

New Source Review Reform

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TOPICS

- **Overview of the current status of the rules**
- **Some of the underlying principles**
- **Specifics of the final rule**
- **Specifics of the Routine Maintenance, Repair, and Replacement Rule**
- **Court cases: review and summary**
- **The future**



NSR Reform Provisions

- **Final Changes in December 2003:**
 - **Baseline Actual Emissions; Actual-to-Projected-Actual Applicability Test; Plantwide Applicability Limitations; Clean Unit Test; Pollution Control Project Exclusion**
 - **Routine Maintenance, Repair and Replacement (RMRR) Proposal**
- **Final Changes as of August 2003:**
 - **Routine Maintenance – Equipment Replacement Provision**
- **Future Proposals:**
 - **Debottlenecking Policy; Project Aggregation Policy; Allowables PALs**



Implementation by States

- **For delegated States, new rules became effective March 3, 2003 (60 days from publication in the Federal Register.) (California, District of Columbia, Hawaii, Illinois, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, South Dakota, and Washington)**
- **For SIP-approved States, rule changes due within 3 years from publication in the Federal Register to amend their SIPs or, alternatively, must demonstrate that that State program is at least as stringent as new rules. (40 States)**



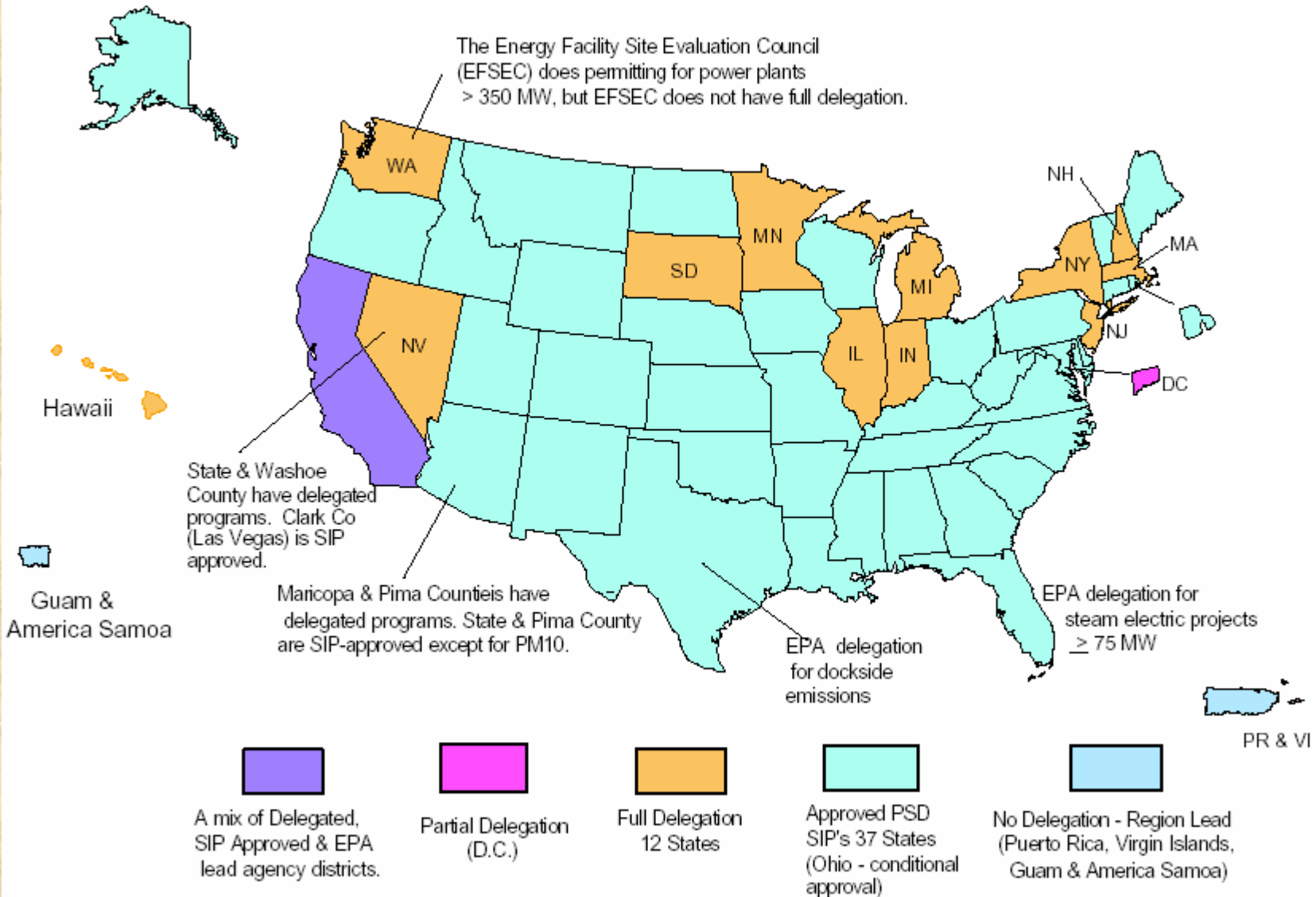
State Implementation Issues

- **The new rules establish the minimum requirements for PSD/NSR programs. Any approved State or local agency must certify that their program is at least as stringent as the EPA program.**
- **EPA HQ and Regional Offices will determine procedures for certifying programs.**

PSD Program Status

June 2002

The Energy Facility Site Evaluation Council (EFSEC) does permitting for power plants > 350 MW, but EFSEC does not have full delegation.





Challenging the Rules

- **Natural Resource Defense Council**
- **Earth Justice**
- **American Lung Association**
- **Communities for a Better Environment**
- **Delaware Nature Society**



Challenging the Rules

- **Pennsylvania**
- **New York**
- **Connecticut**
- **Maine**
- **Maryland**
- **Massachusetts**
- **New Hampshire**
- **New Jersey**
- **New York**
- **Rhode Island**
- **Vermont**
- **California**
- **Illinois**
- **Wisconsin**
- **Delaware**



Supporting the Rules

Note: Even within these states there is disagreement on the rules

- **Virginia**
- **South Carolina**
- **Indiana**
- **Kansas**
- **Nebraska**
- **South Dakota**
- **North Dakota**
- **Utah**
- **American Petroleum Institute**
- **Utility Air Regulatory Group**



NEW ERA OF UNCERTAINTY

- **15 states challenging the rules (5 of which are delegated states)**
- **8 states intervening on behalf of EPA (2 of which are delegated states)**
- **Rules in effect in delegation states, but who is running the program in these states?**
- **SIP states have three years to adopt**
- **Question on mandatory nature of the rules**
- **Ongoing EPA NSR enforcement cases (with settlements providing significant reductions)**

UNDERLYING PRINCIPLES




Both Legal and Technical




Statutory Language in Clean Air Act:

- Section 111(a)(4) defines “modification” as “*any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source . . .*” 42 U.S.C. §7411(a)(4).
- Modifications are subject to New Source Review. 42 U.S.C. §§7475(a), 7479(2)(C), 7501, 7503.




WEPCO v. Reilly,
893 F.2d 901 (7th Cir. 1990)

- Replacement of major generating station systems –including steam drums and air heaters –constitutes a “physical change.”
- To hold otherwise would mean that the application of the PSD requirements to older facilities would be indefinitely postponed.
- “There is no reason to believe that such a result was intended by Congress.” 893 F.2d at 909.



**Any Exemption Must Be Extremely Limited:
Alabama Power v. Costle, 636 F.2d 323 (D.C.
Cir. 1979)**

- “[T]he term ‘modification’ is nowhere limited to physical changes exceeding a certain magnitude.” 636 F.2d at 400.
- “EPA has extremely limited authority to exempt activities from the definition of ‘modification’ The Agency’s authority is limited to circumstances of administrative necessity and circumstances having a ‘*de minimis*’ or ‘trivial impact on emissions.’ 636 F.2d at 358-361.



***Alabama Power, WEPCo* followed recently:
U.S. v. SIGECO, 2003 W.L. 367901 (S.D. Ind.
Feb. 13, 2003); *U.S.v. Ohio Edison*, 276
F.Supp. 2d 829 (S.D. Ohio, Aug. 7, 2003)**

- In *SIGECO*: exemption for “routine” maintenance activities is limited to those activities that are habitual, regular, ordinary at the source. Finding any more than a limited scope to EPA’s authority here would “flaunt the Congressional intent.” 2003 W.L. 367901 at *13.
- In *Ohio Edison*: EPA’s authority to grant exemptions from the statute’s requirements is limited to those projects that would result in *de minimis* (trivial) increases in air pollution. 276 F.Supp at 888-889.



STAPPA/ALAPCO Principles

- **Best time to control a source is at the time of its installation or modification**
- **Legally enforceable limits on future emissions in line with SIP**
- **No netting out of controls**
- **Timeliness, Certainty, and Technology**

Rule Specifics

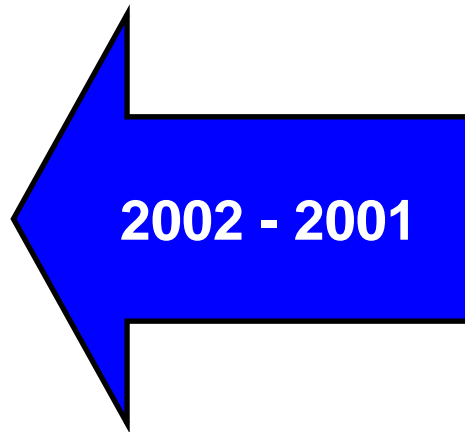


Baseline Actual Emissions

“Actual Emissions”:

Current Requirements for non-EUSGUs

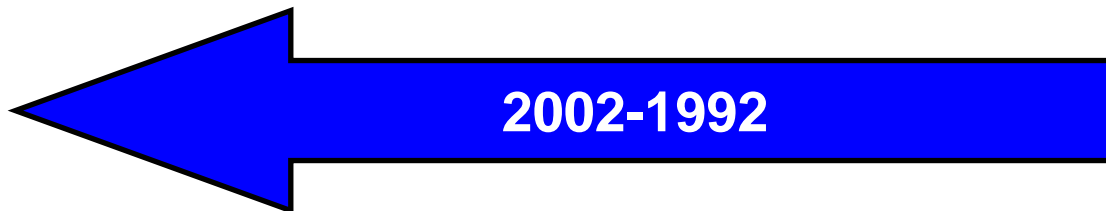
- Average of the annual emissions for a two year-period preceding the project which is representative of normal operations;
- OR**
- Another period if it is determined to be more representative of operations by the reviewing authority.



“Baseline Actual Emissions”:

New Requirements for non-EUSGUs

- Average annual emissions that occurred during any consecutive 24- month period in the past 10 years.
 - ✓ Adjust to reflect current emissions control requirements.
 - ✓ Reduce for any emissions that exceeded allowable emissions.
 - ✓ Available only if adequate data is available for the selected time period.
 - ✓ Use same 24-month period for all emissions units involved in project.



Baseline Actual Emissions:

WEPCO Provision for EUSGUs (unchanged)

- Baseline actual emissions are based on any consecutive 24-month period within 5 years immediately preceding the project.
- A different period may be used if the reviewing authority agrees that it is more representative of normal operations.





Using Baseline Actual Emissions

- **Baseline Actual Emissions will be used for:**
 - Determining emissions increase resulting from project.
 - Computing contemporaneous emissions increase.
 - Establishing a PAL.

- **Old “Actual Emissions” definition retained for:**
 - Conducting air quality analyses (NAAQS, PSD increments, AQRVs)
 - Computing offsets required.



Baseline Actual Emissions

State/Local Improvements

- **Last two years of actual emissions**
- **Possible look back for business cycle**
- **Exclusion of emissions from startup, shutdown, and malfunctions**

Rule Specifics



**Actual-to-Projected-Actual
Applicability Test**



Applicability Test:

Old NSR Requirements

- Non-EUSGUS and New Emissions Units :
Generally use “**Actual to Potential Test**” - Compare Past Actual Emissions to Future Potential Emissions.
- EUSGUs:
The “**WEPCO Test**” - Compare Actual to Representative Actual Annual Emissions.



Actual-to-Projected Actual Test

New Requirements

- Apply to **all changes at existing emissions units.**
- Source must make a **projection of post-change annual emissions:**
 - Project maximum annual emissions for the 5 year-period after the change; or, 10 year-year period after the change (if the change involves an increase in the emissions unit's PTE or capacity).
 - May exclude any emissions increases that the emissions unit could **accommodate before the change, and that are unrelated to the change (e.g. demand growth).**
 - May use potential emissions in making projection (source's option; could avoid record keeping).



Recordkeeping and Reporting

- When there is a reasonable possibility that the project could result in a significant emissions increase:
- **EUSGUs:**
 - Submit a notification to the reviewing authority before beginning actual construction (*approval not needed to begin construction.*)
 - Report annual emissions for five years after the change, or 10 years if the change increases the emissions unit's PTE or capacity.
- **Non-EUSGUs:**
 - Maintain a record of the baseline, projection, and annual emissions information for 5 years after the change, or 10 years if the change increases the emission unit's PTE or capacity; and,
 - Report to reviewing authority if annual emissions result in a significant emissions increase and are inconsistent with the projection.



Future Actual Emissions

State/Local Improvements

- **Actual to potential test (note: variations could include allowable to allowable, potential to potential, or enforceable actual to actual)**
- **Notification to agency**
- **Tracking of emissions**
- **Any increase must be addressed**

Rule Specifics



Clean Unit Test



Clean Unit Test

What Qualifies as a "Clean Unit"?

- Clean Unit Status is **automatic** for most emissions units that went through major NSR and are complying w/ **BACT/LAER**.
- Clean Unit Status can be granted through a permitting process if the emissions control is:
 - **Comparable to BACT/LAER; or**
 - **Substantially as effective as BACT/LAER.**
- Emissions controls can be add-on controls; pollution prevention; or work practices, but **an investment** in the control is required to qualify.
- Clean Unit status available for up to 10 years after applying emission controls.



Clean Unit Test

- The Clean Unit Test is an alternative approach to major NSR applicability for modifications.
- If a change does not cause an emissions unit to exceed its permitted allowable emissions, major NSR does not apply.
- If the permitted allowable emissions (or a design parameter upon which these are based) will be exceeded, then the source must determine whether the projected post-change emissions will result in a **significant emissions increase** and a **significant net emissions increase**.



Clean Unit Test

State/Local Improvements

- **Limited look back (time could differ for technologies/pollutants)**
- **Only sources that have gone through NSR or equivalent (which assures air quality analysis at allowable levels)**
- **CUs based on BACT expire if area is redesignated as nonattainment**

Rule Specifics



Pollution Control Project Exclusion



Pollution Control Projects

What qualifies for the Exclusion?

- To qualify for the exclusion, an activity must pass two tests:
 - **Environmentally Beneficial Test** (shows benefits outweigh emissions increase).
 - **Air Quality Test** (shows that project will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact a Class I AQRV).
- **Listed Projects** -- No permit action is required, but a notice must be sent to the Reviewing Authority with information on the project and air quality analysis.
- **Unlisted Projects** – A permitting action, with public notice and comment, is required to show that both tests are satisfied.



Pollution Control Projects

- The PCP exclusion allows a project that reduces emissions of one or more air pollutants regulated under the Act to avoid major NSR review despite causing a significant emissions increase in a collateral pollutant.
- Our previous rules provided a PCP exclusion to only EUSGUs. We extended the exclusion to other industries in a policy memo issued in 1994. The Final rules **replace the existing WEPCO PCP provisions and codify new requirements for all industries.**
- The exclusion only **applies to activities at existing emissions unit**; addition of new emissions units does not qualify for the exclusion.



Pollution Control Projects

State/Local Improvements

- **Codify existing policy**
- **Primary purpose test**
- **Prior approval by agency**
- **Listed projects are fine**
- **Disallow unit replacements**
- **Emission increases must be minimized and modeled**
- **Provide for public comment**

Rule Specifics



**Plantwide Applicability Limits
Using Baseline Actual Emissions**



Plantwide Applicability Limitations

- **An alternative approach** for determining major NSR applicability.
- **The final rules address only “actuals PALs”**. We will be proposing provisions for “allowables PALs” at a later date.
- A PAL is **an annual (facility-wide) emission limitation (12-month rolling total, rolled monthly)** under which the facility can make any changes without triggering NSR review for that pollutant.
 - Pollutant-specific
 - 10-year term.
- A PAL for VOC or NO_x **is not allowed** in an extreme ozone nonattainment area.



Establishing a PAL

- Determine **baseline actual emissions** for all existing emissions units **using the same consecutive 24-month period for all units.** (However, you may add the PTE for any emissions unit that was added to the major stationary source after the selected 24-month period);
- Add the pollutant-specific **significant emissions rate** to the baseline actual emissions for the PAL pollutant;
- Subtract any emissions from emissions units that operated during the 24-month period and have since been **permanently shut down**; and
- Establish a step-down PAL if there are any requirements that have an effective date during the term of the PAL.



Reopening PAL permits

- Reviewing Authority shall reopen the PAL permit to:
 - Correct **typographical or calculation errors** made in setting the PAL.
 - Reduce the PAL to create **emissions reductions for offset** purposes.
 - Revise the PAL to **reflect an increase** in the PAL.
- Reviewing Authority may reopen the PAL permit to:
 - Reduce the PAL **to reflect newly applicable Federal requirements** with compliance dates after the PAL effective date.
 - Reduce the PAL **consistent with any other requirement** that the State may impose under its SIP.
 - Reduce the PAL if it determines that a reduction is necessary to **avoid causing or contributing to a NAAQS or PSD increment violation**.



Increasing a PAL

- Allowed if the increased emissions can not be accommodated under the PAL, **even if all significant and major emissions units were to meet a BACT level of control.**
- Emissions units causing the need for an increase **(modified or new units) must go through major NSR.**
- New PAL based on sum of:
 - Baseline actual emissions of small emissions units;
 - Baseline actual emissions of significant and major emissions units **assuming a BACT level of control;** and,
 - Allowable emissions of new or modified emissions units.



PAL Renewal

- If baseline actual emissions plus significant level are $\geq 80\%$ of current PAL, then PAL may be renewed at current level.
- If baseline actual emissions plus significant level are $< 80\%$ then:
 - PAL may be established at a level that is more representative of baseline actual emissions, or a level that is appropriate based on air quality needs or other considerations.
- The new PAL level can not be higher than the existing PAL (unless PAL increase provisions are met) or the PTE of the source.



PAL Expiration

- Within the timeframe specified for PAL renewals, the source shall **submit a proposed allocation** of the PAL to each emissions unit.
- The PA shall decide whether and how the PAL will be distributed and **issue a revised permit** incorporating allowable limits for each emissions unit.
- Any subsequent physical or operational change at the source will be **subject to major NSR review**.



PAL Monitoring Requirements

- PAL permit must contain **enforceable requirements** to determine plantwide emissions (12-month rolling total, rolled monthly).
- A source may use any of the following approaches:
 - Mass balance calculations for activities using solvents or coatings.
 - Continuous Emissions Monitoring Systems (CEMS).
 - Continuous Parameter Monitoring Systems (CPMS) or Predictive Emissions Monitoring Systems (PEMS).
 - Emissions Factors.
- If no monitoring data exists for an emissions unit for a time period, the source owner must report the **maximum potential emissions** without considering enforceable or operating emissions limitations.



Plantwide Applicability Limits

State/Local Improvements

- **Allowables-based PALs preferred**
- **Cap is set at level equivalent to BACT on all significant units**
- **Source has 5 years to meet cap and install BACT**
- **Significant new units installed under the PAL must employ good controls**
- **Partial PALs allowed (encouraged)**



Routine Maintenance, Repair, and Replacement Rule

- **Proposed in the December, 2002 rulemaking**
- **Equipment replacement portion of the rule finalized in August, 2003**
- **Stayed by the US DC Circuit Court in December, 2003**



An equipment replacement activity will be excluded from NSR if:

- **It involves replacement of any existing component(s) of a process unit with an identical or functionally equivalent component(s);**
- **The fixed capital cost of the replaced component, plus the costs of any repair and maintenance activities that are part of the replacement activity (such as labor, contract services, major equipment rental, etc.), does not exceed 20 percent of the replacement value of the entire process unit;**



An equipment replacement activity will be excluded from NSR if:

- **The replacement(s) does not change the basic design parameters of the process unit; and**
- **The replacement(s) does not cause the unit to exceed any emissions limits.**
- **When an activity qualifies for the Equipment Replacement Provision, it will be considered RMRR and excluded from major NSR without regard to other considerations.**



States and RMRR

- **In favor:**

- Alabama, Alaska, Arkansas, Kansas, Nebraska, North Dakota, South Dakota, Utah, and Virginia.

- **Opposed:**

- Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New Mexico, New York, Pennsylvania, Rhode Island, Vermont and Wisconsin



Equipment Replacement Rule STAPPA/ALAPCO Objections

- **Misleading to characterize this as an NSPS approach, since NSPS applies to any significant increase in emissions**
- **Cost threshold has no relevance to emissions increases**
- **Economic rather than environmental test**
- **Would allow entire process units to be replaced--component by component—without ever addressing actual emissions increases**



STAPPA/ALAPCO Recommendation

- **Rescind RMRR proposal**
- **Codify criteria similar to EPA's 1994 draft definition for characterizing whether a change is routine, including criteria to safeguard against changes likely to result in an emissions increase**



STAPPA/ALAPCO

Recommendation

- **Develop two lists for each major industrial sector, identifying activities that would and would not be considered routine**
- **Retain the case-by-case determination process for activities not on the lists**
- **Preserve state/local right to be more stringent**



RMRR Court Stay

- **Petitioners have demonstrated the irreparable harm and likelihood of success on the merits required for the issuance of a stay pending review.**



Pending Litigation

- **Litigation on 1980 Rules**
- **Reconsideration requests from certain utilities related to a desire to have the same baseline and emission projection test as other sources**
- **Reconsideration request on whether fugitive emissions should count toward emission increases for applicability determinations on modifications**
- **Final rule litigation**
- **Final RMRR litigation**



Recent Court Decisions

- **Southern Indiana Gas and Electric Company**
- **Tennessee Valley Authority**
- **Ohio Edison**
- **Duke Energy**



Southern Indiana Gas and Electric Company

- **EPA's current interpretation of RMRR is reasonable, and consistent with its past formulation of the test (Clay 1988 memo).**
- **SIGECO completion of the project prior to receipt of the IDEM applicability determination shows it did not rely on this letter.**
- **Granted the Federal Government's motions for summary judgment on remaining issues of SIGECO's affirmative defenses.**



Tennessee Valley Authority

- **The CAA is unconstitutional to the extent that mere noncompliance with the terms of an ACO can be the sole basis for the imposition of severe civil and criminal penalties.**
- **EPA must prove the existence of a CAA violation in district court.**



Ohio Edison

- Found that the plain language of the CAA, read together with the routine maintenance exemption, make it clear that the exemption must have a narrow interpretation so as not to swallow the general rule requiring CAA compliance when a modification is made
- Concluded that all eleven activities constituted “physical changes” for the purposes of CAA compliance, do not qualify as RMRR, and should have been determined to result in significant net increases in emissions
- Adopted the actual-to-future-actual test for estimating emission increases.



Duke Energy

- EPA must consider what activities have occurred within the industry not just at the source to determine RMRR
- EPA bears the burden of proving Duke Energy's projects do not fall within the RMRR exemption
- In calculating post-project emissions, EPA must hold pre-project and post-project hours and conditions of operation constant.
- Failure to obtain a PSD permit constitutes a continuing violation and EPA's claims for civil penalties are therefore not barred
- The statute of limitations does not operate to bar EPA claims for injunctive relief.



Restrictions on State Authority

- **1996 proposal made NSR reforms optional for states**
- **EPA's final rule makes reforms mandatory for states**
- **Some states are prohibited from being more stringent than federal rules**
- **To deviate from EPA rules, states required to make demonstration to EPA**



The Future

- **Legal challenges must be resolved; rules possibly rewritten, proposed, and adopted at the Federal level**
- **Delegation issues must be resolved**
- **Revision of State/Local NSR SIPs**
- **Training for industry and state/local permit writers**