ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
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Rural Alaska
Community Action Program, Inc.

RESOLUTION # 86 - 31

ENTITLED: URGING THE CREATION OF A REVOLVING LOAN FUND FOR RURAL RESIDENTS WHO WANT TO PURCHASE HIGH EFFICIENCY HEATING EQUIPMENT.

WHEREAS, high efficiency heaters and burners are a proven and very cost-effective method of reducing fuel consumption and thus energy bills, and

WHEREAS, the energy savings generated from the installation of these heaters and burners would enable home-owners to pay back loans in a very short period of time, and

WHEREAS, many rural residents have very limited income and are not able to spend large amounts of money for non-essential or non-emergency items, and

WHEREAS, bank loans and other conservation loan programs have not been effective in rural Alaska,

now, therefore, be it

RESOLVED: that the Board of Directors of the Rural Alaska Community Action Program urges the Governor and the Legislature of the State of Alaska to establish a rural Alaska low-interest revolving loan fund for the purchase of high efficiency oil heating equipment, and

be it further

RESOLVED: that this program be administered by the Department of Community and Regional Affairs through statewide social service agencies and/or regional non-profit organizations.

ADOPTED this 17th day of December, 1986 at the Annual Meeting of the Board of Directors held in Anchorage, Alaska.

Gordon Jackson, President

Jeanine Kennedy, Executive Director

Rural Alaska Community Action Program, Inc.

RESOLUTION #86 - 38

ENTITLED: CALLING UPON THE GOVERNOR AND LEGISLATURE OF THE STATE OF ALASKA TO CONTINUE STATE FUNDING OF THE STATE CONTRIBUTION TO THE LOW-INCOME WEATHERIZATION PROGRAM

WHEREAS, reductions in government expenditures will have a significant negative impact on rural Alaskan communities and individuals, and

WHEREAS, fuel prices in rural Alaskan communities are among the highest in the nation, and

WHEREAS, energy use for home heat in rural homes is high due to poor construction and inappropriate levels of insulation, and

WHEREAS, approximately 75% of rural residential energy use is for space heat and a high proportion of household income is in many areas of the state spent on home heating oil, and

WHEREAS, low-income recipients of weatherization have realized significant reductions in energy use and savings in home heating cost and improved levels of comfort, and

WHEREAS, money spent in rural communities by the weatherization program have the additional benefits of creating employment, stimulating local economies, improving housing stock, and reducing energy consumption, and

WHEREAS, only approximately 15% of the eligible homes in the state have been weatherized, and

WHEREAS, contractors have increased their ability to provide high quality weatherization, and

WHEREAS, the merits of the weatherization program compare favorably with other government funded energy programs, and

WHEREAS, adequate funding of this program is critical for effective operation of the program in rural Alaska;

now, therefore, be it

Administration • P.O. BOX 200908; ANCHORAGE, AK 99520 • (907) 279-2511

RESOLVED: that the Board of Directors of the Rural Alaska Community Action Program, Inc. supports continued funding of the low-income weatherization program at or above current funding levels.

ADOPTED this 17th day of December, 1986, at the Annual Meeting of the Board of Directors held in Anchorage, Alaska.

Gordon Jackson, President

Jeanine Kennedy, Executive Director

RESPONDING TO HIGH ENERGY COSTS IN RURAL ALASKA

A COMPREHENSIVE RESIDENTIAL CONSERVATION APPROACH

or

REDUCING POWER COST EQUALIZATION (PCE)

Through

WEATHERIZATION
HEATING SYSTEM RETROFITS
LIGHTING RETROFITS
FREEZER/REFRIGERATOR REBATES

Prepared By:

Conrad Zipperian
Energy Program Director
Rural Alaska Community Action Program

December, 1986

THE IDEA:

Use several energy conservation measures to greatly reduce rural energy consumption and thus make subsidies unnecessary and/or less crucial as a means of equalizing the costs of energy throughout the state.

Conservation measures would include:

1. All #1 priority weatherization measures.
   (Goal: Reduce heating oil costs 10-25%.)
2. A new high efficiency heater or burner.
   (Goal: Reduce heating oil costs an additional 25%.)
3. A complete high efficiency lighting conversion.
   (Goal: Reduce lighting costs 40%.)
4. A $500 rebate per appliance to PCE clients that replace existing freezers and refrigerators with high efficiency models.
   (Goal: Reduce appliance operation costs 60%.)

SUMMARY:

The primary goal of this project is the reduction of total energy consumption and costs in rural areas, thus providing rural residents with secure, long term relief from high energy costs in a way that is not threatened by political or economic trends and does not create a drain on the resources of the remainder of the state.

The secondary goal is the gradual elimination or significant reduction of Power Cost Equalization program expenditures. (Save the State of Alaska money.)

These conservation measures would make total residential heating and electrical costs for most households the same or less without the PCE subsidy as they currently are with the subsidy.

The project would initially require capital expenditures but these monies could be borrowed and/or combined with other funds such as those from the federal weatherization program, the Low Income Household Energy Assistance Program, or the oil overcharge restitution fund.

Two plans are evaluated in this paper:

First, install the conservation measures wherever feasible. Then,

Plan A. provide no further PCE benefits to households that participate in the program.
or
Plan B. continue to provide PCE benefits to all eligible households. (Those who participate will have lower electrical consumption as well as lower heating oil consumption.)

Plan A. would reduce PCE by $13,255,920 in 8 years.

Plan B. would reduce PCE by $5,598,184 in 8 years.

The program would serve PCE clients who have previously been served by the weatherization program as well as those that have not yet been served. A total of 15,504 households would be served.

PROBLEM STATEMENT:

Energy consumption in rural areas of Alaska is high. Energy costs are also high. Thus energy expenditures are high and represent a large percentage of the dollars spent by rural Alaskans.

Government subsidy programs which reduce costs but do not reduce consumption make rural residents vulnerable to political and economic changes which may result in the reduction or elimination of the subsidy.

Long range solutions to the problem of high energy bills for rural Alaskans must include reducing energy consumption without adversely affecting the quality of life. Though alternative methods of heating buildings and producing electricity exist and may have application in Alaska, improving end-use efficiency appears to be the most cost-effective and reliable approach for the present and certainly supports efforts to use alternative energy strategies.

Though to date no evidence has been presented which conclusively proves that PCE has increased rural consumption of electricity, certainly it has not fostered reduced consumption.

The PCE program provides a significant and important means of easing the burden of high rural energy costs and a way of giving a "piece of the action" of state energy expenditures to rural areas. However, the state's willingness to fund PCE may eventually end. Rural Alaskans who want to be self-sufficient and free from the uncertainties of Alaska's politics and boom-or-bust economics deserve a better program.

PCE should not be a part of the state's generosity to rural areas during "boom" times and then be withheld or reduced in "bust" times. This is not good policy for the State nor for rural residents.

The challenge in this period of decreasing state spending will be to replace or reduce PCE in a way that does not create excessive hardship for those who have come to depend upon it nor leave them vulnerable in the long run.

OTHER OPTIONS?

Proposals which merely reduce the amount of subsidy without including conservation strategies will ultimately have a negative impact on rural areas. State PCE dollars that are removed from the rural economy will cause further revenue shortfalls to homeowners, businesses and/or local governments. Withdrawing state dollars will adversely affect the standard of living of areas of the state that are currently the poorest and most in need of economic assistance and development.

Reducing the maximum number of kilowatts eligible for subsidy may help promote conservation. However, the State will not save much money

unless the current 750 KWH ceiling is drastically lowered. (The rural residential average use is about 250 KWH per month.) If it is set higher than 250 KWH it will likely not affect many PCE clients. If it is set lower than 250 it will impose a hardship on rural people unless there is a viable means for them to finance energy conservation. (Such as a zero interest loan fund.)

Households and rural governments that already have very little money will be forced to stop using energy for basic needs. Though some frivolous use occurs, most of the energy used in rural Alaska heats homes, provides light, cooks food, freezes food, and provides subsistence related transportation.

The state needs an approach which will reduce or eliminate the NEED for subsidies to rural low income residents of the state. Long range efforts to develop rural economies and increase cash income are worthwhile. However, opportunities for economic development appear very limited and subsistence will likely continue to be the primary way of life for cash poor villages in the foreseeable future.

Conservation strategies have proven effective in other parts of the world and will work as well or better in rural Alaska.

DETAILS OF THIS PROPOSAL:

The attached sheet provides calculations which support this approach. These are estimates and based on critical assumptions. Everyone who is served by the program will clearly be better off than they would be if PCE is merely gradually reduced and finally discontinued. However, not everyone will benefit as much as this example. Others will benefit more.

The program would augment the existing weatherization program. Rural residential energy consumption would be reduced to the degree that the energy bill for both heating and lighting would be lower without Power Cost Equalization than it currently is with the PCE payments for electricity.

This program could be operated through the State agency which operates the low-income weatherization program. Prior to 1986 the State provided funds and contracted with villages and other rural agencies to weatherize homes. Funds came from both federal and state sources and guidelines were established by DC&RA. The same could be done with this expanded program.

Regional non-profit agencies and existing weatherization contractors could be mobilized quickly to implement this program in rural Alaska. The program would provide jobs in regional centers as well as villages.

This conservatively calculated example uses an average total energy cost of $1521.00 per year with the current PCE payment. $285.00 of this is the estimated cost of electricity with PCE. (The Alaska Village Electric Coop. - AVEC - cost is $.39 per kWh.) Consumers pay $.095 per kWh. AVEC indicates that their average residential customer

usage is 250 kWh per month. The table indicates how 250 kWh might be used in a typical rural village home.

Fuel costs and consumption vary greatly in rural Alaska. This example is based on $1236.00 per year for heating fuel. Conservation measures would reduce heating costs by 43%. A major portion of this reduction will result from heating system improvements.

The program would also reduce electrical consumption by 41%. This would be accomplished by replacing all existing lights with high efficiency bulbs, or electronic ballasts and watt-saver tubes.

In addition, homeowners would be given a rebate if they replaced existing low efficiency freezers and refrigerators with high efficiency models. Only households which had the appliance during the time of the program survey would be eligible for the rebate. The rebate certificate would be given to the vendor when a new high efficiency appliance was purchased. Funds would be sent to the vendor, not the homeowner.

Households which had received prior weatherization would receive a minor weatherization upgrade, a heating system retrofit, a lighting retrofit, and the appliance rebates.

After the retrofit, the total energy bill would be $1395.00 without the PCE subsidy or $872.00 if PCE payments continue. If PCE payments are discontinued after they are served by the program, total energy costs are calculated to be $125.00 per year less than before the retrofit.

If the state chooses to continue the PCE program indefinitely, it would still be wise to fund this program. It would be a good long range investment that would reduce consumption and provide substantial economic benefit to homeowners. (Approximately $650.00 savings per year per household.) The program would also provide jobs and thus be an additional stimulus to the rural economy.

SUMMARY OF THE NUMBERS:

Total Household Energy Bill With PCE Before The Program	= $1521.00
Total Household Energy Bill After The Program Without PCE	= $1395.00
Cost To Provide The Program Per Non-Wxed. Household	= $3725.00
Cost To Provide The Program Per Pre-Wxed. Household	= $1675.00

THE FINANCING PLANS:

Securing the funds to invest in a major conservation project could come from a variety of sources, including loans or bonds. This example does not evaluate the cost of such financing.

The goal of these financing schemes is to complete the project in an eight year period. Work would be done systematically on a community-by-community basis. A total of 15,504 households would be served. (There are approximately 22,000 PCE recipients.)

Each year, $6.3 million would be spent on the project. After a community is served, every household in the community would either receive no more PCE (Plan A) or PCE benefits would be reduced (Plan B).

PCE savings generated by the program could be used to pay for the project or to reduce PCE expenditures. The total cost of the conservation project would be $50.6 million.

PCE annual expenditures would be reduced from $18 million to $4.7 million (or 0) under Plan A. or from $18 million to $12.4 under B.

The total cost of the combined PCE and conservation project over the eight year period would be $148 million under Plan A. and $175 million under Plan B. The eight year cost of the PCE program alone at the $18 million level would be $144 million.

UTILITY CONCERNS:

Rural utility companies face many problems, some of which the Power Cost Equalization program has helped minimize. With the subsidy typically low income households can afford to buy electricity in larger quantity. Bills are lower and more likely to be paid. If homeowners don't pay, the utilities still receive their payment from the State. PCE also allows utilities to implement more effective management and generator maintenance/upgrading programs since they have State funds to help pay for these efforts.

A persistent problem in rural communities is generator inefficiency caused by partial loading. Fuel is wasted and equipment is strained when not operated at an ideal load. This problem primarily occurs in summer months when village residents use less electricity and when school buildings are closed. This problem already exists but could become more troublesome if conservation measures are utilized in some villages.

Though this situation may create some initial problems it should not thwart conservation efforts. The primary motive for State involvement should be to provide relief to rural consumers from extremely high energy costs. In trying to achieve this goal, the State should promote strategies which supply energy services at the least cost to the consumer and to the State. Encouraging or allowing unnecessary consumption should not be used as a solution to the partial loading problem.

The partial loading problem deserves further study and a creative search for potential solutions. These solutions should be evaluated in conjunction with conservation efforts using a life-cycle cost analysis.

In the long view - and Alaska must now think in such terms - efficient energy production and efficient energy consumption should go hand in hand and will certainly prove to be the most economical approach.

AND LIGHTING RETROFIT AND A FREEZER/REFRIGERATOR REBATE PROGRAM

POSSIBLE APPLIANCES	COSTS BEFORE RETROFITTING POWER USED (KWH/MTH)	W/PCE .095	NO PCE .39	COSTS AFTER RETROFITTING POWER USED (KWH/MTH)	W/PCE .095	NO PCE .39
Coffee Maker	5	.48	1.95	5	.48	1.95
Hairdryer	1	.10	.39	1	.10	.39
Toaster	3	.29	1.17	3	.29	1.17
Clock	2	.19	.78	2	.19	.78
Freezer	100	9.50	39.00	38	3.61	14.82
Color TV	35	3.33	13.65	35	3.33	13.65
Music	8	.76	3.12	8	.76	3.12
Hot plate/micro	10	.95	3.90	10	.95	3.90
Misc appliances	11	1.05	4.29	11	1.05	4.29
Lighting	75	7.13	29.25	35	3.33	13.65
Variable	0	.00	.00	0	.00	.00
Monthly	250	23.75	97.50	148	14.06	57.72
Annual	3000	285.00	1170.00	1776	168.72	692.64
Heating Cost		1236.00	1236.00		703.00	703.00
TOTAL ENERGY COST		1521.00	2406.00		871.72	1395.64

I. RETROFIT COSTS NON-WXED		II. RETROFIT COSTS PRE-WXED	
Lighting	125.00	Lighting	125.00
Heating	900.00	Heating	900.00
Weatherization	2200.00	Upgrade-Wx	150.00
Appl. Rebate	500.00	Appl. Rebate	500.00
I. Total	3725.00	II. Total	1675.00

A. ANNUAL SAVINGS - PCE ENDS		B. ANNUAL SAVINGS - PCE CONTINUES	
State of Ak.	885.00	State of Ak.	361.08
Homeowner	125.36	Homeowner	649.28

A. Payback to State		B. Payback to State	
I. Payback	4.21 Years	I. Payback	10.32 Years
II. Payback	1.89 Years	II. Payback	4.64 Years

FUNDING ANALYSIS

PCE Households	12000	PCE Households	3504
Total Cost	44700000.00	Total Cost	5869200.00
GRAND TOTALS	15504 Served	TOTAL COST	50569200.00

CONSIDERATIONS:

1. Consumers who use more than 257 KWH per month will not receive a net benefit from the program.
2. Figures assume all #1 Wx priorities can be done and a high efficiency heater can be installed.
3. Rebate program would require proof of existing appliance.

REDUCING PCE WITH WX, HEATING AND LIGHTING RETROFIT PLUS APPLIANCE REBATE.

PLAN A. REDUCE THE NUMBER OF PCE RECIPIENTS

NINE YEAR CASH FLOW — 1500 homes per yr. at $3725.00 ea. = $5,587,500 per yr.
438 homes per yr. at $1675.00 ea. = $733,650 per yr.

PCE Payments Will End
After Conservation.
PCE Will Be Reduced
By: 15,504 Households
13,255,920 Dollars Per Year After Year 8.

ANNUAL CONSERVATION PROJECT COST = $6,321,150
TOTAL CONSERVATION PROJECT COST = $50,569,200

CASH FLOW ANALYSIS (In Millions.)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
PCE to Cons.	0	1.66	3.32	4.98	6.64	8.3	9.96	11.62	0
Project Cost	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	0
PCE Cost	18	16.34	14.68	13.02	11.36	9.7	8.04	6.38	4.72
PROJECT COST	24.32	22.66	21	19.34	17.68	16.02	14.36	12.7	0
INCOME*	3	3	3	3	3	3	3	3	0
SOA COST	21.32	19.66	18	16.34	14.68	13.02	11.36	9.7	4.72

PLAN B. REDUCED PCE PAYMENT TO CURRENT RECIPIENTS

NINE YEAR CASH FLOW — 1500 homes per yr. at $3725.00 ea. = $5,587,500 per yr.
438 homes per yr. at $1675.00 ea. = $733,650 per year

PCE Will Continue
After Conservation.
PCE Will Be Reduced
BY: 5,598,184 Dollars
Per Year After Year 8.

ANNUAL CONSERVATION PROJECT COST = $6,321,150
TOTAL CONSERVATION PROJECT COST = $50,569,200

CASH FLOW ANALYSIS

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
PCE to Cons.	0	.7	1.4	2.1	2.8	3.5	4.2	4.9	5.6
Project Cost	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	0
PCE Cost	18	17.3	16.6	15.9	15.2	14.5	13.8	13.1	12.4
PROJECT COST	24.32	23.62	22.92	22.22	21.52	20.82	20.12	19.42	0
INCOME*	3	3	3	3	3	3	3	3	0
SOA COST	21.32	20.62	19.92	19.22	18.52	17.82	17.12	16.42	12.4

*PROJECTED INCOME = $1 MILL. - OVERCHARGE FUNDS, $1.1 MILL. DOE WX, $900 TH LIHEAP.

REVOLVING LOAN FUND
TO PROMOTE EFFICIENT USE OF HEATING OIL IN RURAL ALASKA

SUMMARY: Establish a revolving loan fund which would enable rural residents to borrow up to $1000 to purchase either a high efficiency heater or a high efficiency (retention- head) burner.

The loan fund should be administered by the Department of Community and Regional Affairs. Contracts to approve loans and collect payments should be given to rural oriented social service agencies or rural municipal governments.

Loans should be provided for a two and one half year period at five percent interest.

The size of the fund would depend upon the approach:

A single agency fund of $100,000 could reach 225 households in an eight year period.

A statewide multi-agency fund of $500,000 could reach 1164 households in an eight year period.

PROBLEM STATEMENT:

High heating bills remain the greatest drain on income for rural residents. In times of economic distress, rural residents have the ability to cut back and/or do without many items that require cash. Heat, however, is essential and in many areas of the state heat is synonymous with heating oil which can only be obtained with cash.

Various programs help rural residents pay energy bills. The Low Income Household Energy Assistance Program (LIHEAP) and the Power Cost Equalization (PCE) program provide significant help for large numbers of rural residents each year. The Low Income Weatherization Program has gradually helped lower consumption and energy bills in many communities.

Even with these programs, many low income rural residents must use large amounts of their very limited cash to buy heating oil. This situation contributes to the poverty of the individual families and the community as a whole.

Money spent for oil has very little positive effect on the local village economy. Dollars are "exported" to oil companies and only a small percentage circulates in the village or state to provide jobs and other economic benefits.

This situation could be very positively changed if heating equipment in rural areas was improved. New high efficiency heating equipment could reduce oil consumption in thousands of rural homes by thirty to fifty percent!

The most common type of oil heater in rural Alaska is the drip pot burner. Some recently built HUD houses have furnaces or boilers. Virtually all of the drip pot burners could be replaced with high efficiency heaters (Monitors or comparable) and many oil burners in the furnace and boilers systems could be replaced with high efficiency burners.

<u>These replacement units could pay for themselves through reduced energy bills in one to three years.</u>

The cost of these high efficiency units ranges from $500 to $1000. Though some rural homeowners have purchased these items on their own, many do not have sufficient capital or are unwilling to spend such a large amount of their limited funds for something that is not an essential need. (A heater is essential but replacing it is not unless it breaks.) Another factor is the fact that many people still do not know enough about the new technology.

The need for efficient heating equipment in rural Alaska is very significant. The Alaskan Statewide Housing Needs Study, Phase I Report, November, 1982, indicated that there were 7,913 occupied housing units in "remote" areas of the state. The study provided not data about the number of drip pot burners. However, RurAL CAP research and experience suggests that drip pot burners or inefficient burners are used in approximately fifty percent of these homes.

The study indicated that there were 28,355 "rural" housing units in Alaska in 1980. It would be safe to conclude that fifteen to twenty-five percent of these use drip pot heaters or inefficient burners.

The Department of Energy weatherization program does allow replacement of drip pot heaters and oil burners. However, this measure has only been authorized in since 1986. In addition, though many people could use the new technology, limited funds often prevent the program from supplying the heaters. Though several items can qualify under the energy saving guidelines, comfort is often a consideration that dictates installing new windows and doors instead of replacing the heating unit.

It is difficult to predict the number of rural people who would use a loan program. Previous energy conservation loan programs have not served rural people well because they were difficult to apply for and to obtain since many people could offer no collateral. Lack of information has also been a factor.

Borrowing money has also been inconsistent with native cultural habits though many do get loans to purchase commercial fishing equipment.

PROPOSAL BENEFITS:

A low interest revolving loan fund would enable people to significantly reduce their heating oil consumption and save money. In order to be most effective, the program should be operated through agencies that

have regular on-site contact with rural people. This would ensure that the program was well publicized. It would also help ensure repayment of the loans.

Quite likely, the program would have a high default rate. Even so, the state should view the program as a way to help rural residents deal with high energy bills in a more productive way than by giving grants or subsidies.

A loan program would have the additional benefit of giving rural people a degree of ownership of their problem. It would provide an incentive to take responsibility for their situation and provide a way for them to help themselves.

FINANCIAL ANALYSIS:

Two scenarios would be feasible. One option would provide a $100,000 fund to one agency. A second option would appropriate $500,000 which should be distributed to several agencies.

The attached rough calculations evaluate a ten year period. After the eighth year loans would not be made. Collection efforts would continue until the end of the tenth year. All remaining funds would be returned to the State and the program would end.

These calculations assume the following:

1. Each loan would be for $1000, 2.5 years, at 5% interest. Repayment of the loan would be monthly.

2. The fund would be banked so as to draw interest at 10%.

3. Costs of operating the program would be 15% of the amount loaned for that year. After the eighth year it would be a fixed amount.

4. All loans would be made at the beginning of the year. (This would likely not be the case but it simplifies calculations.)

5. The default schedule would be: 50% repaying the complete loan.
   15% repaying 75% of the loan.
   15% repaying 50% of the loan.
   10% repaying 25% of the loan.
   10% repaying 0% of the loan.

Given these assumptions, a $500,000 fund would enable the state to finance approximately 1164 units for a total cost of $385,281.00. A $100,000 fund would finance approximately 225 units for a total cost of $82,125.

A larger program could be instituted if demand for the loans warranted it and the state chose to do so.

STEVE COWPER, GOVERNOR

OFFICE OF THE GOVERNOR

OFFICE OF MANAGEMENT AND BUDGET
DIVISION OF POLICY

P.O. BOX AD
JUNEAU, ALASKA 99811
PHONE: (907) 465-3568

April 1, 1987

The Honorable Dave Donley
Representative
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

SUBJECT: HB 182 -- Power Cost Equalization

Dear Representative Donley:

At the March 26 Labor & Commerce Committee hearing on HB 182, Representative Koponen requested that our office provide additional information and comments on several issues raised during the hearing.

Current Rural Power Rates

Attachment 1 provides a list of power rates for residential and commercial customers of regulated rural utilities. Rate information for unregulated utilities is not readily available; however, the rates shown in Attachment 1 provide a good sample of utilities throughout the state.

The first table in Attachment 1 is from the Alaska Power Authority and shows total power costs, rather than customer rates; PCE payments are not reflected in these figures. PCE rates are shown in the second table, provided by the Alaska Public Utilities Commission.

An important point concerning customer rates under the PCE program is that customers pay more than the 8.5 cents per kWh specified in the PCE statutes. This 8.5 cent figure applies to the calculation of the PCE rate paid to utilities, not directly to the customer rate. The average rate paid by residential customers under the PCE program is about 13 cents per kWh.

ARECA PCE Proposal

At the March 26 hearing, Mr. Ken Johnson, representing the Alaska Rural Electrical Cooperative Association (ARECA), proposed an

alternative method of allocating reduced funding for the PCE program. Mr. Johnson's proposal included the following elements:

- Raise the current PCE floor of 8.5 cents per kilowatt-hour (kWh) to 11.25 cents per kWh, which Mr. Johnson indicates is the current rate paid by Fairbanks residential customers.

- If the previous step is not sufficient to meet funding restrictions, then reduce the 95 percent multiplier in present law to 90 percent.

- If the previous two steps are not sufficient to meet funding restrictions, reduce the current 750 kWh per month cap for residential and commercial customers to 500 kWh.

The Alaska Power Authority (APA) has estimated the funding reductions which would result from each of the elements in the ARECA proposal. For purposes of comparison, HB 182 would reduce the cost of the PCE program by about $5.8 million.

Raising the PCE floor from 8.5 cents per kWh to 11.25 cents per kWh would reduce the funding requirement by about $3.9 million.

Reducing the 95 percent multiplier to 90 percent, with a PCE floor of 11.25 cents, would save about $600,000, for a combined savings of about $4.5 million. Thus, in order to meet the PCE funding level included in the Governor's FY 88 budget, an additional $1.3 million would have to be deleted from the program. According to ARECA's proposal, the next step would be to lower the 750 kWh per month cap to 500 kWh. However, lowering the consumption cap would result in a program cost reduction of approximately $2.7 million -- much more than the $1.3 million required.

It appears that in order to match the Governor's proposed funding level, the most workable variation of the ARECA proposal would be to raise the PCE floor to 11.25 cents and lower the consumption cap from 750 to 500 kWh per month. This would produce a total cost reduction of about 5.6 million. If necessary, the 95 percent multiplier could be reduced by one or two percent to match the proposed funding level. If the consumption cap were not reduced to 500 kWh per month, the multiplier would have to be reduced to about 85 percent to match the proposed funding level.

Rate Impacts of the ARECA proposal

The ARECA proposal would result in what we feel are unacceptable rate impacts for residential customers. Raising the PCE floor to 11.25 cents would require a rate increase for all customers of 2.75 cents (11.25 - 8.5). At an average residential rate of 13 cents per kWh, this would amount to a rate increase of 21 percent.

The effect of reducing the 95 percent multiplier would vary depending on the PCE rate of each utility. Using the Alaska Village Electric Cooperative (AVEC) as a mid-range example, reducing the multiplier to 85 percent would require an additional rate increase of about 16 percent, for a total rate increase of about 40 percent. If the consumption cap were reduced to 500 kWh while leaving the multiplier at 95 percent, rate increases for most residential customers would be limited to the 21 percent required by raising the floor to 11.25 cents.

In comparison to HB 182, the ARECA proposal favors large commercial customers and community facilities at the expense of small residential customers. We are flexible in our approach to reducing PCE funding; however, we feel strongly that any changes made to the program must protect those customers who need the program the most. These are the small residential customers with limited cash incomes, who might use only 2-300 kWh per month. Under the ARECA proposal, these customers would face rate increases of 20 - 40 percent.

The "200 kWh PCE" Proposal

Representative Koponen also asked that we comment on the proposal made by Mr. Alan Mitchell, under which PCE customers would be provided free electricity up to a level of approximately 200 kWh per month. While we support Mr. Mitchell's objective of increasing incentives for the use of efficiency and conservation measures, his proposal involves a major redistribution of PCE benefits from larger to smaller PCE customers. For example, a customer using only 200 kWh per month would benefit greatly from this concept, while a customer using 500 kWh or more per month would probably face substantial increases in power costs. This proposal goes well beyond the restructuring of the PCE program in HB 182, and we do not recommend that the proposal be adopted.

The Diesel "Low-Load" Problem

Representative Koponen raised this issue in response to Mr. Mitchell's testimony on the benefits of efficiency and conservation measures. Essentially, the problem is that most diesel generators are designed to operate at relatively high load factors, and at low loads of 20 or 30 percent, fuel efficiency declines and maintenance problems can develop. Representative Koponen expressed concern that conservation measures could increase these problems by reducing load levels.

This is a valid concern which must be considered on a case-by-case basis, depending on the generation capacity and load characteristics of each utility. However, we believe that conservation

measures can play still play a major role in holding down rural power costs, for several reasons. First, although diesel fuel efficiency does decline somewhat at lower loads, with the high cost of fuel in most villages, utilities can still obtain substantial savings by reducing or limiting growth in power demand.

Second, while many rural utilities tend to have oversized generators, others are nearing their generation capacity and will have to acquire additional units unless demand growth can be limited by conservation or other measures. Second, diesel generators are replaced relatively frequently in comparison to the larger power plants used in urban areas. While conservation may not be as effective in a village with an oversized generator, it can enable the utility to purchase a smaller generator to replace the oversized unit when it wears out.

Third, some types of conservation measures can help to reduce the low-load problem. In many villages, this is a seasonal summer problem because loads are high in the winter and low in the summer. By targeting conservation measures at electrical uses which contribute to the winter peak, such as lighting, the wide swings in seasonal demand can be reduced.

The best solution to the low-load problem is the use of two or more generators in series, which allows a utility to use a small generator during its daily or seasonal low points in demand, then bring additional unit(s) as demand increases. This load following procedure is used by most of the larger rural utilities, but is not yet employed by many smaller utilities.

* * * * *

I hope this information is helpful. Please let me know if we can be of further assistance.

Sincerely,

Jack Kreinheder

Jack Kreinheder
Senior Analyst

MEMORANDUM State of Alaska

TO: Jack Kreinheder, Senior Analyst
Office of the Governor
Division of Policy

DATE: March 31, 1987

FILE NO.:

THRU:

TELEPHONE NO.: 261-7210

SUBJECT: Power Cost Equalization Program (PCEP) Analysis of FY88 Funding Requirements

FROM: Gloria Manni, Director
Accounting & Administration

As per your request, the attached schedule summarizes the projected program requirements under decreasing percentages of power cost equalization provided to utilities per kwh sold and in combination with either the existing floor of 8.5 cents per kwh or a floor of 11.25 cents per kwh.

The variance percentages of the subsidy requirement have been calculated on the standard sample group of utilities and applied program wide. Administrative costs are not included in the projections.

The alternative closest to the $14,289.1 program funding in the FY88 Budget of the Governor are achieved by raising the PCEP floor to 11.25 cents per kwh and decreasing the percentage of power cost equalization provided per kwh sold to 85% and 80%.

Please call me if you have any questions.

GM:tg

cc: R.E. LeResche, Director, Alaska Power Authority

8545/DD19/1

Alaska Power Authority

POWER COST EQUALIZATION PROGRAM - FY88
Analysis of Projected Program Requirement
March 29, 1987

% of Power Costs x kwh (1)	Power Costs 8.5 - 52.5¢ x kwh (2)	% Variance From Base	Power Costs 11.25 - 52.5¢ x kwh (3)	% Variance From Base(A)
95	(A) 19951.5	.0	16053.0	80.46
90	18195.8	91.20	15472.4	77.55
85	17180.2	86.11	14311.2	71.73
80	16170.7	81.05	13425.4	67.29
75	15163.1	76.00	12627.3	63.29

ANALYSIS ASSUMPTIONS:

- 750 kwh x mo x customer
- 70 kwh x mo x resident/community facilities
- Decreasing percentages of power cost equalization provided x kwh sold (1)
- Power costs more than 8.5¢ and less than 52.5¢ x kwh eligible for PCEP subsidy (2)
- Power costs more than 11.25¢ and less than 52.5¢ X kwH eligible for PCEP subsidy (3)

Note:

(A) = PCEP subsidy requirements under existing legislation, as presented in the Power Authority original FYC3 budget request

8545/DD19/2

ATTACHMENT 1

1985 Energy Use (Kwh) and Billing Charges (¢/Kwh)

ALASKA UTILITIES BY REGION

Region/Community	Utility	Residential (Average Annual) Use Kwh/Cust.	Residential (Average Annual) Bill $/Cust.	Residential (Average Annual) Charge(1) ¢/Kwh	Commercial/Industrial (Average Annual) Use Kwh/Cust.	Commercial/Industrial (Average Annual) Bill $/Cust.	Commercial/Industrial (Average Annual) Charge(1) ¢/Kwh	TOTAL (Average Annual) Use Kwh/Cust.	TOTAL (Average Annual) Bill $/Cust.	TOTAL (Average Annual) Charge(1) ¢/Kwh
ARCTIC - NORTHWEST										
48 Villages	AVEC	2,777	1,257	45.3	14,007	5,692	40.6	5,962	2,467	41.3
Barrow	BU&EC	4,953	644	13.0	64,157	5,774	9.0	18,981	1,923	10.1
Deadhorse	AUI	0	0	0	656,851	167,431	25.4	656,851	167,431	25.4
Kotzebue	KtEA	6,046	1,377	22.8	52,340	11,149	21.3	14,106	30,794	21.8
Nome	NJUB	5,394	1,041	19.3	29,889	472	15.8	10,604	2,085	19.6
Unalakleet	UVEC	5,198	1,160	22.3	31,930	6,761	21.1	10,759	2,326	21.6
Regional Average		3,967	1,145	33.1	50,722	8,195	21.2	32,927	5,752	29.9
SOUTHWEST										
Aniak	APC	3,787	1,634	43.2	35,310	13,386	37.9	9,165	3,638	39.7
Bethel	BUC	5,079	970	19.1	58,598	9,832	16.8	13,495	2,363	17.5
Cold Bay	G&K	15,276	3,207	21.0	61,537	13,171	21.4	42,371	9,048	21.4
Dillingham	NEC	5,251	1,069	20.4	27,927	5,300	19.0	10,740	2,111	19.7
Egegik	EL&P	3,740	2,131	57.0	7,152	4,076	57.0	4,685	2,670	57.0
Levelock (3)	LEC	3,825	2,173	57.9	12,240	6,391	53.2	6,350	3,123	50.1
McGrath	MGL&P	3,359	1,224	36.4	13,596	5,165	38.0	8,089	3,045	37.6
Naknek	NEA	5,961	1,377	23.1	30,775	7,101	23.1	14,139	3,264	23.1
Napakiak (3)	NHC	3,224	983	30.5	14,425	4,502	31.2	4,214	1,294	30.7
Regional Average		5,106	1,151	23.4	36,089	7,544	24.0	15,808	2,646	22.8
Alaska Average		9,027	801	14.3	74,724	5,916	9.2	19,363	1,693	9.5

NOTE: (1) These charges do not reflect the actual costs to consumers of utilities eligible under the State Power Cost Equalization Program.
(2) Regional averages are weighted by population.
(3) E: Estimated.

1985 Energy Use (Kwh) and Billing Charges (¢/Kwh)

ALASKA UTILITIES BY REGION

(Page 1 of 2)

Region/Community	Utility	Residential (Average Annual) Use Kwh/Cust.	Residential (Average Annual) Bill $/Cust.	Residential (Average Annual) Charge(1) ¢/Kwh	Commercial/Industrial (Average Annual) Use Kwh/Cust.	Commercial/Industrial (Average Annual) Bill $/Cust.	Commercial/Industrial (Average Annual) Charge(1) ¢/Kwh	TOTAL (Average Annual) Use Kwh/Cust.	TOTAL (Average Annual) Bill $/Cust.	TOTAL (Average Annual) Charge(1) ¢/Kwh
SOUTHEAST										
AP&T (Incl. Tok)	AP&T	4,780	789	16.5	22,580	3,424	15.2	11,086	1,679	15.1
Auke Bay	GHEA	11,346	1,639	14.4	39,161	2,741	7.0	14,496	1,923	13.3
5 Villages	THREA	5,227	1,829	35.0	23,563	8,483	36.0	8,925	3,122	35.0
Haines	HL&P	5,833	1,102	18.9	25,966	4,385	16.9	10,666	1,806	16.9
Juneau	AEL&P	12,695	922	7.3	50,858	3,830	7.5	21,019	1,545	7.3
Ketchikan	KPU	9,777	909	9.3	47,818	4,339	9.1	15,836	1,455	9.2
Metlakatla	MP&L	17,186	1,047	6.1	116,395	11,902	10.2	30,709	2,543	8.3
Petersburg	PMP&L	6,414	691	10.8	60,839	6,030	9.9	14,544	1,489	10.2
Sitka	SED	10,997	746	6.8	63,876	4,156	6.5	22,796	1,499	6.6
Wrangell	WML&P	5,611	865	15.4	24,083	2,714	11.3	10,818	1,399	12.9
Yakutat	YPI	7,008	1,339	19.1	62,286	9,964	16.0	14,419	2,498	17.3
Regional Average (2)		10,395	954	10.3	49,376	4,398	9.9	18,055	1,622	9.9
SOUTHCENTRAL										
Kodiak	KdEA	6,037	1,026	17.0	58,947	9,137	15.5	20,108	3,016	15.0
Port Lions	KdEA	3,637	655	18.0	8,909	1,532	17.2	5,065	912	18.0
Anchorage	AML&P	7,360	487	6.6	120,659	7,155	5.9	26,820	1,641	6.1
	CEA	9,658	640	6.4	76,199	4,524	5.9	16,352	1,043	6.4
	MEA	11,762	1,057	9.0	60,711	4,330	7.1	15,965	1,429	9.0
Cordova	CEC	5,688	1,378	24.2	27,538	5,262	19.1	13,346	2,709	20.3
Glennallen	CVEA	4,941	998	20.2	58,965	9,788	16.6	17,673	3,057	17.3
Homer	HEA	10,926	871	8.4	103,728	6,797	6.5	23,690	1,723	7.3
Seward	SES	10,040	1,014	10.1	35,415	3,391	9.5	19,021	1,869	9.8
Valdez	CVEA	7,994	1,223	15.3	69,353	9,952	14.3	20,360	3,025	14.5
Regional Average		9,583	742	7.8	85,587	5,871	7.4	19,505	1,435	7.5
YUKON										
Fairbanks	FMUS	5,862	511	8.7	69,738	6,314	9.1	21,626	1,942	9.0
	GVEA	8,103	871	10.7	71,935	6,710	9.3	15,503	1,548	10.0
Fort Yukon	GZUC	1,841	801	43.5	16,614	5,737	34.5	6,233	2,269	36.4
Hanley Hot Springs	MUC	2,400	573	23.8	6,700	1,670	24.9	3,014	730	24.2
Northway	NP&L	3,057	893	29.2	55,059	14,841	27.0	13,198	3,610	27.4
Tanana	TPC	5,068	1,926	38.0	81,684	29,406	36.0	9,600	3,552	37.0
Regional Average		7,613	812	10.8	69,944	6,627	9.9	16,594	1,650	10.3

ALASKA PUBLIC UTILITIES COMMISSION-ANNUAL REPORT (Fiscal Year Ending 6/30)

SAMPLE MONTHLY RESIDENTIAL ELECTRIC RATES

(As of December 31, 1985 - Fuel Cost Rate Adjustments Included Where Available)

COMMUNITY	100 KWH	500 KWH	1,000 KWH	1,500 KWH	Power Cost Equalization(1)	UTILITY SERVING COMMUNITY
Anchorage	$ 10.43	$ 34.16	$ 63.83	$ 93.49		Municipal Light & Power Department, Municipality of Anchorage d/b/a
Anchorage	11.59	36.01	66.52	97.04		Chugach Electric Association, Inc.
Andreanof	55.00	200.00	325.00	450.00	26.50¢/KWH	Andreanof Electric Corporation
Angoon	37.06	175.90	337.70	499.50	21.93¢/KWH	Tlingit-Haida Regional Electrical Authority
Aniak	42.48	202.68	395.63	588.58	22.35¢/KWH	Aniak Light and Power Company, Inc.
AVEC Communities	44.15	220.75	441.50	662.25	29.69¢/KWH	Alaska Village Electric Cooperative, Inc.
Barrow	15.00	66.00	121.56	177.12		Barrow Utilities and Electric Cooperative, Inc.
Bethel	22.38	93.46	173.86	254.27	7.26¢/KWH	Bethel Utilities Corporation, Inc.
Bettles	49.50	247.50	495.00	742.50	35.19¢/KWH	Bettles Light & Power, Inc.
Central	50.89	254.45	508.90	763.35	33.38¢/KWH	Far North Utilities
Chuathbaluk	59.00	295.00	590.00	885.00	41.80¢/KWH	Middle Kuskokwim Electric Cooperative, Inc.
Chugiak	18.44	52.18	94.35	133.01		Matanuska Electric Association, Inc.
Cold Bay	36.15	140.75	271.50	402.25	15.43¢/KWH	G & K, Inc.
Copper Center	26.40	100.10	185.10	270.10		Copper Valley Electric Association, Inc.
Craig	21.28	92.84	182.29	271.74	7.41¢/KWH	Alaska Power & Telephone Company
Crooked Creek	59.00	295.00	590.00	885.00	41.80¢/KWH	Middle Kuskokwim Electric Cooperative, Inc.
Delta Junction	19.99	59.93	101.11	142.29		Golden Valley Electric Association, Inc.
Dillingham	26.57	100.34	186.70	273.18	9.64¢/KWH	Nushagak Electric Cooperative, Inc.
Douglas	15.50	49.50	92.00	134.50		Alaska Electric Light & Power Company
Eagle River	18.44	52.18	94.35	133.01		Matsnuska Electric Association, Inc.
Egegik	54.79	273.95	547.90	821.85	33.32¢/KWH	Egegik Light and Power Homer Lee Leonard d/b/a
Fairbanks	19.99	59.93	101.11	142.29		Golden Valley Electric Association, Inc.
Fort Yukon	45.01	165.09	277.69	390.29	18.66¢/KWH	Gwitchyaa Zhee Utility Company

(1) State assistance credited to customer bills on a cents/KWH basis for consumption up to 750 KWH per customer.

ALASKA PUBLIC UTILITIES COMMISSION

SAMPLE MONTHLY RESIDENTIAL ELECTRIC RATES (CONT.)

(As of December 31, 1985 - Fuel Cost Rate Adjustments Included Where Available)

COMMUNITY	100 KWH	500 KWH	1,000 KWH	1,500 KWH	Power Cost Equalization[1]	UTILITY SERVING COMMUNITY
Glennallen	$ 26.40	$100.10	$185.10	$270.10		Copper Valley Electric Association, Inc.
Haines	25.45	90.45	165.93	236.68	.0594¢/KWH	Haines Light & Power Company, Inc.
Halibut Cove	23.32	57.62	100.50	143.38		Homer Electric Association, Inc.
Healy	19.99	59.93	101.11	142.29		Golden Valley Electric Association, Inc.
Homer	22.27	52.41	90.08	121.63		Homer Electric Association, Inc.
Hoonah	37.06	175.90	337.70	499.50	21.93¢/KWH	Tlingit-Haida Regional Electrical Authority
Hope	11.59	36.01	66.52	97.04		Chugach Electric Association, Inc.
Hydaburg	27.64	121.52	238.87	356.22	14.83¢/KWH	Alaska Power & Telephone Company
Iliamna	45.57	227.85	455.70	683.55	26.02¢/KWH	I-N-N Electric Cooperative, Inc.
Juneau	15.50	49.50	92.00	134.50		Alaska Electric Light & Power Company
Kake	37.06	175.90	337.70	499.50	21.93¢/KWH	Tlingit-Haida Regional Electrical Authority
Kasaan	37.06	175.90	337.70	499.50	21.93¢/KWH	Tlingit-Haida Regional Electrical Authority
Kenai	22.27	52.41	90.08	121.63		Homer Electric Association, Inc.
Klawock	37.06	175.90	337.70	499.50	21.93¢/KWH	Tlingit-Haida Regional Electrical Authority
Kodiak	14.93	67.15	120.20	170.75		Kodiak Electric Association, Inc.
Kotzebue	31.60	111.76	211.96	312.16	9.98¢/KWH	Kotzebue Electric Association, Inc.
Levelock	52.00	260.00	520.00	780.00	41.80¢/KWH	Levelock Electric Cooperative, Inc.
Manokotak	30.00	150.00	300.00	450.00	21.10¢/KWH	Manokotak Power Company
McGrath	39.95	188.27	361.54	534.81	28.26¢/KWH	McGrath Light & Power Company
Moose Pass	11.59	36.01	66.52	97.04		Chugach Electric Association, Inc.
Napaklak	47.00	235.00	470.00	705.00	38.50¢/KWH	Napaklak Ircinaq Power Company
Nenana	19.99	59.93	101.11	142.29		Golden Valley Electric Association, Inc.
Ninilchik	22.27	52.41	90.08	121.63		Homer Electric Association, Inc.

[1] State assistance credited to customer bills on a cents/KWH basis for consumption up to 750 KWH per customer.

ALASKA PUBLIC UTILITIES COMMISSION

SAMPLE MONTHLY RESIDENTIAL ELECTRIC RATES (CONT.)
(As of December 31, 1985 - Fuel Cost Rate Adjustments Included Where Available)

COMMUNITY	100 KWH	500 KWH	1,000 KWH	1,500 KWH	Power Cost Equalization[1]	UTILITY SERVING COMMUNITY
North Pole	$ 19.99	$ 59.93	$101.11	$142.29		Golden Valley Electric Association, Inc.
Northway	27.53	137.65	275.30	412.95	19.03¢/KWH	Northway Power & Light, Inc.
Palmer	18.44	52.18	94.35	133.01		Matanuska Electric Association, Inc.
Pelican	15.10	75.50	151.00	226.50	2.99¢/KWH	Pelican Utility Company
Port Graham	23.32	57.62	100.50	143.38		Homer Electric Association, Inc.
Port Lions	14.93	67.15	120.20	170.85		Kodiak Electric Association, Inc.
Red Devil	59.00	295.00	590.00	885.00	41.80¢/KWH	Middle Kuskokwim Electric Cooperative, Inc.
Sand Point[2]	30.10	142.79	280.44	418.09	6.66¢/KWH	Sand Point Electric Company, Inc.
Seldovia	23.32	57.62	100.50	143.38		Homer Electric Association, Inc.
Skagway	24.66	86.29	159.54	232.79	5.16¢/KWH	Alaska Power & Telephone Company
Sleetmute	59.00	295.00	590.00	885.00	41.80¢/KWH	Middle Kuskokwim Electric Cooperative, Inc.
Soldotna	22.27	52.41	90.08	121.63		Homer Electric Association, Inc.
Sterling	22.27	52.41	90.08	121.63		Homer Electric Association, Inc.
Stony River	59.00	295.00	590.00	885.00	41.80¢/KWH	Middle Kuskokwim Electric Cooperative, Inc.
Talkeetna	18.44	52.18	94.35	133.01		Matanuska Electric Association, Inc.
Tanana	44.50	211.90	405.40	598.90	23.32¢/KWH	Tanana Power Company, Inc.
Teller	53.75	268.75	537.50	806.25	40.37¢/KWH	Teller Power Company Helen M. and Robert R. Blodgett d/b/a
Tok/Dot Lake	25.11	110.60	213.40	306.50	9.31¢/KWH	Alaska Power & Telephone Company
Unalakleet	32.88	106.40	198.30	290.20	11.62¢/KWH	Matanuska Electric Association, Inc.
Valdez	23.40	87.00	164.10	240.60		Copper Valley Electric Association, Inc.
Wasilla	18.44	52.18	94.35	133.01		Matanuska Electric Association, Inc.

(1) State assistance credited to customer bills on a cents/KWH basis for consumption up to 750 KWH per customer.

(2) Certificate No. 230 was transferred from Pelican Utility Company to Sand Point Electric Company, Inc., in 1986.

ALASKA PUBLIC UTILITIES COMMISSION

SAMPLE MONTHLY RESIDENTIAL ELECTRIC RATES (CONT.)
(As of December 31, 1985 - Fuel Cost Rate Adjustments Included Where Available)

COMMUNITY	100 KWH	500 KWH	1,000 KWH	1,500 KWH	Power Cost Equalization[1]	UTILITY SERVING COMMUNITY
Whittier	$ 11.59	$ 36.01	$ 66.52	$ 97.04		Chugach Electric Association, Inc.
Willow	18.44	52.18	94.35	133.01		Matanuska Electric Association, Inc.
Yakutat	24.06	98.50	183.90	264.10	7.17¢/KWH	Yakutat Power, Inc.

[1] State assistance credited to customer bills on a cents/KWH basis for consumption up to 750 KWH per customer.

HB

195

Bill No. Committee Substitute for House Bill 195 (Transportation)

Date April 13, 1987

Title "An Act excluding services provided by certain taxicab operators from the definition of employment for unemployment compensation coverage."

Contact: Joe Sitton
465-2712

Eileen Plate
465-2700

Committee Substitute for House Bill 195 (Transportation) seeks to categorically exclude certain taxicab operators from the definition of employment for the purposes of unemployment insurance coverage.

The Department opposes the proposed exclusion since persons, including taxicab operators, who are performing as independent contractors, are presently excluded from unemployment insurance coverage under AS 23.20.525(a)(10). Under this current law, a person's status as an independent contractor is shown to exist if:

(A) the individual has been and will continue to be free from control and direction in connection with the performance of the service, both under the individual's contract for the performance of service and in fact;

(B) the service is performed either outside the usual course of the business for which the service is performed or is performed outside of all the places of business of the enterprise for which the service is performed; and

(C) the individual is customarily engaged in an independently established trade, occupation, profession, or business of the same nature as that involved in the service performed;

Examination of the employee/employer relationship in this regard is appropriate, and the Department supports the application of these criteria in making such determinations.

The exemption of taxicab operators from the independent contractor test, as appears to be proposed in this bill, is not in the interest of Alaska's workers, and the Department opposes it.

APPROVED:

Jim Sampson, Commissioner
Department of Labor

POSITION PAPER/Department of Labor

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

Bill Version: CSHB 195 (Transp)
Publish Date: _____

REQUEST: _____

Revision Date: _____
Title: "An Act excluding services provided by certain taxicab operators..."
Sponsor: House Transportation Committee
Requestor: House Labor and Commerce

Agency Affected: Labor
BRU: Employment Security
Components: Unemployment Insurance

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

Prepared by: Joe Sitton, Director
Division: Employment Security
Phone: 465-2712
Date: 4/13/87

Approved by Commissioner: Jim Sampson
Agency: Labor
Date: 4/13/87

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)
Senate Secretary

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

Bill Version: HB 195
Publish Date:

REQUEST:

Revision Date:
Title: "An Act excluding services provided by certain taxicab operators..."
Sponsor: House Transportation Committee
Requestor: House Transportation Committee

Agency Affected: Labor
BRU: Employment Security
Components: Unemployment Insurance

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Prepared by: Joe Sitton, Director
Phone: 465-2712
Division: Employment Security
Date: 4/3/87

Approved by Commissioner: Jim Sampson
Date: 4/3/87
Agency: Labor

Distribution (by preparer):
- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)
- Senate Secretary

Bill No. House Bill 195

Title "An Act excluding services provided by certain taxicab operators from the definition of employment for unemployment compensation coverage, etc."

Date April 3, 1987

Contact: Joe Sitton
465-2712

Eileen Plate
465-2700

House Bill 195 seeks to categorically exclude certain taxicab operators from the definition of employment for the purposes of unemployment insurance coverage.

The Department is puzzled as to the reason for the proposed exclusion since persons, including taxicab operators, who actually are performing as independent contractors, are presently excluded from unemployment insurance coverage under AS 23.20.525(a)(10). Under this current law, a person's status as an independent contractor is shown to exist if:

(A) the individual has been and will continue to be free from control and direction in connection with the performance of the service, both under the individual's contract for the performance of service and in fact;

(B) the service is performed either outside the usual course of the business for which the service is performed or is performed outside of all the places of business of the enterprise for which the service is performed; and

(C) the individual is customarily engaged in an independently established trade, occupation, profession, or business of the same nature as that involved in the service performed;

Examination of the employee/employer relationship in this regard is appropriate, and the Department supports the application of these criteria in making such determinations.

The exemption of taxicab operators from the independent contractor test, as appears to be proposed in this bill, is not in the interest of Alaska's workers, and the Department opposes it.

APPROVED:

Jim Sampson, Commissioner
Department of Labor

POSITION PAPER/Department of Labor

Dennis L. McCarty
Attorney at Law
309 Mary Frances Tower
320 Bawden Street
Ketchikan, Alaska 99901
(907) 225-2108

March 26, 1987

Honorable John Sund
Alaska State Representative
Pouch V
Juneau, Alaska 99811

Re: Senate Bill 194
House Bill 195

Dear Rep. Sund:

I represent two cab companies in Ketchikan who are very immediately affected by these proposed bills. In each instance there is a proposal to modify A.S. 23.20.526(a) to exempt from unemployment compensation coverage "(23) service performed as an independent contractor who operates a taxicab."

My clients and I greatly appreciate the attempt to allow the cab drivers to be dealt with as independent contractors, but we are concerned that this language may not meet the problem. Specifically, my clients are presently pursuing an appeal to the Superior Court from the determination of the Department of Labor that their cab drivers are not independent contractors. Unfortunately, it appears to me that this modification will not defeat the Department's attempt to make almost every employment within the state come with its definition of employee coverage pursuant to the provisions of the "ABC test" contained in A.S. 23.20.525.

Our specific concern with this legislation is that unless there is a definition of "independent contractor", the Employment Security Division will still interpret that phrase by the "ABC Test". Through my review of Alaska case law together with direct contact with the Department it is obvious that they take the position that it is nearly impossible for anyone to be independently employed. My clients strongly support the intent of these bills. They are concerned that unless care is used in drafting the exemption that nothing may be gained if the Department is free to use the "ABC Test" so broadly as to make it difficult or impossible to be an "independent contractor."

Sincerely yours,

Dennis L. McCarty

DLM:mh

HOUSE COMMITTEE REPORT

(7)

Date referred: 3/20/87 FURTHER REFERRALS: Labor & Commerce

DATE: April 8, 1987

The Transportation Committee has considered HB 195

"An Act excluding services provided by certain taxicab operators from the definition of employment for unemployment compensation coverage; and providing for an effective date."

RECOMMENDS:

[X] replace with CSHB 195(Trsp) [X] the same title

[ ] attached amendment(s) [ ] a new title

[X] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] additional referral to the ________________ Committee

ADOPTS: [ ] __________ letter of intent

ATTACHES NEW FISCAL NOTE(s):

[ ] fiscal impact

[X] zero fiscal note

[ ] zero with analysis

[ ] same as previous fiscal note published ______________

[ ] same as previous zero fiscal note published ______________

SIGNING DO PASS:

[signatures]

SIGNING OTHER RECOMMENDATIONS:

[signature]

Chairman's signature

STATE OF ALASKA
THE LEGISLATURE

POUCH Y · STATE CAPITOL
JUNEAU, ALASKA 99811
907·465·3800

LEGISLATIVE AFFAIRS AGENCY

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Mary Van Nimwegen

H. Transportation April 8, 1987 1:30pm

HB

197

STATE OF ALASKA
THE LEGISLATURE

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3800

LEGISLATIVE AFFAIRS AGENCY

LEGISLATIVE REFERENCE LIBRARY

May, 1988

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Mary Van Nimwegen

H L+C 4-2-87 1:30p.m.

HOUSE COMMITTEE REPORT

(7)

Date referred: 3/20/87 FURTHER REFERRALS: Finance

DATE: 4/2/87

The Labor & Commerce Committee has considered HB 197

"An Act relating to delivery of supplies purchased under the State Procurement Code; and providing for an effective date."

RECOMMENDS:

[ ] replace with ______ [ ] the same title

[ ] attached amendment(s) [ ] a new title

[X] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] additional referral to the ______ Committee

ADOPTS: [ ] ______ letter of intent

ATTACHES NEW FISCAL NOTE(s):

[ ] fiscal impact

[ ] zero fiscal note

[X] zero with analysis

[ ] same as previous fiscal note published ______

[ ] same as previous zero fiscal note published ______

SIGNING DO PASS:

Johnny Ellis

Cliff Davidson

[illegible]

[illegible]

[illegible]

SIGNING OTHER RECOMMENDATIONS:

~~[illegible] NO REC~~

W Furnace

[illegible]

Chairman's signature

POSITION PAPER

Bill HB 197

The bill provides that all supplies purchased by the State will be delivered to a location within the state, unless the department making the purchase determines that a point of delivery outside the state would be in the best interest of the State. Invitations to Bid (ITB) and other means of procurement must state that the bid price includes delivery at the location named in the ITB.

The impact on the Department of Administration (DOA) will be minimal since nearly all ITBs and negotiated purchases already contain this requirement.

The DOA is neutral on this bill.

Robert J. Vink, Director
Division of General Services & Supply

3/27/87
Date

Commissioner Garrey Peska
Department of Administration

3/27/87
Date

19/11K1/0327-01/1
3/27/87

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

REQUEST

Bill Version: HB 197
Publish Date: March 27, 1987

Revision Date:
Agency Affected: Dept. of Administration
Title: An act relating to the delivery of supplies purchased under the State procurement code
BRU: General Services & Supply
Sponsor: Labor & Commerce Committee
Components: Purchasing
Requestor:

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: Attach a separate page if necessary

The impact on the Department of Administration will be minimal since nearly all Invitations to Bid already contain this requirement.

Prepared By: Robert J. Link
Phone: 465-2253
Division: General Services & Supply
Date: March 26, 1987

Approved by Commissioner: Garrey Peska
Date: 3/27/87
Agency: Department of Administration

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)
Senate Secretary

Rev. 9/16/86
19/11K1/0327-01/4

HB

201

Bill No. Committee Substitute for House Bill 201 (HESS) Date January 18, 1988

Title "An Act relating to hazardous painting certification."

Contact: Richard Arab
465-4856

Eileen Plate
465-2700

Committee Substitute for House Bill No. 201 (HESS) is designed to assure the competency of persons employed to perform hazardous painting in the state and thereby prevent harmful exposures to workers who apply toxic and hazardous paints, to their co-workers and to the public.

Under the provisions of this bill, a painter who is employed or contracted to perform hazardous painting must complete an approved training program and be certified. The training program would consist of instruction in and a demonstration of each person's knowledge and skill in using safe work practices and appropriate equipment.

The potential harmful effects of long-term exposure to paint are explained in Section 1 of the bill. The department believes that many of the illnesses and injuries described can be avoided if professional painters receive training in the safe use of paints and solvents and in the proper personal protective equipment available to them. The public and building occupants near painting projects can be better warned and protected by certified professional painters who use appropriate isolation and curing times. Workers' families, as well as other members of the community, need to be protected from the exposure to toxic material, such as lead chromate, brought home on the individual worker's person or clothing.

Under the provisions of this bill, the department would establish minimum requirements for certification training programs; review and approve such programs; issue certificates to persons who present evidence of having completed an approved training program; and enforce the certification requirements.

The requirement for employing certified painters will be limited to businesses that perform hazardous painting as part of their operations. This will eliminate from the scope of the bill the normal casual painting contracts such as a contract between a homeowner and a worker to repaint a house. Also, the bill does not cover latex (water-based) paints which are the most widely used paints in residential building. The intent of the bill is to limit it as much as possible to commercial painting where the more hazardous paints are encountered.

The effective dates in Sections 3 and 4 of the bill anticipated passage of the provisions in 1987. Since this did not occur, these dates need to be changed to July 1, 1988 and January 1, 1989, respectively.

The Department of Labor supports the certification concept presented in this bill.

APPROVED:

Jim Sampson, Commissioner
Department of Labor

POSITION PAPER/Department of Labor

STATE OF ALASKA
1988 LEGISLATIVE SESSION

BILL VERSION: CSHB 201 (HESS)
PUBLISH DATE: _____

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "An act relating to hazardous painting certification."
Sponsor: House Labor and Commerce
Requestor: House Finance

Agency Affected: Labor
BRU: Labor Standards and Safety
Components: Occupational Safety and Health

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		64.8	77.5	77.5	77.5	77.5
TRAVEL		10.0	5.0	5.2	5.3	5.5
CONTRACTUAL		13.2	17.3	17.8	18.4	18.9
SUPPLIES		1.1	1.4	1.4	1.5	1.5
EQUIPMENT		1.6	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	90.7	101.2	101.9	102.7	103.4
CAPITAL						
REVENUE	0	100.0	150.0	50.0	100.0	150.0

FUNDING: (Thousands of Dollars)

GENERAL FUND		90.7	101.2	101.9	102.7	103.4
FEDERAL FUNDS						
OTHER						
TOTAL	0	90.7	101.2	101.9	102.7	103.4

POSITIONS:

FULL-TIME		2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

(See attached)

Prepared by: Tom Stuart, Director — Phone: 465-4870
Division: Labor Standards and Safety — Date: 1/15/88

Approved by Commissioner: Jim Sampson — Date: 1/15/88
Agency: Labor

Distribution (by preparer):
- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

Fiscal Note Analysis
CSHB 201 (HESS)

This bill would require the department to adopt regulations covering persons who are employed in "hazardous painting." The department would issue certificates, for a fee, to persons who complete an approved training course. The department would also enforce the provisions of the bill by inspections and through the issuance of citations.

Expenditures:

In order to effectively administer this program the department would require two new positions, an Industrial Hygienist I, and a Clerk Typist III. The Industrial Hygienist would help develop the required regulations and training program guidelines. Also, a tracking system would be created to monitor approved training programs and to account for certificates and fees. This position would travel to inform employer and employee organizations of the new law.

The Clerk Typist III would begin work six months after the Hygienist. This would allow time for the regulations to be developed and implemented. The Clerk would then process the requests for certification and operate the in-house tracking systems.

Revenues:

It is estimated that 1,000 persons will take the required training course and apply for a certificate during the last six months of FY 1989. During the second year, the number of applications is expected to increase to 1,500 as most persons who want to be certified will have completed training by the end of FY 1990. During the third year, the number of applicants is estimated to drop to approximately 500 as only new entrants into the painting occupation will need certification. In FY 92 and FY 93, activity is expected to increase as persons who received certificates in FY 89 and FY 90 must be re-certified. (The certification will be valid for three years).

Estimated Revenue:

	FY 89	FY 90	FY 91	FY 92	FY 93
Certificates Issued	1,000	1,500	500	1,000	1,500
Fee	$ 100	$ 100	$ 100	$ 100	$ 100
	$100,000	$150,000	$50,000	$100,000	$150,000

Assumptions:

1. An effective date of July 1, 1988 for the program except for the certification requirement that will go into effect on January 1, 1989.

2. The certificate fee would be established at $100.

3. Inflation on non-personal services items will be 3% per year.

Position Title	No. of Positions	Range/Step	Barg. Unit
Industrial Hygienist I	1	19A	GGU

Time Status	Staff Months	Location	Election District
PFT	12	Anchorage	

Type of Expenditure		Amount
1	2	3
Salary	40.032	
Benefits	12.009	
Premium Pay		
Other		
Total Personal Services		52.041
Travel		10.000
Contractual		9,700
Commodities		700
Equipment		1,600
Other		
Total Cost		74,041

Funding Source for Total Cost		
Federal Receipts	1002	
G. F. Match	1003	
General Fund	1004	74.041
GF Program Receipts	1005	
Other		

Justification

This position would work on developing the required regulations and training programs necessitated by the bill. Also, the position would develop an in-house system to keep track of the training programs and certificate holders. As training programs are implemented, this position would ensure compliance with the provisions of this bill.

Costs include $10,000 for travel to inform workers and employers of the new law. Normal contractual, commodities and one-time furniture purchases are also included.

Request For New Position

Agency Labor

BRU Occupational Safety and Health

Component Occupational Safety and Health

FY 89

Position Title	No. of Positions	Range/Step	Barg. Unit
Clerk Typist III	1	8A	GGU

Time Status	Staff Months	Location	Election District
PFT	6	Anchorage	

Type of Expenditure		Amount
1	2	3
Salary	9,786	
Benefits	2,936	
Premium Pay	--	
Other	--	
Total Personal Services		12,722
Travel		0
Contractual		3,522
Commodities		350
Equipment		0
Other		0
Total Cost		16,594

Funding Source for Total Cost		
Federal Receipts	1002	
G. F. Match	1003	
General Fund	1004	16,594
GF Program Receipts	1005	
Other		

Justification

This clerical position would provide support for the in-house tracking system and would process the requests for certification. Costs include normal contractual and commodities.

The position would start six months after the program has begun to allow time for the regulations and tracking system to be implemented. The position would work 12 months after the first year.

Request For New Position

Agency Labor

BRU Occupational Safety and Health

Component Occupational Safety and Health

Revised Date

FY 89

STATE OF ALASKA
THE LEGISLATURE

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3800

LEGISLATIVE AFFAIRS AGENCY

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May, 1988

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Mary Van Nimwegen

H L+C 4-7-87 1:30p.m.

HOUSE COMMITTEE REPORT

(7)

Date referred: 3/20/87 FURTHER REFERRALS: HESS

DATE: 4/7/87

The Labor & Commerce Committee has considered HB 201

"An Act relating to hazardous painting certification; and providing for an effective date."

RECOMMENDS:

[ ] replace with CS HB 201 (L&C) [X] the same title

[ ] attached amendment(s) [ ] a new title

[X] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] additional referral to the ______ Committee

ADOPTS: [ ] ______ letter of intent

ATTACHES NEW FISCAL NOTE(s):

[X] fiscal impact

[ ] zero fiscal note

[ ] zero with analysis

[ ] same as previous fiscal note published ______

[ ] same as previous zero fiscal note published ______

SIGNING DO PASS:

[signature]

Cliff Davidson

Dave Donley

[signature]

[signature]

[signature] Furnace

[signature]

SIGNING OTHER RECOMMENDATIONS:

Dave Donley

Chairman's signature

from Dept. of Labor

RIGHT-TO-KNOW VIOLATIONS

October 1, 1985 - April 6, 1986

Total Violations: 185 establishments were cited for Right-to-Know violations during this period. The Alaska Occupational Safety and Health Section inspected 1,432 establishments during this period.

By industry:

Oil & Gas	2
Construction	49
Seafood Processing	12
Lumber & Wood	3
Other Manufacturing	20
Transportation	9
Wholesale Trade	6
Retail Trade	13
Real Estate	1
Automotive Repair	43
Other Services	18
Health Services	3
Educational Services	3
Government Agencies	3
Total	185

MSDS NO. 14

DUPONT

MATERIAL SAFETY DATA SHEET

September 1, 1985

ACRYLIC LACQUER PRIMERS AND SEALERS

Section I

Manufacturer
E. I. du Pont de Nemours & Co. (Inc.)
Finishes & Fabricated Products Dept.
Wilmington, Delaware 19898
Telephone: Product information (800) 441-7515
Medical emergency (800) 441-3637
Transportation emergency 800-424-9300
(CHEMTREC)

Product: 30S, 70S, 80S, 100S, 110S, 131S, 181S, 1934S, 1985S, 2129S, 2184S, 45285
D.O.T. Hazard Class: Flammable Liquid
Paint UN 1263

Section II — Hazardous Ingredients (See Section X for specific product codes and additional ingredients)

Primary Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A,O
2. Acetone	67-64-1	185	1000ppm-O
3. Methanol	67-56-1	96	200ppm-A,O
4. Toluene	108-88-3	22	100ppm-A
5. Isopropyl alcohol	67-63-0	31	400ppm-A,O
6. VM & P naphtha	64742-89-8	~45	100ppm-A,O
7. Ethyl acetate	141-78-6	76	100ppm-A,D
8. Xylene	1330-20-7	8	100ppm-A,O
9. Methyl ethyl ketone	78-93-3	95	200ppm-A,O
10. 2-Ethoxyl butyl acetate	112-07-02	0.3	225ppm-A,O
11. Acrylic resin	None	None	None

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Section III — Physical Data

Evaporation rate: Slower than ether
Vapor density: Heavier than air
Solubility in water: Slight
Percent volatile: 63.4-84.0% (By volume)
Approximate boiling range: 129°F-401°F
Density: 7.6-11.1 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).
Approx. flammable limits: 1.1-14%.
Extinguishing media: Foam, carbon dioxide, dry chemical
Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.
Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data

Ingestion: Gastro-intestinal distress.
In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.
Inhalation: May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: Headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors. Excessive human exposure to methanol including absorption through the skin may lead to: fatigue, headache, anaesthetic neurologic effects, and visual difficulties ultimately including blindness. Extremely high concentrations of butyl acetate have caused blood changes and weakness in laboratory animals. 2-Ethoxy butyl acetate can be absorbed through the skin in harmful amounts. In studies in laboratory animals has produced damage to red blood cells and kidneys. Very high concentrations of Methyl ethyl ketone have caused embryotoxic effects in laboratory animals. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.
Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.
In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.
In case of skin contact wash with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): None reasonably foreseeable
Hazardous decomposition products: CO, CO2, smoke, oxides of heavy metals reported in Section X
Hazardous polymerization: Will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.
Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.
Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.
Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Acrylic Lacquer Primers & Sealers #s 30S, 70S, 80S, 100S, 110S, 131S, 181S, 1934S, 1985S, 2129S, 2184S, 45285

Protective clothing: Neoprene gloves and coveralls are recommended.
Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.
Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Notes

Product Codes	Additional Ingredients
30S, 70S, 80S	1, 2, 3, 4, 5, 6, 11
100S, 110S	4, 5, 7, 8, 11
1984S, 1985S	1, 2, 4, 6, 6, 7, 8, 9, 10, 11
2129S	1, 2, 4, 5, 6, 9, 10, 11
131S, 181S	4, 5, 7, 8, 11
2184S	1, 2, 4, 5, 6, 3, 11

Additional Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
(1) 30S, 70S, 100S, 131S, 1984S, 1985S, 2129S also contain:			
Titanium Dixoide	13463-67-7	None	10mg/m³-A 15mg/m³-O

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

(2) 80S, 110S, 181S, 1984S, 1985S also contain:			
Non-hazardous natural pigment	None	None	None
(3) 30S, 70S, 80S, 100S, 110S, 131S, 181S, 1984S, 1985S also contain:			
Hydrous magnesium silicate	7789-06-2	None	2mg/m³-A, 15 mg/m³-O

Repeated and prolonged overexposure to Talc may lead to typical X-ray changes and chronic lung disease. The TLV is based on respirable dust that contains no asbestiform fibers and less than 1% crystalline silica.

(4) 100S, 110S, 1984S and 1985S also contain:			
Barium sulfate	7727-43-7	None	10mg/m³
(5) 1984S and 1985S also contain.			
Zinc oxide	1314-13-2	None	10mg/m³-A

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager
Refinish Sales

Printed in U.S.A.

7-10

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor 'Essentially Similar' to form OSHA-20)

MANUFACTURER'S NAME
DUTCH BOY PAINTS
P.O. Box 6709
Cleveland, Ohio 44101

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
10-Apr-85

INFORMATION TELEPHONE NO.
(216) 566-2902

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER
17-10

® - Trade Mark

PRODUCT NAME
Exterior Latex House Paint, White

PRODUCT CLASS
Latex Paint

Section II -- HAZARDOUS INGREDIENTS

CAS No.	INGREDIENT	PERCENT	TLV-PPM	TLV-MG/M3	LEL	V.P.

NO INGREDIENTS IN THIS PRODUCT ARE HAZARDOUS
AS DEFINED BY THE DEPARTMENT OF LABOR.

pH - 9.5

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ether
VAPOR DENSITY -- Heavier than Air

BOILING RANGE (F)	% VOLATILE VOLUME	WT/GAL
212 - 388	62.6	10.82

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION — FLASH POINT >199 F PMCC — LEL N.A.
Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Extreme heat may cause closed containers to burst.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II

EFFECTS OF OVEREXPOSURE
ACUTE: In a confined area vapors in high concentration are anesthetic. Overexposure may result in lightheadedness and staggering gait.
Irritant to skin and upper respiratory system.

Continued on page 2

17-10 EXTERIOR LATEX HOUSE PAINT WHITE

MERGENCY AND FIRST AID PROCEDURES
If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
If on SKIN: Wash affected area thoroughly with soap and water.
If in EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

Section VI -- REACTIVITY DATA

TABILITY -- Stable
AZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
AZARDOUS POLYMERIZATION -- Will Not Occur

Section VII -- SPILL OR LEAK PROCEDURES

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate and remove with inert absorbent.
STE DISPOSAL METHOD
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Section VIII -- PROTECTION INFORMATION

RECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.
Protect against dust which may be generated by sanding or abrading the dried film.
ENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.
RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by MIOSH/MSHA for protection against materials in Section II.
PROTECTIVE GLOVES
Required for long or repeated contact.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

Section IX -- PRECAUTIONS

OL STORAGE CATEGORY -- 3B
RECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.
THER PRECAUTIONS
This coating contains materials classified as nuisance particulates, for example itanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), hich may be present at hazardous levels only during sanding or abrading of the dried film.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

5-0675B
Hein
4/3/87

Original sponsor: Labor and Commerce Committee

IN THE HOUSE

BY THE LABOR AND COMMERCE COMMITTEE

CS FOR HOUSE BILL NO. 201 (L&C)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FIFTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to hazardous painting certification; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS. The legislature finds that

(1) during the course of their work over a period of years painters are exposed to large amounts of toxic substances, which react with body tissues and cause health problems that sometimes become evident only after years of exposure;

(2) studies have indicated that as many as 84 percent of painters suffer neurotoxic effects from exposure to various solvents and coatings, approximately 54 percent of painters experience upper and lower respiratory problems, and approximately 28 percent of painters have chronic bronchitis;

(3) at least four studies by the National Institute of Occupational Safety and Health concluded that 43 percent of painting-related accidents resulted from air conditions in the work environment;

(4) approximately 21 percent of construction accidents involve painters, representing an accident rate four times higher than any other construction craft; and

(5) a study by the Johns Hopkins University found that persons who have ever performed new construction painting, maintenance painting, or specialty painting have a risk of developing lung cancer that is 250 percent higher than the risk for persons who have never painted.

* Sec. 2. AS 18 is amended by adding a new chapter to read:

CHAPTER 63. HAZARDOUS PAINTING CERTIFICATION.

Sec. 18.63.010. HAZARDOUS PAINTING CERTIFICATE REQUIRED. (a) A person may not employ or contract with a professional painter to perform hazardous painting unless the painter holds a current valid hazardous painting certificate issued by the department.

(b) The department may impose a civil fine of not more than $1,000 on a person who violates this section.

(c) Violation of this section is a class B misdemeanor.

Sec. 18.63.020. ISSUANCE OF CERTIFICATE. (a) The department shall issue a hazardous painting certificate to an applicant who has completed an application and submitted a certificate fee. A certificate is valid for three years.

(b) An application for issuance of a hazardous painting certificate shall be on a form prescribed by the department. An application for initial issuance of a certificate must include proof that the applicant completed an approved basic hazardous painting certificate program not more than 30 days before the application was received by the department.

(c) An application for certificate renewal must include proof that the applicant completed an approved refresher hazardous painting certificate program not more than 30 days before the date the application was received by the department.

Sec. 18.63.030. FEE. The triennial fee for a hazardous painting certificate is $100.

Sec. 18.63.040. CERTIFICATE PROGRAMS. (a) The department shall

(1) establish requirements for basic and refresher hazardous painting certificate programs;

(2) review, and approve or disapprove, programs proposed by contractors, labor organizations, public and private schools and

vocational education institutions, and others;

(3) assist persons who propose programs to meet requirements for approval.

(b) A basic hazardous painting certificate program must include instruction and written and practical testing in methods of ventilation, respirator selection, chemical reaction to body tissue, proper use of painting tools, knowledge of relevant health and safety laws and regulations, including relevant portions of state occupational safety and health standards adopted by reference under 8 AAC 61.010, and other appropriate subjects.

(c) A refresher hazardous painting certificate program must include instruction and written and practical training necessary to ensure that a person who completes the program will be knowledgeable about new developments and changes related to hazardous painting that have occurred since the person completed a basic hazardous painting certificate program.

(d) A hazardous painting certificate program conducted by an employer of a person enrolled in the program must also meet the requirements of AS 18.60.066.

Sec. 18.63.050. INSPECTIONS AND CITATIONS. The department shall

(1) inspect job sites to ensure that persons performing hazardous painting are certified as required under AS 18.63.010 and are performing the work safely; and

(2) issue citations to persons who employ or contract with a professional painter in violation of AS 18.63.010(b).

Sec. 18.63.060. REGULATIONS. The department may adopt regulations necessary to implement this chapter.

Sec. 18.63.100. DEFINITIONS. In this chapter

(1) "department" means the Department of Labor;

(2) "hazardous painting" means the application of a substance containing a pigment or containing or combined with a toxic or hazardous substance, as defined in AS 18.60.105, in vaporized, liquid, or particulate form to create a coating that will adhere to a surface to protect or preserve the surface; "hazardous painting" does not include the application of water-based paint that does not contain emulsion epoxies or isocyanates;

(3) "professional painter" means a painting contractor, an employee of a painting contractor, or a person engaged in the business of painting, but does not include a casual laborer, a commercial artist, or a person who creates artworks.

* Sec. 3. Section 1 of this Act and AS 18.63.020, 18.63.030, 18.63.040, 18.63.060, and 18.63.100, added by sec. 2 of this Act, take effect July 1, 1987.

* Sec. 4. AS 18.63.010 and 18.63.050, added by sec. 2 of this Act, take effect January 1, 1988.

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

Bill Version : HB 201
Publish Date :

REQUEST:

Revision Date:
Title : "An Act relating to hazardous painting certification."
Sponsor : House Labor and Commerce
Requestor : House Labor and Commerce

Agency Affected : Labor
BRU : Occupational Safety and Health
Components : Occupational Safety and Health

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES		64.8	77.5	77.5	77.5	77.5
TRAVEL		10.0	5.0	5.2	5.3	5.5
CONTRACTUAL		13.2	17.3	17.8	18.4	18.9
SUPPLIES		1.1	1.4	1.4	1.5	1.5
EQUIPMENT		1.6	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	90.7	101.2	101.9	102.7	103.4
CAPITAL						
REVENUE		200.0	100.0	50.0	150.0	75.0

FUNDING: (Thousands of Dollars)

GENERAL FUND		90.7	101.2	101.9	102.7	103.4
FEDERAL FUNDS						
OTHER						
TOTAL	0	90.7	101.2	101.9	102.7	103.4

POSITIONS:

FULL-TIME		2	2	2	2	2
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

(See attached)

Prepared by : Tom Stuart, Director
Division : Labor Standards and Safety
Phone : 465-4870
Date : 3/27/87

Approved by Commissioner : Jim Sampson
Agency : Labor
Date : 3/27/87

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)
Senate Secretary

Fiscal Note Analysis

HB 201

This bill would require the department to adopt regulations concerning persons who are employed in "hazardous painting." The department would issue certificates, for a fee, to persons who complete an approved training course. The department would also enforce the provisions of the bill by inspections and through the issuance of citations.

Expenditures

In order to effectively run this program the department would require two new position, an Industrial Hygienist I and Clerk Typist III. The Industrial Hygienist would help develop the regulations to enforce this bill. Training program guidelines would be developed, and fees for certifications set. Also, an in-house tracking system would be created to monitor approved training programs and to account for certificates and fees. This position would travel to inform employer and employee organizations of the new law.

The Clerk Typist III would begin work six months after the Hygienist. This would allow time for the regulations to be developed and implemented. The Clerk would then process the requests for certification and operate the in-house tracking systems.

Revenues

We are estimating 2,000 persons will take the required training course and apply for a certificate the first year. This would cover persons employed to paint commercially as well as those self-employed. During the second and third year we estimate the number of applications would drop by 50%, but in the fourth year the number will increase as re-certification will be required. (The certification will be valid for three years).

Estimated Revenues:

	FY 88	FY 89	FY 90	FY 91	FY 92
Certificates Issued	2,000	1,000	500	1,500	750
Fee	100	100	100	100	100
	200,000	100,000	50,000	150,000	75,000

Assumptions

1. An effective date of July 1, 1987.
2. The certificate fee would be established at $100.
3. Inflation of non-personal services items will be 3% per year.

Position Title			No. of Positions	Range/Step	Barg. Unit	Gov.	Approv.	Disapp.
Industrial Hygienist I			1	19A	GGU			
Time Status	Staff Months	RP Number	Location	Election District		Leg.		
PFT	12		Anchorage					

Type of Expenditure		Amount
1	2	3
Salary	40,032	
Benefits	12,009	
Premium Pay	---	
Other	---	
Total Personal Services		52,041
Travel		10,000
Contractual		9,700
Commodities		700
Equipment		1,600
Other		
Total Cost		74,041

Receipt Code	Funding Source		
	Federal Receipts	1002	
	G. F. Match	1003	
	General Funds	1004	74,041
	I-A Receipts	1005	
	Program Receipts	1028	
	CIP Receipts	1061	
	Other		

For B&M Use Only
Key Number __ __ - __ __ - __ __ - __ __ - __ __

Justification

This position would work on developing the required regulations and training programs necessitated by the bill. Also, the position would develop an in-house system to keep track of the training programs and certificate holders. As training programs are implemented, this position would ensure compliance with the provisions of this bill.

Costs include $10,000 for travel to inform workers and employers of the new law. Normal contractual, commodities and one-time furniture purchases are also included.

Request For New Position

Agency Labor

BRU Occupational Safety and Health

Component Occupational Safety and Health

Revised Date

FY 87

Position Title	No. of Positions	Range/Step	Barg. Unit	Gov.	Approv.	Disapp.
Clerk Typist III	1	8A	GGU			

Time Status	Staff Months	RP Number	Location	Election District	Leg.		
PFT	6		Anchorage				

Type of Expenditure		Amount
1	2	3
Salary	9,786	
Benefits	2,936	
Premium Pay	---	
Other	---	
Total Personal Services		12,722
Travel		0
Contractual		3,522
Commodities		350
Equipment		0
Other		0
Total Cost		16,594

Receipt Code	Funding Source		
	Federal Receipts	1002	
	G. F. Match	1003	
	General Funds	1004	16,594
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	Program Receipts	1028	
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	Other		

For B&M Use Only
Key Number __ __ - __ __ - __ __ - __ __ - __ __

Justification

This clerical position would provide support for the in-house tracking system and would process the requests for certifications. Costs include normal contractual and commodities.

The position would start six months after the program has begun to allow time for the regulations and tracking system to be implemented. The position would work 12 months after the first year.

Request For New Position

Agency Labor
BRU Occupational Safety and Health
Component Occupational Safety and Health

FY 87

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

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GRANTS, CLAIMS						
MISCELLANEOUS						
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POSITIONS:

FULL-TIME		2	2	2	2	2
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

(See attached)

Prepared by: Tom Stuart, Director — Phone: 465-4870
Division: Labor Standards and Safety — Date: 3/27/87

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Assumptions

1. An effective date of July 1, 1987.
2. The certificate fee would be established at $100.
3. Inflation of non-personal services items will be 3% per year.

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Time Status	Staff Months	RP Number	Location	Election District		Leg.		
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Benefits	12,009	
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Justification

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Costs include $10,000 for travel to inform workers and employers of the new law. Normal contractual, commodities and one-time furniture purchases are also included.

Request For New Position

Agency Labor

BRU Occupational Safety and Health

Component Occupational Safety and Health

Revised Date

FY 87

Position Title	No. of Positions	Range/Step	Barg. Unit	Gov.	Approv.	Disapp.
Clerk Typist III	1	8A	GGU			
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PFT	6		Anchorage			

Type of Expenditure		Amount
1	2	3
Salary	9,786	
Benefits	2,936	
Premium Pay	---	
Other	---	
Total Personal Services		12,722
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Request For New Position

Agency Labor
BRU Occupational Safety and Health
Component Occupational Safety and Health

FY 87

MSDS NO. 14

DU PONT

MATERIAL SAFETY DATA SHEET

September 1, 1985

ACRYLIC LACQUER PRIMERS AND SEALERS

Section I

Manufacturer
E. I. du Pont de Nemours & Co. (Inc.)
Finishes & Fabricated Products Dept.
Wilmington, Delaware 19898
Telephone: Product information (800) 441-7515
Medical emergency (800) 441-3637
Transportation emergency 800-424-9300
(CHEMTREC)

Product: 30S, 70S, 80S, 100S, 110S, 131S, 181S, 1934S, 1985S, 2129S, 2184S, A5285
D.O.T. Hazard Class: Flammable Liquid
Paint UN 1263

Section II — Hazardous Ingredients (See Section X for specific product codes and additional ingredients)

Primary Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A,O
2. Acetone	67-64-1	185	1000ppm-O
3. Methanol	67-56-1	96	200ppm-A,O
4. Toluene	108-88-3	22	100ppm-A
5. Isopropyl alcohol	67-63-0	31	400ppm-A,O
6. VM & P naphtha	64742-89-8	~45	100ppm-A,O
7. Ethyl acetate	141-78-6	76	100ppm-A,D
8. Xylene	1330-20-7	8	100ppm-A,O
9. Methyl ethyl ketone	78-93-3	95	200ppm-A,O
10. 2-Ethoxyl butyl acetate	112-07-02	0.3	225ppm-A,O
11. Acrylic resin	None	None	None

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Section III — Physical Data

Evaporation rate: Slower than ether
Vapor density: Heavier than air
Solubility in water: Slight
Percent volatile: 63.4-84.0% (By volume)
Approximate boiling range: 129°F-401°F
Density: 7.6-11.1 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).
Approx. flammable limits: 1.1-14%.
Extinguishing media: Foam, carbon dioxide, dry chemical
Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.
Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data

Ingestion: Gastro-intestinal distress.
In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.
Inhalation: May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: Headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors. Excessive human exposure to methanol including absorption through the skin may lead to: fatigue, headache, anaesthetic neurologic effects, and visual difficulties ultimately including blindness. Extremely high concentrations of butyl acetate have caused blood changes and weakness in laboratory animals. 2-Ethoxy butyl acetate can be absorbed through the skin in harmful amounts. In studies in laboratory animals has produced damage to red blood cells and kidneys. Very high concentrations of Methyl ethyl ketone have caused embryotoxic effects in laboratory animals. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.
Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.
In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.
In case of skin contact wash with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): None reasonably foreseeable
Hazardous decomposition products: CO, CO2, smoke, oxides of heavy metals reported in Section X
Hazardous polymerization: Will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.
Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.
Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.
Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Acrylic Lacquer Primers & Sealers 1985, 2129S, 1315, 1815, 2184S

Protective clothing: Neoprene gloves and coveralls are recommended.
Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.
Other precautions: Do not hand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation

Section X — Notes

Product Codes	Additional Ingredients
30S, 70S, 80S	1, 2, 3, 4, 5, 6, 11
100S, 110S	4, 5, 7, 8, 11
1984S, 1985S	1, 2, 4, 5, 6, 7, 8, 9, 10, 11
2129S	1, 2, 4, 5, 6, 9, 10, 11
131S, 181S	4, 5, 7, 8, 11
2184S	1, 2, 4, 5, 6, 3, 11

Additional Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
(1) 30S, 70S, 100S, 131S, 1984S, 1985S, 2129S also contain:			
Titanium Dioxide	13463-67-7	None	10mg/m³-A 15mg/m³-O

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

(2) 60S, 110S, 181S, 1984S, 1985S also contain:			
Non-hazardous natural pigment	None	None	None
(3) 30S, 70S, 80S, 100S, 110S, 131S, 181S, 1984S, 1985S also contain:			
Hydrous magnesium silicate	7789-06-2	None	2mg/m³-A, 15 mg/m³-O

Repeated and prolonged overexposure to Talc may lead to typical X-ray changes and chronic lung disease. The TLV is based on respirable dust that contains no asbestiform fibers and less than 1% crystalline silica.

(4) 100S, 110S, 1984S and 1985S also contain:			
Barium sulfate	7727-43-7	None	10mg/m³
(5) 1984S and 1985S also contain:			
Zinc oxide	1314-13-2	None	10mg/m³-A

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager
Refinish Sales

Printed in U.S.A.

MATERIAL SAFETY DATA SHEET

6

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor 'Essentially Similar' to form OSHA-20)

MANUFACTURER'S NAME
DUTCH BOY PAINTS
P.O. Box 6709
Cleveland, Ohio 44101

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
10-Apr-85

INFORMATION TELEPHONE NO.
(216) 566-2902

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER
17-10

® - Trade Mark

PRODUCT NAME
Exterior Latex House Paint, White

PRODUCT CLASS
Latex Paint

Section II -- HAZARDOUS INGREDIENTS

CAS No.	INGREDIENT	PERCENT	TLV-PPM	TLV-MG/M3	LEL	V.P.

NO INGREDIENTS IN THIS PRODUCT ARE HAZARDOUS
AS DEFINED BY THE DEPARTMENT OF LABOR.

H - 9.5

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ether

VAPOR DENSITY -- Heavier than Air

BOILING RANGE (F)	% VOLATILE VOLUME	WT/GAL
212 - 388	62.6	10.82

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION — FLASH POINT >199 F PMCC — LEL N.A.
Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Extreme heat may cause closed containers to burst.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II

EFFECTS OF OVEREXPOSURE

ACUTE: In a confined area vapors in high concentration are anesthetic. Overexposure may result in lightheadedness and staggering gait.
Irritant to skin and upper respiratory system.

Continued on page 2

ERGENCY AND FIRST AID PROCEDURES

If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
If on SKIN: Wash affected area thoroughly with soap and water.
If in EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

Section VI -- REACTIVITY DATA

TABILITY -- Stable

ZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

ZARDOUS POLYMERIZATION -- Will Not Occur

Section VII -- SPILL OR LEAK PROCEDURES

EPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.

TE DISPOSAL METHOD

Incinerate in approved facility. Do not incinerate closed container. Dispose of in cordance with Federal, State, and Local regulations regarding pollution.

Section VIII -- PROTECTION INFORMATION

ECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact ith skin and eyes. Wash hands after using.

Protect against dust which may be generated by sanding or abrading the dried film.

ENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

ESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II,

ROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section IX -- PRECAUTIONS

OL STORAGE CATEGORY -- 3B

RECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep container closed when not in use. Transfer only to approved containers with complete nd appropriate labeling. Do not take internally. Keep out of the reach of children.

THER PRECAUTIONS

This coating contains materials classified as nuisance particulates, for example itanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), hich may be present at hazardous levels only during sanding or abrading of the dried film.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Editorial

Solvent Neurotoxicity:

The Current Evidence

In view of the current debate regarding the nature and extent of solvent-related neurotoxicity, a brief review of relevant scientific issues and recent research findings seems useful. Unfortunately, as interest increases, the literature expands proportionately, and the authors have reviewed only a fraction of the available work in an attempt to summarize the current state of knowledge and to indicate the directions for future research.

Exposure, Absorption, Distribution, and Excretion

Exposure to solvents is ubiquitous in modern industry.[1] The list of chemical substances is long and many commercial products consist of combinations of several organic compounds. Systemic absorption is accomplished through lung[2] or skin[3] and is facilitated by a variety of host- and substance-specific factors.[4]

During the initial absorption period, solvents tend to be distributed to organs in concentrations proportional to regional blood flow.[5] As a result, during acute exposure, CNS solvent uptake proceeds rapidly and, if sufficient concentrations are reached, acute intoxication may result. The potential for causing acute intoxication varies widely among different organic solvents: those with low blood solubility (eg, methyl chloroform) reach saturation at relatively low blood concentrations and, consequently, cause less transient CNS disruption.[2] High solubility solvents (eg, styrene) show the potential for progressively increasing blood concentration, with attendant increasing risk, which is increased even further by physical exercise. Agent-specific lipid solubility characteristics and organ-specific lipid content also determine the tissue deposition. Nervous system tissue, with its high lipid content, is thus a repository for lipophilic organic solvents.

Address correspondence to: National Institute for Occupational Health, 1600 Clifton Rd, Atlanta, GA 30333 (Dr Baker).

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Excretion occurs primarily through renal or pulmonary routes. Most agents have relatively short (ie, hours to days) whole body half-lives. Exposure to multiple agents or drugs (eg, ethanol) may prolong excretion.[6]

Peripheral Nervous System

A characteristic distal, symmetrical sensimotor peripheral neuropathy has been clearly demonstrated following exposure of humans and animals to several specific solvents: *n*-hexane, methyl-*n*-butyl ketone (MBK), and carbon disulfide. This disorder has characteristic histologic features (focal axonal swelling with distal axonal degeneration), predictable dose-response relationships, well-described clinical-pathologic correlates, and a relatively consistent clinical course.[7] Thus, the evidence for implicating these substances as human neurotoxic agents is well developed. Although peripheral nervous system (PNS) toxicity of these agents is most apparent clinically, all have been shown in animal studies[7] to damage the CNS as well.

Less convincing evidence exists linking mixed solvent exposure to clinically significant peripheral nerve disorders. Obviously, where commercial solvents are contaminated by known neurotoxic agents (eg, MBK in methyl ethyl ketone formulations) peripheral neurotoxic effects may occur. In the commonest circumstance of exposure to solvent mixtures, such as that encountered by painters or lacquerers, epidemiologic studies have shown increased rates of adverse PNS symptoms and electrophysiologic abnormalities on nerve conduction testing and electromyography. As recently summarized by Seppalainen[8] for the First International Conference on Solvent Toxicity held in Stockholm in October 1984, increased risk of PNS disorders appears to be present in certain populations. However, the relationship of those disorders to specific agents has not been elucidated. Furthermore, clear distinctions between clinical and subclinical neuropathy have not been made in all studies, rendering interpretation difficult. In studies of currently exposed groups, the rates of PNS toxicity have been less than CNS effects.

Central Nervous System

Most of the confusion and disagreement regarding solvent neurotoxicity relates to CNS effects. In view of the complexity of CNS function and of solvent exposures, such controversy is not surprising.[9] To achieve some uniformity of diagnosis, a World Health Organization (WHO) working group recently proposed a syndrome categorization scheme for CNS conditions caused by exposure to toxic workplace chemicals, including solvents, metals, and pesticides (Tables 1 and 2). The acute intoxicating effects of organic solvents have been well recognized for years; the symptoms consist of feelings of dizziness, lightheadedness, and incoordination. Transient psychomotor impairment frequently accompanies such symptoms.[10] Such studies of acute episodes do not demonstrate consistent effects on tests of psychomotor function, with the exception of reaction time, at exposures below current permissible exposure limits (PEL). Termination of exposure appears to result in total return of function and loss of symptoms. Acute toxic encephalopathy associated with cerebral edema is well-recognized as an effect of excessive exposure to lead, mercury, and other toxic agents. The condition has not been described as a characteristic finding in excessive short-term solvent exposure.

Evidence does exist that three chronic conditions occur in individuals with solvent exposure. The mildest, organic affective syndrome, as recently defined in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III),[11] represents a reversible mood disorder which occurs in individuals with chronic solvent exposure.[12] Typical symptoms include increased fatigue, irritability, depression, and loss of interest in daily activities. Other toxic substances (eg, lead[13]) also appear to cause this syndrome, which reduces upon removal from exposure to the offending agent.[14] Although difficult to distinguish from other conditons, this syndrome does have characteristic clinical features that allow for identification of affected individuals, the most important of which are the temporal relationship of symptoms to sustained solvent exposure and the consistent pattern of symptom reporting among people with this condition.

Chronic toxic encephalopathy of mild or severe degree has been reported among solvent-exposed individuals. In addition to cognitive and mood symptoms, persons with these conditions display evidence of functional impairment, particularly reduction in psychomotor and short-term memory ability (Table 2). The most convincing scientific evidence derives from studies of individuals who have abused solvent-containing products. For example, four patients were found to have evidence of severe, multifocal CNS damage with cortical, cerebellar, and brainstem atrophy, electrophysiologic abnormalities, and neuropsychological deficits following prolonged inhalation abuse of toluene.[15] Epidemiologic studies of solvent-exposed populations (Table 3) have shown neurobehavioral changes that have varied between studies due to differences in exposure, measurement of health effect, study design, and analysis strategy.[8] Other investigations have shown increased rates of solvent exposure in patients with dementia-like syndromes[37,38]; these studies are difficult to interpret in that broad case definitions were used which included a variety of neuropsychiatric conditions. Further case-referent studies are needed to clarify the results of those two investigations. More restrictive case definitions should be used for future studies than were used in previous research.

The conclusion from these studies is that there appear to be syndromes of solvent-related CNS dysfunction of varying severity with similar qualitative features. As the severity increases, reversibility becomes progressively less likely and demonstrable structural abnormalities (eg, cortical atrophy) progressively more likely. The underlying pathogenesis of toxic encephalopathy due to solvents is unclear and requires further study. The lack of consistent dose-response relationships in chronic epidemiologic studies makes it difficult to determine whether current exposure to levels below accepted PELs is truly hazardous. In fact, a recent US study[39] failed to observe consistent neurobehavioral def-

TABLE 1

Acute Organic Mental Disorders

A. Acute intoxication
1. Pathophysiology: pharmacologic effect
2. Duration: minutes or hours; no sequelae
3. Clinical: acute CNS depression, psychomotor impairment
B. Acute toxic encephalopathy
1. Not clearly documented with organic solvents
2. Pathophysiology: cerebral edema, CNS capillary damage
3. Duration: hours or days; may cause permanent deficits
4. Clinical: coma, seizures

TABLE 2

Chronic Organic Mental Disorders

A. Organic affective syndrome
1. Pathophysiology: unclear
2. Duration: days or weeks; no sequelae
3. Clinical: Depression, irritability, loss of interest in daily activities
B. Mild chronic toxic encephalopathy
1. Pathophysiology: unclear
2. Course: insidious onset; Duration: Weeks or Months; reversibility: variable
3. Clinical: fatigue, mood disturbances, memory complaints, attentional complaints
4. Reduced CNS function
a. Psychomotor function (speed, attention, dexterity)
b. Short-term memory
c. Other abnormalities common
C. Severe chronic toxic encephalopathy
1. Pathophysiology: unclear, often associated with structural CNS damage
2. Course: insidious onset; Duration: indefinite, usually irreversible
3. Clinical manifestations
a. Loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning
b. Memory impairment
c. Other
1) Impairment of abstract thinking
2) Impaired judgment
3) Other disturbances of cortical function
4) Personality change
4. Reduced CNS function
a. Types of abnormalities similar to mild chronic toxic encephalopathy More pronounced and pervasive functional deficits
b. Some neurophysiologic and neuroradiologic tests abnormal

TABLE 3

Epidemiologic Studies on Chronic Neurotoxic Effects of Solvents

Exposure/Population	Subjective Symptoms	Visual/Motor Performance	Memory	Verbal Concept Formation	Mood	Reference
Car painters	+*	+	+	+	+	Hanninen et al[16]
Lacquerers	+				+	Struwe et al[12]
Car painters	+					Husman[17]
House painters	+	+	+	+	+	Arlien-Soborg et al[18]
Spray painters	+	+	+	−		Elofsson et al[19]
House painters		+	−			Hane et al[20]
Solvent-poisoned	−	+	+	−		Lindstrom[21]
Viscose rayon		+	+	−		Harkonen[22]
Laminators		+	−	−		Harkonen et al[23]
Jet fuel-exposed		+	−			Knave et al[24]
Printers		−	+	−		Hanninen[25]
Steel workers		+			−	Anshelm Olson[26]
Dry cleaners		−				Tuttle et al[27]
Viscose rayon	+	+	−	+	+	Hanninen[28]
Styrene-exposed		+	−			Lindstrom et al[29]
Methylene chloride		−	−			Cherry et al[30]
Industrial painters	+	+	+			Anshelm Olson[31]
Toluene		+	−			Iregren[32]
House painters		+	+			Lindstrom et al[33]
Carbon disulfide		−	−			Putz-Anderson et al[34]
Toluene		−	−	+		Cherry et al[35]
Solvent-exposed		+	−			Cherry et al[36]
Solvent-exposed	+	+	−	+	+	Gregerson et al[38]

* + = adverse effect was observed; − = effect was tested for but not observed.

icits and current exposure documented at levels well below relevant PELs.

Other Neurologic Targets

A variety of other neurologic syndromes have been associated with exposure to specific solvents.[5] These include cerebellar ataxia (toluene), trigeminal and facial neuropathy (trichloroethylene contaminated with dichloroacetylene), parkinsonism (carbon disulfide), psychosis (carbon disulfide and toluene), and optic neuropathy (methanol). These associations derive mostly from case reports and dose-response relationships are lacking.

Future Trends

In view of the broad use of solvents in US workplaces[40] and the variety of neurologic syndromes attributed to excessive solvent exposure, much attention will be focused on the issue of solvent neurotoxicity in the future. In European countries, increasing numbers of workers are receiving compensation benefits for chronic solvent neurotoxicity. In response to this trend and other issues, the WHO Regional Office for Europe convened a working group to recommend diagnostic criteria for chronic CNS solvent toxicity in June 1985. The recommendations of that group correspond to the categorization scheme described in this article (Tables 1 and 2).

Although the available studies are in many cases imperfect, the accumulated evidence indicates that PNS and CNS toxicity is occurring in workers with excessive exposure. As yet unresolved are the difficult issues of dose-response relationships and pathogenetic mechanisms. In view of the vulnerability and limited regenerative capacity of the nervous system and the obvious functional importance of an intact nervous system, protection of neurologic function is of extreme importance. To accomplish this goal, prudence dictates that solvent exposure be controlled through accepted industrial hygiene measures. Medical monitoring of exposed workers should be reserved for selected situations in which degree of exposure (or solvent absorption) can be measured along with specific tests of nervous system function. Epidemiologic studies that carefully quantify both exposure and effect in long-term prospective investigations are essential to improve our understanding of this complex issue.

Authors' note (added in proof): A recent international workshop[41] has refined and clarified the terminology noted in Table 2 and has indicated directions for correct practice and future research. In this scheme, the mildest form of CNS dysfunction (type 1) was described as "central nervous system symptoms" rather than "organic affective syndrome." Mild toxic encephalopathy was subdivided into two types depending upon the predominant neurobehavioral deficit: sustained mood or personality change (type 2A) or intellectual impairment (type 2B). Severe chronic toxic encephalopathy (type 3) was felt to have features characteristic of dementia as defined in DSM-III.[11]

In light of current knowledge, certain control strategies are felt to be appropriate[41]:

1. Routine environmental monitoring should be performed to assure that current exposure limits, particularly those for peak exposures, are not exceeded.
2. Substitution of less toxic solvents for those with demonstrated high neurotoxic hazard should be accomplished.
3. Comprehensive worker training and educational

programs on solvent hazards should be implemented and their effectiveness evaluated.

4. In situations where workers are found to have evidence of solvent neurotoxicity, the individual's exposure should be controlled, preferably by removal to a solvent-free work environment. Follow-up of the individual should be performed to evaluate the course of the health condition.

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References

1. Burgess WA: *Recognition of Health Hazards in Industry*. New York, John Wiley and Sons, 1981.

2. Astrand I: Uptake of solvents from the lungs. *Br J Ind Med* 1985;42:217–218.

3. Bird MG: Industrial solvents: Some factors affecting their passage into and through the skin. *Ann Occup Hyg* 1981;24:235–244.

4. Lauwerys RR: *Industrial Chemical Exposure: Guidelines for Biological Monitoring*. Davis, CA, Biomedical Publications, 1983.

5. Baker EL, Smith TJ: Evaluation of exposure to organic solvents, in Harrington JM (ed): *Recent Advances in Occupational Health*. London, Churchill Livingstone, 1984, vol 2.

6. Waldron HA, Cherry N, Johnston JD: The effects of ethanol on blood toluene concentrations. *Int Arch Occup Environ Health* 1983;51:385–389.

7. Spencer PS, Schaumburg HH: Organic solvent neurotoxicity: Facts and research needs. *Scand J Work Environ Health* 1986; 11(suppl 1):53–60.

8. Seppalainen AM: Neurotoxicity of organic solvents in occupational exposure. *Scand J Work Environ Health* 1986;11(suppl 1):61–64.

9. Johnson B, Xintaras C (eds): *Prevention of Neurotoxic Disease in Working Populations*. Geneva, World Health Organization, in press 1986.

10. Gamberale F: The use of behavioral tests in the assessment of solvent toxicity. *Scan J Work Environ Health* 1986;11(suppl 1):65–74.

11. *Diagnostic and Statistical Manual of Mental Disorders*, ed 3. American Psychiatric Association, Washington DC, 1980.

12. Struwe G, Mindus P, Jonsson B: Psychiatric ratings in occupational health research: A study of mental symptoms in lacquerers. *Am J Ind Med* 1980;1:23–30.

13. Schottenfeld MD, Cullen MR: Organic affective illness associated with lead intoxication. *Am J Psychiatry* 1984;141:1423–1426.

14. Baker EL, White RF, Pothier LJ, et al: Occupational lead neurotoxicity: Improvement in behavioral effects after reduction in exposure. *Br J Ind Med* 1985;42:507–516.

15. Lazar RB, Ho SU, Melen O, et al: Multifocal central nervous system damage caused by toluene abuse. *Neurology* 1983;33:1337–1340.

16. Hanninen H, Eskelinen L, Husman K, et al. Behavioral effects of long-term exposure to a mixture of organic solvents. *Scand J Work Environ Health* 1978;4:240–255.

17. Husman K: Symptoms of car painters with long-term exposure to a mixture of organic solvents. *Scand J Work Environ Health* 1980;6:19–32.

18. Arlien-Søborg P, Bruhn P, Gyldensted C, et al: Chronic painter's syndrome. *Acta Neurol Scand* 1979;60:149–156.

19. Elofsson SA, Gamberale F, Hindmarsh A, et al: Exposure to organic solvents: A cross-sectional epidemiological investigation on occupationally exposed car and industrial spray painters with special reference to the nervous system. *Scand J Work Environ Health* 1980;6:239–273.

20. Hane M, Axelson O, Blume J, et al: Psychological function changes among house painters. *Scand J Work Environ Health* 1977;3:91–99.

21. Lindstrom K: Changes in psychological performances of solvent-poisoned and solvent-exposed workers. *Am J Ind Med* 1980;1:69–84.

22. Härkönen H: Relationship of symptoms to occupational styrene exposure and to the findings of electroencephalographic and psychological examinations. *Int Arch Occup Environ Health* 1977;40:231–239.

23. Härkönen H, Lindstrom K, Seppalainen AM, et al: Exposure-response relationship between styrene exposure and central nervous functions. *Scand J Work Environ Health* 1978;4:53–59.

24. Knave B, Anshelm Olson B, Elofsson S, et al: Long-term exposure to jet fuel. II. A cross-sectional epidemiologic investigation on occupationally exposed industrial workers with special reference to the nervous system. *Scand J Work Environ Health* 1978;4:19–45.

25. Hanninen H: Psychological test methods: Sensitivity to long-term chemical exposure at work. *Neurobehav Toxicol* 1979;1:157–161.

26. Anshelm Olson B, Gamberale F, Gronqvist B: Reaction time changes among steel workers: A longitudinal study. *Int Arch Occup Environ Health* 1981;48:211–218.

27. Tuttle TC, Wood GD, Grether CB: *A Behavioral and Neurological Evaluation of Dry Cleaners Exposed to Perchlorethylene*. Cincinnati, National Institute for Occupational Safety and Health, 1977.

28. Hanninen H: Psychological picture of manifest and latent carbon disulfide poisoning. *Br J Ind Med* 1971;28:374–381.

29. Lindstrom K, Härkönen H, Hernberg S: Disturbances in psychological functions of workers occupationally exposed to styrene. *Scand J Work Environ Health* 1976;2:129–139.

30. Cherry N, Venables H, Waldron HA, et al: Some observation on workers exposed to methylene chloride. *Br J Ind Med* 1981;38:351–355.

31. Anshelm Olson B: Effects of organic solvents on behavioral performance of workers in the paint industry. *Neurobehav Toxicol Teratol* 1982;4:703–708.

32. Iregren A: Effects of psychological test performance of workers exposed to a single solvent (toluene): A comparison with effects of exposure to a mixture of organic solvents. *Neurobehav Toxicol Teratol* 1982;4:695–701.

33. Lindström K, Wickström G: Psychological function changes among maintenance house painters exposed to low levels of organic solvent mixtures. *Acta Psychiatry Scand* 1983;67(303):31–9.

34. Putz-Anderson, Albright B, Lee S, et al: A behavioral examination of workers exposed to carbon disulfide. *Neurotoxicology* 1983;41:67–73.

35. Cherry N, Venables H, Waldron H: British studies on the neuropsychological effects of solvent exposure. *Scand J Work Environ Health* 1984;10(1):10–12.

36. Gregersen P, Angelso B, Nielsen TE, et al: Neurotoxic effects of organic solvents in exposed workers: An occupational, neuropsychological, and neurological investigation. *Am J Ind Med* 1984;5:201–226.

37. Axelson O, Hane M, Hogstedt C: Current aspects of solvent-related disorders, in Zenz C (ed). *Developments in Occupational Medicine*. Chicago, Year Book Medical Publishers, 1980.

38. Mikkelsen S: A cohort study of disability pension and death among painters with special regard to disabling presenile dementia as occupational disease. *Scand J Soc Med* 1980;16:34–43.

39. Maizlish NA, Langolf GD, Whitehead L, et al: A behavioral evaluation of workers exposed to mixtures of organic solvents. *Br J Ind Med*, in press 1986.

40. *Survey Analysis and Supplemental Tables*, vol. 3. National Institute for Occupational Safety and Health. National Occupational Hazard Survey, Cincinnati, US Dept of Health, Education and Welfare, 1977.

41. Baker EL, Bus JS, Cranmer JM, et al: Workshop on Neurobehavioral Effects of Solvents: Consensus Summary. *Neurotoxicology* 1985;6:99–103.

COVER STORY

Isocyanates in the workplace— a hidden, deadly threat

By Kevin Cook
FuelLine Staff Writer

Except for a bright scarlet rash spreading over his right hand, Kevin Novinger at first thought he had the flu.

Dizzy, nauseous, short of breath and sweating heavily after only his second week of painting cars for a Harrisburg, Pa. dealership, Novinger shrugged off the symptoms and continued working.

"I was toughing it out because if you get something wrong with you and you're off work more than three or four days you're out the door," said the 35-year-old Camp Hill, Pa. resident who began painting cars at age 16. "I was brought up in a working class family with the ethic that you stay on the job until you die."

Novinger's ethic almost came true. In the weeks ahead his symptoms persisted and worsened. He experienced frequent nosebleeds and pounding headaches. The rash quickly spread up his arms and appeared on his legs. His speech became slurred, his walk unsteady, but he still worked.

Several months later in May 1977, Novinger was told by a doctor that he was being poisoned by new paints, binders and solvents he was using at the dealership. He immediately quit his job, but his illness was by then irreversible.

What followed was a rapid descent into a hellish existence that for nine years has kept Novinger bedridden and almost completely deprived of sight, taste, smell and balance.

The Novingers on their wedding day. Of her husband, Darlene Novinger now says, "He does not plan on a future. He lives on a day-to-day basis."

"I didn't think anything would happen to me," said Novinger. "I didn't think it would happen because I believed the government wouldn't let it happen. It's a hell of a shock finding out there's nothing you can do."

Wearing sunglasses and lying on a sofa bed in a darkened living room, Novinger was within arm's reach of numerous drug vials littering the carpet. He is diagnosed as having nervous system dysfunction and myocardeoneuropathy (heart muscle atrophy) caused by volatile chemicals containing neurotoxins—primarily isocyanates.

Isocyanates—first commercially developed in Europe in the 1930s—are widely used in the production of polyurethanes found in foams, adhesives, electrical insulation and paints and lacquers commonly used by automobile bodyshops to make car coatings harden quickly.

Isocyanates are known to irritate the respiratory tract and produce asthma-like symptoms in workers inhaling them even at very low concentrations. And according to the National Institute of Occupational Safety and Health (NIOSH): "Death may result from exposure at high concentrations."

Destroyed nerves

Today, Novinger's body could be compared to a circuit box with blown fuses. Left toothless and without most of his body hair, dependent on a urine catheter because he has no bladder control and limited to only pinpoint vision in his left eye, Novinger also suffers from a wide array of other symptoms attributed to destroyed nerves, nerve tissues and glands.

"He is battling severe depression," said Novinger's wife, Darlene, who with her husband last February was awarded just under $1 million after a four-year federal district court fight with several U.S. and German corporate defendants directly or indirectly linked to her husband's poisoning. Myers Oldsmobile Sales & Service—the dealership where Novinger says he was poisoned—went out of business two years ago and was protected by law from being sued.

"There is no amount of money in this world to compensate for what happened to him," Darlene Novinger said of her husband. "He does not plan on a future. He lives on a day-to-day basis."

(See ISOCYANATES, page 14)

COVER STORY

ISOCYANATES, from page 4

The Novingers originally demanded more than $500 million in damages, saying they wanted to build a hospital for disabled painters. The defendants—E.I. Du Pont de Nemours & Company; General Motors; Mercedes-Benz of North America; Daimler-Benz A.G.; and BASF Farben & Farben—challenged the Novingers' claims that their products were potentially hazardous or were even used at all by Novinger. In one court document an attorney for Mercedes accused him of "malingering."

Toothless, his face bloated from water retention, limited to only pinpoint vision in his left eye, Novinger also suffers from symptoms attributed to destroyed nerves, nerve tissues and glands.

Although Novinger's case may be an extreme one, "There are many materials now used in the automotive industry that are highly toxic and unknown to the worker," said Dr. C. J. Abraham, a Mineola, N.Y. toxicologist.

Kevin Novinger must spend his days on a sofa bed in a darkened room, his medications always within reach.

"There are inadequate warnings and instructions on the products and working conditions are not safe," Abraham said. "As a result, unbeknownst to the worker ... over a period of time they [the products] can have an effect on his whole system."

"Toxic chemicals are a major threat to painters that rivals or exceeds the better-known health threats to asbestos workers and even to coal miners," said Rod Wolford, health and safety director for the International Brotherhood of Painters and Allied Trades (IBPAT) in Washington, D.C.

"A dead worker can't produce and a sick worker can't produce much better," Wolford said. "For members of our union this is an extremely serious problem that threatens not only the painter's health but the well-being of the whole industry."

Growing danger

Although many commonly used products—like water-soluble or latex-based paints—have not been proven harmful, there are more than 300 neurotoxic chemicals and 150 carcinogens (cancer-causing agents) potentially present in paints, according to a four-year study of paint hazards completed last year by the Johns Hopkins University School of Public Health in Baltimore, Md.

Other studies show a growing danger as manufacturers develop and market new chemical compounds. According to the Labor Department's Occupational Safety and Health Administration (OSHA), a new and potentially toxic compound is introduced into the American workplace every 20 minutes of every working day.

"The problem is, every time you'd get a new piece of information you'd have to change your label. Labels are expensive and difficult to print."

—Steve Sides
Nat'l Paint & Coatings Assn.

Yet, labels on many containers bear only trade names, with others revealing little about the contents.

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The absence of information is largely due to a lack of uniform regulations and a practice sometimes found among suppliers of raw materials who will not disclose chemical contents to manufacturers because they are considered trade secrets. Containers for some industrial-use paints show only code numbers.

Chronic painter's syndrome

Early symptoms of neurotoxic poisoning are dizziness, exhilaration, headaches, blurred vision and slurred speech. Hallucinations, permanent disorientation, paralysis and other signs of injury to the central nervous system can follow.

Such symptoms in Scandinavian countries have been given the name "chronic painter's syndrome." Studies on the subject there date back to the 1930s, and strict labeling of paint products and restrictions on usage have been in place for some time.

But in America—where the toxic effects of popular paint and solvent chemicals like toluene and benzene have only recently become firmly established—painters can still remain in the dark.

Among information conspicuously absent from most labels are instructions on early symptoms of over-exposure or emergency treatment:

"If affected by inhalation of vapors or spray mists remove to fresh air," admonishes a typical label. "If breathing difficulty persists, consult a physician ..."

This label belongs to Du Pont's Lucite acrylic laquer additive 355-S—now found in almost every automotive bodyshop as a replacement product for Du Pont's predecessor 155-S that Novinger says was among the products that poisoned him.

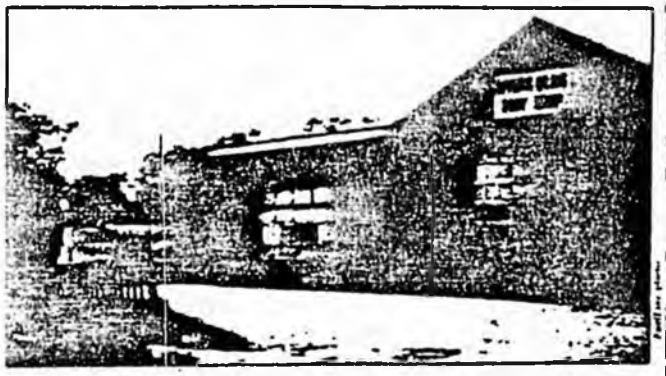
The new product contains two isocyanates and the toxic solvents toluene and hexamethylene. The label goes on to warn:

"Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful."

Misleading labels

But that warning does not mention isocyanates—binders, not solvents. It also implies that toxic solvents pose a serious health risk only through long-term overexposure or if the product is purposely mishandled or abused, said Frank Carsner, president of the Portland, Ore.-based Toxic Victims Association.

"The notice is definitely stilted and misleading and there's a sim-



Now defunct, Myers Olds Body Shop, where Kevin Novinger painted cars, was protected by workmen's compensation laws from being sued—a regulation the painters union wants to change.

do and they deliberately downgrade the toxicological effects so that it will sell."

In a second warning the label seems to make a veiled reference to isocyanates by saying: "Vapors and spray mists harmful if inhaled ... exposure may cause lung injury and allergy or respiratory reaction."

It also recommends wearing supplied-air respirators, gloves, and protective eyewear and clothing "... until all vapor and spray mists are exhausted."

One Du Pont spokeswoman who would not allow her name to be used said all Du Pont Labels "...go beyond known hazards and warn of potential hazards." Yet the label makes no reference to NIOSH and other findings that isocyanates can cause death.

The 355-S label was introduced in March 1985 and goes considerably further than the caution on Du Pont's old 155-S label that said only: "Vapor harmful. Causes eye irritation."

"Current labels are adequate in terms of safety," the Du Pont spokeswoman said, declining further comment. Repeated requests for further comment from Du Pont officials went unanswered.

Dollars versus disclosure

But there is documented evidence that some major paint manufacturers have in the past weighed the merits of more detailed labeling against the cost of lost business if

(See ISOCYANATES, page 18)

COVER STORY

ISOCYANATES, from page 15

their competitors reveal less-threatening information on their labels.

And according to Dr. John F. Keppel—pulmonary physician at Providence Hospital in Portland, Ore. and acknowledged as a leading medical expert on isocyanate toxicity: "Manufacturers are worried about scaring workers who use their paint."

"I think they really haven't been straightforward in their labeling so the worker knows what they mean," said Keppel, who has treated about 40 isocyanate poisoning cases in the past decade. About two-thirds of those cases involved automotive body painters, with most of the rest coming from other painting fields, he said.

Few lawsuits, widespread ignorance

There are no reliable statistics on the number of workers poisoned each year by products they have contact with. If lawsuits were an accurate reflection, then only about 75 to 100 persons nationwide now suspect they were overexposed to isocyanates, according to one legal expert.

"We don't see a lot of these cases because up until recently people didn't know what the hell was causing their illness and they wouldn't see a specialist," said Dr. James Frenkil, director of Central Medical Centers—four clinics in the Baltimore/Washington area treating industrial and occupational illnesses.

"What we see and hear from others is the tip of the iceberg in terms of illness and injury," agreed Wolford of the painters union. He said a 1977 mortality study of the union's workers in New York found their life expectancy to be 11 years less than the average American's—prompting ongoing health and safety awareness programs for thousands of union members.

There are more than 300 neurotoxic chemicals and 150 carcinogens potentially present in paints, according to a four-year study completed in 1985 by Johns Hopkins University in Baltimore, Md.

Few product liability or negligence suits are brought against paint manufacturers and other corporations because of widespread ignorance among injured parties, said Alan Kanner, attorney for the Novingers.

"My impression is that the [manufacturing] industry is very well aware that neurological illnesses are often difficult to connect with workplace exposure," Kanner said. "I think the industry is afraid that if the word gets out that this is a problem, there may be a lot of lawsuits coming out of the woodwork.

"For every Kevin Novinger, there's probably 100 others out there who have suffered some kind of injury," Kanner said.

Victims support group

Carsner of the Toxic Victims Association suspects the same. He formed the association in 1983 with four other former diesel truck painters—all of whom shared a common concern that they were poisoned while working at Portland's Freightliner Corporation.

Carsner, 45, was with Freightliner from 1973 to 1981, when he said he was fired "for absenteeism and misconduct because I kept going to the doctor and complaining about the hazards."

Carsner said he began using Du Pont solvents and polyurethane enamels in 1976. Working in a ventilated spray booth while always wearing a charcoal-filtered "dog-mask" respirator over his mouth and nose and keeping vaseline smeared over his exposed face, Carsner said he followed label recommendations to the letter.

"The labels implied that you didn't even need to wear a respirator," Carsner said. "In fact, they implied that up until the last couple of years."

Not until about eight months following his firing was Carsner diagnosed as having isocyanate

(continued on next page)

(continued from previous page)

poisoning. Meanwhile, other Freightliner diesel painters were becoming seriously ill on the job. Carsner's former foreman later died of kidney failure; another worker succumbed to respiratory failure and a brain tumor, he said.

Carsner is not bedridden like Novinger but his symptoms are still grim: short-term memory loss, body pains, liver and kidney damage, one eye tumor and several other tumors the size of quarters on his body. Now on heavy doses of steroids, he does not expect to live another decade.

But for Carsner and nine other Freightliner ex-painters counted in the membership of Toxic Victims Association, partial retribution was realized two years ago in the form of a reported $3 million settlement with the diesel manufacturer and two paint and chemical manufacturers. Additional lawsuits filed by some members are still in litigation.

Government response

The federal government—accused by critics of responding to the problem with lead feet—recently issued a Hazard Communication Standard impacting manufacturers of hundreds of thousands of products containing some 2,300 toxic substances.

In 1981, as part of its plan for a general reduction in regulations, the Reagan administration shelved a strict labeling regulation proposed by the Carter administration. That regulation had called for potentially toxic products to carry explicit explanations of ingredients, directions for use, and symptoms and treatment of toxic reactions.

Last November OSHA issued its standard that took effect in May. The standard requires about 300,000 manufacturers to inform their employees through training programs and reference material of possible health and safety hazards,

Rod Wolford of the painters union: "There are fewer OSHA inspectors than game wardens . . ."

recommended exposure limits, handling precautions, and appropriate protective equipment and emergency first-aid procedures.

Although covering about 14 million employees, the standard is criticized for not going far enough because it places no labeling requirements on potentially toxic products reaching the private sector workplace.

In fact, the standard's issuance prompted outcries from unions and public interest groups which recently led to a federal district court of appeals order that OSHA broaden the standard to include other industry sectors and pre-empt state regulations.

But Steve Sides of the National Paint and Coatings Association—made up of manufacturers—said current labeling practices will not be changed by a new standard.

"The chemical industry is the safest industry in the U. S.," he said. "The problem is, every time you'd get a new piece of information you'd have to change your label. Labels are expensive and difficult to print."

Proposed solutions

Wolford said a 1985 survey conducted by his union—representing some 180,000 workers—found that 50 to 80 percent of respondents reported typically using no respirator or only a dusk mask in a variety of painting jobs.

"It's possible for a person trying to compete to actually trade off lives and health to make a profit. The current system lets that occur," he said. "There are fewer OSHA inspectors than game wardens—so few that the odds of an inspection is about once in 100 years."

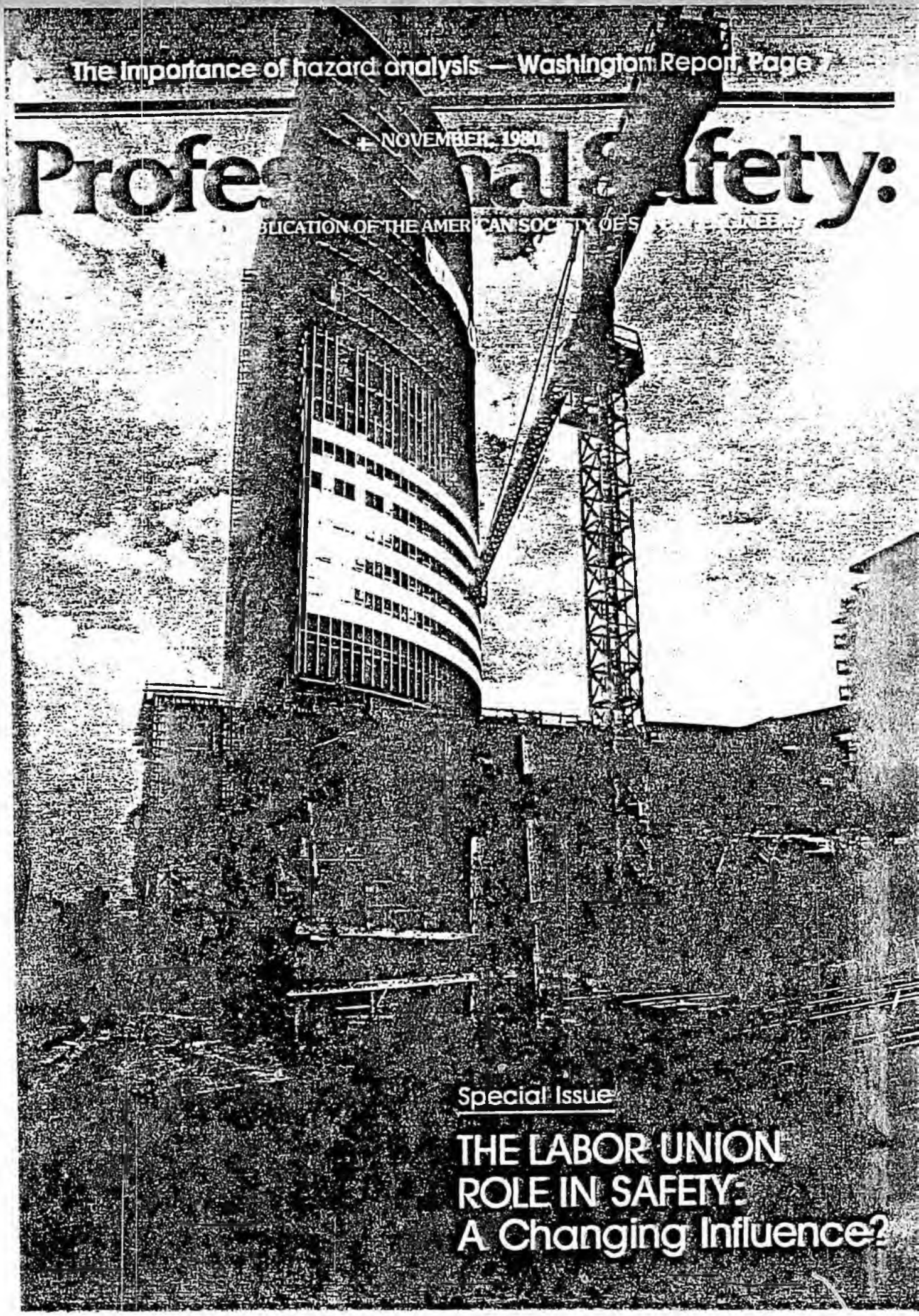
Businesses not meeting safety inspection standards usually face only small fines without the threat of loss of license, Wolford said. His union supports tax incentives for businesses that invest in health and safety improvements; stepped-up inspections and fines that exceed purchase and maintenance costs of protective equipment; and abolishment of state laws barring individuals from suing current or former employers if they are collecting on occupational illness compensation claims, as was Novinger.

And for painters handling toxic paint chemicals with less than utmost caution, the consequences can be devastating—as Carsner and the Novingers know too well.

"There is no certain way to keep the chemicals from coming in unless you have a forced-air [air-supplied] system," Carsner said. "I have seen all kinds of spray booths, and I haven't seen any that keep the product away from the worker to the point that he could get by without a chemical-proof suit and a full-face respirator with forced air."

"By publicizing Kevin's story we want to fight back so this doesn't happen to other people," Darlene Novinger said as she sat on the sofa bed with an arm draped over her husband's side.

"It's not fanaticism that keeps me going," she said, "just a moral obligation."□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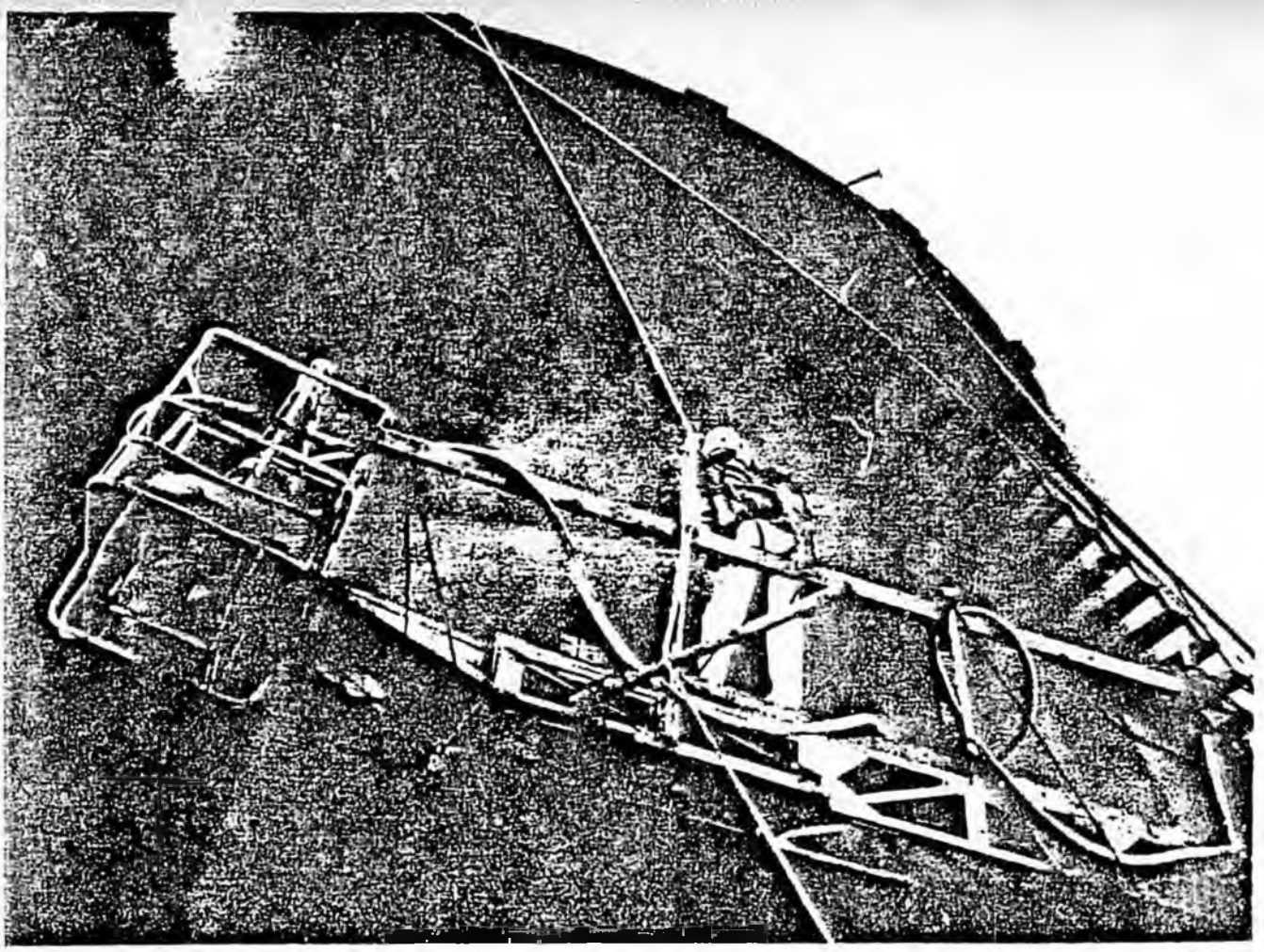


All photos by Les Crowfoot

The decade of job safety

One labor union's r[illegible]n safety

by Marilyn B. Larson and Rodney D. Wolford

The 200,000-member International Brotherhood of Painters and Allied Trades has existed since 1887. It has sought more wages, more benfits, more job security, more training and more for retirement. IBPAT started its death benefit fund in the 1800's, created health and welfare plans in the 1900's and a Department of Apprenticeship and Training in the 1950's, and in the 1960's established its National Pension Plan.

Labor's fight for the passage of the Occupational Safety and Health Act of 1970 was won with dedication—such as IBPAT's—to the principle of more and better protection for all working men and women.

Organizing a committee

In early 1970, IBPAT General President S. Frank Raftery organized the National Joint Safety and Health Committee to look into safety and health problems of painters and allied tradesworkers.

The committee has met twice each year since its beginning, bringing labor, management, government and scientists together to seek solutions to the complex safety and health problems of the paint trades. Through the National Joint Safety and Health Committee, IBPAT first came to Dr. Irving J. Selikoff of the Mount Sinai School of Medicine of the City University of New York. Dr. Selikoff reached into the core of IBPAT membership with scientific measurements to confirm what some had suspected but none had really known before. Many of IBPAT's members suffer effects from exposure to substances of the paint and allied trades. Many die, Selikoff said, and more endure needless damage to their health and well-being.

In September 1974, at the Twenty-Third General Convention, President Raftery declared the "Decade of Job Safety," a stepped-up attack on the health and safety hazards of the trades. In March, 1975, the National Joint Safety and Health Committee reviewed preliminary results of Dr. Selikoff's

When wet mud is applied to drywall seams, the taper may not need a respirator—although it is recommended; but when the seam is sanded, the respirator is a must.

examinations of 600 convention delegates. Many examined delegates had given up the tools of the trade to toil in administrative and leadership functions of the union. Even so, x-rays showed 27.4 percent of painters, 28 percent of tapers, 22.5 percent of floorcoverers and 32.6 percent of sandblasters had lung abnormalities. This large number of abnormal x-rays—better than one in four of examined delegates—shocked IBPAT's officers and members. When the findings appeared in the *Painters & Allied Trades Journal*, many members wrote to request thorough examinations.

A three-point program

By June of 1975, the National Joint Safety and Health Committee had devised a plan for study, based on Dr. Selikoff's work. The committee agreed to a three-point program to: (1) control the asbestos hazard, especially in drywall taping compounds; (2) develop safe work practices for sandblasters; and (3) study the carcinogenic, or cancer-causing, potential of chromates and other paint trade substances. The three problems tackled in the first year of the Decade of Job Safety all yielded results. Drywall taping compounds throughout the United States no longer contain asbestos. Furthermore, safe procedures for using any drywall compound were developed, although not yet widely practiced. Future efforts must alert more members and more contractors to the protections of these practices.

Sandblasting regulations are stronger now—and safer products often substitute for silica sand. Modern, air-conditioned blasting-hoods increase production while providing the best protection for the blaster. The future promises more stringent controls, more monitoring and perhaps even a ban of crystalline silica. But whether or not silica is banned, IBPAT stands ready to defend the interests of its members.

Chromates and cancer are a big concern because of the large amounts of chromate pigment in green, yellow and red paints. The NJS&HC researched chromates thoroughly. The conclusion: chromates cause cancer. Efforts have led to tougher OSHA standards for chromate. But hundreds of other substances still need informed, concentrated attention.

Early in the Decade of Job Safety, Dr. Selikoff also examined 1,400 other IBPAT members throughout the United States. In Toledo, 200 members; in St. Louis, 750; and in Kansas City, 100 members were examined. The findings—published as "Investigations of Health Hazards in the Painting Trades" and widely distributed throughout IBPAT and the government—appeared in a six-part series in the *Painters & Allied Trades Journal* in 1976 and '77.

All this early activity delivered a conclusive bundle of facts. A painter's life span is 11 years shorter than the average worker's. And the risk of cancer is three to five times greater. The painting industry, which is essentially a chemical industry, combines exposures to many highly toxic substances with work at heights on scaffolds, ladders, tanks, platforms, bridges, spiders, bosun's chairs and man-lifts. Painters consistently rank among the top five of more than 90 trades in the number of worker compensation awards received. No wonder OSHA classifies painting as a "high-risk" occupation.

It is evident that it doesn't have to be this way. No problem on the jobsite is beyond a solution. Some problems will take time and research, but for others solutions already exist.

Education and information

Educating members and informing the public of the hazards of the paint trades became a top priority. President Raftery and the General Executive Board sought practical ways to deliver this urgent message.

In October 1975, IBPAT submitted to the Occupational Safety and Health Administration an unsolicited proposal for education and training of 25,000 members. In November 1976, more than a year after submitting the proposal, the contract was awarded to IBPAT. The proposal was in competition with nearly 50 other organizations, including universities and research groups, for the chance to provide education to its own members. IBPAT's concept would take the message where it was needed: to the worker.

March 28, 1977, IBPAT received its first funding award to develop materials to educate painters and allied tradesworkers in the recognition and avoidance of the hazards of their occupations. The OSH Project is unique among occupational health and safety programs. It is unique because it works. It works because it uses programmed learning in printed texts and videotape modules. Practical-minded tradesworkers identify with the modules because visuals show real jobsites. General painters, abrasive blasters, drywall tapers, paint makers and floorcoverers—each trade receives modules for its own special safety and health hazards—and general modules for all trade groups.

In December 1977, the OSH Project pilot tested first-phase materials: for 25 floorcoverers in San Jose, California; 50 sandblasters in Houston, Texas; 75 paint makers in Kansas City, Missouri; and 90 general painters in Buffalo, New York.

Special training seminars

Then in 1978, IBPAT received a second OSHA award to upgrade existing modules, develop new modules and to deliver training in special nationwide seminars. The second award provided innovative training directly to tradesworkers. Producing new modules, publishing the 272-page *IBPAT/OSHA Health and Safety Education Books* and designing the delivery system took the summer of 1978. In September, additional special training materials were developed for glaziers. The glaziers program is modeled on the already produced materials which have proven so successful.

In October 1978, in Sacramento,

California, the first 40 tradesworkers were trained. Twenty-four months and 150 seminars later, over 12,000 members—coast to coast—know how to deal with the safety and health hazards of the paint and allied trades. Some had said IBPAT members were not interested in health and safety. Others had predicted they would not turn out for training sessions. But, even during the first winter that saw road-blocking blizzards all across the midwest and northeast, the attendance figures said the seminars succeeded.

> "Best safety and health program I have ever attended. Instructor was outstanding."
>
> "I liked the video tapes and the step by step way you follow them through the book."
>
> "The course was taught well with plenty of information that could possibly save your life."
>
> "Very modern, easy to understand, valuable information."
>
> "I would not have known about health and safety on the job if it wasn't for the OSH course."

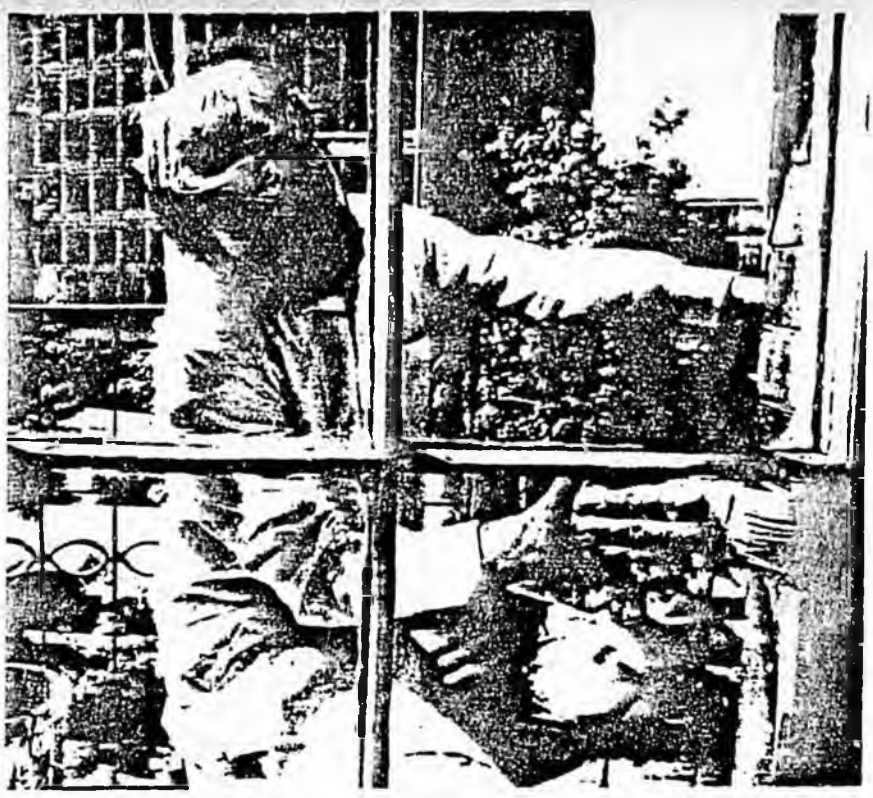
And so did the press. The nationwide training was well publicized—meeting IBPAT's goal to create public awareness and understanding. Some instructors were interviewed by television reporters for local TV news broadcasts, such as WHP-TV in Harrisburg, Pennsylvania, which aired this report:

> Co-sponsored by the Federal Occupational Safety and Health Administration and the national painters' union, today's session was a . . . new on the job safety program . . . designed to teach IBPAT members ways of protecting themselves from the health and safety hazards of their trades . . .
> If successful, Ellenberger says the program will help the union members and their employers learn how to avoid using the more damaging toxic materials.

Training pays dividends

But beyond the accolades, the training was paying real dividends. At an IBPAT/OSH seminar in Texas City, a local union representative realized his members had a serious occupational health problem. Symptoms of anemia were unusually high. The OSH Project examined 20 years of death certificates and found indications of early deaths from respiratory and coronary causes. NIOSH, John Hopkins University School of Hygiene and Public Health and the Mount Sinai School of Medicine are now verifying and evaluating the facts in this situation. This investigation might not have happened without IBPAT's serious concern for the health and safety of its members.

Government agencies, the press, trade associations, medical schools and other unions are frankly amazed at what IBPAT accomplished in so short a time: From research to program design and development to delivery in 18 months. The IBPAT-OSH Project is a startling measure of what a group can do when it rolls up its sleeves to marshal its energies and resources. Only five years into the "Decade of Job Safety," IBPAT has taken a quantum leap forward.



Brush painting is the least hazardous method of application, and because it is the slowest, it is usually reserved for small, inaccessible surfaces.

New program developed

In May of 1979, with training seminars in full swing, IBPAT developed a new jobsite monitoring/medical surveillance program to protect members year-round. The jobsite monitoring/medical surveillance program is—once again—the first of its kind of *any* occupational group. OSHA regards it as a prototype in the construction and maintenance industries where the lack of hazard evaluation and industrial hygiene monitoring on temporary worksites concerns many workers.

As part of the new program, representatives are being trained to identify, evaluate and resolve occupational safety and health problems, using state-of-the-art monitoring equipment such as combustible gas meters, noise dosimeters and passive monitor badges for sampling organic vapors. A "Hazard Index" is currently being developed which will be used to predict likely exposures to solvents *before* a job begins. The "Hazard Index" is undergoing validation through concurrent industrial hygiene measurements and will be further validated by extensive medical monitoring. →

Mixing in preparation for bridge repainting is a special skill of the paint trades; it is also a job which poses hazardous exposures, if protective clothing is not worn. Bridge paints commonly contain lead, chromates or cadmium. In addition, the solvents used are often among the most toxic.

Also included in the jobsite monitoring program are scaffolding evaluation techniques, fire and explosion hazard recognition, heat and noise control and general monitoring for sanitary conditions and safe work practices. The "jobsite monitoring corps" will observe workplaces and record findings on specially designed forms. These forms, along with sampling data, worker questionnaires and on-site photographs, will be analyzed for hazard evaluation and abatement.

At the same time, leading researchers at Johns Hopkins University are completing an epidemiological study of a nationwide population of painters and allied tradesworkers. Morbidity and mortality data produced by this study will allow the OSH Project to locate areas of immediate concern in jobsite monitoring/medical surveillance activities. Information gathered by the jobsite monitoring corps—together with the morbidity and mortality data from Johns Hopkins will enter IBPAT's computer for processing and print-out in formats compatible with those of OSHA, NIOSH, medical schools and trade associations.

Also needed for early detection of harmful exposures to the most hazardous and most commonly used substances of the paint and allied trades is a battery of appropriate medical examinations and a system of recordkeeping to store and retrieve results. Although current OSHA standards *require* employer-sponsored medical examinations for workers handling many substances used in the paint and allied trades, most IBPAT members do not receive regular medical surveillance because of the transient, mobile nature of their employment.

Employers can't keep permanent medical records for temporary employees. Since permanent records are kept for all its members, IBPAT wants to obtain medical examinations for members and maintain permanent medical records with the continuity so necessary to their usefulness—while in no way usurping the employer's responsibility for a safe and healthful workplace.

Jobsite monitoring/medical surveillance is a fledgling program as IBPAT moves into the second half of its "Decade of Job Safety." But it points the direction of the future. IBPAT will continue gathering and compiling information on the safety and health of members for their protection.

IBPAT's four-part plan for the future is this: (1) complete and accurate labels on all paint and allied products; (2) thorough testing of products prior to their introduction into the workplace; (3) assistance for Local Unions and District Councils to establish their own health and safety programs; and (4) nationwide certification standards for painters and allied tradesworkers—union and non-union alike.

Current paint trade product labels are inadequate. The label says only, "contains benzene"—which happens to be a carcinogen, or, "flammable liquid," but nothing about the long-term effects of inhalation and skin absorption. Most labels list no methods for controlling exposure to the product—no engineering controls, no administrative procedures and no recommendations for personal protective equipment. All this information should be on every label—along with the known consequences of failure to take precautions.

Up until now, most health and safety testing of paint trade products is the "field testing" that happens right in our own workplaces. Painters and allied tradesworkers are not guinea pigs. Many workplace hazards can be eliminated through demands for more thorough testing of products prior to their introduction into the workplace—and by testing many substances on its own.

Organized labor is growing increasingly concerned with job safety and health. But it's a complicated and very technical area. Affiliates need scientific, educational and informational support. They may also need help finding outside funds to get their efforts underway.

St. Louis District Council 2 is the first IBPAT affiliate to open its own Health and Safety Department with a full-time staff of two. Their program includes a battery of ongoing medical tests, and a system of jobsite monitoring modeled on the one designed by the IBPAT-OSH Project. The OSH Project has also assisted in publicizing their health screening program.

Finally, IBPAT believes the com-

plexity of health and safety hazards and the depth of technical knowledge required for safe and healthful work in the trades demand certification of painters and allied tradesworkers. Nationwide certification—including training, performance standards and medical monitoring—is an ambitious undertaking. But work conditions, death and suffering, hardships and severe economic impact on productivity and inflation—all of these things challenge our resourcefulness and our energies.

"IBPAT, its Local Unions and District Councils—as a team—can meet this challenge, as we have met all important challenges in other areas over the last 92 years," General President Raftery told delegates to IBPAT's 24th General Convention in Chicago. "To get more, we must do more," he said, "and there is a lot more yet to be done." Following his message, the delegates voted unanimously to establish a dues-funded Department of Health and Safety at the International's headquarters, to carry forth these programs and build on the momentum of the last five years.

"What happens five years from now?" wonders Raftery. "Will the new chemical and mineral substances of the trades and the new equipment and materials make what we know obsolete? Will we return to the task of basic research of each tool or chemical—*after* it kills our members? Or will we have a system as capable of handling the new component Y as the old component X?" IBPAT has the commitment of Local Unions and District Councils to continue its successes in education and jobsite monitoring/medical surveillance—and to meet its new information gathering and record-keeping goals. Affiliates and many others in the paint and allied trades agree: the second half of the "Decade of Job Safety" must see even greater progress.

References

1. Irving J. Selikoff, Principal Investigator, "Investigations of Health Hazards in the Painting Trades," National Institute for Occupational Safety and Health Contract CDC 99-74-91, 1975.
2. *Painters & Allied Trades Journal*, "MSSM Pinpoints Health Hazards," six-part series, Volume 90, Nos. 11 and 12, Volume 91, Nos. 1-4, 1976-1977.
3. Genevieve M. Matar P.H., et al. "Investig Hazards in the Pai NIOSH Contract 2 1980.
4. D. M. Berger, "Cher in the NIOSH Susp gens Subfile and Th Paint Industry," unpu Institute for Applied Washington, D.C., 197
5. Irving J. Selikoff, M. Protection in Construc and Prospects," *Hazar Management Journ* February 1980.
6. *St. Louis Post Dispat* Found Hazardous." \ No. 319, Page 1, Sunda 2, 1979. (A report of Pa Council No. 2 medica program.)
7. *American Painting Cont* Painters Undergo Te Council No. 2 Off to H Medical Surveillance a Monitoring," September.
8. Proceedings of the Tw General Convention of t tional Brotherhood of P Allied Trades, Septem Chicago, Illinois.
9. *IBPAT/OSHA Health a Education Book*, Inte Brotherhood of Painters Trades, AFL-CIO CLC, W D.C., 1978.