AIR QUALITY REGULATORY ISSUES ASSOCIATED WITH RESOURCE RECOVERY

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The author has performed a valuable service in clearly outlining the air quality regulatory issues associated with a resource recovery facility. The following comments and discussion are offered to supplement the author’s well organized presentation:

(1) Resource recovery, as used in this paper, refers to combustion oriented waste-to-energy projects. Other resource recovery operations, which may be associated with a waste-to-energy project, such as RDF production, refuse pelletizing or waste recycling operations, could and probably would be governed by different non-combustion-related air quality regulatory requirements. These requirements will vary from state to state and from community to community.

(2) While air quality regulatory issues at a waste-to-energy facility are accurately discussed in great detail in this paper, it should be appreciated that all other environmental constraints must also be addressed some of which may well have an impact on the potential air quality problems experienced by the facility. These other constraints may well impact the design of the waste-to-energy facility and the selection of the air pollution control equipment and the ultimate handling and disposal of the facilities residue and discharged cooling waters. Such constraints include:

(a) Local or state regulations relative to discharges to publicly owned treatment works or to the surface waters. Such regulations often address items such as solids content, pH, temperature, BOD, toxic substances which may interfere with the treatment plants biological processes or cause the treatment plant’s sludges or residues to be unsuitable for reclamation, etc.

(b) Solid waste disposal regulatory requirements relative to waste-to-energy residues which can vary widely from community to community and state to state.

In some instances, the compliance with these other environmental regulatory requirements (water pollution control and solid waste disposal) may materially extend the total regulatory permitting and review process well beyond the air quality-related requirements outlined in the paper. The point that I am making is that while air quality regulatory issues, as elucidated in this paper, are a very important part of securing the approval for a new waste-to-energy facility that air quality issues alone cannot and should not be viewed separately and independently from the water pollution control and solid waste disposal regulatory issues because of the many and close inter-relationships that exists between all three pollution forms in evaluating the design, operation and performance of this type of facility.

(3) The source of Table 3 Significant Emission Rates incorrectly lists the source as 40 CRF 52.51(b)(23). The correct source for this Table is 40 CFR 52.21(b)(23) — undoubtedly a typing error. The source of Table 4 PSD Air Quality Increments should be listed as 40 CFR 52.21(c).

Table 5 Significant Monitoring Concentrations, as presented in the paper, has now been promulgated in 40 CFR 52.21(i)(8)(i) — July, 1983 with these incorporated changes in Table 5:

(a) Asbestos and Sulfuric Acid Mist have been deleted
(b) Beryllium has been reduced to 0.0005 μg/m³ (24 h)
(c) Hydrogen sulfide has been reduced to 0.04 μg/m³ (1 h)
(d) Total reduced sulfur (including H₂S) is listed as 10 μg/m³ (1 h)
(e) Reduced sulfur (including H₂S) is listed as 10 μg/m³

(4) While at this writing, the much discussed “dioxin issue”, that has been associated in the public's mind with waste-to-energy plants is not in itself an air quality regulatory issue. This is true since no regulatory emission limitations have, as yet, been established for “dioxins” — nor have standardized testing, sampling and analytical procedures been promulgated for this pollutant. It is important, nevertheless, that anyone closely associated with this field have a thorough understanding of the background and the state-of-the-art status of the “dioxin” question since it has caused more recent public concern than any other single environmental issue with regard to the regulatory approval and/or the public acceptance of a waste-to-energy facility by a community. It is imperative, therefore, that the USEPA, who originally flagged the “dioxin” issue, make more widely known it's statement and position as to it's own health risk assessment on the “dioxin” issue lest the whole evolving field of municipal solid waste incineration and waste-to-energy facilities be needlessly and seriously impacted, leaving the landfilling of municipal solid waste one of the few practical, alternative methods of disposal.

(5) As a former air pollution control regulatory official and air pollution consultant with more than 27 years experience in that field, I cannot emphasize strongly enough, as has the author, that anyone developing an incineration or waste-to-energy facility establish a good and straight forward working relationship with the reviewing agency if one wishes to avoid the many possible pitfalls and delays that can be attendant to the reviewing, permitting and approval process.