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From: william bill d peterson <paengineers@juno.com>  
To: <GPB@nrc.gov>  
Date: Thu, May 29, 2003 1:25 PM  
Subject: Fw: 360 units of storage at PFS is good, then do 4,000 units storage at Pigeon Spur

DOCKETED  
USNRC

May 30, 2003 (8:21AM)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

SERVED June 2, 2003

----- Forwarded message -----

From: william bill d peterson <paengineers@juno.com>  
To: bruce.shirley@anlw.anl.gov,winfaux@msn.com,rdickes@xmission.com,  
jerry@srv.net,millielouise@earthlink.net,  
barrowesscb@juno.com, henning@hoj-eng.com,layneb8@aol.com,  
ldAcadSci@aol.com, pregehr@pblutah.com,jmoulder@mcw.edu,  
blc+@pitt.edu, gary\_m\_sandquist@urscorp.com,  
carbon@engr.wisc.edu, wilson@physics.harvard.edu,  
rstallings@pnhs.org, wledwards@netutah.net,  
Edwards\_Wayne\_L@msn.com  
Cc: jdp@dairynet.com,peter.jenks@mail.house.gov,eanderso@le.state.ut.us,  
pknudson@le.state.ut.us,pete\_lyons@energy.senate.gov,  
dwight.cates@mail.house.gov,margaret.chu@hq.doe.gov,  
the.secretary@hq.doe.gov,elizabeth.connell@hq.doe.gov,  
Forinash.Betsy@EPA.gov  
Date: Wed, 28 May 2003 22:22:21 -0600  
Subject: 360 units of storage at PFS is good, then do 4,000 units storage  
at Pigeon Spur  
Message-ID: <20030528.222222.-173859.2.paengineers@juno.com>

Dear Advisers:

In view of the dilemmas, it makes sense to build a small temporary facility for storage of spent nuclear fuel (SNF) at the Goshute Indian Reservation. But then PFS needs to work with us and build a 4,000 unit storage facility at Pigeon Spur in Box Elder County, already on the railroad, but two mountains away from Hill AFB training ranges. With PFS help, we have offered to revise and resubmit our November 19, 1998 license application in 30 to 90 days. With eight years of planning, public hearings and legal work under our belt we would ask the Licensing Board to work with us and issue a license to us within a year. Why not? We have already ask for this at NRC but they said they will not answer until our new License Application is submitted. It makes sense.

Thank your for your help. Our 300-year solution to continue from Yucca Mountain is progressing. Three weeks ago Linda Weightman at DOE called and said that our application for money for work on our proposed 300-year disposal process has been forwarded to appropriate reviewing personnel.

The need for more nuclear power to make hydrogen for fuel cell cars and so a need for a solution for disposal of SNF will soon become enormous. Fuel cell cars are going to spring on the market before the electric industry is prepared to power production of hydrogen. See two news articles on this attached in Word.

Sincerely, Bill May 28, 2003

Template = SECY-038

SECY-02

Attached: D:\P\Nuc\FuelCell\T52503H2.doc  
D:\P\Nuc\PFS\LA\D40103.ans.doc

### 300-YEAR HARDENED STORAGE

We want to develop and license 300-year hardened storage suitable for storing either used nuclear fuel or fission wastes left over after reprocessing. The hardened, 300-year storage would store standard multipurpose canisters a few feet below the surface in convection-air cooled silos, capped by heavy concrete lids with durable top surfaces. They would be designed to safely withstand airplane crashes, violent earthquakes, or terrorist attacks using man-carried missiles, and to remain fully functional with near-zero maintenance for at least 300 years. Such storage will be needed when new methods of reprocessing remove 99.999 percent of the transuranics from the fission waste. This will leave virtually no isotopes with half lives over 30 years, allowing the "purified" fission waste at 300 years to become low level waste, class C. The transuranics would go to new fuel rods and be almost completely burned for energy in Advanced Fast Reactors. Essentially no more 10,000-year storage as in Yucca Mountain would be required, since the 300-year storage would then be adequate to complete the Advanced Fuel Cycle.

**CC:** <JRK2@nrc.gov>, <PSL@nrc.gov>

## Idaho Lab's Research Could Free U.S. Reliance on Oil

By Dan Gallagher  
The Associated Press

BOISE, Idaho -- Jim Francfort of the Idaho National Engineering and Environmental Laboratory (INEEL) has a job many would envy.

He tests America's future vehicles, from tiny, bubble-shaped electric carts to fleets of city buses cruising on clean hydrogen gas.

He's trying to perfect cars and trucks that do not need gasoline or diesel exclusively for power and do not choke the air with exhaust. Instead, they will employ hydrogen from fuel cells, batteries, natural gas, conventional fuel or a combination of them.

Francfort figures his research may help end the country's perilous reliance on oil, which he says is a big reason the nation is embroiled in the Mideast.

"I'm speaking as the father of an 8-year-old girl," he said. "Our dependence on oil ties in with our national security and terrorism. Oil will prove to be finite in someone's lifetime."

The Bush administration wants the next generation of vehicles to be powered by fuel cells. The cells combine hydrogen and oxygen to produce electricity and water. The current powers the car.

U.S. Energy Secretary Spencer Abraham announced the FreedomCAR initiative to speed the production of these hydrogen-fueled vehicles. The administration proposed \$1.7 billion in funding for the FreedomCAR program over the next five years.

The CAR in FreedomCAR is Cooperative Automotive Research. The test-drives are being done by Francfort's federal Advanced Vehicle Testing Activity office and the automobile industry.

The public is demanding a car that emits no pollution, has a long range, is easy to recharge or refill, and has the speed of an internal combustion engine, he said. That is where the political battle is being waged.

GM created electric-powered EV1s, touting them as being able to outrace a Mazda Miata sports car. But California, which has the toughest emission rules in the nation, is retreating from those pollution guidelines.

So, the Big Three automakers have all abandoned their electric-battery vehicles and are focusing instead on low-polluting hybrids and fuel cells.

GM this month delivered six fuel-cell vehicles to Capitol Hill for lawmakers to drive -- and to lobby for the technology. The six HydroGen3 prototypes cost about \$1 million each. Some environmental groups have criticized GM's fuel cell demonstration as designed to distract lawmakers' attention from problems like the low fuel efficiency of many current cars and trucks.

"We oppose FreedomCAR," said Eric Pica, Friends of the Earth policy analyst. "It lacks any types of benchmarks. Fuel cells are seen as the Holy Grail for oil independence, but they're used as an excuse to avoid any efficiencies now."

Pica said the government should stop subsidizing the auto companies as they create new technology. He also warns the administration may push for **nuclear reactors** or coal-fired plants to refine pure hydrogen for the vehicles. While the public is looking for that

be-all hydrogen car, Francfort figures government and commercial fleets are currently winning the alternative fuel war. He crisscrosses the nation to consult with them.

That allows the Energy Department to share costs and document how far their fleets can go.

The research includes:

- \* Construction of a hydrogen and compressed-natural gas generation and fueling station in Phoenix. The researchers are studying the performance of trucks running on hydrogen, natural gas, or blends.
- \* Evaluation of diesel-electric hybrid buses for the New York City Transit Authority and state-of-the-art buses in California running on fuel cells.
- \* Hybrid gasoline-electric vehicles. They already are available in the form of the Honda Insight and Toyota Prius. Advanced Vehicle Testing is putting long miles on the hybrids in Arizona. After driving them as much as 100,000 miles, they will be sold. But researchers will continue to document their performance after the new owners get the keys.
- \* Urban electric vehicles. These are small versions of personal vehicles and can reach about 70 miles an hour. They are being tested for such roles as carrying East Coast executives from their homes to the commuter train and back.
- \* Neighborhood electric vehicles. The bubble-shaped craft resemble golf cars with a top speed of about 25 miles an hour. About 340 were tested. They covered 1.2 million emission-free miles and saved 29,000 gallons of gas.

They are ideal for places like air bases, airports or national park facilities where employees must get around fairly quickly on improved road surfaces, Francfort said.

"They provide a tremendous petroleum savings. You currently have these V-8 pickups on military bases that are getting 8-10 miles a gallon," he said.

The INEEL is improving the batteries that run the new breed of cars.

Francfort also said the nation's semi trucks consume 800 million gallons of diesel a year idling during the winter. Researchers are working on a small heater that consumes far less diesel but keeps the truck engines warm.

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On the Net: Advanced Vehicle Testing Activity: <http://www.ott.doe.gov/otu/field> -- ops/

## N-waste plan is downsized

But making it smaller isn't issue, regulator says

By Donna Kemp Spangler

Deseret News staff writer

In an effort to persuade nuclear regulators to grant them a license, a consortium of nuclear power utilities is offering to reduce the size of their Tooele County project by more than 90 percent.

In one of three motions filed Monday with nuclear waste regulators, Private Fuel Storage seeks a license condition that would limit the size of the facility from 4,000 upright concrete casks containing spent fuel rods to 336 casks.

But PFS says it is just temporary.

"Our goal is still a license for a 4,000-cask facility," said PFS Chairman John Parkyn.

Monday marked the deadline for PFS to respond to an unfavorable ruling from the Atomic Safety Licensing Board (ASLB). In a partial ruling on March 10, the licensing board denied licensure because of the probability of an accident involving Air Force fighter jets that train in the Skull Valley area near the proposed facility.

The smaller the site, the less the probability of an aircraft crash, PFS maintains.

"If we received a conditional license to operate a smaller site, we would be able to proceed with planning and construction while continuing to address ASLB concerns and make our case for a larger facility," Parkyn added.

Utah regulators are shaking their heads in disbelief.

"We'll make it smaller so it's not as easy to hit?" questioned Dianne Nielson, executive director of the Utah Department of Environmental Quality. "It isn't an issue of making it smaller, it is an issue of storing it there in the first place."

PFS is a consortium of mostly Eastern nuclear power utilities that had negotiated a lease with the tiny Skull Valley Band of Goshutes to store up to 44,000 tons of spent nuclear fuel rods piling up at nuclear power plants around the nation. The company wants to store the waste in above-ground canisters pending the completion of a permanent waste repository inside Yucca Mountain, Nev., a project still 10 years or more away.

Besides seeking a licensing decision conditioned on a smaller facility, PFS also appealed the licensing board's finding to the five-member nuclear Regulatory Commission. In a separate motion, it asked the licensing board to consider new evidence that would prove that even if a fighter jet were to crash into the facility, the aircraft would not penetrate a cask and cause a radioactive release.

In its appeal, PFS argued that the licensing board ignored evidence that pilots are trained and able to avoid sites on the ground before having to eject from an airplane. PFS's expert witnesses had estimated that pilots in control of their planes could avoid sites on the ground 95 percent of the time.

But the state's witnesses say there is no evidence that pilots would avoid the facility. In life-threatening situations, the pilot may not be able to eject and steer the aircraft away from the facility.

Nielson said the state is prepared to challenge any appeal.

"I think the licensing board was right on target," she added. "We will fight the

proposal. It is a bad place to put the waste. It doesn't belong in Skull Valley and it doesn't belong in Utah."

*E-MAIL: [donna@desnews.com](mailto:donna@desnews.com)*

P&A ENGINEERS, PUBLIC RELATIONS  
2961 S 500 E  
Salt Lake City, UT 84106  
Phone 801-467-0354  
Email [barrowesscb@juno.com](mailto:barrowesscb@juno.com)

7 May 2003

~~Proprietary~~ *ATB*  
*6/2/03*

John N. Augustine, Mail Stop 921-107  
Unsolicited Proposal Coordinator  
U.S. Department of Energy  
National Energy Technology Laboratory  
626 Cochrans Mill Road Telephone No.: 412-386-4524  
P.O. Box 10940 Facsimile No.: 412-386-6137  
Pittsburgh, PA 15236-0940 e-mail: [john.augustine@neti.doe.gov](mailto:john.augustine@neti.doe.gov)

Subject: Development of hardened 300-year storage--new application

Dear Mr. Augustine:

We have contacted you before about the 300-year solution for dealing with spent or used nuclear fuel (UNF). Regarding the reprocessing part, several eminent Idaho chemists who do work in processing of UNF have studied our proposed 300-year disposal process and have assured us that it can be done by methods within reach.

Our part of this (see abstract below) would be the development and NRC licensing of a hardened, 300-year storage method that would safely withstand airplane crashes, violent earthquakes, and terrorist attacks using man-carried missiles. Other design objectives would be that the required cooling be passive and that for at least 300 years, zero or near-zero maintenance would be sufficient.

Please disregard previous abstracts and consider this abstract by itself. When developed and licensed, this technology could then be used at almost any location where UNF needs to be stored, or where "purified" fission waste would be stored. If the need for another Yucca Mountain can be eliminated, as anticipated, this technology would save the government untold billions of dollars and eliminate numerous future political battles on siting of another Yucca Mountain.

Please give this due consideration and a timely response.

Sincerely yours,

Steven C. Barrowes, Ph.D.  
Public Relations  
P&A Engineers

cc: Dr. Peter Lyons  
Ms. Betsy Connell  
Ms. Betsy Forinash

and

Technical Advisory Board:

Mr. Philip Anderson	208-234-7001	Exec. Dir. ID Academy of Science
Dr. Steven Barrowes	801-467-0354	P&A Engineers
Prof. Max Carbon	608-831-0914	U of Wisconsin
Dr. Jerry Christian	208-522-6793	INEEL, Scientific Fellow (retired)
Prof. Bernard Cohen	412-642-9245	U of Pittsburgh
Prof. John Maulder	414-456-4672	Medical College of Wisconsin
Prof. Gary Sandquist	801-278-3382	U of Utah
Richard Stallings	208-232-9468	Former Congressman, Nuclear Negotiator
Prof. Richard Wilson	617-495-3387	Harvard U

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Abstract text 177

[peter\\_lyons@domenici.senate.gov](mailto:peter_lyons@domenici.senate.gov) [elizabeth.connell@hq.doe.gov](mailto:elizabeth.connell@hq.doe.gov) [Forinash.Betsy@EPA.gov](mailto:Forinash.Betsy@EPA.gov)

[IdAcadSci@aol.com](mailto:IdAcadSci@aol.com) [carbon@engr.wisc.edu](mailto:carbon@engr.wisc.edu) [jerry@srv.net](mailto:jerry@srv.net) [blc+@pitt.edu](mailto:blc+@pitt.edu)  
[jmoulder@mcu.edu](mailto:jmoulder@mcu.edu) [gms@asp-llc.com](mailto:gms@asp-llc.com) [rstallings@pnhs.org](mailto:rstallings@pnhs.org) [wilson@physics.harvard.edu](mailto:wilson@physics.harvard.edu)

Dr. Margaret S.Y  
OCRWM - Chu  
[margaret.chu@hq.doe.gov](mailto:margaret.chu@hq.doe.gov)  
Dr Margaret S Y Chu at OCRWM



**From:** HEARINGDOCKET  
**To:** Paengineers@juno.com  
**Date:** Mon, Jun 2, 2003 11:07 AM  
**Subject:** Fwd: Fw: 360 units of storage at PFS is good, then do 4,000 units storage at Pigeon Spur

On May 29, 2003, William Peterson forwarded an attached e-mail to Judge G. Paul Bollwerk. Judge Bollwerk forwarded the e-mail to the Office of the Secretary for placement on the Docket for the Private Fuel Storage proceeding. One of the attachments to the Peterson e-mail is a P&A Engineers letter dated May 7, 2003 from Seven C. Barrowes to John N. Augustine. The word "Proprietary" appears under the date of May 7, 2003.

As the docketing office, we need to know whether Mr. Peterson intended the information in the letter to be a proprietary submission or a publically available submission. Please send us an e-mail on the status of this document. The cover e-mail appeared to have wide distribution. If you desire, just let us know that the word "Proprietary" can be lined out. If so, we will file your instructions with the original e-mail to Judge Bollwerk.

Thanks for your consideration,

Emile L. Julian  
Assistant for Rulemakings  
and Adjudications  
Office of the Secretary  
301-415-1966

**CC:** G. Paul Bollwerk

**From:** william bill d peterson <paengineers@juno.com>  
**To:** <HEARINGDOCKET@nrc.gov>  
**Date:** Mon, Jun 2, 2003 11:42 AM  
**Subject:** Re: Fwd: Fw: 360 units of storage at PFS is good, then do 4,000 units storage at Pigeon Spur

**To:**  
Emile L. Julian  
Assistant for Rulemakings  
and Adjudications  
Office of the Secretary

The word "Proprietary" can be lined out. Please line out the word "Proprietary".

Truly yours, William D. (Bill) Peterson, M.S., P.E.  
P&A Engineers, Pigeon Spur Fuel Bank  
Ref, NRC Docket No. 72-23, (dormant)

-----  
Ref your E-mail below:

Ref:

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Thanks for your consideration,

Emile L. Julian  
Assistant for Rulemakings  
and Adjudications  
Office of the Secretary  
301-415-1966

**CC:** <barrowesscb@juno.com>, <bruce.shirley@anlw.anl.gov>, <winfaux@msn.com>, <rdickes@xmission.com>, <jerry@srv.net>, <millielouise@earthlink.net>, <henning@hoj-eng.com>, <layneb8@aol.com>, <IdAcadSci@aol.com>, <pregehr@pblutah.com>, <jmoulder@mcw.edu>, <bcl+@pitt.edu>, <gary\_m\_sandquist@urscorp.com>, <carbon@enr.wisc.edu>, <wilson@physics.harvard.edu>, <rstallings@pnhs.org>, <wledwards@netutah.net>, <Edwards\_Wayne\_L@msn.com>

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )

PRIVATE FUEL STORAGE, L.L.C. )

Docket No. 72-22-ISFSI

(Independent Spent Fuel Storage  
Installation) )

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LIMITED APPEARANCE STATEMENT OF WILLIAM D. PETERSON have been served upon the following persons by deposit in the U.S. mail, first class, or through NRC internal distribution.

Office of Commission Appellate  
Adjudication  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Administrative Judge  
Michael C. Farrar, Chairman  
Atomic Safety and Licensing Board Panel  
Mail Stop - T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Administrative Judge  
Jerry R. Kline  
Atomic Safety and Licensing Board Panel  
Mail Stop - T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Administrative Judge  
Peter S. Lam  
Atomic Safety and Licensing Board Panel  
Mail Stop - T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Sherwin E. Turk, Esquire  
Catherine L. Marco, Esquire  
Office of the General Counsel  
Mail Stop - 0-15 D21  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Diane Curran, Esquire  
Harmon, Curran, Spielberg  
& Eisenberg, L.L.P.  
1726 M Street, NW, Suite 600  
Washington, DC 20036

Joro Walker, Esquire  
Director, Utah Office  
Land and Water Fund of the Rockies  
1473 South 1100 East, Suite F  
Salt Lake City, UT 84105

Martin S. Kaufman, Esquire  
Atlantic Legal Foundation  
205 E. 42<sup>nd</sup> St.  
New York, NY 10017

Docket No. 72-22-ISFSI  
 LIMITED APPEARANCE STATEMENT  
 OF WILLIAM D. PETERSON

Denise Chancellor, Esquire  
 Assistant Attorney General  
 Utah Attorney General's Office  
 160 East 300 South, 5th Floor  
 P.O. Box 140873  
 Salt Lake City, UT 84114

John Paul Kennedy, Sr., Esquire  
 David W. Tufts, Esquire  
 Confederated Tribes of the Goshute  
 Reservation and David Pete  
 Durham Jones & Pinegar  
 111 East Broadway, Suite 900  
 Salt Lake City, UT 84105

Tim Vollmann, Esquire  
 3301-R Coors Road N.W., #302  
 Albuquerque, NM 87120

Marlinda Moon, Chairman  
 Sammy Blackbear, Sr., Vice-Chairman  
 Miranda Wash, Secretary  
 Skull Valley Band of Goshute Indians  
 P.O. Box 511132  
 Salt Lake City, UT 84151-1132

Jay E. Silberg, Esquire  
 D. Sean Barnett, Esquire  
 Shaw Pittman  
 2300 N Street, NW  
 Washington, DC 20037-1128

Richard Wilson  
 Department of Physics  
 Harvard University  
 Cambridge, MA 02138

Paul C. EchoHawk, Esquire  
 ECHOHAWK LAW OFFICES  
 151 North 4th Avenue, Suite A  
 P.O. Box 6119  
 Pocatello, ID 83205-6119

Stephen L. Simpson, Esquire  
 Office of the Solicitor  
 Department of the Interior  
 Division of Indian Affairs  
 1849 C Street, NW, Mailstop 6456-MIB  
 Washington, DC 20240

  
 Office of the Secretary of the Commission

Dated at Rockville, Maryland,  
 this 2<sup>nd</sup> day of June 2003