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February 23, 2015

Darin Clipper, Specialist
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth TX 76193

Re: Aeronautical Study Nos.
2014-ANE-1770-OE
2014-ANE-1771-OE
2014-ANE-1908-OE

Dear Specialist Clipper;

The Oxford Flying Club and I, as its President and individually, object to three of the eleven proposed structures at the proposed CPV Towantic power plant in Oxford CT just east of Oxford airport, namely:

2014-ANE-1770-OE 41-29-01.44N 73-07-17.91W 150 ft. AGL/980 ft. AMSL (Stack)
2014-ANE-1771-OE 41-29-01.13N 73-07-19.66W 150 ft. AGL/980 ft. AMSL (Stack)
2014-ANE-1908-OE 41-29-02.91N 73-07-23.40W 62 ft. AGL/892 ft. AMSL (Aux Boiler Stack)

Respondent:

The Oxford Flying Club, Inc. (OFC) is a not-for-profit corporation consisting of approximately 75 pilots who own 4 single engine Cessna and Piper four place aircraft. While our club was incorporated in 1992, we are the offshoot of the Sigma Six Flying Club which predates the opening of the Oxford Airport (KOXC) in 1969. Our flying club has been based at KOXC since its opening in 1969. Presently I am one of nine certified flight instructors who are members of our club. I hold an Airline Transport Pilot (ATP) multi-engine rating and Commercial Pilot single engine rating and Master Certified Flight Instructor Airplane and Instrument ratings for both single and multi-engine aircraft. To help put the Master Instructors program in perspective, there are approximately 97,000 CFIs in the United States. Fewer than 800 (about 1 in every 120 CFIs) have earned Master accreditation. I also hold Advanced Ground Instructor and Instrument Ground Instructor ratings. I serve as a Lead Representative for the FAA SAFETY FAASTeam in the Windsor Locks Flight Standards District Office (FSDO) and serve as one of only two dozen aviation experts from throughout the US on the FAA Aviation Rulemaking Advisory Committee – Airman Certification System Working Group tasked with rewriting the current Practical Test Standards for all US licensed pilots. One of our assigned goals is to incorporate Risk Management into the Airman Certification System to mitigate safety related issues and reduce unsafe flying practices. Between ground and flight instruction, while retired, I teach approximately 500 - 600 hours per year out of KOXC, primarily in small, light, single engine training aircraft.

Location:

These three smoke stacks are planned to be located approximately 0.6 NM east of Runway 36/18 of Oxford Airport (KOXC). This location is precisely below the traffic pattern for small, light, single engine training aircraft which practically every flight instructor teaches is between 0.5 & 1.0 mile from the runway while on the downwind leg of any traffic pattern (see p 7-3 of The Airplane Flying Handbook – FAA-H-8083-3A). Furthermore, the smoke stacks will be located below the location where a pilot is taught to start his/her descent to land if on a left downwind to land on runway 18.

While the predominant traffic is into Runway 36, due to the location of the tower on the west side of the airport, tower personnel routinely and almost unanimously put practicing small, light, single engine training aircraft into a traffic pattern on the east side of the runway (directly over the proposed power plant) in right hand traffic for Runway 36 or left hand traffic for Runway 18 since traffic on the east side of the airport allows tower personnel to view both the runway and the traffic at the same time without the need to turn 180 degrees to view traffic behind the tower. While the predominant small, light, single engine training aircraft traffic is in the afternoon, this procedure also allows the tower personnel to not have to attempt to locate traffic while looking directly into the afternoon sun. I personally condone this local practice since it teaches a student the necessary sight lines in both right hand and left hand traffic while increasing safety by providing tower personnel a greater opportunity to maintain visual contact with local airport traffic.

The construction of this proposed power plant with its three smoke stacks will disrupt this relationship between pilot and tower personnel to a significant degree in that it will, when the plant is running and producing a visible plume, place a visible barrier between the tower and the pilot or require the pilot to fly so close to the airport to preclude a safe, stabilized approach by reducing the base leg of his/her approach to a critical degree.

Substantial Adverse Effect on Flight Operations:

Pursuant to 49 U.S.C. § 44718(b)(1), a aeronautical evaluation must consider, inter alia: (1) the impact on arrival, departure, and en route procedures for aircraft operating under either VFR or IFR; (2) the impact on existing public-use airports and aeronautical facilities; (3) interference with existing or proposed air navigation facilities; and (4) the effect on airport capacity.

Under FAA's standards, a proposed structure will have an "adverse aeronautical effect" if it is found to have physical effect on the operation of air navigation facilities or if it would:

- Require a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure for a public-use procedure.
- Require a VFR operation to change its regular course or altitude....
- Derogate airport capacity/efficiency.
- Affect future VFR and/or IFR operations as indicated by plans on file. Order 7400.2G at f 6-3-3.
- Further, a proposed structure would have a *substantial* adverse effect if it causes interference to the operation of an air facility used by aircraft. Order 7400.2G at U 6-3-5.
- If the evidence demonstrates that a structure would have a substantial adverse effect, a Determination of Hazard Order must be issued 7400.2G at 1 7-1 -3(e).

It is our belief that FDC Notam 4/0811 and AIM 7-5-15 are applicable to the proposed dual fuel (natural gas/fuel oil) power plant in this case is a power plant or "similar facilit[y]" and would restrict flight over or in proximity of this proposed facility.

FDC Notam 4/0811 states:

FDC ...SPECIAL NOTICE... THIS IS A RESTATEMENT OF A PREVIOUSLY ISSUED ADVISORY NOTICE. IN THE INTEREST OF NATIONAL SECURITY AND TO THE EXTENT PRACTICABLE, PILOTS ARE STRONGLY ADVISED TO AVOID THE AIRSPACE ABOVE, OR IN PROXIMITY TO SUCH SITES AS POWER PLANTS (NUCLEAR, HYDRO-ELECTRIC, OR COAL), DAMS, REFINERIES, INDUSTRIAL COMPLEXES, MILITARY FACILITIES AND OTHER SIMILAR

FACILITIES. PILOTS SHOULD NOT CIRCLE AS TO LOITER IN THE VICINITY OVER THESE TYPES OF FACILITIES.

While every pilot knows to check NOTAMS (Notices to Airmen) before every flight, and that NOTAMS must be complied with, every pilot is also trained to understand that the Airman's Information Manual (AIM) is the "standard of care for all pilots" as legally determined in numerous court cases in which pilots were held legally accountable for accidents resulting from the pilot's failure to obey instructions in the AIM, where there was no direct violation of the FAR. In the case of *Management Activities, Inc. v. US*, 21 F. Supp. 2d 1157 - Dist. Court, CD California 1998, the court ruled that the pilot's failure to *disobey* an ATC clearance to land in order to *obey* the instructions for wake turbulence avoidance as set forth in the AIM *made the pilot legally responsible for the ensuing fatal crash*.

The AIM [7-5-15] "Avoid Flight in the Vicinity of Thermal Plumes (Smoke Stacks and Cooling Towers)" defines *the hazards* of thermal plumes in paragraph a: "visible or invisible emissions from power plants, industrial production facilities, or other industrial systems that release large amounts of vertically directed unstable gases. High temperature exhaust plumes may cause significant air disturbances such as turbulence and vertical shear. Other identified potential hazards include, but are not necessarily limited to, reduced visibility, oxygen depletion, engine particulate contamination, exposure to gaseous oxides, and/or icing. Results of encountering a plume may include airframe damage, aircraft upset, and/or engine damage/failure. These hazards are most critical during low altitude flight, especially during takeoff and landing."

Paragraph b instructs pilots; "*When able, a pilot should fly upwind of possible thermal plumes*" and further instructs: "Until the results of these [FAA] studies are known and possible changes to rules and policy are identified and/or published, pilots are *encouraged to exercise caution when flying in the vicinity of thermal plumes.*" (Emphasis added.)

Because pilots have been held legally responsible for compliance with all AIM instructions, this *requires* pilots to alter an assigned heading (perhaps even in contradiction to a KOXC tower demand) in order to fly upwind of the power plant. According to the Pilot-Controller Glossary, page w-1, [http://www.faa.gov/air_traffic/publications/atpubs/PCG/pcg.pdf] "when able" is defined as: "when instructions are prefaced 'when able,' the pilot is expected to seek the first opportunity to comply. Once a maneuver has been initiated, the pilot is expected to continue until the specifications of the instructions have been met."

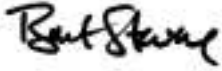
Therefore, a pilot is instructed by the AIM to turn to a heading that will take the aircraft upwind of the stack emitting a thermal plume and continue on that heading until a safe distance is achieved. Since the AIM *fails to define a safe distance*, the resulting deviation from an assigned traffic pattern heading may take the aircraft directly over the airport and into the south downwind traffic pattern depending on wind direction and speed and the pilot's decision about a 'safe' distance from the stack. Alternately, a pilot who suddenly becomes aware that he/she will overfly the stack when the plume is not visible and thus has very little warning, may make an emergency deviation abruptly from his/her heading, thus unexpectedly intersecting the flight path of another aircraft.

Pursuant to FAA's procedures and standards, we believe that the FAA should find a hazard to air navigation because the evidence convincingly indicates that it would have a substantial adverse effect by: (1) forcing a significant volume of aeronautical operations to significantly limit their use of Oxford airspace; (2) requiring changes to existing VFR arrivals and departures, and pattern traffic; (3) requiring an alteration to or the complete elimination of the ILS instrument approach procedure to Runway 36, circle to land Runway 18 where traffic may overfly the stack in the critical low-altitude landing portion of the flight (**at only 300' over the stack!**); (4) by limiting the capacity and efficiency of OXC; and (5) by

increasing safety risks for pilots from reduced visibility within the airspace and plume effects.

For the above stated reasons, we ask that the FAA issue a Determination of Hazard Order for this proposed project.

Sincerely,



Burt Stevens

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FAASTeam Lead Representative
Master Instructor – ATP, CFII, MEI



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