MANUFACTURING CHEMISTS ASSOCIATION

1825 CONNECTICUT AVENUE, N. W. ◦ WASHINGTON, D. C. 20009 ◦ (202) 483-6126

GEORGE H. DECKER
General, U.S.A. (Ret.)
PRESIDENT

March 27, 1969

RHG
Let to discuss

Mr. L.N. Vernon, Plant Manager
Continental Oil Company
Lake Charles VCM Plant
Post Office Box 605
Westlake, Louisiana 70669

Dear Mr. Vernon:

Your attention is invited to a forthcoming program especially arranged by MCA for the chemical industry in the Southeastern region.

The Workshop on Water Pollution at the Bellemont Motor Hotel in Baton Rouge, Louisiana, April 24, 1969, will be concerned with current water quality management programs in this part of the country, with particular emphasis on how industry can move progressively to do its part.

The format provides for prepared orientation in the morning, followed by an afternoon panel session to answer questions and discuss relevant topics of specific interest to those in attendance.

Preparation by the panel will be greatly assisted if as many as possible of the subjects of principal interest for the panel session are made known in advance. Thus space for suggesting questions and discussion topics is provided on the advance registration form incorporated in the enclosed descriptive Workshop folder. Additional copies of the folder may be obtained from MCA.

This announcement is being sent to the manager of MCA member company plants in the states of Alabama, Arkansas, Louisiana, Mississippi, and Texas, who are encouraged to bring the Workshop to the attention of their friends in industry, government, universities, and elsewhere. While presumably it will have greatest appeal for those in or near this regional area, attendance from other parts of the country will be most welcome.

The underlying purpose of such programs is to aid the chemical industry in giving appropriate recognition to controlling environmental pollution, and in taking a leading action role. I hope you will deem it worthwhile to have those on your staff closely related to this matter attend the Workshop, and cordially invite you to do so. Your early response will facilitate preparations now in progress.

Sincerely,

G. H. Decker

Enclosure

CCR 000037028

WORKSHOP ON WATER POLLUTION

8:15 AM REGISTRATION

9:15 AM WELCOME and OPENING REMARKS

Daniel L. Verges
Staff Engineer, Process Engineering Department
Enjay Chemical Company

9:30 AM RESPONSE

A. J. vonFrank
Director, Air and Water Pollution Control
Allied Chemical Corporation

10:00 AM COFFEE

10:20 AM WATER CONTROL PROGRAMS IN THE STATES

Robert A. LaFleur
Executive Secretary
Louisiana Stream Control Commission

10:50 AM THE FEDERAL PICTURE

William Galegar
Regional Director, Dallas, Texas
Federal Water Pollution Control Administration

11:20 AM LEGAL DEVELOPMENTS and LEGISLATION

David B. Sebree
Attorney
E. I. du Pont de Nemours & Company

11:50 AM WATER QUALITY STANDARDS

Richard D. Hall
Environmental Control Engineer
Diamond Shamrock Corporation

12 Noon RECEPTION

12:30 PM LUNCHEON

2:00 PM TECHNICAL PANEL SESSION

A. J. vonFrank, Moderator
Director, Air and Water Pollution Control
Allied Chemical Corporation

William Galegar
Regional Director, Dallas, Texas
Federal Water Pollution Control Administration

Robert A. LaFleur
Executive Secretary
Louisiana Stream Control Commission

Richard D. Hall
Environmental Control Engineer
Diamond Shamrock Corporation

David B. Sebree
Attorney
E. I. du Pont de Nemours & Company

Daniel L. Verges
Staff Engineer, Process Engineering Department
Enjay Chemical Company

Louis Hoblet
Director of Research and Development
The Dow Chemical Company

Thomas W. Kirby
Chief Chemist
Cities Service Oil Company

4:30 PM ADJOURN

REGISTRATION

Advance notice of prospective attendance—incurring no obligation—will be appreciated. Write, either by letter, or by using the printed reply sheet accompanying this folder, or phone H. E. Robbins, Manufacturing Chemists Association, 1825 Connecticut Ave., Washington, D.C. 20009; tel. [illegible] 202/483-0126.
Cost to each registrant will be $10—includes [illegible], noon reception, and luncheon—*payable at the time of registration* at the Workshop, April 24.

THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972

This presentation has been prepared in an effort to provide industry with an understanding of those sections of the Act which will most directly affect them. The Senate has passed the Bill as S 2770. The House passed HR 11896 in March after reopening extensive hearings which seriously challenged some portions of S 2770.

There are several basic differences in the two versions which will have to be resolved in conference. No one can guess which version will be finally adopted, so this presentation will only touch on those sections important to industry and believed to be more or less in final form. Some minor changes, affecting timing, may occur in the adopted Act, but should not change the basic concepts outlined.

We will not discuss the possible impact of the 'no discharge' goals, as the House Bill presents a greatly different approach which would affect long range planning if upheld in conference. One other section of the Bill, Section 311 covering spills of hazardous materials, is significantly different in the two versions, with respect to the possible effect on industry. The Senate Bill would impose a mandatory minimum penalty of $50,000 for any spill even accidental, if the Administrator of EPA determines it to be an imminent and substantial danger to the environment. The House version requires EPA to set per barrel penalties by hazardous substance but establishes a maximum $50,000 penalty. Anyone who would be adversely affected by regulations covering accidental spills of hazardous materials should study the two versions of the Bill. Comments to members of Congress with respect to this section could possibly aid in finalizing an acceptable program regulating control of hazardous substances.

As mentioned, the following presentation discusses only those sections important to industry and which are believed to be in near final form. These concepts are presented at this time, rather than awaiting passage of the final Act in order to provide industry as much time as possible to prepare plans so that compliance with the Act is possible.

J. G. Weidman

7/28/72
JGW/mlh

INDUSTRY REQUIREMENTS

Sec. 301 (b) (1) Specifies need to comply by Jan. 1, 1976, with effluent limitations "which shall require the application of the best practicable control technology currently available as defined by the Administrator in Sec. 304 (b)..."

Sec. 304 (b) Administrator must publish within one year, regulations providing guidelines for effluent limitations. "Such regulations shall - (1) (A) identify in terms of amounts of constitnents and chemical, physical and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources."

(This means that EPA will establish effluent limitations, within one year, for each type and size of all industrial point source discharges. The regulations must establish what is the best practicable control technology currently available for each class and category of point sources.)

Sec. 402 (a) (1) Provides that the Administrator "after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants into the navigable waters, the waters of the contiguous zone, or the oceans, upon condition that such discharge will meet any applicable requirements under sections 209, 301, 302, 306, 307, 308 and 403 of this Act, or prior to promulgation of regulations relating to such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of the Act."

Sec. 502 (8) "The term 'navigable water' means the navigable waters of the United States portions thereof, and the tributaries thereof, including the territorial seas and the Great Lakes."

Thus, once the regulations required under 304 (b) are approved, all industrial discharges must meet the specific best practicable control technology determined for them by EPA, before their permit to discharge is approved. Prior to approval of the regulations permits will only be issued by EPA if the discharge meets such conditions as the Administrator determines are necessary to carry out the provisions of this Act.

(EPA has reported that, before they will extend their approval for the Corps of Engineers to issue a permit under the current 1899 Refuse Act program, they must obtain assurance that the applicant will be in compliance with the best practicable control technology currently available.)

The foregoing relates to requirements under Sec. 301. Sec. 209 relates to Basin Planning and is well into the future. Sec. 302 relates to effluent limitations directed toward more stringent limitations than 301 (b) to assure attainment of water quality which shall assure protection of public water supplies, etc. Sec. 306 and Sec. 307 provide special requirements and will be dealt with separately. Sec. 308 outlines inspection and monitoring requirements. Sec. 403 specifically deals with Ocean discharge requirements.

National Standards of Performance

"Sec. 306 (a) For purpose of this section:

"(1) The term 'standard of performance' means a standard for the control of pollutants which reflects the greatest degree of effluent reduction which the Adminstrator determines to be achievable through application of the best available control technology, processes, operating methods or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

"(2) The term 'new source' means any source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.

"(5) The term 'modification' means any construction (other than construction of pollution abatement facilities as determined by the Administrator or appropriate State Agency) which may alter the nature or may increase the amounts of water pollutants, or combinations of such pollutants, discharged by a source."

"(6) The term 'construction' means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

Sec. 306 (b) (1) (A) requires that within 90 days, the Administrator establish a list of categories of sources. This section does list categories which include most industry.

Sec. 306 (b) (B) requires the Administrator within one year to propose regulations establishing Federal standards of performance for the listed categories, and after an opportunity for comment, he shall promulgate within 120 days after

publication, such proposed standards with such adjustments as he deems appropriate.

Referring back to the discussion of Sec. 402 (a) (1), if a point source does not comply with Sec. 306, a permit will not be issued. Thus, if the standards promulgated for any given category includes no discharge of pollutants, new sources in that category cannot discharge water, as a permit will not be issued.

A disclaimer is provided as follows:

Sec. 306 (b) (C) Such standards of performance shall apply to all sources within such category, unless application from an owner or operator of any source which as a result of modifications is subject to this section, the Administrator determines, after public hearing, that the economic and social costs of implementing such standard bear no reasonable relationship to the social and economic benefits (including water quality objectives) to be obtained. Any such determination shall be accompanied by an appropriate adjustment of such standard for such source, which shall reflect the greatest degree of effluent reduction which the Administrator determines can reasonably be achieved by such source."

Therefore, a discharger can appeal the "no discharge" requirement for a modification if sufficent evidence can be established to convince EPA that 306 (b) (C) applies.

(In the opinion of the writer, an important portion of 306 to those planning new construction is (a) (2). Where new construction has been planned and is ready to be started, if commenced prior to proposed regulations, 306 would not apply. Instead this new construction would be regulated by Sec. 301 (b) (1) and would be considered the same as existing discharges. Where a 'no discharge' requirement would result in economic hardship, commencing construction before the regulations are proposed could result in significant savings.)

Under 402 (a) (1), non-compliance with Section 307 will be cause for denial of a permit.

Section 307 (a) requires the Administrator within 90 days, to publish a list of toxic pollutants for which an effluent standard will be established. The standard can be a prohibition, at the discretion of the Administrator. Within 180 days after publication of the list, he shall establish an effluent standard for each such toxic pollutant, or prohibit its discharge. Public hearings are to be held within 30 days. Not later than six months after the public hearing the standards or prohibitions shall be promulgated.

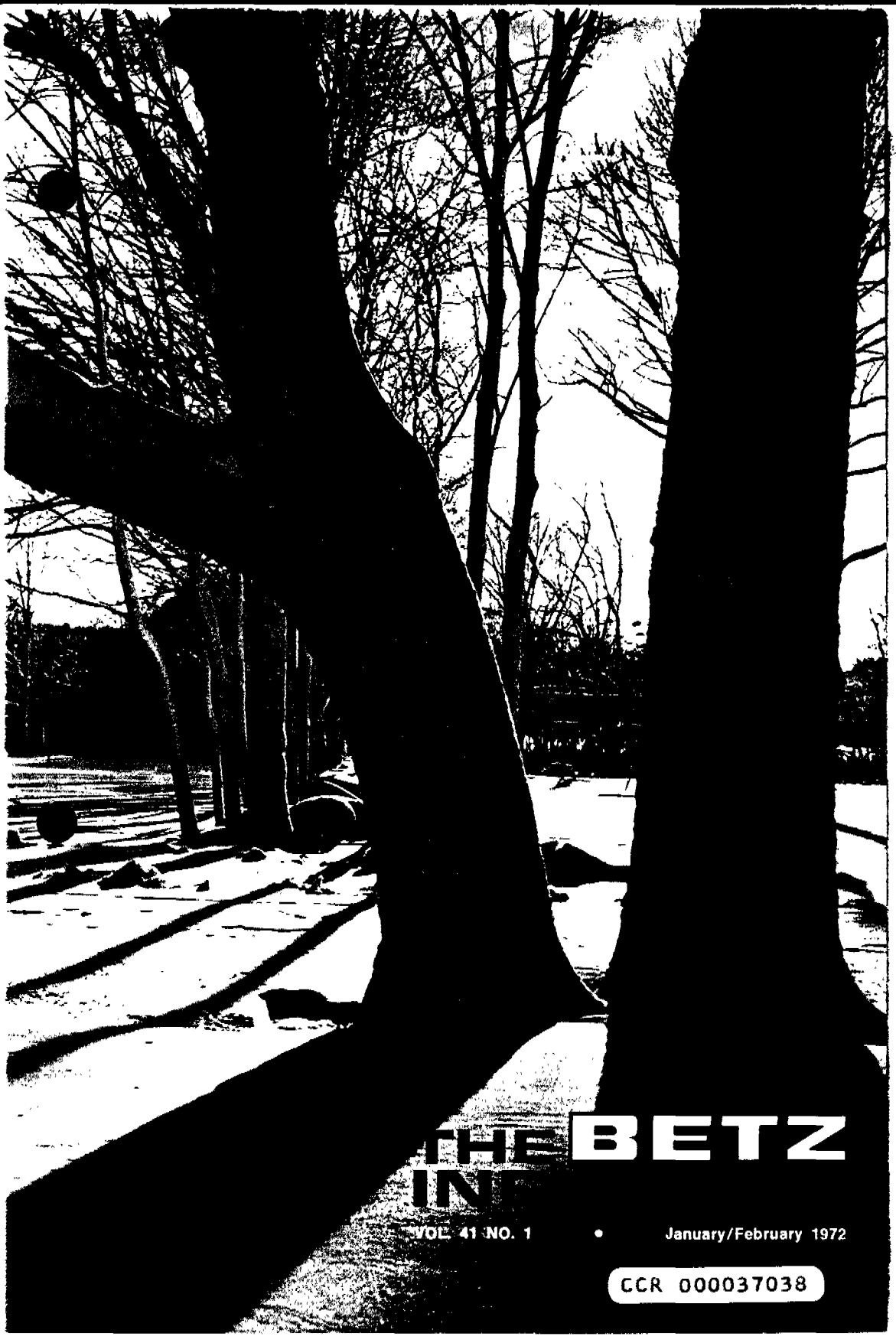
(It is the opinion of the writer, that placing a substance on the prohibited list would require the discharger to completely eliminate such substance from his process, as absolute removal of a soluble material from water with known technology is not possible at reasonable cost. Trace quantities would always be possible in the effluent, and could be found by present sophisticated means of water analysis. Monitoring of the effluent would disclose the trace quantity, and the discharger would be in violation, subject to penalty under Sec. 309. When the original list of toxic pollutants is published, prior to establishment of effluent standards or prohibition, comments should be submitted to EPA against prohibition, where such would have a severe impact on operation.)

Sec. 307 (b) requires the Administrator, within 90 days to publish proposed regulations establishing pretreatment standards for discharges of pollutants into publicly owned treatment works. Not later than 90 days after such publication and after public hearings he shall promulgate such pretreatment standards. The time for compliance is not to exceed three years. The pretreatment standards shall be established to prevent the

discharge through treatment works of any pollutant which interferes with, passes through, or otherwise is incompatible with such works. Pretreatment standards established by this section shall be applied pursuant to section 402. Thus discharges to publicly owned treatment works will require a permit and must comply with the standards.

Section 309 is the punitive Sec. Any violation of those sections previously discussed carries a fine not to exceed $25,000 but not less than $2,500 per day of violation, or imprisonment up to one year, or both. If the conviction is for a violation committed after a first conviction the fine increases to not more than $50,000 or imprisonment for not more than two years, or both.

JGW/mlh
7/28/72



THE BETZ IN

VOL. 41 NO. 1 • January/February 1972

THE BETZ® INDICATOR

VOLUME 41 NUMBER 1

THE COVER

This month's cover, aptly entitled "Tree Design", captures the sharp, invigorating clarity of the morning after a fresh snow.

The photographer, Charles J. Luna of Medfield, Massachusetts, emphasized the drama of the scene by shooting into the sun. In this way, he created a powerful pattern of shadows cast by the giant black walnut trees that are the focal point of this photograph.

The **Betz Indicator** is published bimonthly in the interest of proper treatment for water and process systems, and to encourage effective wastewater and air pollution control. Unless otherwise credited, all information is prepared by Betz engineers, technologists or chemists as a service to industry. Material may not be reprinted without written permission.

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Office of the President

To Our Readers:

The environment is a very complex subject. We continually hear accusations and counter accusations. We see actions taken in the heat of the moment—and subsequently reversed when cooler heads prevail.

At this stage of the game it is clear that no one has all the answers.

That's why we at BETZ have pledged ourselves to maintain a continuing dialogue, in the hope that a cross fertilization of ideas will advance the state of the art in environmental control.

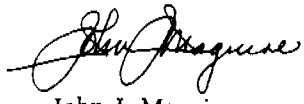
You may remember the article "What on Earth is Pollution?" reprinted by permission of INDUSTRY WEEK in the November/December, 1970 issue of The BETZ INDICATOR. This article investigated the importance of *defining* the pollution problem before trying to solve it.

This month's issue of the INDICATOR continues the dialogue. Our feature article entitled "Wait a Minute . . . " is published verbatim from a speech given by Secretary of Commerce Maurice H. Stans before the 40th International Conference of the Financial Executives Institute this past fall in Houston, Texas. We think it provides a much-needed perspective and gives a sense of balance to the whole complex question of environmental control.

I've put it on the "Must Reading" list here at BETZ and hope you find it equally worthwhile. In fact, I'd be very much interested in hearing your opinion and comments.

Very truly yours,

BETZ LABORATORIES, INC.



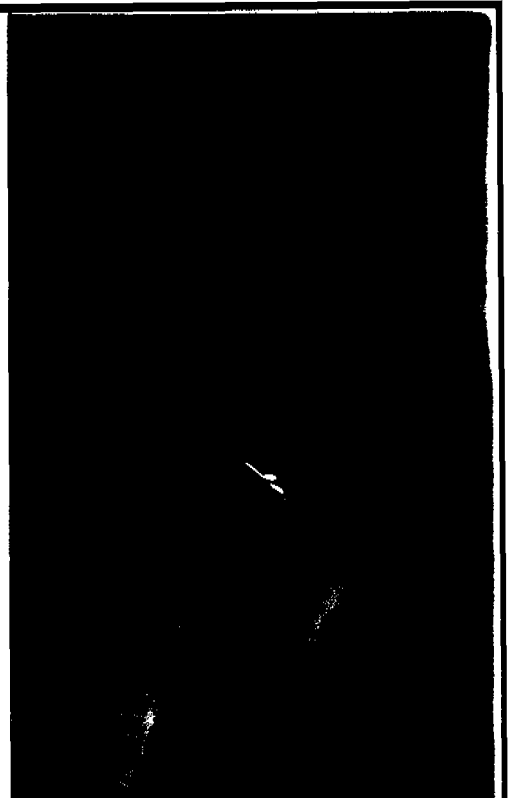
John J. Maguire
President

Maurice H. Stans

United States
Secretary of Commerce

"Wait a Minute . . ."

An address by the Honorable Maurice H. Stans,
United States Secretary of Commerce,
before the 40th International Conference of the
Financial Executives Institute, Houston, Texas, October 26, 1971



Mr. Chairman, it is a very great pleasure for me to be here today for this meeting of the Financial Executives Institute.

Many of you are old friends, and we have much in common to discuss—because of the financial background we share and because the relationship between business and government is constantly becoming more important to all of us.

Today I was faced with a choice of talking about the subject most on your mind, but of a changing and passing nature—the President's Economic Program—or, a matter of more long-run concern to business, industry and the public—the question of a balanced national approach to the environmental issues facing the nation.

The latter is the one I have chosen to discuss.

Environment

A concern that must be seen in perspective is the matter of the environment and the anti-pollution movement in the country today.

This is a very emotional issue in many quarters. It is a very political one in many quarters. The public for its part is demanding action—actively, vocally, impatiently demanding immediate action to resolve pollution problems.

This creates opportunities to make progress. But it also presents some difficulties.

President Nixon has declared that the nation has been long overdue in halting its abuses of the air, land and water. He has made a commitment to eliminate pollution and to cleanse the atmosphere and conditions in which we live.

So there is no question that the environment ultimately has to be cleaned up, that we have to deal with pollution.

The question is, how do we go about doing this? And in the most sensible way?

Priorities

The public's desire for immediate solutions is understandable; its impatience may be justified, in many respects.

But we cannot have single track minds in which the environmental issue overrides everything. That is how some people would have us look at our problems.

But if we yield unquestionably to every popular demand, if we settle for quick, immediate solutions to one set of problems, we can very quickly catapult ourselves into others that are much more serious.

There is evidence that this is happening—and it could lead to an environmental backlash.

So before we act out of panic—out of ecological hysteria, or misinformation—I think it is time to stand back, and look at the environmental problem in the whole.

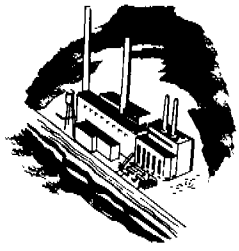
It is high time for the entire nation to weigh the needs against the demands and say: "Wait a Minute, here—what are our priorities?"

We need to weigh our technological capabilities against the demands for immediate change and say: "Wait a Minute—can we really get there from here?"

We need to weigh each specific proposal against economic reality and say: "Wait a Minute, how do the benefits compare with the costs?"

Problems

In other words, the problem is: how do we develop public and private policies in which economics and technology are factored into every environmental assessment?



Let me spell it out.

Industry has been indiscriminately accused by some of ignoring the pollution problems of our times and being responsible for most of them.

The charge is dead wrong and it is unfair.

Industry, of course, must bear a share of the blame. But the fact recognized by too few people is that many of the worst polluters are outside of industry—municipalities, other governments, agriculture, and the public itself. Witness the fact that hundreds, perhaps thousands of American communities pour millions of tons of untreated sewage into waters every day.

Response

By contrast, almost across the board, American industries have launched vastly complex and expensive efforts to help clean up the air, water and landscape of the country.

For example:

The chemical industry in 1970 spent $600 million for pollution abatement.

Industry Investment for Air and Water Pollution Control, 1969-71

Dollars in millions

Industry	Actual		Planned 1971	Percent change 1969-70	Planned percent change 1970-71
	1969	1970			
Iron and steel	$ 179	$ 206	$ 212	15	3
Nonferrous metals	41	100	152	144	52
Electrical machinery	32	52	58	63	12
Machinery	51	121	169	137	40
Autos,trucks and parts	55	67	118	22	76
Aerospace	22	15	18	−32	20
Other transportation equipment	15	15	6	0	−60
Fabricated metals	44	53	70	20	32
Instruments	25	25	28	0	12
Stone, clay, and glass	63	64	104	2	62
Other durables	103	135	175	31	30
TOTAL DURABLES	630	853	1,110	35	30
Chemicals	140	169	263	21	56
Paper	143	153	321	7	110
Rubber	9	50	42	456	−16
Petroleum	260	337	507	30	50
Food and kindred products	58	84	151	45	80
Textiles	10	13	25	30	92
Other nondurables	31	60	37	94	−38
TOTAL NONDURABLES	651	866	1,346	33	55
ALL MANUFACTURING	1,281	1,719	2,456	34	43
Mining	105	115	135	10	17
Railroads	NA	28	28	NA	0
Airlines	NA	21	27	NA	29
Other transportation	0	4	10	—	150
Communications	0	[2]	[2]	NA	NA
Electric Utilities	155	405	679	161	68
Gas Utilities	130	110	148	−15	35
Commercial[1]	0	100	158	—	58
ALL BUSINESS	1,671	2,502	3,641	50	46

1 Based on large chain, mail order, and department stores; insurance companies; banks; and other commercial businesses.

2 Less than .5.

Source: McGraw-Hill Publications Co.

FIGURE 1—Total industrial expenditure estimates for air and water pollution control in 1969, 1970 and 1971 show a 50 percent increase in 1970 over 1969, and a 46 percent increase in 1971.

The iron and steel industry has spent more than a billion dollars on air and water facilities, and almost two-thirds of that in the last two years.

The automobile industry currently is investing a quarter of a billion dollars a year in pollution research and development.

The electric industries will spend two-thirds of a billion dollars on pollution control this year alone.

The paper industry is spending $321 million for air and water pollution control this year.

The petroleum industry is spending more than $500 million in pollution control this year, and in addition is developing expensive facilities in other countries to reduce the sulphur content of fuel oils being shipped here.

The oil and tanker industries are working closely with the government to eliminate oil discharges and accidental spills into the oceans.

The fact is that, on average, American companies will have increased their pollution control spending by almost 50 percent this year over the last year. They will spend some $18 billion over the next five years to meet the requisite standards.

Unfortunately business has failed to make these achievements credibly known to the American people. The idea still persists in many quarters that industry is doing almost nothing to fight pollution and what it does do is only because it is being dragged across the line. Neither is true.

There are deliberate polluters, of course, but most business has been working at pollution control for a long time—and it can be proud of its conservation records.

Progress

As a result of industry's efforts, the nation is visibly cleaner today than it was in the past.

Pressures

But the critics of industry press the public to insist upon quick solutions to these complex problems.

The people, in turn, press the Congress.

As a result, arbitrary timetables have been imposed, and severe regulations have been applied; research has been forced to divert from the orderly paths of science and technology; and untested ideas have been put to action before they are ready.

All of this has given some people a false feeling that the problems will all go away if we only put enough squeeze on business to act.

The trouble is that in the development of these pressures, reason sometimes gets lost and extremes become the result.

Many of the results have been beneficial to be sure, but some have been ill-conceived and harmful to people, to business, and to the country.

Phosphates

Let me give you a few examples, starting with phosphate detergents —the washday ingredient that has recently come to typify the pollution villains.

Environmental pressures against phosphates were based on the argument that they accelerated the growth of algae which can destroy life in the waters.

Because of these pressures, the sale of detergent phosphates was banned by state and local governments over the country on a random, crazy-quilt geographic basis.

But in the rush, perhaps someone should have said: "Wait a Minute —what are we really doing here?"

As we now know, the answer is that we were taking foolish actions instead of careful ones.

Dangers

First we set out to find a substitute for phosphates. But what happened?

Detergent manufacturers spent millions of dollars switching over to NTA, a substance used in Sweden and Canada—but it was shoved aside at the request of the government because some officials were concerned that it might create health hazards. Additional safety tests are now being carried on, but NTA cannot be used.

Then other substitutes began reaching the public containing caustic materials that were dangerous, especially to children. If those products get in a child's eyes, they can blind. Or if they are accidentally swallowed, they can maim or even kill. They have done so.

To limit these risks, the FDA has instituted labeling requirements for caustic detergents.

Unfortunately, the fact is that small children creeping on the floor next to the washing machine can't read them.

Some chemical substitutes for phosphates also wash out the flameproofing in children's cotton sleepers which the textile industry has been working hard to develop.

Facts

At this point more facts began to come to light:

First, phosphates are not of themselves polluters. They are nutrients, harmless to people and in fact a necessary element in human life.

Second, various scientific studies revealed that huge amounts of phosphates were pouring into the nation's waters from human waste, agricultural runoff and natural erosion—in many places far more than from detergents.

Next Congress was given scientific testimony that 85 percent of the people do not contribute phosphate waste to waters that can be affected by them, because of where they live.

Also, Congress took scientific testimony that removal of phosphates alone could rarely reduce the growth of algae.

Finally, evidence has accumulated that the general use of certain caustic substitutes in detergents could cost up to $2 billion a year in wear and tear on clothes and on washing machines.

Total Capital Expenditures for Pollution Control as Percentage of Total Capital Expenditures

Industry	Actual 1970 (percent)
Iron and steel	10.3
Nonferrous metals	8.1
Electrical machinery	2.3
Machinery	3.5
Autos, trucks, and parts	4.2
Aerospace	2.8
Other transportation equipment	5.0
Fabricated metals	4.3
Instruments	3.6
Stone, clay, and glass	6.4
Other durables	9.2
TOTAL DURABLES	5.4
Chemicals	4.9
Paper	9.3
Rubber	5.3
Petroleum	6.0
Food and beverages	3.0
Textiles	2.3
Other nondurables	5.5
TOTAL NONDURABLES	5.4
ALL MANUFACTURING	5.4
Mining	6.1
Railroads	1.6
Airlines	0.7
Other transportation	0.3
Communications	0
Electric utilities	3.8
Gas utilities	4.4
Commercial[1]	0.6
ALL BUSINESS	3.1

Source: McGraw-Hill Publications Co.
1 Based on large chain, mail order, and department stores; insurance companies, banks, and other commercial businesses.

FIGURE 2—Total pollution control investment as a percentage of current total capital expenditures is large and rising.

Circle

As a result, the Surgeon General of the United States has now advised state and local governments not to ban phosphates, and has recommended that housewives return to using phosphate detergents.

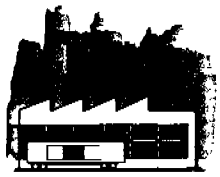
And the Environmental Protection Agency has advocated a $500 million program to deal with phosphates from all sources through improved sewage treatment plants in affected areas.

So today we are back roughly where we started about two years ago, doing what we should have done in the beginning. We are dealing with phosphates at the treatment plants in specific trouble areas, not in legislative councils and public forums all across the nation.

In the long trip around this circle, all we have done is delay progress and confuse the people—at great inconvenience and unnecessary cost to the public, to industry and to government.

My purpose in citing these points is not to defend phosphates, or the industries that use them, or the products that contain them. Instead, it is a way of saying:

"Wait a Minute. Before we rush helter-skelter into immediate responses to such problems of nationwide concern, isn't it prudent first to take the time to know what we are doing? To weigh all of the factors and consequences involved?



Power Plant Sitings

For another example, take the siting of new electric power plants.

This is all too familiar to many of you, I am sure.

The nation's need for more electric power is rapidly outrunning our capacity to generate it, and our demands for energy are going to double by 1980.

The answer would seem to be simply to build more power plants.

But in many areas of the country it has become almost impossible to do so.

Environmental pressures in the courts have placed the entire atomic power program in suspense, just as we face our years of greatest need.

The total amount of public and private construction being held up by environmental actions in the United States today is somewhere between $5 and $10 billion—and many of these are the electric power plants we must have to meet our needs.

So we are losing both electric power, and at least a $5 billion shot in the arm that our country could use for new jobs and the economy.

Examples

We all know the power trouble that New York City has been having for years. Con Ed is being forced to seek as many as 40 different approvals, many of them on environmental grounds alone, and until it can get clean atomic power it has had to build high-cost, short-term gas turbine plants that further pollute the skies of New York.

Houston is another case in point. Generating plant construction has been blocked because of complaints that the effluents, even after a costly cooling process, would raise the temperature of the discharge basin some two degrees above the present temperature levels.

Isn't it time someone said: "Wait a Minute."

If we fix the right priorities—if we integrate our environmental, technological and economic interests—*all* of them can be served without one dominating the other.

The President has urged the Congress to enact legislation to resolve the power plant siting problem. He wants to assure public discussion of plans, quick and proper resolution of environmental issues, and timely construction of the facilities.

A law along such lines is urgently needed.

Industry's Investment in Air and Water Pollution Control 1967-70

Dollars in millions

% = Percent of total capital expenditures

	1967 ACTUAL		1968 ACTUAL		1969 ACTUAL		1970 PLANNED	
Iron & Steel	6%	$ 130	5.23%	$ 119	8.40%	$ 179	9.85%	$ 199
Nonferrous Metals	4	43	1.41	15	3.73	41	7.06	84
Electrical Machinery	1	17	3.00	53	1.58	32	2.38	54
Machinery	1	29	2.10	60	1.48	51	2.49	95
Autos, Trucks & Parts	4	62	1.96	27	3.33	55	5.86	89
Aerospace	1	9	1.87	16	2.65	22	2.73	18
Other Transportation Equipment	2	5	4.26	11	5.36	15	3.61	13
Stone, Clay & Glass	5	48	4.65	40	5.89	63	7.42	95
Fabricated Metals	2	22	3.36	41	3.52	44	5.57	64
Instruments	1	5	1.02	6	3.52	25	4.09	36
Other Durables	2	18	2.00	21	7.01	103	3.82	63
TOTAL DURABLES	2.76	388	2.90	409	3.95	630	4.81	808
Chemicals	3	92	3.85	109	4.52	140	6.22	226
Paper	6	94	6.20	82	9.05	143	11.02	184
Rubber	1	7	1.00	10	.83	9	2.13	20
Petroleum	2	102	3.23	170	4.62	260	3.41	205
Textiles	1	7	1.73	9	1.59	10	3.65	23
Food & Beverages	2	42	1.06	23	2.24	58	3.24	91
Other Nondurables	5	53	1.80	20	2.82	31	4.42	57
TOTAL NONDURABLES	2.75	397	2.97	423	4.14	651	4.74	806
ALL MANUFACTURING	2.75	785	2.93	832	4.04	1,281	4.78	1,614
Mining	4	66	3.45	56	5.65	105	6.03	126
Electrical Utilities	2	135	2.86	219	1.73	155	3.59	398
Gas Utilities	4	80	1.00	25	4.87	130	6.01	146
INDUSTRY TOTAL	3.00	1,066	2.82	1,132	3.70	1,671	4.62	2,284

Source: McGraw-Hill Publishing Co.

FIGURE 3—Capital expenditures for pollution control are growing substantially and steadily.

D.D.T.

Another case in point is insecticides.

We all know there are valid arguments against some of them, but in the rush away from them, we can create massive new problems.

For example, in New Jersey, without DDT, more than one million oak trees have been blighted by the Gypsy moth.

Without DDT, forest insects went rampant in Sweden, eating away the raw material of that country's biggest industry.

DDT is estimated to have saved 500 million lives throughout the world.

Without DDT in India there would be 100 million cases of malaria each year instead of a few hundred thousand.

In Ceylon, without DDT, malaria cases went from almost none up to 10 percent of the population.

In Sweden, Ceylon, Venezuela and others without DDT, insects became so devastating that laws against DDT have been repealed or amended.

In parts of the United States, without DDT, insects have made it increasingly difficult to grow lettuce, lima beans, sweet corn, and so on.

Now, in time perhaps, substitutes for present insecticides can be developed and proved out. But in the meantime, most of the substitutes are uncertain or don't even exist.

The whole question is whether by precipitous action we will create an expensive gap between the present means and the later solutions.

Again, this is not a brief for DDT. This is just a way of saying:

"Wait a Minute. Before we act precipitously and ban products for one reason, shouldn't we at least be certain that the cure is not worse than the disease?"

One-Industry Towns

What about one-industry towns? Today a growing number of small communities across the country are fearful that they will lose their life if their single sustaining industry is forced to close, either because of rigid environmental protection controls or because they can't cope with the economic cost of complying.

For example:

In one California community, environmental regulations closed down the biggest industry, a cement plant. The result—175 men out of work.

The same thing happened to a small chemical plant in West Virginia. One hundred and thirty men became jobless.

There are many others.

Isn't it time for someone to say:"Wait a Minute?"

Are the environmental dangers so imminent, so critical, that we have to throw thousands of productive people out of work? Are the dangers so great, so immediate, that whole communities must run through the economic wringer?

Isn't it time that we first measure all the evidence, recognizing legitimate concerns on the one hand, weighing them fairly against valid considerations on the other, then act reasonably and carefully to protect both the environment and the jobs? It may take a bit longer but the end result would be far more satisfactory.

SST

For another example, Congress killed the SST.

The two prototype airplanes could have been used to test the environmental consequences of supersonic flight.

Instead, forty thousand jobs were lost, along with an estimated $450 million in wages and other benefits together with losses in research, technology, aircraft leadership and foreign trade—all immeasurable.

Shouldn't we as a nation have said "Wait a Minute?" Are we so afraid to build just two experimental airplanes that we would willingly sacrifice thousands of jobs, jeopardize the economic health of an entire city, forego the technological advantage of an entire industry, and deny major benefits to our balance of payments?

Isn't it time we weigh our potential against the risk in every reasonable case?

Pipeline

What about the Trans-Alaska pipeline?

Again, people have said: "Let's not build it because of the possible adverse consequences to the environment."

No one suggests that we ignore these possible dangers. Everyone agrees that we must take every precaution to protect the environment.

But there is another side of the coin—the nation's need for the oil and the benefits to Alaska.

Isn't it time somebody says on things like this, "Wait a Minute?"

We already have the technological means to provide reasonable protection against dangers to the Alaskan environment. Are we so afraid of what might happen that we will sacrifice the enormous new sources of oil we need for our homes, our cars, our jobs, our country? Will we sacrifice potential jobs for thousands of people who would be employed in the shipping industries, in Alaska and elsewhere? Will we turn our backs on all of the economic benefits to that state and to the country?

The environmental risks are recognized, but isn't it time we recognize that other considerations must also be taken into account in the national interest?

Emission Standards

And what about the tougher emissions standards for transportation? Certainly they should be sought and should be achieved.

But—wait a minute—in the past decade the amount of hydrocarbons given off by an automobile has already been reduced by 80 percent, carbon monoxide emissions by 70 percent. And with existing capabilities, these improvements can continue in an orderly way.

But a mandatory standard of the Clean Air Act demands a 90 percent reduction below the remaining levels by 1975.

ELECTRIC UTILITY SALES, BILLIONS OF kwhr*

	RESIDENTIAL	INDUSTRIAL	COMMERCIAL	OTHER	TOTAL
1971	482.0	577.6	339.2	62.9	1461.7
1972	519.0	620.2	364.7	68.1	1572.0
1973	560.0	675.6	395.7	74.2	1705.5
1974	604.0	727.6	429.3	80.0	1841.7
1975	648.0	779.9	461.5	88.6	1978.0
1980	930.0	1050.0	674.0	149.6	2803.6
1985	1205.0	1380.2	959.0	276.5	3820.7
1990	1700.0	1788.0	1314.0	572.7	5374.7

*Electrical World, Sept. 15, 1971

FIGURE 4—These figures show the sharply increasing demand for electrical generating capacity. If capacity does not maintain pace with demand, a serious electrical shortage will soon become apparent.

For hydrocarbons, according to experts, that level is as much as foliage gives off in the average yard of the average American home in the average suburb.

The same experts estimate that every car would have to be parked for two days after getting its tank filled—literally—because gasoline going from the pump to the car gives off at least twice the daily allowable hydrocarbons for that car.

Spreading one ounce of house paint releases the same daily quota of hydrocarbons.

Burning up two logs on the fire in the fireplace also emits the daily quota.

The list of examples could go on.

The Environmental Protection Agency has reported to Congress that we simply do not have the technology to comply with some of the standards that have been set in accordance with law.

To try to achieve these standards will result in millions of dollars of added costs, which inevitably have to go into higher consumer prices.

If we try to solve our environmental problems more quickly than our technology permits, not only will we raise costs sharply and suddenly, but we will also increase the number of false steps that we take along the way. The incomplete state of our knowledge leads directly to pitfalls that can't be foreseen.

So isn't it time to say:"Wait a Minute?" Let's weigh each need against the technological realities and let's not impose anymore arbitrary deadlines that can't be met with the technology in sight.

Let's do the things we can do first, while making orderly progress against the others.

Offshore Drilling

What about offshore drilling? Certainly we should take every possible practical step to stop polluting the oceans.

But—"Wait a Minute."

We have learned many things from the unfortunate spill at Santa Barbara.

For one, university studies have proved that oceans are very sturdy systems, able to take far more environmental punishment than man would ever willingly inflict.

Before we make offshore drilling too difficult let's recognize that by the end of this decade, offshore wells will have to provide 30 percent of our oil. And it will also provide much of the low-sulphur fuel that is urgently needed for clean air.

Proposals

As all of you know so well, there are many other matters which we could cite and say: "Wait a Minute." These examples make the point.

Let me give you some specifics as to guidelines in dealing with these matters in the future.

First, a determination of the economic impact should be required before environmental acts are mandated.

The public must know what the costs will be, what the alternatives are, and whether it will get its money's worth.

Second, a technological determination should be prepared in connection with any governmental action, indicating the time required to carry it out.

Third, we must avoid panicky, ad hoc approaches to the problems of air, land and water pollution, and develop feasible, long-range plans to deal with them on a balanced basis of regular, gradual improvements, always with consideration of the public interest and of the economic and technological factors involved.

Fourth, government should study whether companies and industries can finance the improvements that they are being required to make without prejudice to their financial security or their normal capital improvements and consider whether assistance might be required.

Fifth, the Congress should be urged to support all of the President's environmental plans relating to other than the business areas, so that industry's progress will be matched by progress in municipal disposal and other nonindustrial pollution problems.

Sixth, coordinated methods should be developed for governments to reach prompt conclusive decisions on power plant locations, as proposed by the President, in order to end those critical delays.

And finally, antitrust attitudes should be reviewed to determine the possibility of cooperative industry attempts, working together to resolve environmental problems.

Observations

Let me add this set of simple observations before I finish.

First, none of the major problems we face can be resolved instantly, all of them are too complex. They call for long-range programs and careful consideration of priorities and financing.

Second, business alone cannot be held responsible for all of our pollution. The burdens of responsibility and cost must be shared by all levels of government, by agriculture and by the public.

And third, the technology we need in order to solve our problem must be developed in many fields. We have a tremendous flow of uncoordinated, uncertain, imprecise data about the environment, and industry faces a severe shortage of environmental engineering specialists.

Fourth, we have to achieve greater conformity of state and local actions dealing with pollution control before we bog down the whole country in conflicting regulations and deadlines.

Mankind

Finally, we have to recognize that even our man-made problems, in some instances, are essential to satisfying human existence on this planet. After all every new birth brings us instantly a new polluter. But even the most ardent of the environmentalists have yet to call for "no new starts" there.

Here again I suppose we could say: "Wait a Minute."

But what I am talking about is the necessity to recognize that the pollution problem exists in a real world, and it calls for balance and objectivity.

I can reduce it all to absurdity.

If we had no cars on the street, there would be no automobile pollution.

If we built no power plants, we would have no pollution from utilities.

If we washed no clothes we would have no pollution of our waterways, and so on.

But what kind of country would we have left?

The line between that kind of nonsense and the kind of sense we need to resolve the problem requires a sense of reality in dealing with the economic and technological factors, and with the impatience of those who would like to clean up the country overnight.

Conclusion

The time has come to bring these things into focus and stop overheating the view that we are killing ourselves today.

Without pause or equivocation, we must continue to halt pollution of the world, but we must do so realistically, soundly.

This point of view is supported by people like Dr. Philip Handler, President of the National Academy of Sciences, who not long ago said this: "My special plea is that we do not, out of a combination of emotional zeal, ecological ignorance, and romanticizing about the 'good old days' that never were, hastily substitute environmental tragedy for existing environmental deterioration. Let's not replace known devils by insufficiently understood unknown devils."

So all we seek fundamentally in these considerations is a balance of values, a weighing of proper priorities, a measuring of the costs against the benefits.

And, gentlemen, if we approach our problems in that spirit of balance and fairness, we can meet our ecological needs, clean up the country and do so without undue economic risks for anyone, all within the framework of continued technological progress.

That is the way I think we ought to do it.

Secretary of Commerce Maurice H. Stans—the Nation's 20th Secretary of Commerce—is an initial member of President Nixon's Cabinet. He has brought to this position several years experience, both in private business and Federal service. A CPA and an investment banker by profession, Mr. Stans served the Eisenhower administration in a variety of capacities that led to his appointment in 1958 as Director of the Bureau of the Budget, a post he held until 1961. Just prior to being named to his cabinet position, Mr. Stans was president of the investment banking firm of Glore Forgan, William R. Staats, Inc.

Mr. Stans received his college education at Northwestern and Columbia Universities, and holds honorary degrees from several colleges and universities.

people serving you . . . . . .

PROFILES

Alan T. Canham is the BETZ man on the scene in the East New York District.

Born and raised in North Vassalboro, Maine, Al received his degree in mechanical engineering at Stevens Institute of Technology where he was elected to Tau Beta Pi, the National Engineering Honor Society.

Al joined BETZ in 1959 as a sales and service representative to New York State's pulp and paper industry. Successful duty in this capacity earned him promotions to several other responsible positions, including production management and staff engineering, and most recently, sales administrator and training director. It was from this later spot that Al was promoted in 1969 to district manager and returned to the Empire State to head the East New York District.

Al is a member of the Technical Association of the Pulp and Paper Industry, the Paper Industry Management Association, and the National Association of Plant Engineers.

With his wife Hazel, and their three children, Andrea age 15, Anson age 13, and little Jennifer age 3, Al makes his home in Syracuse, New York. In his spare time, Al enjoys reading, golf and gardening.

Stephen R. Graham, newly appointed manager of the Jacksonville District, is a son of the South returned home.

A native of Ponchatoula, Louisiana, Steve received a BS in chemistry from Southeastern Louisiana College in 1953. After that, he first worked in the mining industry and later in a research post with a Louisiana paper mill.

Steve joined BETZ in 1958 as a district engineer and was promoted to manager of the Arkansas District in 1960. In 1968, he assumed managerial functions in the Northern New Jersey District and was named to his present position early this year. He is now responsible for Alabama, Southern Georgia and Northern Florida.

Steve is active in the Technical Association of the Pulp and Paper Industry, the American Chemical Society, the Water Pollution Control Federation, and the National Association of Corrosion Engineers.

Steve spends as much time as possible with his wife and four daughters —Pat, Jean, Stephanie, and Carol. He also makes time to fly, camp, canoe, and involve himself in the performing arts.

PS. . . pollution/solution

PROBLEM

A refractory brick manufacturer was under the gun to implement immediately a control program to conform with state air quality requirements.

SOLUTION

The manufacturer called in **BETZ Environmental Engineers, Inc.** to conduct their emission testing program and make recommendations for control.

B.E.E promptly started an intensive two week, on-site sampling program to measure actual emission concentrations—both gaseous and particulate—coming from over twenty different production areas. All their sampling procedures and equipment conformed to the United States Environmental Protection Agency's testing procedure guidelines, as outlined in the August 17, 1971 Federal Register, therefore validating B.E.E results with the state regulating body concerned.

After studying the test results, B.E.E recommended a louvered ducting system to carry intermittent gaseous emissions to a wet scrubber. A dry mechanical collector to handle the particulate emissions was also recommended.

Results and recommendations are now being reviewed by the client. Because of their in-depth design capability, B.E.E is in an excellent position to still further help their client meet the state requirements. They can provide detailed engineering design . . . including complete control equipment specifications and drawings for field construction . . . right through to start-up and operation supervision.

Because of fast action and accurate testing methods, the client is well within the control program procedure schedule outlined by the state regulating body, and well on their way to a final solution of their emission problem.