Known as McMinnville college when this fine old lithograph appeared in WEST SHORE magazine in 1885, Pioneer Hall, as it is known today, is oldest structure on campus of Linfield College. Taking two years to build at a cost of $25,000 it was dedicated in 1883. Constructed in the form of a Greek cross and using 300,000 bricks the four-story building with its three-foot thick wall bases is topped by large square cupola and spire that serves as area landmark and houses the carillon bells. Foundation is laid with native stone with cornerstone weighing 1/3 ton which contains "precious documents and 'Word of Life' of past and present."

Printed for Linfield College, McMinnville, Ore. by Glass, Dahlstrom Printers
Linfield College
Mr. Robert C. McHarness
20 Kresswold Lane
Woodstown, New Jersey  08098

Dear Mr. McHarness:

Each year, Linfield College confers honorary doctors degrees on several outstanding people. On behalf of the faculty and the trustees, I am pleased to report that they have unanimously recommended that the degree, Doctor of Science (D.Sc.), be awarded to you. Our intent is to present the doctorate at Commencement exercise on Sunday, May 30, 1982.

Those of us here particularly want to recognize your significant work related to refrigerant gases, especially "Freon", and the plastic "Teflon", your dedication to helping others in their work, your commitment to accuracy, and your genuine connections with Linfield.

I hope you will be able to accept the honorary degree and be present for the ceremony at 3:00 P.M. Also, my wife and I would like you to attend the luncheon at our home immediately before Commencement. No speech is required at Commencement, other than simply acknowledging the degree when it is presented and sharing with the graduates one idea that has been important in your life.

All of us hope you will permit your alma mater to recognize your dedicated work and important achievements. I look forward to receiving your reply.

Sincerely,

Charles J. Walker

CUW:mcw
Because you have distinguished yourself as a productive scientist and as a person ever willing to help others, your alma mater takes great pride in recognizing you today.

As scientist you devoted most of your career to working with flourinated hydrocarbons at Du Pont Corporation. According to a person who knows your work well, one of your most outstanding scientific contributions is in "Freon" chemistry "especially in the field of thermodynamics and physical properties of the Freon." In fact, it was suggested that you can be called the father of the properties of the Freons. Another scientist declared that your work made it possible for Du Pont to put out the Thermodynamic Properties of the Freons without which it would have been practically impossible to use the "Freons" as refrigerants. Still another pointed out that "the refrigeration, deep freeze, and air conditioning industries, and all of us who benefit from them, owe McHarness a debt of gratitude for his pioneering work."

In a related area, you are referred to as a co-inventor of the process used in the commercial manufacture of the plastic known as Teflon -- a substance now found everywhere from family kitchens to space shuttles.

Further evidences of your productivity are the scientific publications that bear your name and the fact that you are the holder of eleven United States Patents.

A co-worker of many years agrees that your technical contributions in these several fields are significant but insists there is another contribution that is equally or, perhaps, even more important. He wrote, "By his dedicated guidance and counseling and by his personal examples, Bob imbued all his co-workers with his love for scientific truth. For Bob, sloppy measurements and careless calculations were forbidden -- only accuracy and precision were accepted. Reports and
publications were so written and edited that data were error-free
and the conclusions were clear and free from ambiguities and
half-truths."

Your career shows you are a master teacher of the others around
you. You have demonstrated this through your concern, through
your expectations, and through your compassion and understanding
of others. As many of us know, you are continuing your concern
for others today and have recently provided much of the impetus
for building the Class of 1929 Endowed Scholarship Fund to aid
Linfield students each year in the future.

We recognize you for what you have done, for what you are, and
for the contributions that your work makes to the lives of all
of us.

By virtue of the authority vested in me by the Linfield Board of
Trustees, I hereby confer upon you the degree of Doctor of Science
with all the rights and privileges pertaining thereto, ask that the
hood of a proud alma mater be placed upon your shoulders, give you
this diploma, and welcome you as a member of the class of 1982.

Charles U. Walker, President
Linfield College
May 30, 1982
MR. PRESIDENT, MEMBERS OF THE CLASS OF 1982, AND FRIENDS OF LINFIELD:


PRESIDENT WALKER, I SINCERELY THANK YOU, AND ALL THE OTHER MEMBERS OF THE LINFIELD FAMILY WHO DECIDED THAT I SHOULD RECEIVE THIS HONOR. IT IS A MUCH APPRECIATED CLIMAX TO MY CAREER.

DURING MY YEARS AT LINFIELD, THERE IS ONE MAN TO WHOM I MUST GIVE SPECIAL THANKS TODAY. HE IS DR. KENNETH W. RAY, A YOUNG PH.D. FROM INDIANA UNIVERSITY, WHO WAS NOT ONLY THE HEAD OF LINFIELD'S CHEMISTRY DEPARTMENT; HE WAS THE DEPARTMENT. AFTER A LONG CAREER IN THIS FIELD OF SCIENCE, HE IS NOW ENJOYING RETIREMENT IN FLORIDA.

PROFESSOR RAY WAS NOT CONTENT WITH JUST GIVING ME A BASIC EDUCATION IN CHEMISTRY. AFTER MY GRADUATION, HE WAS INSTRUMENTAL IN MY OBTAINING A SCHOLARSHIP FOR GRADUATE STUDY AT INDIANA UNIVERSITY. FROM THERE I TOOK A POSITION WITH THE DU PONT COMPANY, STARTING AS AN ANALYST.

DURING THE 37 YEARS I WAS WITH DU PONT, I WORKED FOR, AND WITH, MANY MEN. ALL WERE COMPETENT CHEMISTS EAGER TO GET AHEAD. IT WAS PARTICULARLY GRATIFYING TO ME TO HAVE TWO YOUNG CHEMISTS DO OUTSTANDING WORK ON A PROJECT UNDER MY SUPERVISION AND THEN GO ON TO TAKE ON GREATER RESPONSIBILITIES. THESE FINE MEN ARE JEFF HAMILTON AND BILL MURRAY.

THERE WAS ANOTHER PART OF MY LIFE AT LINFIELD BESIDE CHEMISTRY AND TENNIS. HER NAME WAS HELEN HARRIS.

EVENTUALLY WE WERE MARRIED AND HAD ONE SON. BOTH ARE HERE TODAY, AND I WANT TO ACKNOWLEDGE THEIR LOYAL SUPPORT OVER THE YEARS.

YOU WILL NOTE THAT THERE IS A COMMON THEME OF LOYALTY AND INTEGRITY IN THE VARIOUS INCIDENTS THAT I HAVE MENTIONED. THE PERSUIT OF THESE QUALITIES HAS HELPED ME IN MY CAREER AND I AM SURE THEY CAN HELP YOU IN YOURS.

YOURS. Keep your standards high as you go out from here."
Nov. 8, 1981

Dr. Ralph W. Macy
5611 SW 45 Avenue
Portland, Oregon 97221

Dear Dr. Macy:

In response to your request to Helen McHarness, I would like to make the following comments.

I worked for Mac at Jackson Lab. in the middle forties doing process development and plant assistance type work. Mac was a demanding yet fair boss with an extensive knowledge and background in the field of chlorofluorocarbons. He was a careful meticulous worker himself and expected the same dedication and intellectual honesty from his subordinates.

Later when I became chief supervisor and ultimately superintendent of technical activities in the Freon manufacturing area I came to appreciate even more fully Mac's key role and many contributions to the development of the Freon business - including as they do process development & control, physical properties and end-use technology.

Specific contributions can be gauged but not quantified by the list of publications contained in Dr. Hamilton's letter. I make this distinction because many significant technical improvements and developments are not necessarily patentable and gratuitous publication has never been a policy of the DuPont Co. Consequently, unlike our academic brethren, much of what an industrial scientist contributes remains company confidential and Mac is no exception in this regard.

You mentioned Mac's trip to England. Actually the only men I know who could have commented authoritatively on this incident are dead (I refer to his former bosses and co-authors of many publications, A/F. Benning and F.B. Downing). The occasion was an explosion in ICI's fledgling Teflon operation around 1947. Mac was sent over to help with the investigation; my memory fails me on details and Helen was unable to locate the letter of commendation acknowledging his assistance.

In summary, Mac was unquestionably one of the half dozen or so key individuals responsible for the technical side of the commercial development of the Freon refrigerants. He was a talented and dedicated scientist who invariably was gentlemanly in the conduct of his affairs - truly a man any college should be proud to acknowledge and honor!

Sincerely yours,

[Signature]

Dr. William S. Murray
Du Pont Co. Retiree
Dr. Ralph W. Macy  
5611 S.W. 45th Avenue  
Portland, OR - 97221

Dear Doctor Macy:

I take pleasure in responding to your inquiry concerning the professional accomplishments of Bob MacHarness during his long and distinguished career with the Du Pont Company. I certainly feel qualified to speak in this regard, since "Mac" (as he was usually called by his co-workers) was my first boss when I joined Du Pont some thirty-five years ago. Later, as a Division Head myself in the Freon® Research and Development Section, I continued to be in an excellent position to appreciate his many valuable contributions.

In order to make my answer as specific as possible, I have attached a list of Mac's numerous publications and patents - the sort of data most commonly used in quantifying professional accomplishment. As you can see, I have grouped these into three general areas: the technology associated with refrigeration and air conditioning; the synthesis of high-performance plastics, and technical support for the Armed Forces during World War II.

The first of these areas relates to Mac's career-long association with the fluorinated hydrocarbons developed by Du Pont and sold under the trademark Freon®. These compounds, uniquely safe with regard to toxicity and flammability, have long been an almost universal choice as the working fluid in all forms of refrigeration and air conditioning equipment. Though Mac was intimately connected with every aspect of the development and manufacture of this class of compounds, his most signal contribution was perhaps the series of papers on their thermodynamic properties. These measurements were not only crucial to the original selection of the proper refrigerant for each application, but continue to provide the entire industry with the basic engineering data required for the design of efficient, trouble-free equipment. Though Mac's hands-on association with the work decreased as he became more involved with the management aspects of the program, his research group continued to make vital contributions throughout the remainder of his Du Pont career.

October 30, 1981
Luncheon at Presidents Home prior to Ceremony

HELEN HARRIS

ROBERT C. CALVERT

M. Harness
Congratulations Bob! Honorary Degree Doctor in Science May 30, 1982