since the issuance of the EIS, substantial research has been performed on the health risks posed by air toxics emissions from airports. This includes an aviation industry report issued through Airport Cooperative Research Program's 2008 analysis entitled "Aircraft and Airport-Related Hazardous Air Pollutants: Research Needs and Analysis," which was funded through the FAA. That analysis provides direction on how airports should be able to address the requests from states and "communities surrounding airports to analyze the health impacts of aircraft and other airport-related sources of air toxics, also known as hazardous air pollutants (HAPs), in National Environmental Policy Act (NEPA) and state-level documents." Indeed, as the EIS acknowledges, the health effects of emissions of air toxics from airports on the surrounding communities [has been studied with regard to large California airports under state law]. The conclusion is inescapable: the HAPs emitted by airports create health risks to the surrounding communities and any project that increases the emission of HAPs into the air should be analyzed.

At the very least, the FAA should supplement the EIS by including a Hazardous Air Pollutants inventory pursuant to its guideline set out in *Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources*, (Ver. 1, September 2, 2009) ("HAP Guidance").[3] According to the FAA, the HAP Guidance "provides an approach to, and technical guidance for, preparing speciated OG/HAP emission inventories in support of environmental documents prepared by, or on behalf of, the FAA under the National Environmental Policy Act (NEPA)". Indeed, the FAA HAP Guidance specifically states that OMP is the type of project for which a HAP inventory must be developed: "[n]otably, if a proposed project/action is evaluated through an EIS, an [HAP] emission inventory must be prepared (for each alternative under consideration) if an inventory of the criteria air pollutants and/or precursors to the criteria air pollutants must be prepared." HAP Guidance, p.13. With the establishment of HAP Inventory, there would be at least, a baseline for future health risk assessments showing the deleterious effect that airport emissions of HAPs have on the surrounding communities.

While establishing a HAP inventory is a step in the right direction, what is needed is a study that quantifies the substantial health risks that HAP emissions from OMP present to surrounding populations. Toward that end, a more significant finding is the May 8, 2009 article *Between-airport heterogeneity in air toxics emissions associated with individual cancer risk thresholds and populations risks,* by Ying Zhou and Jonathan I. Levy. In that article, the authors conclude:

[3] In addition, the FAA and the EPA have published the *Recommended Best Practice For Quantifying Speciated Organic Gas Emissions From Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines* which details joint efforts between the FAA and the EPA to update OG/HAP speciation profile data from these types of aircraft.

> Using state-of-the-art four-dimensional emissions characterization and atmospheric dispersion modeling, we demonstrated that both the emission rate contributing to a 10^{-6} maximum individual risk and the total population exposure within 50 km of the airport per unit emissions vary substantially across airports *but can be predicted with reasonable precision using easy to obtain variables, such as distance from the airport, total population, and mixing height.* These results provide a method to quickly but reasonably determine the likelihood of public health impacts of concern for airport modifications or expansions.

Zhou Levy Article, p.10 (emphasis added). This conclusion is in direct conflict with the conclusion in the EIS, which the Zhou Levy Article cites. *Id.*, p.2.[4] Moreover, it should be noted that in developing their conclusions about air toxics at airports, Zhou and Levy used the AERMOD high-resolution atmospheric dispersion model.

Thus, the study of HAPs emitted from airports has progressed substantially from the time the EIS was issued. Since Park Ridge has consistently expressed its concerns with respect to air toxics and HAPs, the FAA should take advantage of the new research and prepare an SEIS that addresses HAPs.

C. The Noise Contours Set Out in the OMP EIS Have Changed, Especially with Respect to Single Noise Events Over 65 DNL.

Although the EIS complied with the then existing regulations, it has become apparent that the noise contours set out in the EIS are expanding. The Chicago Department of Aviation (CDA) has issued a couple of reports indicating the single noise event levels for the area surrounding O'Hare. The last report, issued in August 2010 for the months January 2010 through June 2010, shows the number of noise events, by monitor location, at 85dB or greater and at 65dB or greater. There are several monitors located in Park Ridge. Monitor 26, in the heart of Park Ridge, showed that there were 18 noise events about 85dB or greater and 116 noise events over 65dB. This is an increase over the number of noise events recorded in December 2008, when there were eight events over 85dB and 87 over 65dB. This shows noise is becoming increasingly louder within this residential neighborhood with an average, daily, of seven noise events each hour louder than 65 decibels – roughly one every eight minutes.

Not only are the single noise events becoming more frequent, the noise reports published by the O'Hare Noise Compatibility Commission show noise spreading at 3.0dB or greater over Park Ridge, beyond the noise contours established for OMP in the EIS. *See*, EIS, App. F, Ex. 19. Looking at current noise data by month, this would suggest that the noise contour, depicted in the EIS for "OMP build out," will actually look much different, encompassing additional communities and many more residents. Actual noise monitoring since completion of Phase I

[4] "however, modeling risks from airports or from proposed airport expansions can be complex and somewhat uncertain, given the need for accurate emissions inventories and atmospheric dispersion models that address the intricacies of airport emissions (i.e. aircraft emissions that vary over time and space, including vertically). [OMP EIS]. For this reason, some have concluded that currently available data are inadequate to conduct air toxics risk assessments for airports. [OMP EIS]." Zhou Levy Article, p.2.

(that is, the opening of 9L/27R) has shown increases when this runway has been in full use. But this runway has not reached its projected usage of 22% of all arrivals to O'Hare upon completion of OMP, running at half that percentage or less. With the reconfiguration of the airfield, the three northern runways will account for over 50% of daily flight operations, post OMP completion. *See,* EIS, App. F, Table F-39. Thus, while usage for Runway 9L/27R remains lower than what is expected on build-out, the noise it is creating is approaching the build-out levels.

Finally, the noise created by OMP is having a significant effect on the education of children in Park Ridge. A two-week noise monitor test at Maine South High School recorded 50-60 decibels and higher during school hours with many noise events above 85 decibels. The FAA sets the threshold for noise at 60 decibels for schools. The World Health Organization recommends Leq 35dBA for the learning environment, which is far exceeded by the noise events that occur at Maine South High School. The soundproofing that has been installed is, at best, a partial fix since it filters, but does not eliminate this noise. Thus, aircraft noise still disrupts classrooms, causing teachers to pause in the middle of class while aircraft land and losing the students' attention as a result. During the test period there was an average of 154 flights a day from all runways. Upon completion of OMP, the school will experience an average of 350 flights a day from one runway. As the number of flights using 9L/27R increases, the noise levels within the school will only rise. Aircraft over the school are two miles out from the edge of 9L/27R and 400 to 600 feet above the athletic field. ANMS Portable Noise Monitoring Summary Report, Site 1968, Maine South High School, February 6, 2010 - February 21, 2010.

D. Since the Publication and the Issuance of the ROD, Federal Agencies Have Been Required to Address Greenhouse Gas Emissions in Their Environmental Impact Statements

While NEPA predates the current sensitivity to climate change, courts have already recognized that its analysis falls within NEPA's purview. NEPA requires that federal agencies consider adverse effects of major federal actions, whether the effects are direct or indirect. 42 U.S.C. §4332(C), 40 C.F.R. §1508.8. Indirect effects are those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. §1508.8. The U.S. Court of Appeals for the Ninth Circuit stated as recently as 2008, in *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1214-1215 (9th Cir. 2008), that it is NEPA's purpose to ensure that environmental information, including information about climate change, is made available to public officials and citizens before decisions are made and actions are taken. That would apply equally to preparing an SEIS.

Information about broad-scale causes and effects of climate change has been well publicized. In *Center for Biological Diversity, supra*, the Ninth Circuit summarized the following findings from International Panel on Climate Change reports and other sources:

- Carbon dioxide concentrations increasing over the 21st century are virtually certain to be mainly due to fossil-fuel emissions;

- The average earth surface temperature has increased by about 0.6 degrees;

- There have been severe impacts in the Arctic due to warming, including sea ice decline;

- Global warming will affect plants, animals, and ecosystems around the world. Some scientists predict that it will cause 15 to 37 percent of species in certain regions to be extinct;

- Global warming will cause serious consequences for human health, including the spread of infections and respiratory diseases;

- Climate change is associated with increasing variability and heightened intensity of storm such as hurricanes; and,

- Climate change may be non-linear, meaning there are positive feedback mechanisms that may push global warming past a dangerous threshold (the "tipping point").

Id. at 522-23. These findings indicate that greenhouse gases from combustion of fossil fuels substantially contribute to climate change, and climate change is expected to result in widespread adverse environmental effects. It is indisputable that aircraft and ground operations at airports emit greenhouse gases and contribute to climate change, as well as the construction associated with reasonable foreseeable projects.

In the past year, the CEQ has advised federal agencies that they should consider opportunities to reduce GHG emissions caused by proposed federal actions and adapt their actions to climate change impacts throughout the NEPA process and to address these issues in their agency NEPA procedures. The CEQ explains how federal agencies should analyze the environmental impacts of greenhouse gas emissions and climate change when they describe the environmental impacts of a proposed action under NEPA. The CEQ has provided instruction to the agencies on how to assess the effects of climate change on the proposed action and their design. The EIS did not provide any such analysis.

While it is doubtful that individual projects, standing alone, could result in significant climate change effects, in *Center for Biological Diversity*, the Ninth Circuit faulted NHTSA's Environmental Assessment, which quantified the expected amount of CO2 emitted from light trucks under the proposed CAFE standard, because the EIS did not include an evaluation of the "incremental impact" that such emissions will have on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions. *Id.* At 549. Based on legal precedent and the CEQ Guidelines, the FAA should evaluate the incremental impact that OMP's emissions of greenhouse gases will have on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions in an SEIS.

III. FAA SHOULD EXERCISE ITS DISCRETION AND PREPARE AN SEIS IN ORDER TO FURTHER THE PURPOSES OF NEPA.

Even if the FAA deems the changes, new information and circumstances not significant enough to require the preparation of an SEIS, "the purposes of [NEPA] will be furthered by doing so." Section 4331 of title 42 of the U.S. Code outlines the purposes of NEPA:

> It is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

42 U.S.C. §4331. Since the OMP EIS is almost six years old and the project has yet to be completed, [5] the FAA should "use all practicable means and measures" to "foster and promote the general welfare" of the citizens in the communities surrounding O'Hare by preparing an SEIS. There are essentially two issues about which the City of Park Ridge is very concerned: air quality and noise. The study of noise and its health effects has changed substantially over the past six years, despite the fact that the way that the FAA measures noise at airports has not.

A. Noise

1. FAA must protect the communities surrounding airports from the substantial health effects and risks that accompany aircraft noise.

The FAA last reviewed the technical bases for its noise policies in 1992. For example, 65 DNL as the "threshold of significant impact" under the NEPA and the level below which land uses are deemed compatible has been used by the FAA without substantial change since *1978* (it was "re-affirmed" by FICAN in 1992). It is safe to say that the FAA's policy no longer reflects the best scientific evidence of the effects of aircraft noise exposure. This failure on the part of the FAA to update its policy undermines the trust that the public places in the FAA in their pursuit to understand noise exposure and its effects.

This is particularly true since substantial research done on the measurement and effect of aircraft noise on the communities surrounding airports has come from sources outside the United States. For example, the Hypertension & Exposure to Noise Near Airports (HYENA) study evaluated the effects of aircraft noise on 4,861 persons residing near seven European airports between 2002 and 2006. The 2002 RANCH study from London studied the effect of aircraft and road traffic noise on 2,844 children's cognition and health. Both of these studies came out with rather startling results concerning the effect aircraft noise has on the quality of human life. Finally,

[5] Indeed, OMP lacks a projected completion date, due to the recent agreement between AA/UAL and Chicago Department of Aviation.

WHO Europe issued "Night Noise Guidelines," which were based on research done by the European Union. This type of study has largely been absent in the United States.

The emerging research suggests that current standards associated with the modeled science contained in the EIS are outdated. The current understanding of the health effects of aircraft noise goes beyond mere annoyance and sleep disturbance. The new research shows a strong correlation between aircraft noise and significant, serious health outcomes, such as hypertension and heart disease. Four studies from Europe have shown this connection:

1. Haralabidis AS, Dimakopoulous K, Velonaki V, Barbaglia G, Mussin M, Giampaolo M, Selander J, Pershagen G, Dudley ML, Babisch W, Swart W, Katsouyanni K, Jarup L; for the HYENA Consortium. Can exposure to noise affect the 24 h blood pressure profile? Results from the HYENA study. *J. Epidemiol Community Health.* 2010 Jun 27.

2. Haralabidis AS, Dimakopoulou K, Vigna-Taglianti F, Giampaolo M, Borginia A, Dudley ML, Pershagen G, Bluhm G, Houthuijs D, Babish W, Velonakis M, Katsouyanni K, Jarup L; for the HYENA Consortium. Acute effects of night-time noise exposure on blood pressure in populations living near airports. *Eur Heart J.* 2008 Feb 12.

3. Jarup L, Babisch W, Houthuijs D, Pershagen G, Katsouyanni K, Cadum E, Dudley M-L, Savigny P, Seiffert I, Swart W, Breugelmans O, Bluhm G, Selander J, Haralabidis A, Dimakopoulou K, Sourtzi P, Velonakis M, Vigna Taglianti F, on behalf of the HYENA study team. Hypertension and Exposure to Noise near Airports – the HYENA study. *Environ Health Perspect* 2008; 116:329-33.

4. Jarup L, Dudley ML, Babish W, Houthuijs D, Swart W, Pershagen G, Bluhm G, Katsouyanni K, Velonakis M, Cadum E, Vigna-Talianti F for the HYENA Consortium. Hypertension and exposure to noise near airport (HYENA) – Study design and noise exposure assessment. *Environ Health Perspect* 2005; 113:1473-8.

This is not to say that there has not been any research done in the United States on this issue. In March 2007, for example, Lisa Goines and Louis Hagler published their article entitled "Noise Pollution: A Modern Plague" in the South Medical Journal. While it did not concentrate solely on aircraft noise, the article concluded that

> Noise produces direct and cumulative adverse effects that impair health and that degrade residential, social, working, and learning environments with corresponding real (economic) and intangible (well-being) losses. It interferes with sleep, concentration, communication, and recreation. The aim of enlightened governmental controls should be to protect citizens from the adverse effects of airborne pollution, including those produced by noise. People have the right to

> choose the nature of their acoustical environment; it should not be imposed by others.

When the FAA approved the OMP, it was imposing "the nature of" Park Ridge's "acoustical environment" on them, rather than having the citizens choosing for themselves.

In addition several "findings" have been issued by governmental or quasi-governmental sources. Since the publication of the EIS and the issuance of the ROD, the Federal Interagency Committee on Aviation Noise (FICAN) has issued two findings: *FICAN Recommendation for use of ANSI Standard to Predict Awakenings from Aircraft Noise* (2008) and *Findings of the FICAN Pilot Study on the Relationship between Aircraft Noise Reduction and Changes in Standardized Test Scores* (2007). Partnership for Air Transportation Noise and Emissions Reduction (PARTNER), a collaboration among the FAA, NASA and TransportCanada, issued in July 2010, its *Review of the Literature Related to Potential Health Effects of Aircraft Noise*, (prepared by Hales Swift). That review concluded that "[p]otentially serious health outcomes have been identified in studies involving transportation noise exposure in a population. These include heart disease and hypertension and the observed effects seem to be related especially to nighttime noise exposure although similar daytime exposure effects have also been identified." PARTNER 2010, p.62. PARTNER has also issued several other reports:

- Sonic Boom and Subsonic Aircraft Noise Outdoor Simulation Design Study. Victor W. Sparrow, Steven L. Garrett. A PARTNER Project 24 report. May 2010. Report No. PARTNER-COE-2010-002.

- Passive Sound Insulation: PARTNER Project 1.5 Report. Daniel H. Robinson, Robert J. Bernhard, Luc G. Mongeau. January 2008. Report No. PARTNER-COE-2008-003.

- Vibration and Rattle Mitigation: PARTNER Project 1.6 Report. Daniel H. Robinson, Robert J. Bernhard, Luc G. Mongeau. January 2008. Report No. PARTNER-COE-2008-004.

- Low Frequency Noise Study. Kathleen Hodgdon, Anthony Atchley, Robert Bernhard. April 2007. (Report No. PARTNER-COE-2007-001) PARTNER Project 1, Low Frequency Noise Study, final report.

- Land Use Management and Airport Controls: A further study of trends and indicators of incompatible land use. Kai Ming Li, Gary Eiff. September 2008. Report No. PARTNER-COE-2008-006.

- En Route Traffic Optimization to Reduce Environmental Impact: PARTNER Project 5 Report. John-Paul Clarke, Marcus Lowther, Liling Ren, William Singhose, Senay Solak, Adan Vela, Lawrence Wong. July 2008. Report No. PARTNER-COE-2008-005.

- Land Use Management and Airport Controls: Trends and indicators of incompatible land use. Kai Ming Li, Gary Eiff, John Laffitte, Dwayne McDaniel. December 2007. (Report No. PARTNER-COE-2008-001) PARTNER Project 6 final report.

Thus, there is no shortage of relevant, topical information for the FAA to use in assessing the health risks and impacts of noise on the communities surrounding O'Hare. It is readily apparent that the current system does not fully account for the increased health risks communities surrounding airports are subject to due to the increased noise levels. Because of the serious nature of the health risks that the FAA has imposed on the communities surrounding O'Hare, the FAA certainly would "further the purpose" of NEPA by undertaking an SEIS to address the newly discovered and significant health effects of noise exposure.

2. The FAA must protect the schools located in noise-impacted areas to a higher degree than the rest of the community.

Of particular concern to the citizens of Park Ridge is the fact that several schools, including the Maine South High School campus, lie within the 65 DNL contour. Because of this fact, these schools have received (or will receive) noise mitigation. However, that noise mitigation is inadequate to combat the multitude of issues that are raised by an increase in noise levels in a school environment. For three years (2002, 2003 and 2004), researchers at Queen Mary, University of London carried out the largest study on the effects of long-term exposure to noise on children's health to date, examining almost 3,000 children living in the UK, Spain and the Netherlands. That study found discernible impacts on children's cognitive development to aircraft noise exposure as low as 50 DNL. The reading age in children exposed to high levels of aircraft noise was delayed by up to two months in the UK for a five decibel change in noise exposure.

In July 2007, FICAN published its study documenting the relationship between aircraft noise reduction and changes in standardized test scores. It concluded that: "[a]fter controlling for demographics, the study found (1) a substantial association between noise reduction and decreased failure (worst-score) rates for high-school students, and (2) significant association between noise reduction and increased average test scores for student/test subgroups." FICAN 2007, p.1. In addition, FICAN found that the FAA's standard use of DNL was not helpful in assessing the impact of noise on schools and students. FICAN 2007, p.2 ("[a]lthough contours of day-night sound levels (DNL) were available for each airport, such contours are influenced by early morning, evening and nighttime aircraft activity, and were not used. Instead, a series of noise exposures were developed – all for the 9-hour school day (7am to 4pm), and all inside the school classrooms"). Single event and the intermittent nature of aircraft noise all have a significant impact on the ability of children to be educated in such an environment.

A third study, by the World Health Organization, also studied the effect of noise on education. It concluded that:

> ...the authors pointed out that aircraft noise, because of its intensity, the location of the source, and its variability and unpredictability, is likely to have a greater

> effect on children's reading than road traffic noise, which might be of a more constant intensity. Thus, it is conceivable that aircraft noise is more damaging than road traffic noise for children's cognition. This may also be true when Ldn level is controlled for, which has been reported for children's memory in an experimental acute noise study.

WHO 2010, p.51. In study after study it has been shown that the EIS (and FAA) cookie-cutter approach to addressing noise impacts on schools and school children is not effective. The FAA should exercise its discretion and prepare an SEIS to address the harmful impact that the noise from O'Hare is having on the schoolchildren in the surrounding communities.

B. Air Quality

For the reasons expressed in Sections II A, B and D of this letter, even if the FAA disagrees as to whether it is *required* to update the findings of the EIS relative to the effects of the OMP on (i) the NAAQS established for the criteria air pollutants ozone, fine particulate matter, and nitrogen dioxide; (ii) ambient levels of hazardous air pollutants; and (iii) greenhouse gas emissions, the FAA should exercise its discretion and prepare an SEIS "to further the purposes of NEPA."

C. Use of FAA's Discretion Would Be Advantageous to FAA as well as to the Surrounding Communities.

The provision in NEPA giving federal agencies the discretion to undertake SEISs when it will further the purposes of NEPA was designed to produce the best environmental results and to limit litigation that is both costly and damaging to growth and development projects. It is certainly the City of Park Ridge's desire to see that its issues with the air quality and noise emanating from O'Hare are addressed without litigation. However, evidence is increasing that the environmental effects of OMP go far beyond what is stated in the EIS. The citizens of Park Ridge need to be able to trust the FAA that it has their best interests at heart and that it will not do anything that would jeopardize the health of Park Ridge's citizens and their children's future. Although the tension between the communities that surround O'Hare and the FAA is palpable, preparing an SEIS to address ongoing noise and air quality concerns without having to resort to litigation would assist in the rebuilding of that trust.

IV. CONCLUSION

In *Marsh*, the Supreme Court admonished federal agencies that "NEPA does require that agencies take a 'hard look' at the environmental effects of their planned action, even after a proposal has received initial approval" (109 S.Ct. at 1859) and they should not rely on "an interest in finality without carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance – or lack of significance – of the new information." *Marsh*, 109 S.Ct. at 1861. The City of Park Ridge believes that the conditions are ripe for the preparation of an SEIS. For the reasons presented above, the FAA should "carefully review the record" and evaluate the new and significant information presented here. If it does so, there can be only one conclusion: an SEIS needs to be prepared.

The City of Park Ridge would like to set up a meeting with you to discuss how the FAA and the City of Park Ridge can reach an agreement about the necessary steps to take to resolve these environmental issues. If you have any questions or comments, please feel free to call me at (815) 490-4920 or send me an e-mail at rporter@hinshawlaw.com.

Sincerely,

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