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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued February 13, 2003 Decided April 8, 2003

No. 96-1422

ARTEVA SPECIALTIES S.A.R.L., D/B/A KOSA,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

No. 96-1423

EASTMAN CHEMICAL COMPANY,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

Bills of costs must be filed within 14 days after entry of judgment. The court looks with disfavor upon motions to file bills of costs out of time.

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

No. 01-1398

ARTEVA SPECIALTIES S.A.R.L., D/B/A KOSA,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

On Petitions for Review of Orders of the
Environmental Protection Agency

Alan H. McConnell argued the cause for the petitioners. *William F. Lane* was on brief. *Kurt E. Blase* and *Victoria A. Cochran* entered appearances.

Laurel A. Bedig, Attorney, United States Department of Justice, argued the cause for the respondent. *Steven Silverman*, Attorney, United States Environmental Protection Agency, was on brief. *John C. Cruden*, Assistant Attorney General, *Christopher S. Vaden*, *Eric G. Hostetler* and *Mary F. Edgar*, Attorneys, United States Department of Justice, and *Patricia A. Embrey*, Attorney, United States Environmental Protection Agency, entered appearances.

Before: EDWARDS, HENDERSON and ROGERS, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* HENDERSON.

KAREN LECRAFT HENDERSON, *Circuit Judge*: In 1996 the Environmental Protection Agency (EPA) promulgated national standards to reduce emissions of hazardous air pollutants from plants that manufacture a group of polymers and resins, including polyethylene terephthalate resin (PET). National Emissions Standards for Hazardous Air Pollutant Emissions: Group IV, Polymers and Resins: Final Rule, 61 Fed. Reg. 48,208 (Sept. 12, 1996) (Group IV NESHAP), pursuant to

section 112 of the Clean Air Act, 42 U.S.C. § 7412. Arteva Specialties S.a.r.l. d/b/a KoSa (KoSa)[1] and Eastman Chemical Company (Eastman), which operate PET manufacturing plants, seek review of the equipment leak standard of Group IV NESHAP on the ground the required emission controls are not cost effective as required by section 112(d)(2), 42 U.S.C. § 7412(d)(2). Specifically, the petitioners contend it was arbitrary for EPA to aggregate costs and effectiveness facility-wide, rather than disaggregating the costs and effectiveness of the individual control technologies proposed. For the reasons set forth below, we grant the petitions for review and remand to the agency to clarify its decision to aggregate costs and effectiveness.

I.

Section 112 of the Clean Air Act directs EPA to set national emission standards to reduce emission of various "hazardous air pollutants." *See* 42 U.S.C. § 7412.[2] Subsection (d)(2) provides:

> Emission standards promulgated under this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions of the hazardous air pollutants

[1] KoSa replaced then-petitioner Hoechst Celanese Corporation on February 5, 2002 after purchasing its PET manufacturing facilities.

[2] Section 112(b)(2) defines "hazardous air pollutants" as

> pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise, but not including releases subject to regulation under subsection (r) of this section as a result of emissions to the air . . . .

42 U.S.C. § 7412(b)(2).

> subject to this section (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies, through application of measures, processes, methods, systems or techniques . . . .

42 U.S.C. § 7412(d)(2). Subsection (d)(3) requires that EPA set a minimum standard for a category which, for existing sources such as those here, must be at least as stringent as the average emission level achieved by the "best performing" existing sources. 42 U.S.C. § 7112(d)(3)(A)-(B). Pursuant to these provisions, EPA promulgates standards in a two step process. First, EPA identifies a "maximum achievable control technology" (MACT) for each pollutant and source category which serves as a "floor" for its control standards; then the agency selects as its standard either the MACT floor or, if achievable in light of the factors and methods listed in subsection (d)(2), "beyond the floor" technology that is more stringent than the MACT. *See generally Cement Kiln Recycling Coalition*, 255 F.3d 855, 858 (D.C. Cir. 2001). In the Group IV NESHAP rulemaking EPA selected as the MACT floor for PET manufacturing facilities sensory leak detection and repair (LDAR), which relies solely on the human senses to detect leaks. *See* EPA's Opp'n to Pet'r's Motion for Stay Pending Review, at 3 (filed December 10, 2001). Nevertheless, for most of the equipment categories addressed in the leak provisions, EPA prescribed, in lieu of or as an alternative to sensory LDAR, one or both of two beyond-the-floor technologies: "one time" equipment modification or "Method 21" LDAR, which uses portable organic vapor analyzers to monitor emissions.

Pursuant to subsection (d)(2)'s directive to "tak[e] into consideration the cost of achieving such emission reduction," EPA conducted a cost effectiveness analysis of the proposed standard, using the following methodology. First, EPA calculated the aggregate effectiveness of the proposed controls

at each PET producing facility by subtracting the aggregate estimated post-control leak rates from the aggregate estimated pre-control leak rates to ascertain the amount of emission reduction. EPA then calculated the aggregate estimated costs to implement the leak reduction technologies selected at each facility. Third, EPA calculated the cost effectiveness by dividing the aggregate estimated costs of all of the technologies for each facility by the aggregate estimated reductions for the facility. Finally, EPA reported the combined cost-effectiveness of the improvements at the facilities in each of four subcategories of PET production plants—identified by the feedstock used (dimethyl terephthalmate (DMT) or terephthalic acid (TPA)) and by the manufacturing process applied (batch or continuous)—as the annual cost per ton of HAP reduction: $620/ton (DMT-batch), $320/ton (DMT-continuous), $1500/ton (TPA-continuous) and $730/ton (TPA-batch). *See* 66 Fed. Reg. at 40,905.[3] EPA concluded that these aggregate figures demonstrate that implementation of the standard for each subcategory is cost effective.[4]

In November 1996 KoSa and Eastman filed separate petitions for review with this court and a joint petition for reconsideration with EPA. With the petition for reconsideration they submitted new cost and emissions data that they contended should be used to determine cost effectiveness. In response, in October 1998 EPA conducted a new analysis using the petitioners' data which produced new, less cost effectivene figures: $2100/ton (DMT-batch), $1300/ton (DMT-continuous), $1600/ton (TPA-continuous) and $1600/ton (TPA-batch). *See* 66 Fed. Reg. at 40,905. Based on these results,

[3] Initially, EPA reported the cost effectiveness in $/megagram, *see* EPA, *Re-valuation of Equipment Leak Analysis for PET Facilities Subject to the Group IV Polymers and Resins NESHAP*, at 7 (October 26, 1998), but converted the results to $/ton in its final denial of the petition for reconsideration.

[4] EPA identified a single facility type within the TPA-continuous subcategory (the type using a "continuous TPA high viscosity multiple end finisher process," 61 Fed. Reg. at 48,225), for which it found the standard would not be cost effective.

EPA again concluded the standard is cost effective and issued a proposed denial of the petitions for reconsideration on June 8, 1999. National Emission Standards for Hazardous Air Pollutants: Group IV Polymers and Resins: Proposed Denial of Petition for Reconsideration and Notice of Public Hearing, 64 Fed. Reg. 30,456 (June 8, 1999).

The petitioners submitted comments on the proposed denial, asserting EPA had underestimated the costs of the control and overestimated the emission reductions and that EPA should not have aggregated the cost effectiveness of the controls. EPA conducted another analysis in December 2000 and calculated the following costs/ton: $3300/ton (DMT-batch), $2700/ton (DMT-continuous), $1700/ton (TPA-continuous) and $1600/ton (TPA-batch). On June 8, 2001 EPA published its final denial of the petition for reconsideration, concluding once again that the standards are cost effective. National Emission Standards for Hazardous Air Pollutant Emissions: Group IV: Polymers and Resins: Final rule; Amendments and Denial of Petitions, 66 Fed. Reg. 40,903 (August 6, 2001). KoSa filed a petition for review of the denial on November 12, 2001.

II.

The petitioners do not here challenge EPA's basic cost effectiveness methodology but fault only the agency's decision to aggregate the cost effectiveness of the proposed controls—facility-wide and by facility subcategory—which, they contend, misrepresents the cost effectiveness of the leak provisions, at least for some types of equipment, because it averages the cost effectiveness of using Method 21 with the cost effectiveness of the other two controls—one time modification and sensory LDAR.[5] Because of the high cost of Method 21, the petitioners maintain, only a separate analysis of this control will accurately reflect the cost effectiveness of the equipment leak standard. We conclude that, although aggre-

[5] The petitioners also challenge EPA's conclusion that sensory LDAR is cost effective. Because we are remanding to EPA to clarify its cost effectiveness analysis, we need not reach this issue.

gating cost effectiveness may be a permissible approach to assessing the standard's cost effectiveness, the present record does not demonstrate that EPA's use of aggregation was reasonable.

In its denial of reconsideration, EPA set forth the following justification for aggregating its cost effectiveness results:

> We did not perform cost analyses which separate portions of the equipment leak programs that require one-time equipment modifications from the portions that are based on EPA Method 21 monitoring. We consider the LDAR program to be a whole program designed to reduce HAP emissions from equipment leaks across the total facility. The leaks from individual equipment components are considered together due to the similarity of the cause of the emissions and the control techniques. We do not believe it is appropriate nor necessary to disaggregate equipment leak programs by individual component types

66 Fed. Reg. at 40,905. EPA now offers a different defense of aggregation. Pointing out that "most of the leak detection and repair provisions provide specific alternative ways of achieving the standard," the agency asserts that "this interchangeability of compliance methods" makes the standard sufficiently "flexible" that aggregation does not distort the results. Resp't's Br. at 20–21. The petitioners correctly counter, however, that for two sources—"[v]alves in gas/vapor service and in light liquid service" and "[c]onnectors in gas/vapor service and in light liquid service"—the standard authorizes only Method 21 LDAR so that, for those two sources at least, aggregation appears to distort the cost effectiveness. *See* 40 C.F.R. §§ 63.168 (valves), § 63.174 (connectors).

To shore its defense here, EPA has cited a fallback provision in the standards which permits a facility owner or operator to use an "alternative means of emission limitation" if EPA determines, pursuant to the procedure set out in 40 C.F.R. § 63.177, that it is "a permissible alternative." Thus, EPA reasons, "[i]n all instances a facility may utilize a leak

detection and repair method of its own choosing." Resp't's Br. at 20 (citing 40 C.F.R. §§ 63.162(b)(1)). At oral argument EPA identified specific measures it contends may be used as alternatives to Method 21 for § 63.168 valves and § 63.174 connectors. For § 63.168 valves the agency points to a portion of a technical document it prepared in June 1993 which identified "two primary alternatives for controlling equipment leaks from pressure relief devices: use of a rupture disc (RD) in conjunction with the [pressure relief valve], or use of a closed vent system," EPA, *Protocol for Equipment Leak Emission Estimates*, at 5–4 (June 1993); for § 63.174 connectors the agency points to the language of the regulation itself, which provides "an optional credit for removed connectors" that are satisfactorily welded to prevent leaks, 40 C.F.R. § 63.174(j).

EPA may well be correct that the availability of the alternatives it cites adequately answers the petitioners' concern over the cost-effectiveness of the cited provisions. We are unable, however, to discern this from the administrative record because EPA did not take into account these particular alternatives in conducting its cost effectiveness analysis. We therefore have no evidence of their cost or of their effectiveness. They may be relatively inexpensive and effective measures or they may be less cost effective than Method 21 LDAR. Because the agency failed to consider in its analysis below the alternatives it now offers, we cannot accept its assertion here that their availability makes EPA's proposed standard cost effective notwithstanding the aggregation problem. *Cf. Sierra Club v. EPA*, 167 F.3d 658, 665 (D.C. Cir. 1999) (remanding emission standard for medical waste incinerators because "[a]lthough th[e] potential rationale for EPA's method was made clear in the briefs for the agency and the parties intervening on its behalf, it does not appear in the rulemaking record with enough clarity for us to say that the agency's 'path may reasonably be discerned' ") (quoting *Bowman Transp., Inc. v. Arkansas–Best Freight Sys, Inc.*, 419 U.S. 281, 286 (1974)). We emphasize that aggregating cost effectiveness is not prohibited under the Clean Air Act's

cost effectiveness provisions and EPA's decision to do so on remand will therefore be upheld as long as it is reasonable. *See Husqvarna AB v. EPA*, 254 F.3d 195 (D.C. Cir. 2001) (upholding chosen methodology as "reasonable" because statute "d[id] not mandate a specific method of cost analysis"). If EPA demonstrates on remand that a cost effective and practicable alternative to Method 21 exists for each leak source, and expressly provides for the alternatives in the standard, we do not see how the petitioners can then assail aggregation as unreasonable.

For the foregoing reasons, we remand to EPA to clarify the PET equipment leak standard after reconsidering its cost effectiveness in accord with this opinion. On remand, the stay of the standard issued by the court on January 7, 2002 will remain in effect pending final termination of the proceeding.

So ordered.