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# Best Available Control Technology/Clean Air Act: Federal Appellate Court Addresses Challenge to Air Permit for SoLoNOx Turbine

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The United States Court of Appeals, Fifth Circuit (“Court”) in a June 3rd opinion vacated an air permit the Massachusetts Department of Environmental Protection (“DEP”) issued to Algonquin Gas Transmission (“Algonquin”). See *Town of Weymouth, Ma. v. Ma. Dept. of Environmental Protection*, 2020 WL 2904672 (1st Cir. June 3, 2020).

The Court addressed whether a Clean Air Act Best Available Control Technology (“BACT”) analysis was properly undertaken.

Algonquin is a natural gas transmission company based in Houston, Texas. It developed the “Atlantic Bridge Project” to create a natural gas pipeline connecting the Northeastern United States and Canada. A portion of the project included construction of a natural gas compressor station (“Station”) in Weymouth, Massachusetts.

The Station would utilize a “SoLoNOx” Solar Taurus 60 combustion turbine. This is described as a proprietary model of a dry low nitrogen oxide (“NOx”) turbine. It would be a non-major source of air pollution. However, under Massachusetts regulations BACT had to be employed to reduce NOx emissions.

The Environmental Protection Agency (“EPA”) has developed a five-step process for determining BACT:

1. identify all control technologies;
2. eliminate technically infeasible options;
3. rank remaining control technologies by control effectiveness;
4. evaluate most effective controls and document results; and
5. select BACT.

Algonquin submitted an air permit application to DEP applying the five-step approach. The state agency concluded that the SoLoNOx turbine was BACT for the Weymouth Station. This was based on its review of the application and agreement with the BACT analysis.

The Algonquin air permit was then issued.

Three groups (“petitioners”) challenged DEP’s approval of the Weymouth Station air permit. They included:

- Town of Weymouth
- Nearby municipalities
- State and local officials

Petitioners first argued that DEP’s five-step BACT analysis was flawed because DEP:

1. improperly excluded consideration of using an electric motor instead of the SoLoNOx turbine; and
2. wrongly determined that a Dry Low NOx turbine plus a selective catalytic reduction (“SCR”) was not cost feasible.

The petitioners argued either an electric motor or SCR use would have reduced emissions. DEP was argued to have prematurely dismissed both options.

The Court found no basis to fault DEP’s analysis regarding SCR. Nevertheless, it agreed that DEP improperly excluded the use of an electric motor because it failed to substantiate its conclusions that an electric motor would not be cost effective. Thus, DEP’s exclusion of the electric motor at step four of the BACT analysis was deemed arbitrary and capricious.

Petitioners also argued that DEP violated Massachusetts regulations by failing to include background pollutants when considering Allowable Ambient Limits (“AAL”) and Threshold Effects Exposure Limits (“TEL”). TEL is a 24-hour-based measurement that determines what health effects the public may experience from air pollutants. AAL is an annual measurement that focuses on cancer risks associated with air pollutants.

DEP responded that its policy is to compare only emissions from the new source to the applicable AAL and TEL, without considering background levels. DEP’s approach was deemed rational. Many other screening programs were noted to have similar policies. Petitioners’ interpretation of Massachusetts’ regulations was neither the only nor the most reasonable interpretation. Therefore, the Court deferred to DEP’s conclusions.

Petitioners also argued that Algonquin’s air dispersion model underestimated formaldehyde emissions. It was argued to not properly include emissions from intermittent startup events. Analysis that included emissions from intermittent startup events marginally exceeded the AAL limits.

DEP countered that the models of intermittent startup events often show impacts significantly higher than what will actually occur. The agency also noted that Algonquin had provided startup models. However, its policies did not actually require official consideration of startup models. The Court found that DEP acted within its discretion when it found that there was no exceedance of AAL or TEL.

Petitioners also argued that DEP failed to comply with the Massachusetts Environmental Justice (“EJ”) policy. It guarantees all people the enjoyment of a clean and healthful environment. DEP is required to engage in “enhanced public participation” for projects where the project site is located within five miles of an “EJ population,” and where emissions will exceed either the Environmental Notification Form (“ENF”) threshold or the Environmental Impact Report (“EIR”) threshold under the Massachusetts Environmental Protection Act.

There was no dispute that the Weymouth Station was within five miles of an EJ population. However, DEP argued that the Station’s projected emissions exceeded neither the ENF nor the EIR thresholds. Petitioners did not provide evidence to the contrary. Therefore, the Court deferred to DEP.

The Court also rejected petitioners’ argument that the City of Brockton v. Energy Facilities Siting Board decision interpreted EJ to require DEP to develop strategies designed to proactively promote

environmental justice in all neighborhoods. City of Brockton's language was permissive. It stated that there "may" be such a requirement. Because petitioners did not specify any strategies or methods on which DEP could have relied, the Court was not willing to make City of Brockton stand for a more definitive requirement.

Petitioners argued that the noise from the Weymouth Station would be an impermissible "condition of air pollution" in violation of Massachusetts regulations. DEP cited its policy stating that a source of sound violates noise regulations if it increases the broadband sound level by more than 10db(A) above ambient or produces a "pure tone" condition. Petitioners did not argue that DEP's policy was unreasonable. Instead, it relied on nonbinding recommendations from the United States Environmental Protection Agency and the World Health Organization. The Court deferred to DEP's policy.

Petitioners further argued that no manufacturer guarantee supported Algonquin's finding that the Solar turbine had a guaranteed emission rate of 9 ppm. The Court rejected the petitioners' argument. It stated Massachusetts law did not require a manufacturer guarantee prior to issuing an air permit.

DEP was argued to have violated Massachusetts law by granting Algonquin's air permit without requiring Algonquin to obtain liability insurance or a surety bond. The Court rejected this argument because the cited statute applies to hazardous waste facilities. The petitioners did not claim that Weymouth Station was such a facility.

The Court rejected most of the petitioners' arguments. However, it did find that DEP's exclusion of the electric motor option was arbitrary and capricious and that a remedy was required.

Algonquin requested the Court to remand to DEP without vacating the air permit. The petitioners asked the Court to vacate and remand.

The proper remedy was within the discretion of the Court and depended upon three factors:

1. the severity of the errors,
2. the likelihood that they can be mended without altering the order, and
3. the balance of equities and public interest considerations.

Algonquin argued that DEP could easily and quickly add additional explanation for its conclusions. This was argued to remedy the error. Petitioners argued that vacatur is the default remedy when an agency takes a defective action and that remand without vacatur should be a limited exception.

The Court found both arguments persuasive. Nevertheless, it ultimately reasoned that the administrative record was insufficient for DEP to quickly complete the BACT analysis. Therefore, DEP could best consider Algonquin's potential redesign argument if the permit was vacated. If so, DEP's future proceedings would be limited and thus expedited.

Accordingly, the Court vacated Algonquin's air permit and remanded to DEP for further proceedings limited to the identified purposes.

A copy of the Opinion can be downloaded [here](#).