Smokestack Rollback:

How the Bush administration's Clean Air Act proposals will increase toxic refinery pollution and jeopardize public health

A February 2002 report by:

Earthjustice • Lone Star Chapter of the Sierra Club
Louisiana Bucket Brigade • Public Citizen's Texas office
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About the cover illustration
A nationwide problem: each smokestack represents one of the 152 oil refineries that pollute the United States.

Contributors:
Earthjustice is a nonprofit public interest environmental law firm that has prepared legal information and policy analysis on the Bush administration's attacks on the Clean Air Act in a series of fact sheets that are used in this report. The four fact sheets, titled *New Source Review: A Public Health Law; Will Environmental Lawbreakers Rewrite the Clean Air Act?*; *In the Shadow of Refineries: Communities Fighting for Clean Air;* and *The Lies Industries Tell*, are available on the Earthjustice website at www.earthjustice.org/policy/rider/display.html?ID=12.

The Lone Star Chapter of the Sierra Club is a nonprofit environmental conservation and public interest group that has provided technical assistance since 1992 to dozens of Texas industrial communities in addressing their air pollution hazards through public comments, permit reviews, air modeling critique, health effects analysis, filing Title VI complaints, pollution control technology review, pollution violation analysis, compliance status, stack test data analysis, ambient air data information, dialoguing with citizen-company workgroups, giving citizen air sampling training and supporting citizen suits. Sierra Club's Lone Star Chapter office researched and provided significant information for sections of the report. www.texas.sierraclub.org/

Louisiana Bucket Brigade The Louisiana Bucket Brigade (LABB) is an environmental health organization led by communities that neighbor the state's oil refineries and chemical plants. The "bucket" is a community friendly tool that citizens use to take air samples. The LABB was created to arm community members directly impacted by pollution with buckets, cameras, and video cameras to document the harms that they live with. The information gathered by the citizens is used in campaigns to pressure state and federal regulators, to research and expose operations at targeted facilities, to alert communities and the general public that industrial emissions poison our air with hazardous chemicals, and to create change. www.labucketbrigade.org

Public Citizen's Texas office is a nonprofit public interest advocacy group working to protect consumer rights, and promote fair government and environmental protection. Public Citizen's Texas office summarized the proposed Bush NSR proposals and collected and analyzed refinery emissions data to determine the effects of the proposals on refinery emissions. www.publiccitizen.org.

The Sustainable Energy and Economic Development (SEED) Coalition is a Texas-based non-profit public interest advocacy group that promotes clean air and clean energy. The SEED Coalition organized the development of, contributed to and produced this joint report and provided the basis for the solutions section. The SEED Coalition is organizing a national *Refinery Reform Campaign* to protect public health from dirty refineries and promote clean energy. Additional information may be found at www.seedcoalition.org and www.refineryreform.org.

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Executive Summary

Behind closed doors, the Bush administration has been carving out a central portion of the Clean Air Act, known as New Source Review ("NSR"). NSR is the principal tool for ensuring that the nation's oldest and worst polluters install up-to-date pollution control technologies. Enforcement of NSR has resulted in substantial reduction of air pollution from oil refineries and other industries.

The Bush administration is now considering industry-backed proposals on new rules for administering the Clean Air Act. Each proposal eviscerates NSR by allowing substantial increases in air pollution that would result in serious public health threats. The emissions from more than 17,000 industrial plants, in hundreds of different industries could increase as a result.

This report focuses on the devastating effects of weakening the Clean Air Act in the context of oil refinery pollution and public health impacts. The analysis in this report finds that the administration's proposal would enable dozens of major refining facilities to increase their emissions, with pollution increases ranging from two times to a hundred and forty times what they are now.

Refinery pollution impacts have often been considered "toxic hot spot" problems in the South where they are concentrated. But refineries are a national public health crisis. Thirty-six states and 125 U.S. cities, where more than 67 million people live, are polluted by refineries.

- For years, a vast majority of the nation's refineries have evaded regulatory scrutiny, including compliance with NSR.

- Many refineries are concentrated in heavily populated urban areas and disproportionately impact low-income and minority communities.

Refineries and neighborhoods often share fence-lines

- Refineries are major sources of toxic volatile organic compounds, like cancer-causing benzene as well as common air pollutants.

- Under proposals now being considered by the Bush administration, refineries will be able to dramatically increase their emissions by avoiding requirements for pollution controls.

Weakening NSR standards will increase the growing number of children and adults who suffer from a wide range of health problems associated with air pollution. Cancer, respiratory disorders, and cardiovascular problems are some of the well known health effects of air pollution that could be reduced if NSR were fully enforced.

Instead of gutting the Clean Air Act, the Bush administration should strictly enforce it. The Administration should require the nation's oldest and dirtiest oil refineries to install modern pollution controls.

The Administration should patch the loopholes in the existing Clean Air Act. It is time to get serious about the oil refining industry's assault on the nation's public health.

Refineries and Clean Air Act rollbacks are serious public health threats
Photo courtesy of the Louisiana Bucket Brigade

Industry's Target: New Source Review [1]

When Congress passed the Clean Air Act more than 30 years ago, it gave existing facilities a "grandfather" exemption from pollution control standards on the theory that they would soon retire. If the facilities did not retire, but instead remained in operation, they would be required to install modern pollution control equipment when they made major modifications that increased their emissions. The requirement to install modern pollution controls, applicable to new facilities and old ones that make significant modifications, is now called New Source Review.[2]

NSR is already a program with many loopholes established by the EPA. As a result, facilities are able to avoid compliance even as they make significant modifications and increase pollution year after year. Apparently, these existing loopholes are not enough for industries that are leading the charge to further weaken NSR.

Existing loopholes in the NSR program include:

- Categorical exemptions for routine maintenance, repair, or replacement, changes in ownership, and increases in the hours of operation;

- Broad provisions that allow increased pollution levels to be netted out based on five years of purported decreases in pollution that occurred while a facility was in grandfather status; and

- A generous formula for determining baseline emissions.

The Thirty-Year War Against New Source Review

Since the 1970's, industry has relentlessly litigated and lobbied to avoid compliance with NSR. Until the Bush administration, industry has been largely unsuccessful in its attack.

President Reagan's EPA filed suit to compel compliance with NSR when a facility's expansions went clearly beyond "routine" modifications.[3] When the court agreed with EPA, holding that rebuilding a unit was not routine, but was, in fact, a "major modification," industry turned to Congress to pass broad exemptions. When that failed, industry lobbied the administration of George H. W. Bush for regulatory exemptions,

resulting in a generous formula for calculating emissions increases, but no new statutory exemptions.

While industry has used its influence in an effort to gut the law, many facilities have been flagrantly breaking the law. In the 1980's, EPA and the Department of Justice initiated enforcement actions against the worst violators. In 2001, EPA found that more than 80 percent of all oil refineries are in violation of New Source Review,[4] illegally spewing excessive pollution into the air.

Today, EPA has NSR enforcement cases pending against 57 refineries and 15 oil-related facilities in 17 states.[5] Nearly half of these refineries are operating in communities of color along the 260-mile corridor between Louisiana's Cancer Alley and Houston, Texas.

Payoff for Polluters

One of the grave concerns with the current rollbacks is the possibility that they would undermine enforcement proceedings now in progress. Refiners and other polluters who are subject to millions of dollars in fines for violating New Source Review, but who have not yet settled, have considerable incentive to press for the rollbacks.

ExxonMobil's Texas refineries are a case in point. In June 2001, the Houston Chronicle pointed out that "ExxonMobil could be spared a multi-million dollar pollution fine at its Baytown industrial complex if the Bush administration heeds the company's plea to halt a major anti-pollution campaign at the nation's oil refineries."[6]

The company's Baytown, Texas refinery violated the New Source Review provision twice, once in 1988 and 1989[7]. The company's Beaumont plant also has two NSR violations, dating to 1994 and 1998[8]. Assuming a maximum penalty of $27,500 per day of violations, and counting that NSR violation penalties can go back only a maximum of 5 years, ExxonMobil could be subject to roughly $180,000,000 in penalties for its violations.

Now, industry is counting on its friendship and influence with the new Bush administration to buy what Congress, the Courts, and EPA have refused them since 1970 — broad loopholes and exemptions from NSR's public health protections under the Clean Air Act.

New Source Review is an effective public health protection program

"For the past 25 years, the Clean Air Act's NSR program has been instrumental in achieving millions of tons of emissions reductions that otherwise would not have occurred. Air quality in the United States is decidedly better because of this program."
STAPPA/ALAPCO letter to EPA Administrator Whitman[9]

"Protecting our natural resources through strong enforcement of environmental law is a top priority for the Department of Justice. I look forward to continuing our fight for cleaner air and water."
Attorney General John Ashcroft on the settlement of an NSR case against several refiners in March 2001[10]

There is widespread recognition that the New Source Review program, when properly enforced, protects public health from dangerous air pollution. There are far too many instances of NSR resulting in cleaner air, but the following summary of recent cases against refineries helps to illustrate how effective the program is.

NSR Protects Public Health: Summary of Recent Cases[11]

Company/ies (Some NSR cases group companies together)	Date	***Location, (# of refineries)***	***Civil Penalty***	***Ordered spending on pollution controls, community and environmental projects.***	***Total Tons Reduced by NSR settlement***
BP/Amoco	7/25/00 (announced)	LA, CA, WA, ND, UT, OH, TX, IN, VA	$10,000,000	Over $500,000,000	Approximately 54,000 tons
Koch Petroleum	12/22/00	TX (2), MN	$4,500,000	$80,000,000	5,200 tons
Murphy Oil	1/23/01	WI	$5,500,000	$19,500,000	unknown
Motiva, Shell, and Equilon	3/21/01	DE, LA (2), TX (2), CA (3), WA	$9,500,000	$405,500,000	60,000 tons
Marathon Ashland	5/11/01	IL, KY, LA, MI, MN, OH, TX	$3,800,000	$6,500,000	23,000 tons
Premcor Refining	7/12/01	IL	$2,000,000	$20,000,000	5600 tons
Conoco	12/20/01	LA, OK, CO, MT	$1,500,000	$100,000,000	7710 tons
Navajo Refining / Montana Refining	12/20/01	NM (2), MT	$750,000	$17,500,000	2800 tons

Totals	Refineries 28	Civil Penalties $37,550,000	Clean-up spending over $1,149,000,000	Pollution reduced 158,310 tons

The Bush Administration Shell Game

When the Bush administration released the National Energy Policy report, written by Vice President Cheney's controversial energy task force, it instructed the EPA and the Department of Justice to review New Source Review. The National Energy Policy argued that NSR interferes with the nation's energy supplies, and that environmental regulations that stand in the way of energy production should be reviewed.[12]

However, an April 17, 2001 EPA memo[13] addressed to the head of the National Energy Policy Development group contradicts this claim. According to the EPA, the claim that environmental regulations hamper the nation's energy supplies is "overly simplistic and not supported by the facts." The memo goes on to detail the many ways in which the Energy Policy inaccurately blames environmental regulations for supply restrictions.

In the summer of 2001, EPA produced a lengthy report that further refuted the 'environmental regulation hampers energy supply' claims. Pursuant to the National Energy Policy's recommendation that EPA review NSR, EPA Administrator Christie Todd-Whitman prepared a report further detailing that compliance with NSR is not an obstacle to investments in the energy industry.

EPA's June 2001 NSR 90-Day Review Background Paper found that, for oil refineries, the cost of compliance with environmental regulations is a minor factor.[14] In addition, the report concluded that the NSR program has had virtually no impact on blocking investments in refineries, as refinery capacity has continued to increase, even in areas with poor air quality, where NSR requirements are more stringent.[15]

According to the background paper "The literature search revealed only 5 references to pollution abatement issues, and no specific references to NSR, as factors influencing the decision to invest in new capacity."[16]

The Bush administration is disregarding its own agency's findings and is proceeding with industry-backed proposals to gut the NSR program under the guise that it blocks investment and hinders development in the energy industry. However, EPA's report refutes this position, clearly demonstrating that there is no need to reconsider NSR. To continue to roll back NSR in the face of EPA's report demonstrates that

this administration is sacrificing public health to benefit big oil companies.

The administration is also attempting to downplay proposals to rollback NSR by highlighting its "3 Pollutant" proposal. This proposed legislation, which purportedly places caps on the amount of mercury, nitrous oxides, and sulfur dioxides emitted by power plants, would actually allow more air pollution compared to the requirements of the current Clean Air Act.[17]

The administration's "3 Pollutant" proposal is part of the elaborate shell game designed to obscure a scheme for achieving the most significant roll back of the Clean Air Act in history. By portraying it as a proactive attack on emissions, the proposal serves to distract attention from the additional, far-reaching proposals by the administration to gut the Clean NSR requirements for all industrial facilities. These NSR rollback proposals would allow approximately 17,000 industrial facilities, including power plants, oil refineries, and chemical manufacturers, to drastically increase pollution.

The Proposals

While the Administration's final proposals have not been announced, various recommendations are under consideration.[18] Each of these proposals would mean more air pollution and adverse health effects for the public, and more intricate and generous loopholes for industry. NSR is triggered by modifications that cause pollution increases. The Bush proposals use "fuzzy math" to calculate whether or not pollution has increased and allow industry to ignore many pollution increases. The following is a list of some of the proposals under consideration.

1. **COST/INVESTMENT TEST**. This proposal would tie New Source Review to the amount a facility spends on modifications. The refining industry suggests they be allowed to spend between $60 and $360 million a year on modifications without triggering NSR – no matter how much pollution is increased by the modifications. A refinery could practically be built from the ground up at this level of investment.

2. **LIKE-KIND REPLACEMENT**. This proposal would allow a facility to replace one piece of equipment with another similar piece of equipment that serves the same purpose and avoid NSR – no matter how much pollution increases as a result of the replacement.

3. **DE-BOTTLENECKING**. This proposal would allow industry to consider only emissions increases at the unit being modified. Emissions increases caused by the modification at associated units would not be considered.

4. **AGGREGATION.** This proposal would allow industry to divide a modification into several smaller projects so that the emissions increase from each of the smaller projects is too small to trigger NSR.

5. **"CLEAN UNIT" EXEMPTION**. This proposal would allow a plant to avoid NSR for 15 years if, at the time a modification is made, "good controls" are installed. However, the proposed definition of "good controls" easily allows no pollution controls at all.

6. **FULL CAPACITY EXEMPTION.** This proposal would allow a facility to increase a unit's emissions up to what the emission would be if the unit was operating at its original full capacity without triggering NSR. In other words, despite the fact that a unit was very old and had not operated at full capacity for years, the unit could be upgraded and operated at its original full capacity, regardless of the impact on emissions.

7. **BASELINES**. NSR is triggered when a modification to a facility increases its existing, or "baseline," emissions. A number of Bush proposals allow facilities to hide pollution increases by inflating baseline emissions. Currently, baseline emissions are generally defined as the average of the last two years' emissions. The Bush proposals would change this definition, thereby making current emissions appear higher and any emissions increases caused by modifications appear smaller.

    a. <u>One-In-Ten Baseline</u>: This proposal would allow a facility to use its highest annual emissions in the past ten years as baseline. In other words, a facility might be emitting 100 tons per year of a pollutant today, but if it emitted 5,000 tons in 1992, it could claim that its baseline – or current – emissions is 5,000 tons per year.

    b. <u>Two-in-Ten Baseline</u>: This proposal would allow a facility to use the average of its highest two years of annual emissions during the past ten years as baseline.

The baseline proposals could be used in two ways. Under the Clean Air Act, the NSR program is applied on a unit-by-unit basis, as versus a facility, or plant, wide basis. Thus, facilities have separate emissions limits for each unit at a facility. The administration's baseline proposals could be used to inflate emissions from each of these units, thereby making in harder to trigger NSR and allowing refineries to avoid its requirements.

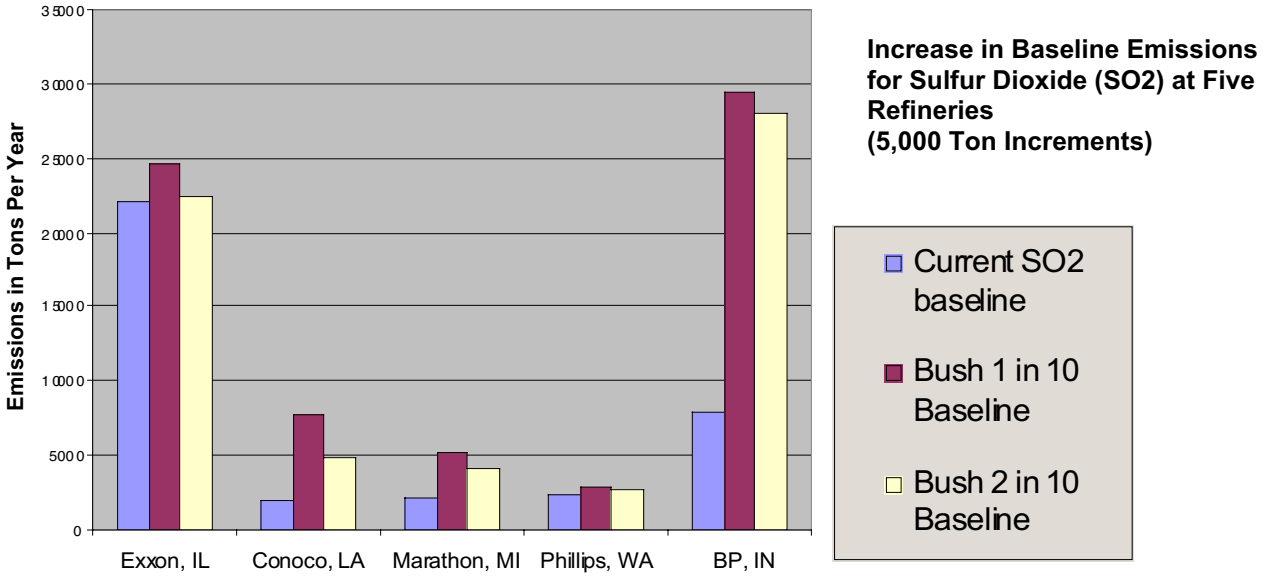
The Bush administration proposal could also allow facilities to use a new method of regulating emissions at facilities, Plantwide Applicability Limits (PALs). These allow averaging of emissions limits over an entire facility, or plant. Each unit at the facility can vary its emissions as long as the overall facility emissions stay below the PAL. A facility could, therefore, use the new baselines proposals to make its facility-wide emissions seem higher, thus significantly raising the bar for triggering NSR and, again, enabling facilities to avoid NSR.

Pollution Increases[19]

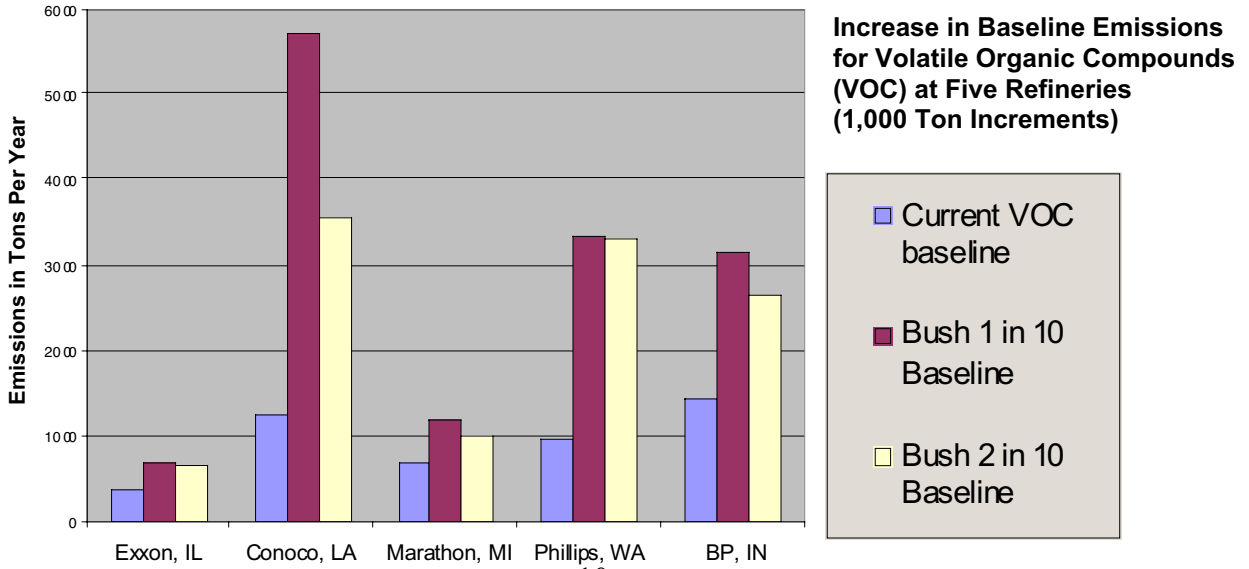
The Bush Administration will likely propose a combination of the above proposals. According to an analysis of seventeen plants and facilities, the Administration's proposals would increase refinery pollution. The full results of the analysis are found in Appendix A of this report. The results for some refineries were graphed.

The charts on the next two pages show how much new pollution could be emitted without triggering New Source Review under the two different versions of Bush's "baseline emissions" proposals.

The following two charts show the increased baseline emissions that could occur if Bush applied his baseline proposals to PALs.



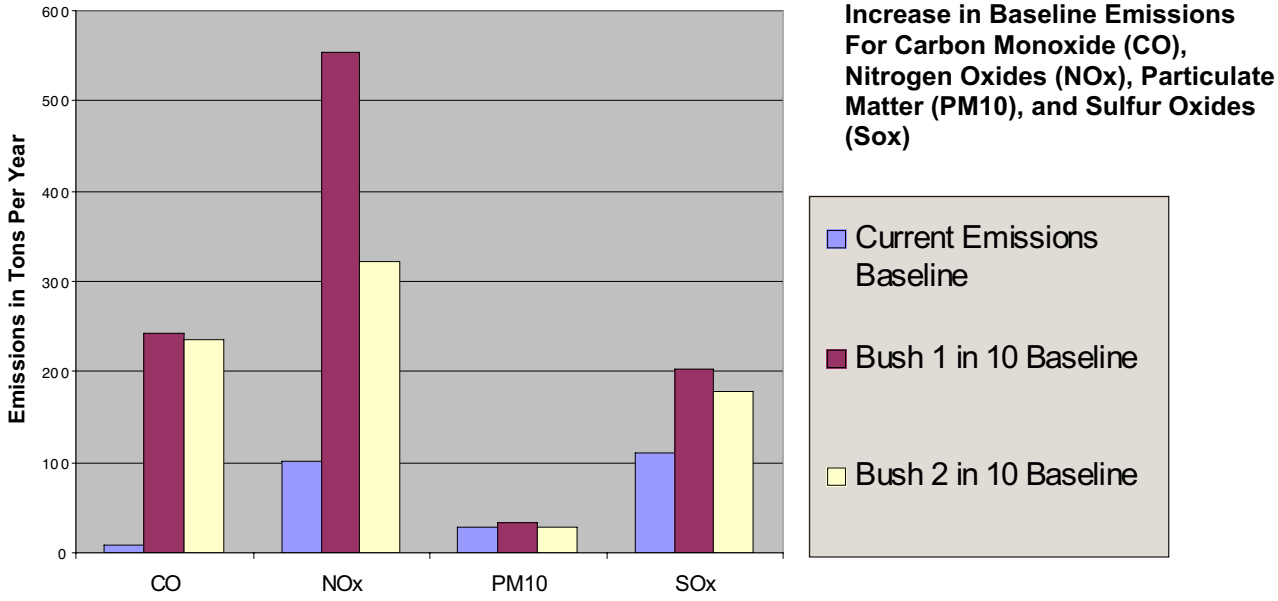
Increase in Baseline Emissions for Sulfur Dioxide (SO2) at Five Refineries (5,000 Ton Increments)



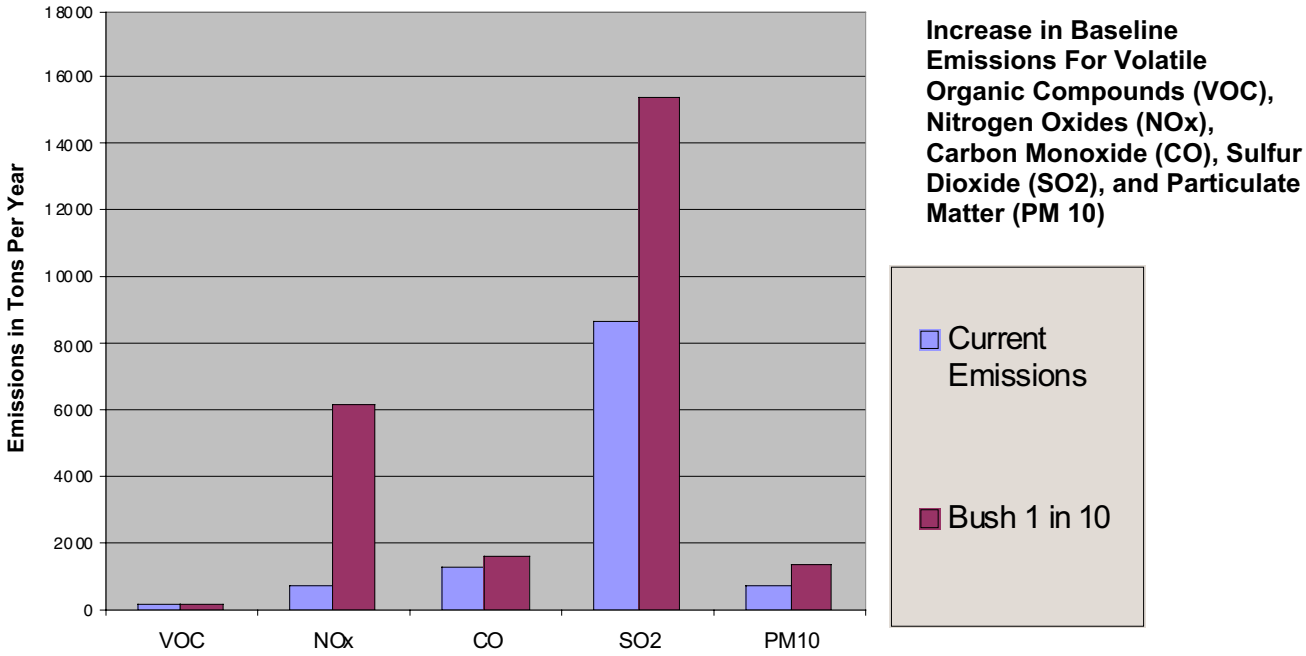
Increase in Baseline Emissions for Volatile Organic Compounds (VOC) at Five Refineries (1,000 Ton Increments)

The following two charts show the allowable emissions increases under the Baseline proposals for just two units within two refineries. Similar increases could be replicated at many units within the same refinery.

ExxonMobil Baytown Refinery, Unit PS8, Harris County, Texas



Motiva Refinery, Unit 12, Delaware[20]



Impacts on Regional Air Quality

Many states are having trouble meeting health-based air quality standards. The Bush NSR proposals would aggravate this problem. This concern is shared by the two national associations of state and local air pollution control agencies in the United States, the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA and ALAPCO).

In a January 2001 letter to EPA Administrator Whitman, the associations described their objections to the various administration proposals, saying: "We have considerable trepidations regarding what we understand the [NSR] reforms will allow and the impact that these changes will have on our nation's ability to achieve and sustain clean, healthful air."[21]

While NSR reforms would affect over 17,000 industrial plants, oil refineries deserve special attention. Many refineries are located in and around heavily populated and polluted metropolitan areas.

One hundred and fifty two refineries are located in or near 125 U.S. cities, where more than 67 million people live. Sixty-nine of the nation's refineries, or 45 percent, are located in areas that fail to meet health based air quality standards, which are known as "nonattainment areas."[22]

Nine of these non-attainment areas are classified as "extreme," "severe," and "serious" because air quality fails to meet more than one health-based standard. Oil refineries are a major part of unhealthy air quality problems around the United States. They release massive amounts of sulfur dioxide, volatile organic compounds, particulate matter, nitrogen oxides, and carbon monoxide. These pollutants form ground level ozone and haze. Thus, refineries also contribute to the failure of many areas to meet EPA ambient air quality standards.

One hundred and fifty two refineries are located in or near 125 U.S. cities, where more than 67 million people live.

Nonattainment Areas Containing or Downwind of Major Oil Refineries

- Los Angeles (extreme)
- New York-New Jersey-Long Island (severe)
- Chicago-Gary, Indiana (severe)
- Philadelphia-Wilmington-Trenton (severe)
- Houston-Galveston (severe)
- Sacramento (severe)
- San Joaquin Valley area (severe)
- Baton Rouge (serious)
- El Paso (serious)
- San Francisco Bay-Richmond (moderate)
- Beaumont-Port Arthur, TX (moderate)

Reducing oil refinery pollution will soon become even more important when EPA fully implements new eight-hour ozone and fine particulate (PM2.5) standards. Preliminary data indicates that 92 refineries, or 61 percent, are located in potential new nonattainment areas for eight-hour ozone. Fifty-three refineries in the nation, or 35 percent, are in potential PM2.5 fine particle nonattainment areas. Clearing the air in these polluted U.S. cities cannot be achieved without cleaning up aging oil refineries.

States have been implementing plans, sometimes taking drastic measures, to meet health-based air quality standards. Many of these strategies do not place sufficient burden on refineries and other industries to reduce pollution resulting in unhealthy air quality. For example, some states are instructing drivers to observe lowered speed limits as a method for lowering vehicle emissions. Texas even considered prohibiting people from mowing their lawns before noon. If the Bush administration is going to let industry dodge the law and increase emissions, it is unclear how states will be able to make air quality safe for the public.

Toxic Impacts on Communities

While the Bush proposals would worsen air quality for many Americans, the people living next door to refineries pay the highest price. The residents in these communities are mostly people of color and poor. They have organized to fight for environmental justice in defense of their families and communities.

The Bush administration ignores the direct impacts of its pro-industry proposals on communities where refinery expansions increase pollution less than a stone's throw away from homes, schools and playgrounds, and churches. In doing so, agencies in the Bush administration are disregarding their responsibility under an existing Presidential Executive Order supporting environmental justice.[23] This executive order establishes a mandate for all federal agencies to reduce or prevent the disproportionate pollution impacts that burden low-income people and people of color.

Oil refinery pollution causes severe human health effects. Health surveys provide ample evidence that residents of refinery communities are suffering from health problems associated with exposure to refinery pollution.[24] The following chart lists just some of the toxic pollutants emitted by refineries and their associated health impacts. The source of this information is the Agency for Toxic Substances and Disease Registry's *ToxFAQS*, unless otherwise indicated.

TOXIN	HEALTH EFFECTS
Toluene	Affects the nervous system. Low to moderate levels can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, and loss of hearing and color vision. Inhaling high levels can cause light-headedness, dizziness, or sleepiness, unconsciousness, and death. High levels may affect the kidneys. Breathing high levels during pregnancy can cause birth defects. The affects of exposure to low levels during pregnancy are unknown.
Xylenes	Short-term exposure to high levels causes irritation of skin, eyes, nose and throat, difficulty breathing, impaired lung function, impaired memory, and possible changes in liver and kidneys. Short and long-term exposure to high concentrations can cause headaches, dizziness, confusion, and lack of muscle coordination. Xylene contributes to formation of ozone, which can affect the respiratory system.
Methyl Ethyl Ketone	Possible human carcinogen. Short-term moderate exposure causes adverse effects on the nervous system ranging from headaches, dizziness, nausea, and numbness in the fingers and toes to unconsciousness. Repeated exposure to moderate to high amounts may cause liver and kidney damage. (Source: EPA Refinery Sector Report)
Propylene	Low concentrations can cause mild intoxication and an inability to concentrate. High concentrations cause unconsciousness, vomiting, low blood pressure, and disordered heart rhythms. Skin or eye contact causes freezing burns. Propylene contributes to the formation of ozone, which can affect the respiratory system.

Benzene	Known human carcinogen. Long-term exposure to high levels of benzene in the air can cause leukemia. Breathing high levels of benzene can result in death, drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Long-term exposure causes harmful effects on the bone marrow, excessive bleeding, and affects on the immune system. Women who breathe high levels may have irregular menstrual periods and a decrease in ovary size. Animal studies have shown low birth weights, delayed bone formation, and bone marrow damage when pregnant animals breathed benzene.
Styrene	Possibly carcinogenic to humans, according to International Agency for Research on Cancer. Can cause depression, concentration problems, muscle weakness, tiredness, and nausea. Animal studies show liver damage and reproductive effects.
1,3-Butadiene	Believed to be a human carcinogen. Breathing high levels can cause central nervous system damage, blurred vision, nausea, fatigue, headache, decreased blood pressure and pulse rate, unconsciousness, and death. Low level exposure causes irritation of the eyes, nose and throat. Long-term effects of low level exposure are unknown. Animal studies show that exposure causes birth defects, kidney and liver disease, and damaged lungs.
Ethyl benzene	Can cause dizziness, throat and eye irritation, tightening of the chest and a burning sensation in the eyes. Animal studies have shown effects on the nervous system, liver, kidneys, and eyes.
Carbon Disulfide	Life threatening at high levels due to affects on the nervous system. Animal studies indicate that carbon disulfide can affect normal functions of the brain, liver and heart.
1,2,4-Trimethyl-benzene	Adversely affects the human nervous system. Causes headaches, fatigue, and drowsiness, and irritates the nose and throat. Animal studies have shown that repeated exposure adversely affects the reproductive system and developing fetus. (Source: EPA OPPT Chemical Fact Sheet)
Formaldehyde	The Department of Health and Human Services has determined that formaldehyde is a likely carcinogen. Low levels of formaldehyde can cause irritation of the eyes, nose, throat, and skin.
Naphthalene	High-level exposure may destroy red blood cells causing fatigue, lack of appetite, restlessness and pale skin. High-level exposure may also cause nausea, vomiting, diarrhea, blood in urine and a yellow color to skin. It is not known whether naphthalene is a human carcinogen.

The Bush administration proposals would allow an increase in emissions of many of these volatile organic compounds. Communities nearby refineries are already subject to an overwhelming onslaught of toxic chemicals. The increase in pollution allowed under the Bush proposals could literally mean the difference between life and death for the families who live in these communities.

Increases in refinery operations allowed under the proposals would likely lead to increases in pollutants regulated under NSR as well as other pollutants not directly associated with that section of the clean air act. Hydrogen sulfide and hydrogen fluoride emissions are of particular concern at refineries.

Hydrogen sulfide is a "broad-spectrum poison" that can poison several body systems. Breathing very high levels of hydrogen sulfide can be deadly within a few breaths and can cause unconsciousness within a few breaths. Exposure to lower concentrations results in eye irritation, sore throat and cough, shortness of breath, and fluid in the lungs. Long-term, low-level exposure may result in fatigue, loss of appetite, headaches, irritability, poor memory, and dizziness.[25]

Hydrogen fluoride is a chronic and acute toxin. It is highly toxic at low concentrations and can decalcify the human body. Exposure causes irritation of the eyes, skin, nose, and throat; pulmonary edema; burns on the eyes and skin; rhinitis; bronchitis and bone changes.[26]

Refinery communities live in constant fear of exposure to these and similar toxins. Any changes to air pollution laws should increase protection of the health and safety of these communities, not increase pollution.

Case Study: Norco, Louisiana[27]

Residents of the Diamond neighborhood in Norco, Louisiana (named after the New Orleans Refinery Company) have roots that pre-date industry by more than 75 years. Many residents are descendants of slaves and sharecroppers. Industry settled around the community and today, the residents of Diamond are sandwiched between the Shell Chemical Plant, Motiva Refinery, and Orion Refinery, which together reported more than 2 million pounds of toxic emissions in 1997. Within the petroleum industry, the Motiva refinery is the second largest emitter of toxic air pollutants in Louisiana, spewing more carcinogens than any other refinery in the state.

Air samples taken by local residents show levels of benzene, a human carcinogen, at six times higher than the state ambient air standard. Other pollutants released by these facilities include: methylene chloride and toluene — developmental, reproductive, and chronic toxicants; carbon disulfide — a chronic neurotoxin and irritant; and styrene — a nervous system depressant and possible human carcinogen.

A preliminary health study conducted by the Xavier University Deep South Center for Environmental Justice shows that 42 percent of the adults surveyed in the Diamond community report respiratory ailments, 50 percent report blurred vision, 45 percent report dizziness, more than 25 percent report muscle problems, 35 percent of children suffer from asthma, and more than 30 percent of women reported memory problems and depression.

The Motiva plant was part of a New Source Review settlement with DOJ requiring a reduction of more than 60,000 tons of air pollution per year. It is this type of enforcement that industry and the administration are seeking to derail.

Percy Hollins of Diamond checks the air sample bag after using a bucket sampler to catch Shell in the act.
Courtesy Louisiana Bucket Brigade.

Recommendations

Refineries are enormous sources of air and toxic pollution that contaminates dozens of US cities and thousands of neighborhoods. Public health should be protected, not sacrificed. The following three recommendations will reduce the toxic threat from refineries in a fair and efficient manner.

Enforce New Source Review Rules, Don't Gut them

Rather than weaken the Clean Air Act's New Source Review program, the Bush administration should close the loopholes that allow oil refineries and other industrial facilities to avoid compliance. The Administration should step up enforcement of this critical public health law, and expand investigations, which have already uncovered hundreds of NSR violations.

The Bush administration should end the "grandfather" exemption, and require the nation's oldest and dirtiest oil refineries to install modern pollution controls or cease operations by 2007. This solution would put all facilities on equal footing, and render complex schemes, such as those currently being proposed, unnecessary.

Protect Communities from Refinery Hazards and Pollution

Two programs promoted by community leaders in recent years have sought to get residents out of the "sacrifice zone" of surrounding refineries. These zones describe the area where the release of hazardous substances stored or processed at a facility can result in death or serious illness.

- Create buffer zones of a half-mile to a mile to provide neighborhoods a measure of safety by getting them off the front lines of refinery pollution and hazards.

- Promote community relocation by calling on refineries to offer to purchase homes at replacement value. (Buyouts at market value are of no help because the value of a home next door to a refinery is considerably depreciated.)

Reduce Refinery Pollution

In addition to strengthening NSR compliance, the Bush Administration should take the following actions to combat the oil refining industry's assault on the nation's public health.

- End lax oversight of leaks, malfunctions, process upsets, and flaring — the sources of illegal and under-reported emissions.

- Issue and enforce Clean Air Act Title V operating permits for the oil refinery sector, as a strategy to ensure that refineries comply with existing laws.

- Require states and the federal government to tear down obstacles to effective public participation in air regulatory programs.

- Require oil refineries to install modern nitrogen oxide controls on heaters.

- Require EPA to expeditiously evaluate "cumulative" and "residual" risks posed by airborne cancer-causing, neurotoxic, and other hazardous air pollutants in refinery communities.

- Require reporting of dangerous emissions that are not currently included in state or EPA emissions inventories, set health-based standards that limit these emissions, and assure compliance with pollution limits.

- EPA should issue a stringent Maximum Achievable Control Technology standard for catalytic cracking, catalytic reforming and sulfur recovery unity by its May 2001 deadline. These are generally the biggest and dirtiest sources of pollution from refineries. Issuing a new, stricter standard would force refinery operators to clean up these uniformly outdated emissions sources.

Appendices

- Impact of Bush Administration proposals on refinery pollution based on the "1 in 10" year baseline proposal
- Impact of Bush Administration proposals on refinery pollution based on the "2 in 10" year baseline proposal

C) April 17, EPA memo

D) STAPPA/ALAPCO letter to Whitman

Endnotes

[1] The information in this section is drawn from a series of facts sheets on New Source Review by Earthjustice, available at http://www.earthjustice.org/policy/rider/display.html?ID=12

[2] 42 U.S.C. §7411 *et seq*.

[3] *Wisconsin Electric Power Company v. Reilly*, 893 F.2d. 901 (1990)

[4] John Biers, *Nations Refineries Thinking Expansion*, TIMES-PICAYUNE, May 17, 2001, p. A4.

[5] EPA Administrator Whitman's May 14, 2001 letter to Senator James Inhofe concerning New Source Review shows 16 states and 42 cases. Since that letter, more cases have been announced by the Department of Justice so the figures have been updated to 17 states and 57 refinery cases.

[6] Bill Dawson, *ExxonMobil Seeks to Get Out of Penalty,* Houston Chronicle, June 18, 2001.

[7] EPA January 19, 2001 Notice of Violation letter to ExxonMobil.

[8] EPA December 20, 2001 Notice of Violation letter to ExxonMobil.

[9] January 2001 letter from State and Territorial Air Pollution Program Administrators / Association of Local Air Pollution Control Officials (STAPPA and ALAPCO) to EPA Administrator Whitman. See Appendix D.

[10] EPA Press release "Clean Air Agreements Reached With Petroleum Refiners" issued March 21, 2001.

[11] Summary compiled from Department of Justice Press release "EPA and DOJ Announce Record Clean Air Agreement with Major Petroleum Refiners" dated July 25, 2000, and several consent decrees posted at the EPA's enforcement website http://es.epa.gov/oeca/ore/aed/

[12] National Energy Policy, Report of the National Energy Policy Development Group, May 2001. Page 7-14.

[13] U.S. Environmental Protection Agency, Memo to the Energy Task Force, April 27, 2001.

[14] U.S. Environmental Protection Agency, NSR 90-Day Review Background Paper, (Docket A-2001-19 Document II-A-01), June 22, 2001, p. 32.

[15] Id. at pp. 5 (par. 4), (par. 1 &2), 34 (par. 1), 38 (par. 2).

[16] "NSR 90-Day Review Background Paper". June 22, 2001. EPA Docket A-2001-19 Document II-A-01. Page 32

[17] "Comparison of Emissions under Bush 3P, Jeffords (S. 556), and EPA "Business as Usual"", a fact sheet by Clear the Air, issued February 14th, 2002.

[18] While the Administration has yet to make formal proposals, the ones outlined in this report are culled from a combination of EPA memos, leaked documents and information from EPA staff briefings to environmental organizations.

[19] The information presented in this section was obtained through state environmental agencies and compiled by Public Citizen's Texas office.

[20] The State of Delaware only had emissions data for years 1990, 1993, 1996 and 1999. The year 1999 was used as "current" emissions for purposes of this chart. Because information from only four out of 10 years

was available, it is possible that there were higher emissions in years not available to the public. The inconsistency in the availability of state data for previous years' emissions is another reason the Bush proposals are flawed.

[21] January 2001 letter from State and Territorial Air Pollution Program Administrators / Association of Local Air Pollution Control Officials (STAPPA and ALAPCO) to EPA Administrator Whitman. See Appendix D.

[22] Figures were developed from several sources. Nonattainment area classifications and specific counties in each of these nonattainment areas came from: http://www.epa.gov/air/oaqps/greenbk/index.html. Population data and ozone nonattainment data for all refinery counties within the nonattainment areas came from doing inquiries at: http://www.epa.gov/air/data/monvals.html which has been updated to a new site and now located at: http://www.epa.gov/air/data/geosel.html. Refinery listing in each state came from: http://www.scorecard.org.

[23] Executive Order, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Number 12898, Feb. 11, 1994.

[24] Mossville, Louisiana Symptom Health Survey, Dr. Marvin Legator, University of Texas at Galveston Medical Branch, October 1998; Community Health Survey: Norco/Old Diamond Plantation (Statistical Report), April 1997, Xavier University Deep South Center for Environmental Justice.

[25] ATSDR ToxFAQs.

[26] National Institute of Occupational Safety and Health, "Pocket Guide to Hazardous Chemicals" (12/22/01) and "Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Fluoride," Publication No. 76-143.

[27] Source: Will Environmental Lawbreakers Rewrite the Clean Air Act? Earthjustice NSR Fact Sheet; Concerned Citizens of Norco, et al, Shell-Norco Toxic Neighbor: The Case for Relocations, November 17, 1999; From Plantations to Plants: Report of the Emergency National Commission on Environmental and Economic Justice in St. James Parish Louisiana, September 15, 1998.

ANALYSIS OF IMPACT OF BUSH 1 IN 10 BASELINE PROPOSAL

For purposes of this analysis, emissions data from 1990-2000 was analyzed. The data was provided by the State environmental agencies. All emissions are in **tons per year.** The average of 2000 and 1999 emissions was used as the current baseline.[1] The highest emissions in any one year, out of the available data were used as the Bush proposed 1 in 10 baseline. Facility-wide data reflects increases to baseline that could be allowed if the facility used a Plantwide Applicability Limit. The individual unit data reflects increases to baseline that could be allowed on a unit-by-unit basis.

DELAWARE

Motiva Delaware City, Delaware (Point 11)	***Current Baseline (99 data)***	***Bush proposed baseline***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	0.1	148	147.90	147900%
NOx	0.2	78.3	78.10	39050%
CO	0.2	14385	14,384.80	7192400%
SO2	4.7	1560.87	1,556.17	33110%
PM10	0.3	178	177.70	59233%

Motiva Delaware City, Delaware (Point 12)	***Current Baseline (99 data)***	***Bush proposed baseline***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	101.13	123.08	21.95	22%
NOx	704.4	6160	5,455.60	775%
CO	1264.13	1540	275.87	22%
SO2	8649.24	8649.24	0.00	0%
PM10	728.42	728.42	0.00	0%

[1] The only exception was the State of Delaware. Delaware had data available only for 1990, 1993, 1996 and 1999. Therefore, 1999 was used as the current baseline for Delaware.

ILLINOIS

CITGO Lemont, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	843.51	4,264.84	3,421.33	406%
NOx	3,299.22	6,324.62	3,025.40	92%
PM10	213.35	422.44	209.09	98%
SO2	19,718.35	21,455.50	1,737.15	9%
VOC	507	878.48	371.48	73%

EXXON Joliet, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	3248	3346	98.00	3%
NOx	3121	3165	44.00	1%
PM10	421.5	450	28.50	7%
SO2	22083.5	24530	2,446.50	11%
VOC	383	691	308.00	80%

MARATHON ASHLAND Robinson, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	1313.09	1357.97	44.88	3%
NOx	2665.45	5542	2,876.55	108%
PM10	229.62	499	269.38	117%
SO2	6472.35	9118.8	2,646.45	41%
VOC	2740.29	2811.1	70.81	3%

INDIANA

BP AMOCO Whiting, Indiana (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
NOx	9,942.50	10,235	292.5	3%
PM10	875	5,428	4,553.0	520%
SO2	7,713.50	29,495	21,781.5	282%
VOC	1,423	3,150	1,727.0	121%

BP AMOCO Whiting, Indiana (Unit FCU-500)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	3,058.50	6,113.21	3,054.71	100%
NOx	1,057.07	2,112.11	1,055.04	100%
PM10	253.38	5,039.31	4,785.93	1889%
SO2	2,987.43	5,228.34	2,240.91	75%
VOC	40.58	66.93	26.35	65%

BP AMOCO Whiting, Indiana (Unit FCU-600)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	2,061.27	2,355.53	294.26	14%
NOx	712.41	763.92	51.51	7%
PM10	170.74	170.8	0.06	0%
SO2	1900.92	2,653.08	752.16	40%
VOC	27.12	273.84	246.72	910%

BP AMOCO Whiting, Indiana (Unit No. 3)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	424.44	437.88	13.44	3%
NOx	5256.75	5,343.28	86.53	2%
PM10	210.04	403.91	193.87	92%
SO2	2592.34	9,300.53	6,708.19	259%
VOC	54.14	55.35	1.21	2%

BP AMOCO Whiting, Indiana (Unit No. 4)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	311.14	358.47	47.33	15%
NOx	830.21	949.12	118.91	14%
PM10	14.06	16.24	2.18	16%
SO2	29.84	3,565.82	3,535.98	11850%
VOC	20.38	23.61	3.23	16%

BP AMOCO Whiting, Indiana (Pipe Still**)**	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	190.23	194.91	4.68	2%
NOx	347.09	355.36	8.27	2%
PM10	14.27	50.61	36.34	255%
SO2	13.41	2,001.77	1,988.36	14827%
VOC	12.46	12.76	0.30	2%

LOUISIANA

CONOCO Westlake, Louisiana (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	1,230.50	1,963	732.50	60%
NOx	1,623	1,809	186.00	11%
SO2	1,898	7,582	5,684.00	299%
VOC	1,257	5,702	4,445.00	354%

CONOCO Westlake, Louisiana (Calciner Stack)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	58	74	16.00	28%
NOx	245	288	43.00	18%
SO2	423.5	2,501	2,077.50	491%
VOC	1	1	0.00	0%

CONOCO Westlake, Louisiana (FCC Regenerator)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	117.5	744	626.50	533%
NOx	444.5	455	10.50	2%
SO2	931	2,858	1,927.00	207%
VOC	0	0	0.00	0%

CONOCO Westlake, Louisiana (South Flare)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	14.5	134	119.50	824%
NOx	2.5	25	22.50	900%
SO2	28	546	518.00	1850%
VOC	6	51	45.00	750%

MICHIGAN

MARATHON OIL Detroit, Michigan (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	512.92	608.5	95.58	19%
NOx	2279.37	4545	2,265.63	99%
SO2	1984.42	5031.93	3,047.51	154%
VOC	690.78	1191.74	500.96	73%

TEXAS

EXXON Harris County, Texas (Unit BH7)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	28.84	68	39.16	136%
NOx	41.91	215.09	173.18	413%
PM10	6.2	7.02	0.82	13%
SO2	25.34	48.12	22.78	90%

EXXON Harris County, Texas (Unit HF4F402)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	23.01	148.16	125.15	544%
NOx	78.5	155.04	76.54	98%
PM10	15.03	16.18	1.15	8%
SO2	66.86	127.93	61.07	91%

EXXON Harris County, Texas (Unit PS8)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	8.45	243.41	234.96	2781%
NOx	102.45	554.29	451.84	441%
PM10	28.15	32.33	4.18	15%
SO2	109.67	203.4	93.73	85%

WASHINGTON

PHILLIPS Ferndale, Washington (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	985	3340	2,355.00	239%
PM	105.5	170	64.50	61%
NOx	718.5	1310	591.50	82%
SO2	2276	2863	587.00	26%
CO	354	381	27.00	8%

TESORO Anacortes, Washington (Facility Wide)	***Current Baseline***	***Bush proposed baseline (1 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	1472	3340	1,868.00	127%
PM	497.5	710	212.50	43%
NOx	2242	2910	668.00	30%
SO2	5990.5	6726	735.50	12%
CO	2598.5	5135	2,536.50	98%

ANALYSIS OF IMPACT OF BUSH 2 IN 10 BASELINE PROPOSAL

For purposes of this analysis, emissions data from 1990-2000 was analyzed. The data was provided by the State environmental agencies. All emissions are in **tons per year**. The average of 2000 and 1999 emissions was used as the current baseline.[2] The average of the highest two consecutive years of emissions was used as the Bush proposed 2 in 10 baseline.[3] Facility-wide data reflects increases to baseline that could be allowed if the facility used a Plantwide Applicability Limit. The individual unit data reflects increases to baseline that could be allowed on a unit-by-unit basis.

ILLINOIS

CITGO Lemont, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	843.51	6258.25	5,414.74	642%
NOx	3,299.22	19718.35	16,419.13	498%
PM10	213.35	822.35	609.00	285%
SO2	19,718.35	410.18	0.00	0%
VOC	507	2405.65	1,898.65	374%

MARATHON ASHLAND Robinson, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	1313.09	1313.09	0.00	0%
NOx	2665.45	5064.5	2,399.05	90%
PM10	229.62	332	102.38	45%
SO2	6472.35	7070.7	598.35	9%
VOC	2740.29	2740.29	0.00	0%

[2] The only exception was the State of Delaware. Delaware had data available only for 1990, 1993, 1996 and 1999. Therefore, 1999 was used as the current baseline for Delaware.

[3] Many states did not have data for 1991. If 1990 and 1992 were the highest two years emissions, those years were used for determining the Bush 2 in 10 baseline.

EXXON Joliet, Illinois (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	3248	3298	50.00	2%
NOx	3121	3121	0.00	0%
PM10	421.5	441	19.50	5%
SO2	22083.5	22394	310.50	1%
VOC	383	649	266.00	69%

INDIANA

BP AMOCO Whiting, Indiana (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
NOx	9,942.50	10,161	218.5	2%
PM10	875	4,290	3,415.0	390%
SO2	7,713.50	28,067.50	20,354.0	264%
VOC	1,423	2,649.50	1,226.5	86%

BP AMOCO Whiting, Indiana (FCU-500)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	3,058.50	4,746.79	1,688.29	55%
NOx	1,057.07	1,640.01	582.94	55%
PM10	253.38	3,912.93	3,659.55	1444%
SO2	2,987.43	4,059.71	1,072.28	36%
VOC	40.58	51.97	11.39	28%

BP AMOCO Whiting, Indiana Unit (FCU-600)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	2,061.27	2,348.26	286.99	14%
NOx	712.41	761.56	49.15	7%
PM10	170.74	170.74	0.00	0%
SO2	1900.92	2,437.21	536.29	28%
VOC	27.12	240.97	213.85	789%

BP AMOCO Whiting, Indiana (Unit No. 3)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	424.44	424.44	0.00	0%
NOx	5256.75	5,256.75	0.00	0%
PM10	210.04	297.94	87.90	42%
SO2	2592.34	9,275.43	6,683.09	258%
VOC	54.14	54.23	0.09	0%

BP AMOCO Whiting, Indiana (Unit No. 4)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	311.14	353.32	42.18	14%
NOx	830.21	941.76	111.55	13%
PM10	14.06	16.06	2.00	14%
SO2	29.84	3456.57	3,426.73	11484%
VOC	20.38	23.21	2.83	14%

BP AMOCO Whiting, Indiana (Pipe Still)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	190.23	190.23	0.00	0%
NOx	347.09	360.35	13.26	4%
PM10	14.27	32.58	18.31	128%
SO2	13.41	1,889.66	1,876.25	13991%
VOC	12.46	12.46	0.00	0%

LOUISIANA

CONOCO Westlake, Louisiana (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	1,230.50	1,825	594.50	48%
NOx	1,623	1,623	0.00	0%
SO2	1,898	4776.5	2,878.50	152%
VOC	1,257	3,551	2,294.00	182%

CONOCO Westlake, Louisiana (Calciner Stack)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	58	72	14.00	24%
NOx	245	277	32.00	13%
SO2	423.5	1,477.50	1,054.00	249%
VOC	1	1	0.00	0%

CONOCO Westlake, Louisiana (FCC Regenerator)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	117.5	468	350.50	298%
NOx	444.5	444.5	0.00	0%
SO2	931	1,834	903.00	97%
VOC	0	0	0.00	0%

CONOCO Westlake, Louisiana (South Flare)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	14.5	134	119.50	824%
NOx	2.5	25	22.50	900%
SO2	28	540	512.00	1829%
VOC	6	51	45.00	750%

MICHIGAN

MARATHON OIL Detroit, Michigan (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	512.92	563.29	50.37	10%
NOx	2279.37	4335.54	2,056.17	90%
SO2	1984.42	4194.55	2,210.13	111%
VOC	690.78	1010.04	319.26	46%

TEXAS

EXXON Harris County, Texas (Unit BH7)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	28.84	68	39.16	136%
NOx	41.91	215.09	173.18	413%
PM10	6.2	6.83	0.63	10%
SO2	25.34	46.97	21.63	85%

EXXON Harris County, Texas (Unit HF4F402)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	23.01	144.51	121.50	528%
NOx	78.5	147.51	69.01	88%
PM10	15.03	15.03	0.00	0%
SO2	66.86	101.13	34.27	51%

EXXON Harris County, Texas (Unit PS8)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
CO	8.45	235.46	227.01	2687%
NOx	102.45	321.7	219.25	214%
PM10	28.15	29.6	1.45	5%
SO2	109.67	177.99	68.32	62%

WASHINGTON

PHILLIPS Ferndale, Washington (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	985	3310	2,325.00	236%
PM	105.5	119	13.50	13%
NOx	718.5	1230	511.50	71%
SO2	2276	2650	374.00	16%
CO	354	354	0.00	0%

TESORO Anacortes, Washington (Facility Wide)	***Current Baseline***	***Bush proposed baseline (2 in 10)***	***Increase allowed under Bush proposed baseline***	***Percentage increase***
VOC	1472	3270	1,798.00	122%
PM	497.5	497.5	0.00	0%
NOx	2242	2242	0.00	0%
SO2	5990.5	5990.5	0.00	0%
CO	2598.5	3888	1,289.50	50%

APPENDIX C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 2 7 2001

OFFICE OF
THE ADMINISTRATOR

Memorandum

TO: Andrew Lundquist, Executive Director, NEPD Group

FROM: Tom Gibson, Associate Administrator

SUBJECT: Concerns with Chapter 8 of NEPD Report

Based on our review of the most recent drafts of the national energy policy report chapters, we continue to have concerns that I feel are significant enough to warrant bringing to your attention. Our concern is with the language and tone in Chapter 8, "Increased Production of U.S. Energy Resources."

EPA has provided comments regarding the language on oil refineries and fuel infrastructure and supply issues in past rounds of the document review process, but our concerns have not been addressed. In the latest draft, new language has been added which is even more problematic. Costs of compliance with environmental requirements are overstated, several inaccurate statements and opinions are presented as factual, and no citations are provided for many of these statements. We are very concerned that this language is inaccurate and inappropriately implicates environmental programs as a major cause of supply constraints in the United States' refining capacity. Such a conclusion, in our opinion, is overly simplistic and not supported by the facts.

We have submitted alternative language for the section on infrastructure in the oil industry, which is attached. We believe that this language provides a more accurate and balanced picture of the U.S. refining and distribution infrastructure.

Specific examples of our key concerns include:

Statements regarding refining capacity are oversimplified and misleading, and create the false impression that environmental regulations are the major cause of supply constraints.

According to EIA statistics, overcapacity existed from 1978 until 1993. This led to low return on investment and therefore, no financial incentive to invest in new refineries. Since 1978 refining capacity increased significantly at existing refineries to keep pace with demand. Data from the Oil and Gas Journal shows that from 1989 to 1999 domestic refining capacity increased 15% from efficiency improvements at existing refineries.

The bottom line is that the refining industry chose to increase output by utilizing under-used potential and by investing in more efficient technologies at existing facilities. In addition, since the mid-1990's, as facilities approached maximum output, it has become more profitable to import finished product rather than to build new refineries in the U.S. To draw the conclusion that environmental requirements are a primary cause of this trend is, to our knowledge, not supported by any study.

Estimates of the capital cost required to comply with environmental regulations are overstated, and are not cited.

A 1997 EIA publication, "The Impact of Environmental Compliance Costs on U.S. Refining Profitability" found that "although pollution abatement requirements reduced the rate of return to refining/marketing assets, these requirements appear to account for only a small part of the steep decline in the rate of return to U.S. refining/marketing operations in the 1990's." The report further notes that "pollution operating costs have been and continue to be a small part of the overall operating costs."

The document states that Tier 2 gasoline and diesel rules will require additional capital investments of $8 billion for gasoline and more than that for diesel. These numbers are inaccurate.

The correct data for capital investments is $4.5 Billion for Tier 2, and $5.3 Billion for Diesel, and these costs are spread over 9 years (per EPA's Regulatory Impact Analyses and Summaries and Analyses of Comments for these two rules). In addition, to fully put these rules into perspective, some discussion should be added regarding the substantial public health benefits that result from the production of cleaner-burning fuels.

Several misleading statements are made regarding new and potential regulatory actions.

For example, the document states that significant capital costs will likely be required to comply with a new driveability index, and with new toxics rules. In fact, EPA has no plans to set a standard for a driveability index, and the new toxics rule will require no new capital costs.

There is no evidence or documentation to support the effect of the transport of ultra-low sulfur diesel on delivery infrastructure claimed in the document.

EPA believes that with relatively minor changes and associated costs, the existing distribution system will be capable of adequately managing sulfur contamination during the transportation of 15 ppm sulfur diesel fuel, very similar to the way the distribution system optimized handling of 500 ppm sulfur diesel fuel in 1993. In addition, out-of-spec highway diesel fuel that does occur will be blended back into compliance at the terminal, as is done today, or will be put into the off-highway diesel pool. It will not be shipped back to refineries for reprocessing at substantial cost.

The statements regarding "boutique" fuel formulations and transmix fuels are inaccurate and misleading.

The draft language cites 50 unique fuel formulations. EPA disagrees with that figure. In addition to the federal requirements (conventional gas and RFG) there are 12 areas with State-run, summer-only low RVP programs and 11 areas with State-run winter-only oxy programs that are required by the Clean Air Act. (Many of the fuel formulations for these programs in each season are similar or identical.) States most often develop their clean fuels programs in cooperation with refiners who supply that area. EPA, when given authority, has set national fuel requirements.

EPA believes its Tier 2 and diesel rule will not result in any increased volume of transmix compared to today's levels. In addition, the interface (transmix) between diesel and gasoline that occurs today is sent back to the refinery and distilled into separate mixtures of gasoline and diesel. Those processes will not change.

Statements regarding coal generated electricity create the false impression that environmental regulations are the sole cause of the decrease in investment in new coal generation.

The section of Chapter 8 that deals with coal generated electricity is also more problematic than earlier versions. We are concerned that it gives the impression that environmental regulations alone are responsible for halting investment in new coal generation, when in fact it is but one of a number of factors. The section also does not recognize the important role that environmental requirements play in allowing coal to be burned while protecting public health.

We believe it is critical that chapter 8 of the Energy Policy document be edited to address these issues. Attached please find more detailed edits to chapter 8 that address our concerns. Please contact me if you would like to discuss these issues further.

APPENDIX D

The Honorable Christine Todd Whitman
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, 101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Governor Whitman:

On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), we are writing to express our serious concerns regarding development by the Administration of a comprehensive package of reforms for a fundamental component of our nation's clean air program – New Source Review (NSR). These widely held concerns are two-fold. First, we are deeply troubled by the closed process in which the Administration has engaged over the past several months to craft these significant reforms, particularly since it represents such a departure from EPA's traditional practice of consulting with state and local agencies on NSR reform. Second, we have considerable trepidations regarding what we understand the reforms will allow and the impact that these changes will have on our nation's ability to achieve and sustain clean, healthful air.

For the past 25 years, the Clean Air Act's NSR program has been instrumental in achieving millions of tons of emissions reductions that otherwise would not have occurred. Air quality in the United States is decidedly better because of this program. Notwithstanding the pivotal role NSR has played in environmental protection, however, there is broad consensus that the program can be improved. Over the past eight years, STAPPA and ALAPCO have worked with EPA and other stakeholders to develop recommendations in this regard. As recently as this past summer, STAPPA, ALAPCO and others were actively engaged with EPA in NSR reform discussions that we believed were productive and leading to real progress. Our associations were somewhat frustrated, therefore, when these discussions ceased, and we became increasingly dismayed and perplexed when the discussions did not resume.

Within just the last several weeks, STAPPA and ALAPCO have learned that an NSR reform effort has, in fact, been proceeding, but without our participation. Although we have not been included in the discussions, nor formally provided with any information on the approach the Administration is pursuing, we have learned certain details from news reports and informal information sources. It is not our preference to comment on hearsay. However, from what we understand, many aspects of the reform package will be promulgated in final form without any opportunity for additional stakeholder review and discussion. Therefore, we

believe we have no alternative but to provide you with our views at this time, notwithstanding the limited and uncertain nature of our information.

Based on the details we have gleaned, STAPPA and ALAPCO find the NSR reforms the Administration is contemplating to be of significant concern. In particular, we take issue with the reported approaches for routine maintenance, like-kind replacements, the determination of what will trigger NSR, the clean-unit exemption and the plant-wide applicability limit (PAL), each of which would substantially weaken the environmental protections offered by the NSR program.

Under current law, a number of types of modifications to existing sources are exempt from NSR, including certain kinds of maintenance and replacement activities and activities that do not result in emissions increases over a specified limit. It is our understanding that the Administration is now considering changes that would significantly expand the number and size of source modifications that would be exempt from NSR, thus causing substantial increases in air pollution.

With respect to routine maintenance, we understand that the Administration's reforms would institute an investment-based test, whereby the triggering of NSR would depend on the cost of the modification. Accordingly, modifications up to a prescribed percentage of the source's total replacement cost would be exempt from NSR. Such a test could have substantial adverse impacts because it places no restrictions on the level of air pollution that will be caused by the change. Moreover, the annual investment percentage levels that we understand are under consideration (e.g., up to 8 percent for petroleum refineries and 5 percent for electric utilities) would allow enormous projects to be undertaken, all with absolutely no requirements to reduce emissions.

We further understand that the Administration is considering expanding the existing exemption for certain replacement activities to broadly exempt any replacement, irrespective of how great the air pollution increase, simply provided the replacement is of "like kind." This, too, would inappropriately allow far more modifications, and those of greater magnitude, to escape NSR than currently allowed.

It is also our understanding that the Administration is contemplating revising the method for determining what magnitude of emissions increase would trigger NSR. Whether or not NSR is required is currently determined by comparing a source's "baseline" emissions over the past two years to the potential emissions that will result from the modification. What we have learned, however, is that the Administration is pursuing an approach that would allow a source to "look back" and select any 24-month period over the past 10 years upon which to establish its emissions baseline and then to compare that arbitrary – and, most likely, inflated – baseline to a projection of future emissions that is not only far more speculative, but also unenforceable. Such a scenario would provide yet another opportunity for new emissions to avoid NSR.

STAPPA and ALAPCO have gone on record in favor of reforms to the NSR process, and we continue to hold that position. We believe that sources that install the best available controls should be provided with flexibility in return. However, what we have learned is that for several elements of NSR for which STAPPA and ALAPCO have historically supported reform, the Administration is now seeking to institute changes that are not only far beyond what our associations have endorsed, but also beyond what industry requested during our stakeholder negotiations.

Our associations have agreed that sources that install the best available controls today should be afforded an exemption from further NSR for a limited time into the future. Under the clean-unit exemption now under consideration by the Administration, however, not only would a source that has installed the best available controls be exempt from further NSR for 15 years, this exemption would apply retroactively, thus allowing sources that installed controls more than ten years ago to escape NSR until the balance of the 15 years has expired.

Similarly, STAPPA and ALAPCO have supported a PAL, provided it declines over time to a level reflecting installation of best available controls and requires all significant new sources constructing under the PAL to install the best available controls. The approach we understand the Administration is pursuing does not fit these criteria and, instead, includes only a weak cap that does not decline over time, with no requirements whatsoever for new sources or for existing sources with outdated pollution controls. The direction of both of these reforms, as well as that of the reported reforms related to "debottlenecking" and aggregation, is highly problematic.

Individually, each of these reforms will serve to weaken the NSR program by allowing an unacceptably large number of sources that are currently subject to NSR to escape air pollution controls. Even more distressing, however, is that, when taken in combination, these reforms will allow most source modifications to avoid NSR, resulting in unchecked emission increases that will degrade our air quality and endanger public health.

Once again, STAPPA and ALAPCO find it most unfortunate that we have no option but to provide comments to you on such a critical issue based on vague information. Further, we are disappointed that crucial decisions regarding the reform of one of the most vital aspects of our nation's air quality program are being made in the absence of an inclusive stakeholder process. Of greatest concern, however, is that the Administration may be arriving at decisions that will have a detrimental effect on air quality and public health.

Although STAPPA and ALAPCO support changes to the NSR program, we believe that reforms as controversial as those currently being contemplated by the Administration will undermine the chances of any responsible changes to the

NSR program ever taking effect. Accordingly, prior to the issuance of any NSR reforms, our associations request an opportunity to meet with you and your staff so that we can receive factual details on and discuss more fully our concerns relative to the contemplated changes and their impacts. In addition, we recommend that you convene a broad stakeholder meeting to allow for an open dialogue on the reforms under consideration. Finally, and most importantly, irrespective of what NSR reforms EPA ultimately promulgates, STAPPA and ALAPCO urge that under no circumstances should these reforms result in any less protection of the environment than is derived under the current program.

Sincerely,

Lloyd L. Eagan
STAPPA President

Arthur L. Williams
ALAPCO President

cc: Jeffrey R. Holmstead