Dear Sir/Madam,

30th September 1996

I am writing to you on behalf of the Fire Brigades Union (FBU) which is the major trade union representing local authority firefighters serving in fire brigades throughout the United Kingdom. I would ask you to consider most carefully the arguments put forward in Greenpeace’s report in support of their proposal to phase out the use of PVC in buildings.

As a result of evidence presented to us by Greenpeace, the FBU is now particularly concerned about the safety of PVC based building materials, that are used in the construction and fitting out of buildings, when involved in fire.

Whilst we readily acknowledge that other plastic types when involved in fire may also pose serious dangers to human life and building structures, there now exists a substantial body of evidence which shows that the combustion of PVC (as an organochlorine product) in a fire leads to the release of dioxins and furans which may then be spread over a wide area by the smoke plume from the fire.

Dioxins are one of the most toxic chemicals known. They have been linked to human immune system problems and cancer. Dioxin is also a potent hormone disrupter. It is the ability of PVC when involved in a fire situation to produce these substances, which concerns us.

In the UK we have tended to view fires as a short term problem with little or no long term environmental impact, or threat to human well being. However, the evidence that Greenpeace have amassed leads us to believe that in the case of fires involving PVC in any quantity, this may no longer be the case.

A report written in 1993 by scientists at the German Federal Environment Protection Agency concluded that:

"In recent years it has become clear that PVC gives rise to dioxins and furans when burned - a fact that not only causes environmental damage, but also results in major problems for worker safety and high remediation costs in the wake of fires”

They went on to say:
"In the long run PVC products should be substituted by other materials where the potential dioxin and hydrogen chloride formation in a fire, poses a substantial hazard for human health and the environment, and where extensive and costly remediation measures are subsequently required."

Presently, there is no statutory requirement in the UK for a fire toxicity test for building products. We believe that the lack of such a fire toxicity test is a fundamental flaw in our building safety and regulatory standards which has been exposed by the Greenpeace report and that omission should be addressed sooner rather than later.

It is for these reasons that the FBU welcomes the work done by Greenpeace to create a directory of alternative building materials which are PVC-free and we would recommend to you that you make use of their report when planning new buildings or the refurbishment of existing ones.

Yours faithfully,

[Signature]

Ken Cameron
General Secretary
Dear Sir/Madam:  

30th September 1996

I am writing to you on behalf of the Fire Brigades Union (FBU) which is the major trade union representing local authority firefighters serving in fire brigades throughout the United Kingdom. I would ask you to consider most carefully the arguments put forward in Greenpeace’s report in support of their proposal to phase out the use of PVC in buildings.

As a result of evidence presented to us by Greenpeace, the FBU is now particularly concerned about the safety of PVC based building materials, that are used in the construction and fitting out of buildings, when involved in fire.

Whilst we readily acknowledge that other plastic types when involved in fire may also pose serious dangers to human life and building structures, there now exists a substantial body of evidence which shows that the combustion of PVC (as an organochlorine product) in a fire leads to the release of dioxins and furans which may then be spread over a wide area by the smoke plume from the fire.

Dioxins are one of the most toxic chemicals known. They have been linked to human immune system problems and cancer. Dioxin is also a potent hormone disruptor. It is the ability of PVC when involved in a fire station to produce these substances, which concerns us.

In the UK we have tended to view fires as a short term problem with little or no long term environmental impact, or threat to human well being. However, the evidence that Greenpeace have amassed leads us to believe that in the case of fires involving PVC in any quantity, this may no longer be the case.

A report written in 1993 by scientists at the German Federal Environment Protection Agency concluded that:

“In recent years it has become clear that PVC gives rise to dioxins and furans when burned – a fact that not only causes environmental damage, but also results in major problems for worker safety and high remediation costs in the wake of fires.”

They went on to say:
In the long run PVC products should be substituted by other materials where the potential dioxin and hydrogen chloride formation in a fire, poses a substantial hazard for human health and the environment, and where extensive and costly remediation measures are subsequently required.”

Presently, there is no statutory requirement in the UK for a fire toxicity test for building products. We believe that the lack of such a fire toxicity test is a fundamental flaw in our building safety and regulatory standards which has been exposed by the Greenpeace report and that omission should be addressed sooner rather than later.

It is for these reasons that the FBU welcomes the work done by Greenpeace to create a directory of alternative building materials which are PVC-free and we would recommend to you that you make use of their report when planning new buildings or the refurbishment of existing ones.

Yours faithfully,

Ken Cameron
**General Secretary**
February 1, 2000

Dear Healthy Buildings Conference Attendees:

On behalf of the San Francisco Fire Department, I wish to thank you for your interest in non-toxic building materials and products. The Fire Department’s mission is to protect the lives and property of the people of San Francisco from fires, natural disasters, and hazardous material incidents. We are, therefore, very concerned about the health hazards posed by exposure to combustion byproducts of polyvinyl chloride (PVC) plastic in fires.

During a building fire, PVC-based materials release hydrochloric acid and dioxin. Both of these substances are known to have short and long term adverse health effects on firefighters, building occupants, and the environment. When it comes in contact with the skin or eyes, hydrochloric acid can cause skin burns and blindness. When inhaled, hydrochloric acid can cause bronchitis and permanent respiratory damage. Dioxin is one of the most carcinogenic substances known to science and, in addition to cancer, has been linked to endocrine disruption, compromised immunity, diabetes, and reproductive disorders.

The San Francisco Fire Department strongly supports safer alternatives to PVC building materials. We applaud your efforts in attending the Healthy Building Conference, educating yourself about the hazards of PVC and helping to protect our community by using PVC free materials.

Sincerely,

ROBERT L. DEMMONS
CHIEF OF DEPARTMENT

[Signature]

By: Joseph Asaro
Deputy Chief of Administration
February 1, 2000

Dear Healthy Buildings Conference Attendees:

On behalf of the San Francisco Fire Department, I wish to thank you for your interest in non-toxic building materials and products. The Fire Department’s mission is to protect the lives and property of the people of San Francisco from fires, natural disasters, and hazardous material incidents. We are, therefore, very concerned about the health hazards posed by exposure to combustion byproducts of polyvinyl chloride (PVC) plastic in fires.

During a building fire, PVC-based materials release hydrochloric acid and dioxin. Both of these substances are known to have short and long term adverse health effects on firefighters, building occupants, and the environment. When it comes in contact with the skin or eyes, hydrochloric acid can cause bronchitis and permanent respiratory damage. Dioxin is one of the most carcinogenic substances known to science and, in addition to cancer, has been linked to endocrine disruption, compromised immunity, diabetes, and reproductive disorders.

The San Francisco Fire Department strongly supports safer alternatives to PVC building materials. We applaud your efforts in attending the Healthy Building Conference, educating yourself about the hazards of PVC and helping to protect our community by using PVC free materials.

Sincerely,

ROBERT L. DEMMONS
CHIEF OF DEPARTMENT

By: Joseph Asafo
Deputy Chief of Administration
April 14, 1998

Concord School Board
Ripley School
120 Merion Rd.
Concord, MA 01742

Dear Concord School Board Member:

We understand that issues regarding the potential hazards posed by polyvinyl chloride (PVC) used in school roof membranes have been discussed recently. The International Association of Fire Fighters, which represents fire fighters throughout the United States and Canada, is concerned about the short and long-term health hazards posed by exposure to combustion by-products of PVC fires. For this reason, we have prepared a detailed information packet containing an overview and articles addressing these health hazards for fire fighters who might be exposed to burning PVC. It is also for this reason that we are writing to express our concerns and to encourage you to utilize less toxic materials with which to re-roof the town's schools.

Because of its high chlorine content, when PVC burns in fires, two hazardous substances are formed which present acute and chronic hazards to fire fighters, building occupants and the surrounding community. These are hydrogen chloride gas and dioxin. Hydrogen chloride gas is a corrosive, highly toxic gas that can cause skin burns and when it comes into contact with the mucous lining of the respiratory tract creates hydrochloric acid, which can cause severe respiratory damage. Exposure to a single PVC fire can cause permanent respiratory disease.

Dioxin is an unintentional by-product of PVC combustion and would most likely be left behind in ash and debris from a PVC fire. While only small amounts of dioxin may be formed, the result of burning PVC, it is one of the most toxic substances known to science. Dioxin is a known human carcinogen and has been linked to reproductive disorders, immune suppression, endometriosis, and other diseases in laboratory animals.

Due to its intrinsic hazards, we support efforts to identify and use alternative building materials that do not pose as much risk as PVC to fire fighters, building occupants or communities.

If you need any additional information or have any question, please do not hesitate to contact me.

Richard M. Duffy, Director
Department of Occupational Health and Safety

Michael Mullane, IAFF District Vice President
Brian J. Whirley, President, IAFF Local 1942

1750 NEW YORK AVENUE, N.W., WASHINGTON, D.C. 20006-5335 • (202) 737-8484 • FAX (202) 737-8418
Dear Concord School Board Member:

We understand that issues regarding the potential hazards posed by a polyvinyl chloride (PVC) roof membrane for two schools in the Town of Concord have arisen during recent weeks. The International Association of Fire Fighters, which represents firefighters throughout the United States and Canada, is concerned about the short and long-term health hazards posed by exposure to combustion by-products of PVC fires. For this reason, we have prepared for our membership a detailed information packet containing an overview and articles addressing these hazards for firefighters who might be exposed to burning PVC. It is also for this reason that we are writing you to express our concerns and to encourage you to utilize less toxic materials with which to re-roof the town’s schools.

Because of its majority chlorine content, when PVC burns in fires two hazardous substances are formed which present acute and chronic hazards to firefighters, building occupants and the surrounding community. Thes (sic) are hydrogen chloride gas and dioxin. Hydrogen chloride gas is a corrosive, highly toxic gas that can cause skin burns and when it comes into contact with the mucous lining of the respiratory tract creates hydrochloric acid, which can cause severe respiratory damage. Exposure to a single PVC fire can cause permanent respiratory disease.

Dioxin is an unintentional by-product of PVC combustion, and would most likely be left behind in ash and debris from a PVC fire. While only small amounts of dioxin may be formed as a result of burning PVC, it is one of the most toxic substances known (sic) to science. Dioxin is a known human carcinogen and has been linked to reproductive disorders, immune suppression, endometriosis, and other diseases in laboratory animals.

Due to its intrinsic hazards, we support efforts to identify and use alternative building materials that do not pose as much risk as PVC to firefighters, building occupants or communities.

If you need any additional information or have any question, please do not hesitate to contact me.

Sincerely,

Richard M. Duffy, Director
Department of Occupational Health and Safety

cc: Michael Mullane, IAFF District Vice President
    Brian J. Whitney, President, IAFF Local 1942