March 28, 1989

Mr. Vince Vallquist 4219 Ashworth N Seattle, WA 98103

Dear Mr. Vallquist:

Thank you for your recent letter to Admiral Watkins, Secretary of Energy, and the enclosed copies of your earlier letters to Mr. Tower.

I reviewed your materials very carefully and was quite touched by the sincerity and good will towards our country that emanates from them.

Your suggestions have been noted. The effort you took to communicate them to the Department of Energy is very much appreciated.

Sincerely,

Ryszard Gajewski, Director Division of Advanced Energy Projects Office of Basic Energy Sciences, ER-16

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PREPARED BY: RGajewski/lh:ER-16:03/28/89:3-5995

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Adm, Janes Watkins march 7,1989 SICKITARY OF ENTRBY Dischington D. C. Rei Full Disclosure.

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# This work has been very hartic for me in trans of pressure breaker of my inward some of the magnitude of these lattens, and I feel you can guage my contidence if andon for your brilliant Naval Background in the attacked prefficie that is mount of what one Navy mans to us in a new lock, cold-fusing power trains, to which a quiet approxume would intimacy as a signification that early min understand in tenms of hand will centled in IN For our country, 4-15, The attire does cap my recommendation in the new look for the Navy, a controlmer taling between men and me 145t pictures is definituly my ARTISTIC AXPRAGE IM of SDI magnitude of claring eliginance I've com sun in my liter. Please take care that this servendining of Wents is in largung with America at her best, kniwing smore hard Work mixuela have to be per formed, yet having a digger of spirited play prist with daring em fidmer taking, daring, prist, train spirit, a paint, than that presumes in the extensity that were in the extensity that were in the reach and it's live.

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you for your time,
Sincreshy,
Vince Vallanist
4219 Ashworth No Souttle Wa 98103

JOHN TOWER March 5, 1989
SECRETARY OF DEFENSE
THE PENTAGON
WASHINGTON DC

RE: PLASMA WAVE-GUIDE ACCELERATOR SUPERIMPOSED INTO COLD-FUSION REACTORS FOR FUTURE NAVAL SHIPS

Dear Secretary Tower,

I would like your staff to be keenly aware of a possible breakthrough in cold fusion design which I feel is appropriate at this time for you to consider from the intrinsically evidencing article if the Scientific American magazine dated March 1989, 'Plasma Particle Accelerators' by John Dawson.

The gellpoint of this discussion is one of obtaining a 20 MW beat-wave of about 400 GEV to which electrons could be injected into the plasma wave topside perpendicular to the direction of the electric field(induced by two carbon dioxide lasers with wavelengths of 9.6 and 10.6 microns), similar to what Dr. Joshi is doing per the article, yet I believe theplasma waves can be superimposed within the cold fusion vessel to which the electrons produce X-rays of sufficient energy to yield a muon region of about 1 MW that essentially yields fusion at 100 MW with the required tritium and deuterium injectors inserted at precise points of amplitude with the plasma wave-beat region. Note that the cold-fusion arrangement could provide its own fuel from fast-nuetrons reaching into proton regions for deuterium, and lithium regions for tritium. The vessel itself would have superconductor magnetic confinement within a superconductor magnetic refrigerator which I believe could both be assisted by Josephesen Junctions in which all housekeeping functions would be at 37.5% or 37.5 MW, and 83,750 h.p. derived from another superimposed idea, that of the muon region inducing a high magnetic field perfectly aligned for an alternator that just happens to appear on page 93 of this issue, in which the magnets

are mounted on the rotor and the coils are place on the stator, which means the electromagnetic stator is flush and interior to the reactor vessel aft end. Note that the required magnetic field holding the plasma within a vacuum region travels formed with while the plasma electric field travels aft, completely consistent with the aim of the lasers, and the induced magnetic field is directed transversely inward perfectly matching the superimposed alternator aft. Of course, one could also add a lithium coil blanket in a compact sequencer-condencer arrangement. I also feel that the most critical factor of a 400 GEV pasma, or 20 MW, can be centered within a vessel size of no more than 3.5 m by 2 m square-or 6.5 foot width, heighth and 12 feet in length that produces 134,000 horsepower total and 83,750 hp external. If these figures are some what correct, then I believe we have

exactly the parameters for a Navy ship or Sub and we can scale a pair of these reactors for an aircraft carrier of cold-fusion HST/SST bomber, and it just tickles me that this may make Admiral Crowe's day. Obviously, the sentient point comes up of muomolecular catylist resonance at the required temperature of 900 degrees C relative to the plasma wave-guide but I did want you to get the idea that I just couldn't contain myself when I put it together and everything lined up perfectly - I think.

Aside from my interest in superpositioning fusion events, I've got a couple of drawings I'd like you to consider for future platform studies which could be examples of cold fusion applications - except for the twin X-wing Navy Patrol Craft. Again, thank you.

Sincerely,

Vince Vallquist

4219 Ashworth N Seattle Wa 98103 JOHN TOWER

SECRETARY OF DEFENSE THE PENTAGON WASHINGTON DC

RE: PLASMA WAVE-GUIDE ACCELERATOR APPLIED TO A NEW AIRFORCE
AIRCRAFT - AN EARTH SHIP THAT HAS BEEN PREVIOUSLY TERMED
A GRAVITY SHIP.

Dear Secretary Tower,

I would like you to attach this letter to the one dated March 5, 1989 to which I gave a description of several novel ideas of superpositioning a wave-guide accelerator within a cold fusion reactor vessel with a power magnitude and inferred deminsion of 100 MW in which the drive from the plasma is dericted to an interior alternator which could provide an estimated 83,750 h.p. based on muon fusion and carbon dioxide lasers as implied in a formal research article appearing in the Scientific American magazine dated March 1989.

This letter now suggests that this arrangement of perhaps seven such cold fusion units with a suitable SMES startup arranged in the lower third of a flying saucer shaped 'Earthship' with a convenient diameter of 100 feet would have a combined energy of 20 TEV or 1,000 GW if infact the cold fusion sizes are approximately 150 MW each in which the lasers are situated at right angles to the lower deck perimeter and angled by mirrors as the attached drawing indicates. This aircraft would weigh in at approximately a 747 to which a supercomputer linkup would employ the downward directed magnetic force much like a cone as indicated with the current running counterclockwise and resultant energy vectors dericted radially outward. The key to this huge amount of plasma energy is precisely found in the computer synchronization of wave-beats fore, aft, and transversally - as the drawing indicates.

If the March 5th letter has seroius merit for a breakthrough in cold fusion design for ships, subs, and aircraft as I truly beleive, then you can see the logic in aligning seven such units serially along a flying saucer perimeter which the supercomputer would be above the reactor base level and the command-pilot area on the top level. The implications may seem startling yet I am forever grateful to your staff if infact plasma wave-guide accelerators joined with cold-fusion units become the crucial elements of launching highly efficient platforms such as conventionally appearing aircraft or breathtaking saucer-shaped aircraft as I've submitted in the past, with some degree of trepidation. If such designs do infact represented in the next decade I believe that very serious attention be given to this roughdraft presentation. The most novel concept is my approach to the flying saucer flight management profile.

I realize that this Earth Ship concept comes as a shock to everyone but I feel proud to come forward with these ideas with fullest pride in trying to give the Navy and the AirForce my very best of design creativity, that is truly meant well. Certainly the March 5th letter can be dericted to Energy Secretary ADM. James Watkins for possible inclusion in new cold fusion utility studies to which I believe there would be incredable savings.

This very sincere suggestion stream is dedicated to ADM. Crowe, ADM. Troste, and General Welch, all whom I devote my most fervent admiration and respect to.

Sincerely, Vina Vallegrist

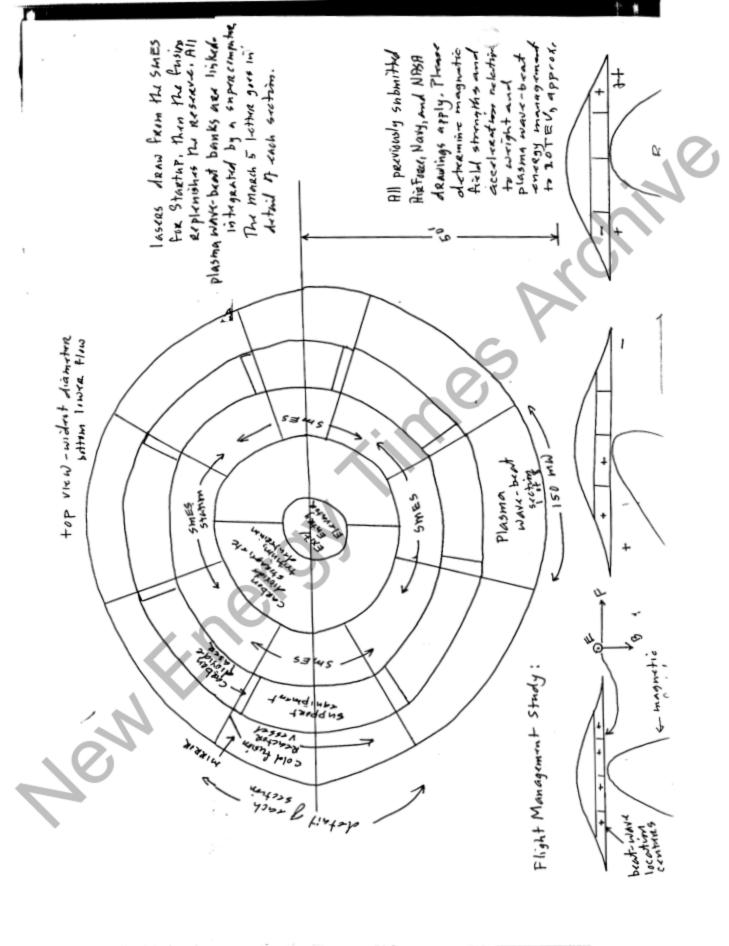
Vince Vallquist

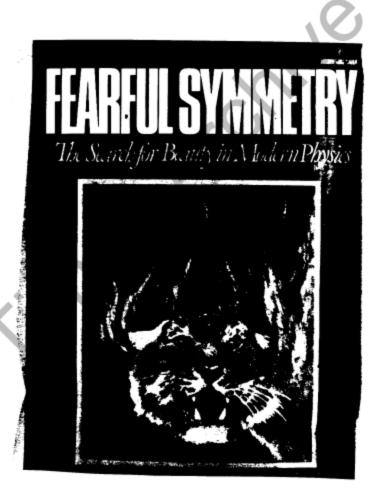
4219 Ashworth N

Seattle Wa 98103

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application and smes Requirements.

scaled up according to fusion event

7 GW

February 10, 1989

Mr. Vince Vallquist 4219 Ashworth N Seattle, WA 98103

Dear Mr. Vallquist:

Your recent letter to Secretary-Designate Watkins has been referred to me for response.

As it happens, your favorite, personal hope for a future energy source, cold fusion, is also mine (any many other people's). The problem, as you correctly imply, is in cheaply producing the muons. The only way we know how to make them is to first produce  $\pi$ -mesons (pions) which then naturally decay into muons. Pions are produced by effecting nuclear collisions at very high energies per nucleon. Though the total energies released in a howitzer round, as you suggest, would be tremendous, the energy per nucleon would certainly not be enough to induce nuclear reactions leading to muon production.

Your thoughtfulness in sharing your idea with the Department of Energy is very much appreciated.

Sincerely,

Ryszard Gajewski, Director Division of Advanced Energy Projects Office of Basic Energy Sciences, ER-16

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PREPARED BY: RGajewski/lh:ER-16:02/10/89:3-5995

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ADM. JAMES WATKINS

SECRETARY OF ENERGY DEPARTMENT OF ENERGY WASHINGTON DC

RE: COLD-FUSION DIRECT DRIVE ENHANCEMENT

Dear Secretary Watkins,

this letter is very brief that concerns a working principle that may be of fairly significant consequence in upscaling direct drive efficiencies for my favorite, personal hope of energy sourcing: cold-fusion. Please consider employing a bank of 155 mm howitzers to fire the nuclear micropellets into the deuterium/lithium target to create muons by the most efficient means possible - x-rays, and we simply are avoiding incredible acceleratorand laser costs to achieve a scaleup necessary for a fairly large fusion reactor. In fact, the target could be within the fussion vessel with the gun muzzels projecting inward, but the important point is that the high velocity is offset by recoil system; and I would imagine the barrel could be made of organometalic/ceramic material (OMs) to insure rapid fire without heat buildup. The guns could be centered bunker-style, or concentric, or below the base in a shaft arrangement, but the main point is that each gun would fire the equivalent of 25 pounds of TNT, times 20 guns, or 500 pounds of TNT equates to one billion joules of energy. The micropellets employed in this incredibly affordable fashion become the most elegant method of initializing and maintaining fusion energy.

Please note that these howitzers give perfect dimension requirements if grouped horizontally in a cluster, and I assume that pulsed ignition has always been the mainstream of thought. With the above arrangement, we can power subs, surface ships, and planes, although we would have to design a suitable silencer.

Concerning the reacter vessel, I believe OMs could be employed with a ceramic inner surface, since turbine technology is now considering these materials and with regard to new utility ITER generators, I fee that we should at least weigh the possibility of matter/ anti-matter interactions as a direct translation to streamline the turbine interface that could again be downscaled to ship/aircraft propulsion.

After a year long study of Defense applications, I feel coldfusion is sentiently perfect as the next step, especially for the Navy. In fact, new materials may completely change our Naval presence - with ceramic construction becoming viable if we can reduce costs and maintain a CAD-CAM section join in which I believe specially-coated CAD-CAM aluminum trays would serve as reusable molds for ceramic pouring and kilning. High energy and high facility costs would be a factor, even with Varian gyrotron microwave lasers, but an article in the February 1989 issue of HIGH TECHNOLOGY may have cracked the problem. A team from Northwestern University (Boston) is using superconductors to deposit thin ceramic films for computer chips, a process that would normally require temperatures in the range of 1,000 to 2,000 degrees C , but they've found a way to apply the ceramic films at 150 to 170 degrees C, and if upscaled to ship section constuction, say 6' X 6' rigid sheets reinforced with honeycomb, then again the Navy is well served by your Department assisting in such developments for Defense purposes. This thought is yours to give to ADM. Crowe.

I am ever so sensitive to performatively brilliant articles from SCIENTIFIC AMERICAN and HIGH TECHNOLOGY, to which the public is given a glimpse of the incredible challenges facing your Department, and leading edge companies and university research teams. I hope I've been of some assistance. Thank you.

Sincerely,

VINCE VALLQUIST

4219 ASHWORTH N

SEATTLE WA 98103

(206) 633-0754