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Volume II A.1 Pages 501-1,005

FINAL
ENVIRONMENTAL IMPACT STATEMENT

SUPERCONDUCTING SUPER COLLIDER

Volume II
Comment Resolution Document

A. Comments
1. Letters

December 1988

U.S. Department of Energy
Washington D.C. 20585

225-775 - 88 (Book 3) - 1

LETTER 302

Thomas & Boren
CERTIFIED PUBLIC ACCOUNTANTS

September 15, 1988

Dr. Wilmot Hess
Chairman
SSC Site Task Force
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

Thomas & Boren, P.C. is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

We strongly support a Federal decision to locate the SSC in Ellis County, Texas. The positive economic impacts of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate.

1 The beneficial impacts of the scientific community which will grow with the SSC are important to the Metroplex region and to Texas. By affiliating Texas's universities and our private sector research capabilities with SSC programs, a mutual benefit both to SSC development as well as for our technology base will result.

Texas is the best location nationally for the SSC because our right-to-work tradition, our young workforce, and our rapid growth as a high-tech region will guarantee the Department of Energy the most productive, qualified staffing which could be found.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

John C. Thomas

John C. Thomas, CPA
THOMAS & BOREN, PC

bb

7125 Marvin D. Love Frwy. • Suite 204 • Dallas, TX 75237 • (214) 296-2941 • A Professional Corporation

LETTER 303

FIRST NATIONAL BANK

MIDLOTHIAN, TEXAS
76065

JIM RODGERS
PRESIDENT

September 19, 1988

Dr. Wilmot Hess
Chairman
SSC Site Task Force
Department of Energy
Washington, D. C. 20545

Dear Dr. Hess:

The First National Bank in Midlothian, Texas is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

Texas is the best location nationally for the SSC because our right-to-work tradition, our young workforce, and our rapid growth as a high-tech region will guarantee the Department of Energy the most productive, qualified staffing which could be found.

We strongly support a Federal decision to locate the SSC in Ellis County, Texas. The positive economic impacts of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate. 1

Texans are rightfully known for our "can-do" spirit and work ethic. These qualities of our people and our businesses will insure not only timely, quality construction and operation of the SSC by the skill pools here in Texas, but also long-term public support for the SSC program for years to come.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

Jim Rodgers

Jim Rodgers,
President

JR/pm

IIA.1- 502

LETTER 304

905 Savannah Dr.
Ennis, Texas 75119
September 21, 1988

Dr. Wilmot N. Hess,
Chairman
SSC Site Task Force
Department of Energy
Washington, DC 20545

Dear Dr. Hess:

1 I have reviewed the environmental impact information compiled by the Department of Energy pertaining to the proposed sites for the Superconducting Super Collider (SSC). As a resident and property owner in Ellis County, Texas, I am comfortable with the overall affect that the SSC project will have on our area. I fully support the selection of Ellis County as the SSC site, and am confident that the citizens of this area will help make the project a success.

Sincerely,

Randy Wiemelt

Randy Wiemelt

LETTER 305

Balch-Edwards
REAL ESTATE
817-865-7434

9-17-88

TO: Dr. Wilmot Hess
Chairman
SSC Site Task Force
Dept. of Energy
Washington, D.C. 20545

FROM: Dean Edwards,
Owner
Balch/Edwards Real Estate
1402 E. Main
Gatesville, Tx 76528

Dear Dr. Hess,

The firms and companies we represent as either owners, general partners, or those which we chair are corporately enthused to have this opportunity to reply to the Draft Environmental Impact Statement concerning the potential for locating the proposed Superconducting Super Collider project in Ellis County, Texas.

1 A decision for the location of the SSC in Ellis County, Texas is one which we wholeheartedly support and encourage. We feel that the economic/social/regional, and educational benefits will be advantageous to the region as well as the State as a whole.

As a region with a healthy workforce in terms of employable blue and white collar workers, as well as the long-term public support this project will receive, you will see, I am sure a vast number of positive benefits to the SSC project as a whole if it is to be located in our area.

Please count our response as overwhelmingly favorable for the location of the SSC in the Ellis County area.

Sincerely,

Dean Edwards

1402 Main Street
Gatesville, Texas 76528

LETTER 306

Associated Underground Contractors, inc.

2355 FRANKLIN ROAD, P.O. BOX 7025, BLOOMFIELD HILLS, MICHIGAN 48302-7025 (313) 338-8191

September 21, 1988

United States Department of Energy
Superconducting Supercollider Commission
Site Selection Task Force
Washington, D.C. 20545

Attention: Mr. Michael Wolfe

Dear Mr. Wolfe:

Unfortunately, the Associated Underground Contractors, Inc. was late in requesting presence on the agenda for the September 26, 1988 public hearing in Stockbridge, Michigan.

In lieu of a personal presentation I am submitting written testimony from Mr. Ronald Heuer, a geotechnical consultant from McHenry, Illinois. As you can see from the enclosed, Mr. Heuer has extensive experience in the tunnel construction industry with special emphasis on rock tunnel construction methods.

I am hopeful that the task force will take the time to analyze Mr. Heuer's analysis of the Michigan site.

Sincerely,

Robert A. Patzer,
Executive Director

LETTER 306 (CONTINUED)

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

3317 West Ringwood Road
McHenry, Illinois 60050-8581
815-675-2003

Telex: 9102406210/Heuer UD

RECEIVED
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A U C

12 September 1988

Mr. Robert A. Patzer
Executive Director
Associated Underground Contractors, Inc.
2355 Franklin Road, PO Box 7025
Bloomfield Hills, Michigan 48302

Subject: File 8712
Michigan SSC Study

Dear Bob:

This letter is to report my interpretation of how tunneling conditions at the Michigan Stockbridge SSC site compare with those at other SSC sites being considered by the Department of Energy, based upon review of the summary geologic information for each site contained in the Draft Environmental Impact Statement (DEIS), dated August 1988. Pertinent soil, rock, and groundwater information is contained in Volume I, Chapter 4; Volume IV, Appendices 5a, 5b, 5c, 6, and 7 of the DEIS.

1. Introduction

1 As a matter of introduction so that you may better judge the significance of this letter, I am enclosing a copy of my professional resume, outlining my experience working on several hundred tunnel projects in the last 20 years for Owners, Engineers, and Contractors. I have worked throughout the US, in Canada, and in several other countries. A large portion of my work has involved interpretation of geologic information to predict tunneling conditions, prior to actual excavation.

I have studied additional geologic data from the Michigan site, observed rock core from the Michigan SSC borings, and have

observed the rock formations to be tunneled, where these formations are exposed in the area in surface outcrops and excavations. Also, I have observed the Sagimaw formation (major tunnel horizon) in a tunnel excavation in Flint, Michigan, several years ago.

For the other proposed SSC sites, I have either observed rock core or surface outcrops of the formations to be tunneled, or have worked on tunnel projects in similar geologic materials and environments, for all of the other states involved.

2. Interpretation

I believe tunneling conditions to be expected at the planned tunnel location for Michigan SSC are favorable. In addition to the Flint tunnel mentioned above, I have worked on a number of tunnel projects in similar rock formations and geologic settings throughout the northeast and northcentral United States and southern Canada. Nearly flat-lying interbedded sandstone, shale, siltstone, limestone, and minor interbedded coal rocks of Paleozoic age such as are indicated at the Stockbridge site, generally present relatively favorable tunneling conditions unless the tunnel encounters something such as the following:

2

a. Rock material which is very soft, weak relative to insitu stresses, or unstable and susceptible to slaking or swelling.

b. Rock material which is very strong or hard and difficult to excavate.

c. A rock mass which is very jointed, or faulted, folded, sheared, weathered, or otherwise disturbed so that it is either unstable about the tunnel excavation; or of high mass permeability producing large water flow into the tunnel.

d. Gases such as methane or hydrogen sulfide, very salty water, or some similar material within the rock.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

e. The tunnel is located sufficiently deep that problems of rock support or water inflow are magnified by high rock or water pressures.

The information from the Stockbridge site indicates no significant problems of these types would be expected at this site.

The Stockbridge SSC tunnel is relatively shallow (150 to 200 ft average depth), so that rock and water pressures are relatively low. The geologic structure at Stockbridge appears to be simple, with no evidence of significant faulting, folding, shearing, extensive jointing, weathering, etc, at tunnel level. The coal content appears to be very low. The rock mass appears to be permeable enough to have allowed gas from the coal to escape, but of sufficiently low permeability that water inflow would not be expected to be a large problem. There is no indication of other significant gas or water chemistry problem. The rock materials themselves are indicated to be weak enough to cut easily be a tunnel boring machine, but to be strong enough to be stable, and to be relatively stable chemically and not susceptible to significant slaking or swelling.

Not only has the exploration to date found no evidence of such problems, but significant problems of these types would not be expected in the relatively simple and stable geologic conditions indicated at this site.

Based on the DEIS information and my previous experience with rock types and geologic settings such as exist at the other proposed SSC sites, it appears as if none of the other proposed SSC sites are as simple and favorable geologically. Each of the other sites appears to have some negative features which the Michigan site does not have. For example, consider the following factors which are arranged approximately in order of decreasing technical complexity and risk (i.e., "a" is most risky, in my judgement):

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GEOTECHNICAL CONSULTANT

a. One site is expected to contain a significant amount of solution features in at least one of the limestone formations to be tunneled. Tunneling in such conditions is risky because of potential large inflows of water and soil materials when the tunnel encounters such features. Significant water and delays can result. Identifying all such features ahead of the tunnel is questionable with current technology.

b. Some sites have a complex geologic structure with such features as folding, faulting, shearing, metamorphism, and igneous intrusive activity. Structural features of these types commonly increase tunnel instability. The increased complexity increases the degree of uncertainty and risk with the present limited investigation.

c. For several states the depth from the ground surface and water table down to tunnel level is from several times to many times deeper, than at Michigan. This would tend to increase water inflow, and would increase construction costs because of increased shaft and tunnel depth. One state apparently proposes to construct the large experimental halls in mined underground chambers because of the proposed tunnel depth. Such mining is likely to be more expensive than surface construction, and could be much more expensive if adverse geologic features are present at the excavation location, but are not yet identified by present limited investigation.

d. Some states have a large percentage of the tunnel in claystone which is expected to be susceptible to slake and/or swell behavior to some degree. These materials are indicated to be weak enough that they can be expected to exhibit overstress failures if not adequately supported at the proposed tunnel depth over

at least portions of the tunnel line. Hard concretions in these claystones may cause excavation difficulties.

e. Some states have very strong rock (to 39,000 psi) and hard rock (to Total Hardness of 228) which are expected to reduce tunnel boring machine penetration rates.

All of these problems are things which I have experienced before on tunnel projects in similar geologic settings. Each of the other proposed SSC sites has one or more of these unfavorable characteristics which apparently are not present at the Michigan site. Given adequate geologic exploration and proper engineering, I believe the SSC facilities could be constructed at any of these sites. All sites (including Michigan) currently have some risk associated with them because the geologic information at each site is currently limited. However, at the current level of investigation detail, the Michigan site presently seems to be least risky. This, to me, is what seems most favorable about the Michigan site.

3. Summary

My interpretation is that conditions at the Michigan SSC site are favorable for tunneling. The geologic setting here seems to be simple and straight-forward, without a high risk of encountering surprises and unfavorable conditions. The other proposed sites all appear to have one or more unfavorable characteristics or risks not present at the Michigan site.

I appreciate the opportunity of reviewing the DEIS. If you have any questions about this letter or if I may be of further service, please do not hesitate to contact me.

Sincerely yours,

Ronald E. Heuer

Ronald E. Heuer

REH:dlv
Enclosure

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880913

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

RONALD E. HEUER

3317 West Ringwood Road
McHenry, Illinois 60050-8581
815-675-2003
Telex: 9162406210/Heuer UD

HEUER, RONALD E.

PERSONAL DATA:

Date of Birth: 7 April 1940
Citizenship: United States

EDUCATIONAL RECORD:

University of Illinois, Urbana, Illinois
B.S. Degree in Civil Engineering - 1963
M.S. Degree in Geology - 1965
Ph.D. Degree in Civil Engineering, Rock Mechanics - 1971

WORK EXPERIENCE:

1975-date Consultant on underground construction projects for owners, engineers, contractors, and legal counsel.
1974-1975 Foster-Miller Associates, Inc. Alexandria, Virginia
1969-1974 A. A. Mathews, Inc., Arcadia, California and Rockville, Maryland.

Geotechnical engineering and engineering geology for underground construction. Geological studies, soil and rock mechanics analyses, evaluation and design of existing and proposed initial support and final lining, selection and design of excavation methods. Underground projects ranging from large chamber excavations in rock, to shield and compressed air tunneling in soft ground. Work with owners and engineers in design and construction stages, with contractors in prebid and construction phases, and with legal counsel in claim evaluation and presentation. Structural design of cast-in-place concrete linings and of initial support systems including fabricated steel liners, precast concrete segments, steel ribs, rock bolts, and shotcrete. Experience on over 200 underground projects.

REGISTERED ENGINEER:

Illinois, Wisconsin, California, New York, Virginia

PROFESSIONAL SOCIETIES:

American Society of Civil Engineers
Association of Engineering Geologists

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RONALD E. HEUER
GEOTECHNICAL CONSULTANT

TEACHING EXPERIENCE:

Lecturer in extension courses on tunneling in both rock and soft ground:
University of California, Los Angeles, 1972 and 1973
University of California, Berkeley, 1974
University of Wisconsin, Milwaukee, 1973-1978, 1984, 1985
University of Illinois at Urbana-Champaign, 1975-1978.
Appointment as Associate Professor. Teaching undergraduate and graduate courses in soil mechanics, rock mechanics, and foundation engineering with emphasis on courses related to underground construction.

PUBLICATIONS:

1. "Geology of the Soyalo-Ixtapa Area, Chiapas, Mexico", MS thesis in Geology, University of Illinois, 1965, 103 pp.
2. "Geomechanical Model Study of the Behavior of Underground Openings in Rock Subjected to Static Loads", Ph. D. thesis in Civil Engineering, University of Illinois, 1971, 368 pp.
3. "Excavation and Support of Navajo Tunnel No. 3", 1972 RETC Proc., June, 1972, Chicago, co-authored with P. E. Sperry.
4. "Design/Selection of Shotcrete for Temporary Support of Tunnels", Proceedings of Eng. Found. Conf. on "Use of Shotcrete for Underground Structural Support", July 1973, South Berwick, Maine, ASCE.
5. "Important Ground Parameters in Soft Ground Tunnels", Proceedings of Eng. Found. Conf. on "Subsurface Exploration for Underground Excavation and Heavy Construction", August, 1974, Henniker, New Hampshire, ASCE.
6. "Catastrophic Ground Loss in Soft Ground Tunnels", 1976 RETC Proc., June 1976, Las Vegas.
7. "Site Characterization for Underground Design and Construction", Proceedings of NSF specialty Workshop on "Site Characterization and Exploration", C. H. Dowding, Ed., Evanston, Ill., ASCE, 1978.
8. "Excavation and Support of Gatineau Shaft", 1983 RETC Proc., June 1983, Chicago, co-authored with W. C. Cox and J. M. Loignon.
9. "Ocean Bottom Tap, Point LePreau Cooling Water Tunnels, New Brunswick", 1985 RETC Proc., June 1985, New York, co-authored with F. Breu.
10. "Design of PCCP Pressure Tunnel Liners", 1987 RETC Proc., June 1987, New Orleans, co-authored with P. M. Douglass, C. C. Sundberg, and S. L. Paul.

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GEOTECHNICAL CONSULTANT

11. "Anticipated Behavior of Silty Sands in Tunneling", 1987 RETC Proc., June 1987, New Orleans, co-authored with D. L. Virgens.
12. "Geotechnical Investigations for Construction Dewatering for Soft Ground Tunneling", Proc. Peck Symp., Prentice-Hall, 1987, in press, co-authored with P. M. Douglass.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

EXAMPLES OF SPECIFIC UNDERGROUND PROJECTS:

Experience has included working for owners, engineers, contractors, and legal counsel in all phases of underground design and construction, in a wide range of ground conditions. Examples of recent and major projects include the following:

Planning, Analysis, and Design, including planning and evaluation of geotechnical investigations, soil and rock mechanics analyses, tunnel design, analysis and design of tunnel lining and support systems and preparation of Contract Plans and Specifications.

- Member of Design Review Board for Trans-Koolau Tunnels in Honolulu, twin highway tunnels in basalt flows and saprolite.
- Stanley Canyon Project, Colorado. Pressure tunnel and shaft, 9 ft ID by 17000 ft long under 1500 ft head, in granite.
- Eklutna Tunnel, Anchorage. Water supply tunnel 6 ft ID by 6000 ft long in mixed glacial soils. Includes tap into existing tunnel.
- PATH Exchange Place Station, New Jersey. Renovation of existing subway station in Manhattan Schist, includes new inclined escalatorway and new passages with breakout into existing tunnels in operation.
- Rogers Pass Tunnel, British Columbia. Evaluation of tunneling conditions, initial support, and final lining requirements for single track railroad tunnel in metamorphic rock at depths up to 4500 ft.
- Member of 4 man panel established by government of Mexico City to review proposed methods of slurry machine tunneling at depth in Mexico City clay.
- Member of Board of Special Geotechnical Consultants established by Chief Engineer, Southern California Rapid Transit District, Los Angeles, to assist in planning and evaluation of geotechnical investigations for subway preliminary design.
- Sewer tunnel, 8 ft diameter, in glacial outwash sand adjacent to Rock River, Rockford, Illinois. Geotechnical investigation, tunnel design, and preparation of contract documents.
- Section B-10 of Washington, DC Metro System. Twin 18 ft diameter tunnels and subway station, mostly in schist and gneiss, with portions in weathered rock and residual soil.

- Design of 30,000 ft of sewer tunnel in alluvial clay and sand, Kansas City.

- Sewer tunnels in Milwaukee in various glacial, alluvial, and estuarine soils, including river crossings.

- Paitovi-Lanus water supply tunnel, 16 ft diameter in soft clay and sand, including crossing under river, Buenos Aires, Argentina. Participated in analysis of tunnel failure, geotechnical investigation, tunnel redesign.

- Participated in design of Section A-11 of Washington, DC Metro System. Twin 18 ft diameter tunnels and subway stations in gneiss and schist.

- Crosstown Interceptor, Austin, Texas. Participated in design of 8 ft diameter sewer tunnel in limestone and shale.

- Mt. Baker Ridge Tunnel, 60 ft diameter highway tunnel in glacial till, Seattle, Washington, multiple drift perimeter tunnels filled with concrete. Structural model testing of joints between adjacent perimeter drifts.

- Aurora-Ramparts Tunnel No. 1, Colorado. Design of new concrete lining of existing unlined water tunnel, to be pressurized, 6 ft diameter in rock.

- Zion-Mount Carmel Tunnel, Utah. Study of stability of two lane highway tunnel immediately adjacent to cliffs in Navajo sandstone, Zion National Park.

- Lucky Friday Mine Shaft, Idaho. Design concepts for concrete lining of 18 ft diameter shaft 7500 ft deep in quartzite and argillite, including squeezing fault zones.

- Atigun Pass, Brooks Range, Alaska. Feasibility study for pipeline tunnel in metasedimentary rocks, partially in permafrost, interpretation of tunneling conditions and support requirements.

- Two track subway tunnel, 30 ft diameter, Mexico City. Participated in design of segmented precast concrete lining for tunnel in sand and gravel.

- Thornton Quarry, Illinois. Evaluation of stability of 45 ft wide by 107 ft high unlined tunnel in limestone ridge in aggregate quarry.

- Chambers Creek Tunnel, Tacoma, Washington. Planning and interpretation of geotechnical exploration for sewer tunnel in mixed glacial deposits below water table.

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GEOTECHNICAL CONSULTANT

- Intersite Tunnel, Winnipeg Airport. Concepts of design and construction for 20 ft diameter tunnel excavation in medium clay and hard glacial till with 10 ft of cover under airport runway.
- Romeoville Quarry, Illinois. Design of 30 ft wide by 20 ft high service tunnel in dolomite.
- Precast concrete segment design concepts for sewer tunnels in Mexico City clay.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

Prebid Studies for Contractors - Study of available geologic information to predict anticipated ground behavior, support requirements, and potential problems, for contractors use in preparing bids and in planning construction procedures and equipment.

- Lake Travis Intake, Austin, Texas. 12 ft diameter tunnel and 40 ft wide by 60 ft high chamber in limestone and marl; including lake intakes, drilled shafts and conventional shafts.
- Syar Tunnel, Utah. 8.5 ft diameter tunnel in mixed sedimentary rocks.
- Montreal Sewer Tunnel Contracts 4.1, 4.3, 6.4. Approximately 12 ft diameter tunnels in limestone, shale, mixed face.
- New Waddell Dam Tunnels, Arizona. 20 ft diameter diversion and outlet tunnels in mixed volcanic andesite and tuff.
- West Interceptor Phase 2, Anchorage, Alaska. 76 inch sewer tunnel in silt and sand driven with compressed air and dewatering.
- Crosstown and Northshore Interceptors, Milwaukee. 30 ft and 17 ft diameter tunnels in dolomite.
- Casagrande Storm Drain Tunnels, Phoenix. 21 ft diameter tunnels driven below water table in very coarse sand, gravel and cobble alluvial deposits.
- Spirit Lake Drainage Tunnel, Washington. 12 ft diameter tunnel driven through mixed igneous and volcanic rocks to drain Spirit Lake, partially filled by eruption of Mount St. Helens.
- Onion Creek Interceptor, Section IV, Austin, Texas. 7 ft diameter tunnel driven through weak clay shale with shallow crossings under small river.
- Stillwater Tunnel Completion, Utah. Interpretation of squeeze behavior and support requirements, 10 ft diameter tunnel in shale at depths up to 2500 ft.
- Rocky Mountain Pumped Storage Project, Georgia. 40 ft diameter tunnel and shaft in mixed sedimentary rocks.
- Section F-4a, Anacostia River Crossing, Washington, DC. Twin single track subway tunnels in clay and sand, evaluation of dewatering and compressed air requirements for subaqueous shield driven tunnel.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

- Sections E-1d and E-6e, Washington, DC. Twin single track subway tunnels in clay and sand, evaluation of dewatering and compressed air requirements.

- Contracts 105 and 107, Singapore. Design-construct proposal for twin single track subway tunnels in residual soils developed from granite and sedimentary rock, and in alluvial sand and soft marine clay; evaluation of dewatering and compressed air requirements, initial lining design, underpinning requirements, plan of additional geologic exploration needed for final design.

- Three Rivers water tunnel, Atlanta, Georgia. 10 ft diameter tunnel in gneiss, residual soil, and weathered rock.

- Milwaukee Contracts 287 and 288. 8 ft diameter sewer tunnels in hard silt glacial till and mixed face conditions below water table.

- SWOOP Tunnel, San Francisco. Evaluation of compressed air requirements for 14 ft diameter sewer outfall tunnel through sand formations under Pacific Ocean.

- Donkin-Morien Mine Access Tunnels, Nova Scotia. Twin 25 ft diameter tunnels through mixed sedimentary strata for undersea coal mines.

- MARTA Contract CN430, Atlanta. Single and double track subway tunnels in gneiss and mixed face conditions.

- Foothills Tunnel, Colorado. Water tunnel in mixed igneous and sedimentary rocks.

- Bicounty Water Tunnel - West, Washington, DC. 12 ft diameter tunnel in schist and gneiss.

- Hades and Rhodes Tunnels, Utah. Small diameter water tunnels in mixed sedimentary rocks.

- Springfield, Ohio sewer tunnel. 9 ft diameter, rock and alluvial soil.

- Lexington-Market tunnels, Baltimore. Twin 18 ft diameter subway tunnels, residual soil and coastal plain sand and gravel, compressed air.

- North Shore Outfall tunnel, San Francisco. 17 ft diameter, sand and Bay mud.

- Vat Tunnel, Utah. Small diameter machine bored tunnel in mixed sedimentary rock.

- Mondawmin Tunnels, Baltimore. Twin, single tube subway tunnels in gneiss and schist.
- Peach Tree Station, Atlanta. Subway station in gneiss and twin single track compressed air subway tunnels in gneiss and residual soil.
- Deep Sewer Tunnels, Chicago. Large diameter machine bored storm sewer tunnels in limestone.
- San Bernadino Tunnel, California. 16 ft diameter water tunnel in mixed igneous and metamorphic rocks, on California Aqueduct.
- San Fernando Tunnel, California. 18 ft diameter machine bored water tunnel in alluvial deposits and weak sedimentary rock, on California Aqueduct.
- Buckskin Mountains Tunnel, Arizona. 20 ft diameter machine bored water tunnel in mixed extrusive igneous rock.
- Sections A-9a and A-10a, Washington, DC. 20 ft diameter machine bored, twin single track subway tunnels in gneiss and schist.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

Consulting During or Post Construction - Consulting with owners, contractors, and legal counsel in evaluating ground conditions, in developing solutions to ground behavior and support requirements, and in claim analysis and presentation.

- Disputes Review Board. Member of 3 man panel established by Owner and Contractor to resolve disputes which arise during construction.
  - Mt. Baker Ridge Tunnel Bore, Seattle
  - Seattle Metro Bus Tunnels
  - San Antonio Storm Drain Tunnels

- Hex River Tunnel, South Africa. Evaluation of ground conditions and support requirements for single track railroad tunnel 13 km long in mixed sedimentary rock, drill and blast excavation.

- Crosstown and Northshore Interceptors, Milwaukee. Evaluation of initial support for 30 ft tunnels in dolomite including low cover areas, evaluation of water inflows and grouting behavior.

- Shafts and appurtenant structures, Milwaukee. Design of initial support and water control measures for shafts in mixed glacial soils and rock, tunnels and chambers in rock. Contracts CT-2 and 3/4, NS -2, 7, 8, 11.

- Section F4a, Anacostia River Crossing, Washington, DC. Evaluation of precast concrete lining behavior and ground behavior in Earth Pressure Balance tunnel under river. Plans for tunnel breakthrough into shaft.

- Northside Contract VI, Houston. Evaluation of squeeze behavior in stiff fissured clay around 9 ft diameter jacked pipe.

- Straight Creek (Eisenhower) Tunnel, First Bore, Colorado. Participated in redesign of tunneling methods and support systems after problems encountered. These formed basis of design for subsequent Second Bore.

- Navajo Tunnels No. 3 and 3A, New Mexico. Rock mechanics analysis and design of support system after difficulties encountered during construction of 18 ft diameter machine bored tunnel in weak sandstone and shale

- Point Lepreau Tunnels, New Brunswick. Analysis of rock plugs for ocean bottom tap for nuclear power plant tunnels in sandstone and shale under Bay of Fundy.

- Cameron Run Tunnels, Alexandria, Virginia. Seven tunnels 20 ft diameter spaced 28 ft cc in sand fill of railroad embankment. Analysis of steel liner plate stability.

- Big Walker Mountain Tunnels, Virginia and East River Mountain Tunnels, West Virginia. Separate contracts, each twin two lane highway tunnels in mixed sedimentary rocks, evaluation of ground conditions.

- Central Park Subway, New York City. Double track subway tunnel and junction structures in Manhattan schist, evaluation of ground conditions.

- Gathright Dam Concrete Membrane, Virginia. Cutoff wall 8 ft thick by 106 ft high by 700 ft long, constructed in cavernous limestone dam abutment by underground mining methods, evaluation of ground conditions and proposed construction procedures.

- Mineral Creek Diversion Tunnel, Arizona. 16 ft diameter tunnel in mixed sedimentary and igneous rocks, stream diversion around open pit copper mine, interpretation of ground conditions and initial support design.

- Wreck Cove Power Project, Nova Scotia. Multiple tunnels and powerhouse excavation in mixed igneous and metamorphic rocks, interpretation of ground conditions.

- Section D-4a and Section F-1b, Washington, DC. Twin single track subway tunnels in sand and clay, interpretation of ground behavior.

- Rochester, New York, 5 ft diameter sewer tunnel in silt under New York State Barge Canal, investigation of collapse.

- Cuyahoga Valley Interceptor, Contract D, Cleveland. Small diameter sewer tunnel in varved clay, alluvial silt and sand, evaluation of ground conditions.

- Bolton Hill Tunnels, Baltimore. Twin single track subway tunnels in residual soil and weathered metamorphic rock, evaluation of ground conditions.

- Flint Sewer Tunnel, Contract 4, Michigan. Small diameter sewer tunnel in sandstone, shale, and glacial soils, evaluation of ground conditions.

- WSSC Project W-80, Washington, DC. 8 ft diameter machine bored tunnel in metamorphic rock, interpretation of ground behavior.

RONALD E. HEUER
GEOTECHNICAL CONSULTANT

- Sewer tunnel, Jonquiere, Quebec. 10 ft diameter tunnel in sensitive clay, interpretation of failure of steel liner plate in heavy frost conditions.

- Lynwood Collector Sewer, Ottawa, Ontario. 10 ft diameter tunnel in sand, sensitive clay, and rock, interpretation of dewatering requirements and design of initial support of liner plate and steel ribs and wood lagging.

- Thunder Bay tunnels, Ontario. 10 ft diameter tunnel in soft clay and sand, interpretation of wood lagging behavior.

- Three Rivers West tunnel, Atlanta. 10 ft diameter conventional excavation in residual soil materials, evaluation of flowing ground conditions.

- Friendship Heights Station, Washington, DC. Evaluation of rock slope stability.

- Mondawmin Station, Baltimore. Evaluation of rock slope stability and effects of blasting vibrations.

- Nipawin Drainage Tunnel, Saskatchewan. 10 ft diameter tunnel driven under dam site in glacial soils, with precast concrete lining designed to leak to provide relief of hydrostatic uplift pressures. Evaluation of lining concepts and excavation difficulties.

- Powerhouse Excavation, Cat Arm Hydroelectric Project, Newfoundland. Evaluation of blasting damage in surface excavations in rock.

- Sauro-Agri-Sinni Tunnels, Italy. 4 meter diameter tunnels in clay at depths to 110 meters, and in partially cemented sand and silt. Evaluation of clay squeeze pressures and structural adequacy of precast concrete lining, and of flowing ground conditions.

- City Water Tunnel No. 3, New York City. 27 ft diameter horseshoe excavation in Manhattan schist, evaluation of rock collapses and support requirements.

- Gatineau Pump Station, Quebec. Shaft 120 ft diameter by 65 ft deep in sensitive clay, design of steel liner plate and rib initial support system.

LETTER 307

Mrs. DAVID WERDIN
2 S 540 DAUBERMAN RD.
ELBURN, ILLINOIS 60119

Sept. 23, 1988

2 Picture Slides In Envelope

Dr. Wilmot Hess, Chm.
SSC Site Task Force
U.S. Dept. of Energy
Washington D.C. 20545

Dear Dr. Hess,

As a resident on Dauberman Road, Kaneville Township, Il. for over 50 of my 61 years, I feel I have knowledge of this area that you do not have. I have enclosed two slides of Welch Creek during flood times (EIS pg.A-3T, Sect. 93, 82) I have also enclosed a photo of Welch Creek this summer which shows it almost not flowing at all. This creek truly floods on occasion and you will not be able to site K-4 and F-5 where you show them on the map, believe me!

1

Upon examining the recently received Draft EIS I find many omissions and flaws in the information the state of Illinois has given you. For instance, Kaneland Schools, housing about 2000 students and teachers are about 1300 ft. from where the ring is shown in the maps in the back of the EIS, but they are not to be found on your "noise" map, pg 5.1.4-7, figure 5.1.4-3. In fact human receptors in the Il. site are many, many , many more than indicated. Your maps are terribly outdated. You don't even show the completed tollway that we have been using for years and years. If you had up-to-date information on the population of the IL proposed site, you would never consider placing this major disruption in such a highly populated area.

2

Another discrepancy is the statement on page 5.4-2 that only 163 acres of prime farmland would be withdrawn in IL. On Dauberman Road alone in the Fee Simple land, many more acres will disappear as farm land from the present tax rolls. On that page you will also find that the relocation of 219 residences and businesses will not be

3

4

accurate. As stated before, your maps and population estimates are much too low.

5 I will further suggest, based on experiences in the area in recent years, the water needs of the SSC will seriously impare the existing wells. In fact, the presence of the SSC in this area of IL will seriously impare all future orderly development. I foresee the SSC as a limiting factor, one that forces this beautiful land into becoming a dead, depressed area because of the limits of noise, dirt and ugly structures placed in the very spaces persons are wanting for their families. Who wants to live around the environment even you admit will be here? Even persons who do not have to leave will move out of this place. Persons who want to build this project will deny this, of course, but just stand back and think about it. Be honest and you will have to agree that the SSC should not be placed where there are over 300,000 persons living already.

6 My family has lived in the community of Kaneville for eight generations. Seven generations lie buried in our little cemetary. If all the persons are displaced as proposed, this 150 year old community will be destroyed. This loving group of friends and neighbors will be torn apr'. This is the true environmental impact I feel you should address. The impact of destroyed communities should be paramount in your consideration of a site for the SSC.

On Oct. 6 your committee will hear a lot of persons speaking for and against the SSC in IL. If you closely question those for the SSC you will find few, if any, who have even opened the Draft EIS. People who actually read the information you have published will realize how destructive the SSC is for Illinois.

Sincerely,

Lynette Werdin

Lynette Werdin (Mrs. David)

LETTER 307 (CONTINUED)

The SSC is not needed for jobs!

The Beacon-News
AURORA, ILLINOIS

Money

Friday, Sepptember 16, 1988 A8

Aurora looking downstate to fill employee shortage

by Jim Peters
The Beacon-News

A new survey says overall hiring prospects in the Aurora area will taper off during the rest of 1988, but area officials are looking to downstate Illinois to fill a critical shortage of available workers with high-tech industrial skills.

In its quarterly hiring forecast, Milwaukee-based Manpower Inc. said the local hiring pace will cool off considerably from the summer, returning to levels similar to the last quarter of 1987. Manpower Inc. has offices in Aurora.

Manpower's poll of 30 firms from St. Charles to Chicago found that job opportunities are anticipated in durable and non-durable goods manufacturing and the service sector. Even with the holiday season on the horizon, mixed hiring intentions are forecast in the wholesale and retail trades.

Twenty-three percent of area employers plan personnel increases between October and December, 10 percent expect to reduce staff and 64 percent plan to make no changes, said George Mihalic, owner of Manpower's Aurora office. The other three percent were unsure of their employment plans, he said.

Last year at this time, about 25 percent of area employers surveyed planned to increase staff and 13 percent predicted job cutbacks. During last summer, 40 percent said they would add workers while none expected to decrease personnel.

Area officials, however, say numerous job openings are available locally in some areas with no more available workers to fill them. Aurora, filled with a shortage of available workers with certain high-tech industrial skills, is looking to depressed areas of southern and southwestern Illinois, where the number of unemployed is still around 10 percent in some areas, to fill the gap.

A program is in the works to bring former southern Illinois full-time workers, among others, to the Fox Valley to take some of the thousands of new jobs being created by dramatic business growth along the I-88 corridor. Officials said potentially thousands of downstate workers have the skills needed but that area is short supply here. As many as 1,700 Illinois coal miners are out of work because stricter federal pollution standards have diminished the market for high-sulfur coal, the only type of coal mined downstate.

Edward Fauth, executive director of the Aurora Area Labor Management Association, which is spearheading the employee relocation plan, said the area has a shortage of facility maintenance and industrial manufacturing workers with complicated skills. He also said the area needs more tool and die makers, set-up workers for computerized stock and purchases and computerized warehouse equipment workers.

"That kind of high-tech work is increasing exponentially here," Fauth said, while the available labor pool for those jobs has been diminished in the Fox Valley and Chicago.

Fauth said the program, which the labor association will be coordinating with the Egyptian Labor Management Association in Carterville, Ill., will start "right away. They're going to send us resumes and we're going to send them listings of the types of work available."

Rod House, executive director of the Egyptian association, said the program has not be formed up downstate. The association is waiting for Aurora to send information on time types of jobs available and skills needed, he said.

"We want to first do everything we can to keep our workers here," House said. "We're willing to look at their alternative till a stop-gap measure" to give workers temporary jobs until they can find new jobs downstate.

The program is not without its problems. One of the main stumbling blocks, Fauth said, will be finding affordable housing for the relocated workers. They will be coming to the Fox Valley where housing costs are generally several times higher than those downstate.

Fauth said the labor management associations are "not neglecting" the housing problem but have yet to find a solution.

IIA.1-525

LETTER 308

Jimmy Naifeh
Representative
81st Legislative District

Nashville Office:
18A Legislative Plaza
Nashville, Tennessee 37219
(615) 741-3774

Covington Office:
P.O. Box 97
Covington, Tennessee 38019
(901) 476-9593

House of Representatives
State of Tennessee

NASHVILLE

Office of Majority Leader

Member of Committees
Calendar and Rules
Commerce
Finance, Ways and Means
Joint Management

Chairman
Rules Committee

Vice-Chairman
Corrections Oversight

September 20, 1988

SSC Draft EIS Comments
% Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research ER-65, GTN
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

I regret that I am unable to attend this last public hearing on the Superconducting Supercollider.

Please allow me the opportunity to use this letter as evidence of my support of the SSC project. I firmly believe that this project is a worthwhile endeavor to our nation and I hope Tennessee will receive every consideration by the federal government in its efforts to select a final site for the supercollider.

1 Although I do not reside in Middle Tennessee, I want to go on record as a state legislator and as House Majority Leader in pledging my full support in bringing this project to our state.

Tennesseans have historically proven their abilities in fostering high technology programs. Our people are certainly capable of working on this project and any ancillary support programs necessary to make the SSC program a great success.

Again, I regret that I had a prior commitment and I would kindly ask that my statement be read at the public hearing.

Sincerely,

Jimmy Naifeh

Jimmy Naifeh

JN:ra

Representing Tipton and Fayette Counties

LETTER 309

THE VILLAGE OF KINGSTON

3655 ROSS STREET
KINGSTON, MICHIGAN 48741

"An Antique Village"

ECONOMIC DEVELOPMENT COMMITTEE

PROGRESS THROUGH COOPERATION

September 23, 1988

SSC DRAFT EIS COMMENTS
Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research, ER-65/GTN
Department of Energy
Washington, D.C. 20545

Dear Sir:

1 The Kingston EDC would like to encourage the DOE to place the proposed SSC here in Michigan. I think Michigan has the resources to make it a top quality research center for the nation.

Sincerely,

Richard Peter
EDC Chairman

jp

LETTER 310

NEYER, TISEO & HINDO, LTD.
Consulting Engineers and Geologists
38955 Hills Tech Drive, Farmington Hills, Michigan 48018 313 553-6300

September 23, 1988

United States Department of Energy
Superconducting Supercollider Commission
Site Selection Task Force
Washington, D.C. 20545

ATTN: Mr. Michael Wolfe

Dear Mr. Wolfe:

I am submitting this letter as part of the public hearing process for the Stockbridge, Michigan Supercollider Site. Prior commitments prevent me from attending the hearing in Stockbridge on September 26, 1988.

I am the president of a consulting engineering firm which specializes in engineering for underground construction projects. A copy of my resume is included for your reference. Our firm is headquartered in southeastern Michigan and presently has a staff of approximately 225 engineers, geologists and support personnel. We are presently working on tunnel projects in Michigan, Texas, Wisconsin, Minnesota and Ohio and have worked throughout the United States and Canada.

1 I have reviewed the Draft Environmental Impact Statement dated August, 1988 with respect to the relative magnitude of subsurface problems which should be anticipated during underground construction at the six sites being considered. On the basis of my review, the geology of the Stockbridge site appears to present one of the most favorable environments for underground construction.

The glacial drift overlying the bedrock should not be particularly troublesome with respect to shaft construction. Flexible wall cofferdams have been constructed for many underground projects in the Great Lakes glacial deposits. Shafts of up to 120 feet in diameter have been constructed using soldier piles and timber lagging and cast-in-place concrete ring walers. This technique is relatively inexpensive and requires no long lead time for procurement of materials and/or equipment. Semi-Rigid concrete walls (slurry walls, tangent piles or caissons) have also been used effectively, particularly when site dewatering could not be permitted.

NTH

Shaft construction in the nearly-horizontally-bedded sedimentary rock should also be relatively straightforward. The rock appears to have sufficient strength and integrity to be supported by rock bolting, relatively light ring walers or a combination of the above methods.

Groundwater control is a major concern for all underground construction projects, both tunnels and shafts. The glacial soils in Michigan are generally heterogeneous because of their deposition by the glaciers. Thus at any site, the drift can range from relatively clean sand and gravel to very hard clay and silty clay. In spite of this variability, the soils are relatively easy to dewater by deep wells if dewatering is necessary to effect construction. The clays do not require dewatering because of their cohesive nature and low transmissibility. The sands and gravels are readily dewatered. Silty sands and sandy silts, which are invariably present in glacial settings, can be drained by deep wells installed into the more permeable strata of the formation.

Likewise, the sandstone bedrock can be dewatered, if necessary, whereas the shale and limestone do not generally require dewatering. Techniques are available to recharge the bedrock aquifers (and the glacial drift aquifers) if this is required to protect nearby domestic water wells in the formations which require dewatering. 2

The sedimentary rocks in the Stockbridge area are amenable to tunneling with several types of tunnel boring machine (TBM). As in the case of shafts in the rock, the strength and integrity of the rock mass is generally good and thus relative light tunnel support is adequate. Rock bolts on a predetermined pattern have proved effective in similar formations in Michigan, such as the Flint Sandstone and the Antrim Shale. The rock is moderately abrasive and generally consistent for relatively long reaches of tunnel. Thus TBM cutters can be designed to cope with the rock anticipated. In the event of unforeseen changes in rock quality, cutter replacement is generally not a problem since the rock integrity allows access to the face without undue concern for loss of ground. 3

All in all, the subsurface conditions at the Stockbridge site are favorable for underground construction. Underground construction is never easy but it becomes somewhat less difficult when conditions are relatively uniform (even if uniformly bad). It becomes even less difficult if conditions are relatively uniform and uniformly good. This is the case in Stockbridge.

NTH

Mr. Michael Wolfe
September 23, 1988
Page 3

Thank you for your consideration of my professional opinion on the constructability of the Superconducting Supercollider at the Stockbridge, Michigan Site. Please feel free to contact me if you have any questions regarding this matter.

Very truly yours,

NEYER, TISEO & HINDO, LTD.

Jerome C. Neyer, P. E.

JCN/alm
Attachment

RESUME

NEYER, JEROME C.
PRESIDENT
NEYER, TISEO & HINDO, LTD.

EDUCATION

B. C. E. - University of Detroit (1961)
M.S.C.E. - University of Washington (1963)

PROFESSIONAL EXPERIENCE

August 1968 to present	PRINCIPAL in consulting engineering firm of Neyer, Tiseo & Hindo, Ltd. in Farmington Hills, Michigan, specializing in the field of geotechnical engineering for underground construction projects. Directed subsurface explorations for tunnels, deep shafts and other underground works as well as for major industrial facilities. Acted as consultant to contractors and owners, in the resolution of soil-related underground construction problems such as ground water control, gassy formations, soil instability and subsidence control. Investigated failures of tunnels and deep shafts which failed after construction as well as construction related failures. Served as an expert witness in the resolution of disputes arising from underground construction projects.
December 1965 to August 1968	PROJECT ENGINEER with Hugo N. Halpert Associates in Detroit, Michigan. Directed investigations and field control operations on a wide variety of construction projects, including tunnels and deep shafts. Work involved all aspects of soil mechanics and foundation engineering including stability analyses, settlement analyses, field monitoring of underground construction projects and preparation of reports.
April 1962 to December 1965	FOUNDATION ENGINEER for Metropolitan Engineers in Seattle, Washington. Employed in Soil Department of large consulting engineering firm engaged in design and construction control for Seattle "Metro" sewer project. Investigations, analyses, reports and field control for treatment plants, pipelines, tunnels, submarine outfalls, and other major underground construction projects.
June 1961 to April 1962	FACILITIES ENGINEER for The Boeing Company in Seattle, WA. Preliminary design and cost estimates for ground support facilities for the Dyna-Soar and Minuteman projects.

November 1958 to June 1961	ENGINEERING AIDE; Co-op position with U. S. Army Corps of Engineers, Detroit District while attending the University of Detroit. Work included drafting, surveying, soil laboratory technician and routine calculations.

REGISTRATION

Professional Engineer	Michigan, Arizona, California, Florida, Georgia, Illinois Indiana, Kansas, Massachusetts, Missouri, Nevada, New York, Texas, Washington, Wisconsin, New Hampshire and Ontario.

National Council of Engineering Examiners

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Civil Engineers
President - Southeastern Branch (1973-74)

American Society for Testing Materials

Consulting Engineers Council of Michigan
President (1981-1982)

ASFE - The Association of Engineering Firms Practicing in the Geosciences
Director (1987-1988)

Engineering Society of Detroit

National Society of Professional Engineers

Michigan Society of Professional Engineers
Director - Detroit Chapter (1980-1983)

Society of American Military Engineers
Director - Detroit Post (1985-1988)

Chi Epsilon

Tau Beta Pi

EDUCATIONAL EXPERIENCE AND PUBLICATIONS

1969	Taught short course on the subject "Design of Shallow Foundations on Clay" for American Society of Civil Engineers.
1970	Published discussion on "Precompression for Improving Foundation Soils" in Journal of Soil Mechanics and Foundations Divisions, proceedings of American Society of Civil Engineers.

1973 to 1979	Adjunct Professor of Civil Engineering at the University of Detroit (Soil Mechanics).
1975	Taught short course on the subject "Design and Construction of Drilled Pier Foundations" for the American Society of Civil Engineers.
1976	Published article titled "Subsurface Information for Underground Construction - How Much is Too Much?" for inclusion in Better Contracting for Underground Construction conference, May, 1976.
1984	Published article titled "Soft Ground Tunnel Failures in Michigan". First International Conference on Case Histories in Geotechnical Engineering, St. Louis, Missouri.
1985	Published article titled "Geotechnical Investigation for Tunnels in Glacial Soils". 1985 Rapid Excavation and Tunneling Conference, New York, NY.
1985	Published article titled "Sewer Tunnel in Gassy Rock". 1985 Rapid Excavation and Tunneling Conference, New York, NY.
1988	Published article titled "Tunnel Repair Using Cement-Stabilized Flyash". Second International Conference on Case Histories in Geotechnical Engineering, St. Louis, Missouri.

COMMUNITY ACTIVITIES

Mineral Well Advisory Board, State of Michigan,
Department of Natural Resources Member (1969 - 1988)
(Chairman 1974 - 1975)

Construction Safety Standards Commission, Advisory Committee
State of Michigan, Department of Labor
(1977 - 1988)

City of Farmington Hills Building Appeal Board
(1978 - 1988)

City of Farmington Hills Building Authority
(Chairman, 1986 - 1988)

City of Los Angeles Independent Review Committee
Los Angeles Metro Rail Project (1985)

3/88

LETTER 311

THE MICHIGAN
SUPERCONDUCTING SUPER COLLIDER PROJECT
A SUMMARY OF SOCIAL EFFECTS AND COMMUNITY RESPONSES

Prepared For

Department of Energy
Draft Environmental Impact Assessment Hearing
Stockbridge, Michigan

Prepared By

Richard W. Stoffle
and
Michael W. Traugott

September 26, 1988

Institute for Social Research
The University of Michigan
Ann Arbor, Michigan

Among the current large-scale federal projects planned for the United States, the Superconducting Super Collider (SSC) is financially one of the most expensive, technically one of the most difficult to understand, spatially one of the largest, and scientifically, perhaps, the one that holds the most promise. These facts made attracting this facility an exciting prospect for the State of Michigan. Offsetting this excitement, however, was the State's caution about potential adverse social and environmental impacts that could result from a project of this scale. The State of Michigan, therefore, funded a series of scientific studies to identify potential impacts and determine whether these could be resolved before the final Department of Energy (DOE) siting decision.

The Institute for Social Research (ISR) at the University of Michigan was contracted by the State to conduct independent studies to determine the potential social impacts of and community responses to the SSC. The research has been conducted over the past three years. The findings have been submitted to the DOE and made available to the public in the form of two reports entitled Social Assessment of High Technology: The Superconducting Super Collider in Southeast Michigan (Stoffle, Traugott, Jensen, and Copeland 1987) and The Superconducting Super Collider at the Stockbridge, Michigan Site: Community Support and Land Acquisition (Stoffle, Traugott, Harshbarger, Jensen, Evans and Drury 1988). These reports are available at the Stockbridge high school library and in the Ingham and Jackson county public libraries. Copies have been sent to the SSC Citizens' Task Force, township supervisors, and some local government leaders. Copies of either report are available at cost through the publishing division of the ISR.

1

This evening at the DOE's public hearings on the Draft Environment Impact Statement (DEIS) I am presenting (1) a very brief summary of the overall findings presented in these reports and (2) a response to one social issue -- the boomtown effect -- that was raised in the DEIS.

SUMMARY OF PUBLIC RESPONSES

The ISR research program was designed to obtain data from different populations, including state residents and people in the Stockbridge area. To accomplish this, researchers conducted a public opinion telephone survey with two random samples, one composed of people from throughout the State of Michigan and the other composed of people residing in Ingham and Jackson counties (excluding Lansing). In addition, in-depth ethnographic interviews were conducted with a representative group of people who live on the path of the SSC ring. These interviews were conducted to determine the impacts on and attitudes of people most directly affected by the SSC project.

State Response - Telephone Survey

In order to measure the degree of support for constructing the SSC, researchers at ISR conducted telephone surveys in the summer of 1987 and the winter of 1988. In order to measure changes in attitudes toward the SSC with accuracy, a panel design involving reinterviews was used.

Reinterviews were conducted with 349 of the original 601 state respondents. These reinterviews document a positive shift in attitudes toward the SSC (See Figure 1-5, Stoffle and Traugott et al., 1988:10). In 1987, 49 percent of the respondents in the state sample said they would be concerned if the SSC were to be built near their homes; but in 1988 only 41 percent said they would be concerned. In 1987, 39 percent said they would not be concerned, while in 1988, 47 percent said they would not be concerned. So state-wide suport for the SSC is now more positive than negative.

Stockbridge Area Responses: People on the SSC Ring - Ethnographic Interviews

In-depth ethnographic interviews, each lasting about two hours, were conducted with 55 people in 1987 and 57 people in 1988. The 1988 respondents represented the more than 700 land owners who must sell their property and the 221 people who must relocate if the SSC were to be located at the Stockbridge site. These are

the people who would be most directly affected by the project, and they raised a wide range of issues especially about land purchase and relocation. Their concerns were communicated to the State of Michigan who then developed plans to mitigate or eliminate these problems (Stoffle and Traugott et al. 1988:93). The State's willingness to consider these issues so early in the siting process was important, because the overall attitude of these people is tied directly with the State's ability to reduce the adverse affects of the SSC project.

At the time of the interview, these people were asked about their attitude toward the SSC (Figure 1-7, Stoffle and Traugott et al. 1988:12). Their responses were placed on a five-point scale, in which a score of 1 represented "very negative" and a score of 5 represented "very positive." On average, the 1988 respondents reported a neutral attitude (3.4 mean score). Twelve of the 1988 people, who had answered the same question in 1987, reported a positive shift in attitude over the past year (Figure 1-6, Stoffle and Traugott et al. 1988:12).

Stockbridge Area Responses:People in Ingham and Jackson Counties - Telephone Survey

In early 1988, telephone reinterviews were conducted with respondents in the Jackson/Ingham County sample, who were originally contacted in the summer of 1987. Reinterviews were completed with 430 of the 605 original respondents. These reinterviews documented strong support for the SSC. Respondents were asked, "Overall, would you favor or oppose the construction of the SSC in the Stockbridge area?" In 1987, 62 percent of the respondents in the two-county sample favored constructing the SSC in the Stockbridge area, while in 1988, 72 percent favored the project (Figure 1-3, Stoffle and Traugott et al. 1988:7). In 1987, 23 percent of these respondents opposed constructing the SSC in the Stockbridge area, and in 1988, 11 percent opposed the project. It is interesting to note that Stockbridge area residents are almost twice as positive towards the SSC as are state-wide residents. There appears to be two reasons for this (1) the people of Stockbridge will receive the greatest benefit from the SSC and (2) the people of Stockbridge are undoubtably more knowledgable about the project and our findings show that the more people know about the SSC the more they support its construction.

BOOMTOWN EFFECT

People's initial responses to projects often are focused on issues that are close to home, like employment and family health. This was true of Michigan residents' responses. As people learned more about the project, issues were debated in public; the State proposed mitigations; issues were resolved; and, as a result, people began to focus on less obvious social impacts.

The boomtown effect is such an issue. It was just being raised by local people at the end of the 1988 research (Stoffle and Traugott et al. 1988:166) and has just been suggested as an issue of potential importance by the DOE in the DEIS. A "boomtown effect" is a sociological term that refers to effects of rapid growth on a community, usually small rural communities. Any aspect of community life can be effected by rapid growth. There can be too many students in the schools, too many cars on the roads, too many customers for a restaurant, too many people wanting new home utility hookups, even too many people who want to relax in the park. Past studies suggest that a growth rate of more than 20 percent per year can be too rapid and may adversely affect what is growing.

Growth, especially in the number of new jobs, is perceived by Stockbrige area people as one of the major benefits of the SSC project (Figure 3-2; Stoffle and Traugott et al. 1988:7). Growth, however, whether it be in numbers of people, in needs for public services, or in commercial market demands, can be either an opportunity or a threat to the people and businesses who currently fulfill these needs. Growth turns from opportunity to adverse impact when new needs cannot be met by the expansion of existing facilities, as when the old school cannot handle more students without reducing the quality of education or when families cannot find a place to picnic in the park.

The State of Michigan recognizes the potential of the boomtown effect in the Stockbridge area and has proposed a three-step program to address the boomtown issue: (1) diagnosis, (2) cure, and (3) precaution.

1. Diagnosis - Social Impact Assessment. In the first step, research will be conducted to diagnose the potentials for boomtown effects. The State has committed to conducting a year-long social impact assessment, which will include an analysis of potential boomtown effects. The research will be conducted by independent researchers at the Institute for Social Research and will directly involve a citizens' group from the Stockbridge area who will help identify the issues to be researched, review the findings of the study, and approve the final report.

2. Cure - Mitigating Impacts. Once the social impact assessment has identified potential boomtown effects, the State has committed to provide funds and other state resources to reduce or eliminate (that is mitigate) adverse effects to the extent possible. One or more issue-specific local citizens' committees will be asked to propose mitigation solutions to the boomtown effects of the SSC identified in the first step of the program. Mitigation will involve the joint efforts of a variety of support groups, such as the Michigan Township Association.

3. Precaution - Long Term Social Monitoring. The DOE recognizes the need for good project-host community relations, and for this reason often requires a program to monitor a project's social as well as its environmental effects. These monitoring efforts usually occur throughout the life of a project, which can formally be divided into four periods: (1) preconstruction, (2) construction, (3) operation, and (4) decommissioning. The State is committed to designing a scientifically valid and responsive social monitoring program. The State will assure scientific validity by asking researchers at the ISR to draft a proposed SSC social monitoring program based upon the findings of the most current scientific literature on this subject. This literature documents that the quality and the acceptability of a social monitoring program is increased by involving local people. Therefore,

in order to assure the program will be socially responsive, Stockbridge area people will be directly involved in drafting the social monitoring program, especially defining (1) what elements of their lives should be monitored, (2) how social, cultural, and psychological changes can be measured, (3) what is a significant amount of change, (4) who will conduct the monitoring, and (5) who will make recommendations in the event that the SSC project causes adverse social effects.

In conclusion, after reading the DEIS, it is apparent that the State of Michigan is the only state to have an open and on-going scientifically based social assessment, mitigation, and public participation program. This program has defined key social impact issues, thus permitting these issues to be debated in public and, in many cases, resolved. The Michigan program documents that public support for the SSC derives as much from the resolution of negative impacts as from the recognition of positive benefits.

ISR Bookshelf

INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN 48106

New in the ISR Research Report Series . . .

The Superconducting Super Collider at the Stockbridge, Michigan, Site:

Community Support and Land Acquisition Issues

Richard W. Stoffle, Michael W. Traugott, Camilla L. Harshbarger, Florence V. Jensen, Michael J. Evans, and Paula Drury

This new volume is the second of two ISR research reports on the potential social impact if the U.S. Department of Energy's Superconducting Super Collider research facility were to be located in southern Michigan. (An earlier volume entitled *Social Assessment of High Technology*, published by ISR in 1987, focused on Dundee, Michigan, as a proposed site for the SSC.)

Construction of such a large new research facility would involve thousands of workers and billions of dollars over a period of several years; its operation would provide continued employment for many hundreds of research physicists and support personnel. Of the many large-scale federal construction projects planned for the U.S., the SSC is one of the largest and most expensive, one of the most technically difficult for the general public to understand, and one that holds great promise for advancement of scientific knowledge. An important intial step in determining the eventual location for the project is to determine whether or not there is support for the project within the potential host community.

This volume presents social impact assessment research conducted by ISR during 1987 and 1988 in and near the rural community of Stockbridge, Michigan--one of the handful of proposed a sites selected nationally to receive final consideration by the DOE as a location for the SSC.

Data for this second report were collected both through telephone surveys of Michigan residents statewide and through in-depth interviews with individuals who would be most affected by the SSC project: farmers, residents, and small-business owners in the rural areas surrounding the proposed SSC site near Stockbridge. These persons live or do business on the proposed path of the SSC ring--53 miles in circumference--and would be directly affected by land purchase and relocation issues.

Results from this research indicate a high level of support for the SSC in the Stockbridge area of Michigan (72 percent favored the project in 1988), with support increasing between 1987 and 1988, apparently due both to an increase in public knowledge about the project over time and to the awareness that the State of Michigan is actively making efforts to elicit the public's concerns and be responsive to them.

ISR Research Report / 1988 / 208 pp. / paper $15.00

A table of contents and an order form appear on the reverse side.

The Superconducting Super Collider at the Stockbridge, Michigan, Site

Preface

List of Tables and Figures

Chapter 1: Executive Summary
- Introduction
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Chapter 5: State's Response to Land Acquisition and Relocation Issues
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Appendices
- July 1987 Telephone Survey Questionnaire
- February 1988 Telephone Survey Questionnaire
- Contacting Landowners
- Moving Costs for Mobile Homes
- Voluntary Support and Opposition
- SSC Question-and-Answer Handbook

Bibliography

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LETTER 312

September 26, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER 65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

ATTENTION: SSC Draft EIS

As an area resident, affected by the impacts of the SSC should it come to Michigan, I have spent considerable time researching the project through the DOE Conceptual Design book, the DEIS and with less than adequate answers or assistance from the State.

The following is a list of items from the DEIS that need to be addressed in greater detail and with current information.

1. Our State officials have often stated that the SSC is to be compared to Fermilab. The DEIS (2.2.4) states that these projects are not comparable in energy or luminosity, with the SSC being much greater. This needs further description and definition.

2. Noise and vibration impacts are addressed in the DEIS. I have found the maps used to address the "human receptor" aspects are mid-1960's maps that DO NOT include many residences and subdivisions that are in this sensitive area. There are few, if any, discussions on how noise impacts will affect land values. More current information should be used and effects on land values discussed. DEIS 5.1.4 map 5.1.4-4 5.1.4-17/2 A. operation

3. Water/Wells

Much reference is made to ground water overdrafts. It also states that data for evaluation is limited. Dr. Robert Cadbold (ICN, 7/20/88) indicates we have been looking for alternate sources of water since the late 70's and existing supplies are not limitless. More current and detailed data should be used and assessed before proceeding further. DEIS 5.5 Appendix 6-9 A/B4 B-1. the attachment

Kingsford Co Health Dept Environmental Div

There is a question concerning how much water will seep in through the tunnel walls during tunneling and operation. There is great conflict in the numbers the state is using and the numbers the DEIS intimates. There is also little detail on how the larger amount of water seepage would be dealt with since it is significant. Appendix 6-9 A/17 1st paragraph
State lists 530 gals per minute over the 53 miles
Our calculations indicate between 2700 & 4,400 gals minimum

Removal of water wells is another area of conflict. The Ingham County Health Department has indicated that the information supplied to the state concerning locations of wells was compiled in 1968-69. More current data was not used. The DEIS indicates 80 wells to be removed while Gilbert Commonwealth is asking contractors to bid on 400. This NEEDS to be researched further and with more current data. Appendices 6-9 A/120-6 Fig 7-18

The Michigan SSC Commission is stating that existing wells (within 35 feet of the tunnel) can remain and that new wells can be drilled as close as 150 feet. The DEIS indicates that no resource recovery will be conducted within 1,000 feet either side of the tunnel. Please elaborate and clarify details of this area. DEIS 5.5

4. "Stratified Fee Areas" DEIS 5.1.8.5 / 5.1.8-24 4.2.1.2

These people are directly impacted, but dealt with very little in the DEIS. State legislation offers little compensation or protection for residents in this area. The state has told us (until the DEIS) this was an easement, not a complete purchase of the sub strata property as stated in the DEIS. This area needs clarification as to anticipated effects, property owners rights, adverse impacts, and avenues of mitigation.

5. Scenic/Visual DEIS 5.1.10-14 D.

Areas F4 through F7 (and everything in between) is not addressed in the DEIS. Visual impacts will need to be addressed in terms of scenic value and land values. Sec. 16.3.4.4 is in conflict with local township zoning ordinances.

6. There is only mention of the proposed railroad siding at Eden and no details. Area residents have no concept of what is proposed and the impacts it may have. This needs to be addressed in detail.

7. There is limited information on the abort areas. Our State officials have indicated this is the worst area for radiation and little information is available as to actual construction, operations and adverse impacts to this area (especially to stratified fee residents).

8. The State is in direct conflict with the participation procedures and intent outlined by the DOE for this meeting by soliciting comments in favor of the SSC being sited in Michigan (see attachments).

9. ISR

The Michigan SSC Commission has referred to this report to show support for this project. I have reviewed the report to find that the surveys were conducted prior to the February 16, 1988 Scoping meeting when little information was known about the project. This is misleading, inaccurate and I questions how this survey can be done impartially when it is contracted by the State and the university involved stands to gain from the SSC. Surveys of this nature should be conducted by out of state, independent organizations. ~~downs~~ Rockbridge area only

I have approximately 1,000 signatures of residents not in favor of the SSC that would challenge the accuracy of the ISR.

Sincerely,

Jay D. Jenkins
2661 Tomlinson
Mason, Michigan 48854
(517) 676-5462

STATE OF MICHIGAN
84TH LEGISLATURE
REGULAR SESSION OF 1988

Introduced by Senators N. Smith and Sederburg

ENROLLED SENATE BILL No. 788

AN ACT to amend the title and sections 3, 7, and 11 of Act No. 26 of the Public Acts of 1987, entitled "An act to create the Michigan superconducting super collider commission; to prescribe its powers and duties; to prescribe the powers and duties of certain state agencies and certain state officials; and to repeal certain acts and parts of acts of specific dates," being sections 3.813, 3.817, and 3.821 of the Michigan Compiled Laws; and to add sections 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22.

The People of the State of Michigan enact:

Section 1. The title and sections 3, 7, and 11 of Act No. 26 of the Public Acts of 1987, being sections 3.813, 3.817, and 3.821 of the Michigan Compiled Laws, are amended and sections 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22 are added to read as follows:

TITLE

An act to create the Michigan superconducting super collider commission; to prescribe its powers and duties; to prescribe the powers and duties of certain state agencies and certain state officials; to provide for the establishment of the superconducting super collider in this state; to provide for the purchase of certain property for the superconducting super collider; to provide for certain equity payments; and to provide for reimbursement to local governments for taxes lost due to purchase of certain real property for the superconducting super collider.

Sec. 3. As used in this act:

(a) "Commission" means the Michigan superconducting super collider commission created in section 4.

(b) "Contiguity" means in close proximity, touching, or near.

(c) "Department" means the department of commerce.

(d) "Local government" means a city, village, township, county, a local or intermediate school district, a community college district, or any special taxing district.

(e) "Ombudsman" means the superconducting super collider ombudsman created in section 19.

(f) "Parcel" means that portion of a property that has unity of ownership, contiguity, and unity of use.

(g) "Superconducting super collider" means a 20 trillion electron volt superconducting super colliding particle beam accelerator proposed by the United States department of energy.

Sec. 7. The commission shall do all of the following:

(a) Act as an agent of this state in presenting to the United States department of energy site proposals for 1 or more sites in this state which would be appropriate locations for the superconducting super collider.

(b) Represent the state in matters concerning the superconducting super collider before the legislative and executive branches of the federal government and the public.

(76)

(c) Represent the state in negotiations with the United States department of energy regarding the superconducting super collider.

(d) Develop and implement both of the following:

(i) Plans for state participation in the superconducting super collider project.

(ii) Proposals for alternative methods of financing of plans for state participation in the superconducting super collider project.

(e) Consult with the senate majority leader, speaker of the house of representatives, senate minority leader, and minority leader of the house of representatives on matters pertaining to attracting the superconducting super collider to this state.

(f) Consult with the United States senators and representatives from this state on matters pertaining to attracting the superconducting super collider to this state.

(g) Contract with the Michigan energy and resource research association to aid in the preparation of the state's proposal to the United States department of energy for the superconducting super collider.

(h) Hold public meetings, and provide information as appropriate, to inform and educate local citizens as to the nature of the state's proposal to attract the superconducting super collider to this state.

(i) Perform, in a cost effective manner, all efforts necessary to attract the superconducting super collider to this state including, but not limited to, research, preparation and submission of reports, and education of the public.

(j) Provide that adequate and appropriate compensation is made by state government, federal government, contractors or other appropriate persons to local governments and individuals for losses including loss of water, loss of roads, damage to drainage fields, crop loss, roadway wear, and other damage resulting from the construction of the superconducting super collider.

(k) Provide that adequate and appropriate compensation is made to businesses or individuals whose property is acquired or who are relocated as a result of the superconducting super collider for measurable business losses or agricultural production losses as a result of the acquisition, of land under this act.

Sec. 11. Effective July 1, 1991, all powers and duties granted to the commission under this act shall be transferred to and shall be performed by the department of commerce and the commission shall be dissolved.

Sec. 12. (1) The commission shall purchase all real property necessary for the construction and operation of the superconducting super collider at the fair market value of the property.

(2) If the acquisition of a portion of a particular parcel of real property in fee simple under subsection (1) would destroy the practical value or utility of the remainder of that parcel, or reduce the fair market value of the entire parcel by greater than 50%, the commission shall offer to acquire the entire parcel.

(3) The commission shall offer to enter into option agreements and pay property owners option payments on all parcels of real property to be acquired in fee simple necessary for the construction and operation of the superconducting super collider at a price of 5% of fair market value of the property, but not less than $500.00, if the option agreement is signed by the property owner within 60 days of the offer. If Michigan is chosen as the final site of the superconducting super collider, the commission shall offer option payments by no later than April 1, 1990 to property owners for property to be acquired. The option payment shall not be applied against the purchase price of the property if the option is exercised. The terms of the options shall include a provision that the option shall extend for a period of 1 year after the date the option agreement is signed by the property owner. The option agreement shall also provide that the option will terminate immediately upon the official announcement by the president of the United States or the president's designee that this state has not been chosen by the federal government as the site for the superconducting super collider. Within 90 days after an option on a parcel of real property is terminated, the state shall clear the title of the property as it relates to that option.

(4) The commission shall pay all reasonable relocation costs incurred as a result of the superconducting super collider pursuant to the uniform relocation assistance and real property acquisition policies act of 1970, Public Law 91-646, 42 U.S.C. 4601 to 4602, 4604, 4621 to 4633, 4635 to 4636, 4638, and 4651 to 4655.

(5) Upon the official announcement by the president of the United States or the president's designee that Michigan has not been chosen as the site of the superconducting super collider, the commission shall not offer to enter into any additional option agreements with property owners pursuant to subsection (3) and shall discontinue any activities related to the surveying, appraisal, or acquisition of land for the superconducting super collider.

Sec. 13. (1) A farmland equity adjustment program is created to compensate property owners for the purpose of encouraging the continuation of agriculture and reestablishing agricultural lands displaced by the superconducting super collider.

(2) Except as provided in subsection (3), the department of commerce shall provide a farmland equity adjustment payment to a property owner of real property greater than 5 acres that is acquired in fee simple by the commission for the superconducting super collider prior to October 1, 1990. The payment shall equal 50% of the fair market value of the real property less the fair market value of any homestead, improvements related to the homestead, appurtenances, and acreage related to or associated with the use of the homestead improvements related to the homestead, or appurtenances. This payment shall be made to the property owner at the time of closing unless the property is sold pursuant to a deferred payment agreement under section 14.

Sec. 14. (1) At the option of the seller, the commission shall purchase property under section 12 and provide farmland equity adjustment payments under section 13 on a deferred installment payment schedule not to exceed 10 years after the date of purchase. However, the commission shall receive title of the property at the time the deferred payment agreement is entered into. If property is purchased on a deferred payment schedule pursuant to this section, the commission shall pay interest on the balance owing to the seller at the same rate as the state's rate of return on its investments in the common cash fund.

(2) If property is purchased on a deferred payment schedule pursuant to this section, the seller may request, at any time, full payment of the outstanding principal, plus any accrued interest, owing to him or her. The state may grant the sellers request under this subsection in the event of financial hardship or other reasonable cause. In the event of death of the seller, the state shall grant the request.

(3) A deferred payment agreement entered into under this section shall be assignable.

Sec. 15. (1) The commission shall purchase underground stratified fee rights necessary for the construction or operation of the superconducting super collider at a minimum price of $5.00 per 70,000 cubic feet, or at a higher appraised value determined by the commission.

(2) The commission shall offer to enter into option agreements and pay property owners option payments on underground stratified fee rights under subsection (1) at a price of $1.00 per 70,000 cubic feet, if the option agreement is signed by the property owner within 60 days of the offer. The option payment shall not be applied against the purchase price of the rights acquired under this section if the option is exercised. The terms of an option purchased under this section shall include the same provisions for termination of the option as specified in section 12(3). If Michigan is chosen as the site of the superconducting super collider, the commission shall offer option payments by no later than April 1, 1990 to property owners for rights to be acquired under this subsection.

Sec. 16. (1) To reimburse local governments for ad valorem taxes levied under the general property tax act, Act No. 206 of the Public Acts of 1893, being sections 211.1 to 211.157 of the Michigan Compiled Laws, lost due to the removal of real property from the property tax rolls for the establishment of the superconducting super collider, the department of treasury shall make payments in lieu of taxes to those local governments that levy ad valorem taxes.

(2) The treasurer of each local tax collecting unit affected under this section shall forward to the state treasurer a statement of payments lost due to the removal of real property from the property tax rolls for the establishment of the superconducting super collider. The statement shall include a legal description of each parcel of property purchased by the commission under this act that is located within that local tax collecting unit.

(3) The state treasurer shall cause a warrant to be drawn on the state treasury in an amount equal to the amount of payments required by this section for each local government and shall transmit that warrant to the treasurer of the local government for deposit in the treasury of that local government. The payments required by this section to a local government shall be calculated by multiplying the current ad valorem millage rate of the local government by the lesser of the following amounts:

(a) For property removed from the tax rolls for the establishment of the superconducting super collider in the local government, the state equalized value of the property in the year prior to the removal.

(b) The amount obtained by subtracting the then current state equalized value of the local government from its adjusted state equalized value. The adjusted state equalized value for the year in which the property is removed from the tax rolls shall be calculated by multiplying the local government's prior year's state equalized value by the inflation rate for the then current year as certified under section 34d of the general property tax act, Act No. 206 of the Public Acts of 1893, being section 211.34d of the Michigan Compiled Laws. The adjusted state equalized value for subsequent years shall be calculated by multiplying that year's inflation rate by the prior year's adjusted state equalized value of the local government.

Sec. 17. The state shall pay, through legislative appropriation of funds provided under Act No. 51 of the Public Acts of 1951, being sections 247.651 to 247.674 of the Michigan Compiled Laws, after consulting with the boards of county road commissioners in affected counties, the cost of initial county or secondary road construction or improvement needed for the construction or operation of the superconducting super collider.

Sec. 18. Local governments shall not be responsible for the cost of water systems, sewers, waste disposal systems, or preparing new property tax descriptions associated with the construction and operation of the superconducting super collider.

Sec. 19. A property owner whose property is acquired for the superconducting super collider may retain improvements for removal from the site at salvage value. A salvage value will be prepared by the commission at the request of the property owner.

Sec. 20. The commission shall provide information and assist individuals in areas impacted by the construction and operation of the superconducting super collider in obtaining job training for work associated with the superconducting super collider.

Sec. 21. (1) The director of commerce shall appoint and be responsible for 1 or more individuals within 30 days of the effective date of this act to serve as the superconducting super collider ombudsman. The ombudsman may act on behalf of the state in attempting to reconcile grievances between the state and any person aggrieved by the planning, construction, or operation of the superconducting super collider.

(2) Any person aggrieved pursuant to subsection (1) may submit a request to the ombudsman to review the grievance. The ombudsman shall respond within 7 days of the request.

Sec. 22. The department shall promulgate emergency rules to implement this act. These emergency rules shall be promulgated pursuant to the administrative procedures act of 1969, Act No. 306 of the Public Acts of 1969, being sections 24.201 to 24.328 of the Michigan Compiled Laws.

This act is ordered to take immediate effect.

Secretary of the Senate.

Clerk of the House of Representatives.

Approved .....

.....
Governor.

4

LETTER 312 (CONTINUED)

Jennifer Carroll
Suburban/Regional Editor
377-1195

Lansing State Journal
Thursday, July 7, 1988
Page 3B ★

Township ends collider support

By DAVE POULSON
Lansing State Journal

MASON — Vevay Township bucked super collider fever this week and became the only Ingham or Jackson county municipality to withdraw support for the $4.4 billion proton smasher.

The township board voted 5-0 Tuesday that it could not support the project because of unanswered questions and conflicting answers to other questions, said Jeff Oesterle, the township supervisor.

SUPER COLLIDER

The Stockbridge-area site is one of seven across the country in the running for the Superconducting Super Collider. The federal project is expected to generate thousands of jobs and millions of dollars of revenue.

Initially, Vevay Township was among those that supported the state's application to become a site "simply because it's a good idea not to turn your head on anything," Oesterle said.

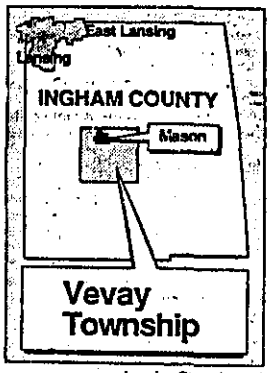
But township officials now think that protection from ground water contamination has not been adequately explained, he said. They also have questions about the buying of property in the collider path, and object to a proposed government body that would plan development around the collider, a 52-mile circular tunnel.

Township officials want to be solely responsible for planning development within the township, Oesterle said.

Community support is among the criteria that will be used to decide on a site late this year. In Michigan, 38 local units of government and 90 service clubs, economic development groups and other organizations have passed resolutions of support, said Jack Burdock, a spokesman for the state's Superconducting Super Collider Commission.

Officials will try to address the township's concerns immediately, he said.

Among those passing resolutions of support is Mason, which is adjacent to the township. The collider path passes about a half mile from the Mason limits.



Lansing State Journal

"I can see their reaction to it," said Mason Mayor Gene Goodman. "I might feel differently, too, if it went under my house."

Township resident Jay Jenkins, who helped circulate petitions opposing the collider, said groundwater contamination worries many residents.

Current colliders — which are much smaller than the proposed super collider — have so far not been shown to contaminate ground water, said Jeff Sherwood, a spokesman for the U.S. Department of Energy.

As a precaution, no wells will be allowed within 35 feet of either side of the super collider ring. Wells drilled within 150 feet must be specially approved.

Such caution fuels concern about radioactivity from the collider. It is expected to be at extremely low levels, said Jim Heinzman, a hydrogeologist with the Department of Natural Resources.

But the DNR has made an extensive study of the site, he said. "There are not going to be any groundwater problems. The groundwater movement is at a rate that contaminants would not travel far even if they did get into groundwater."

ZONING ORDINANCE
TOWNSHIP OF INGHAM INGHAM COUNTY, MICHIGAN

Title

An Ordinance enacted under Act 184, Public Acts of 1943, as amended, governing the unincorporated portions of the Township of Ingham, Ingham County, Michigan, to provide for the establishment of Zoning Districts within which the proper use of land and natural resources may be encouraged and regulated; to provide for the location, the size of, and the type of uses that may be made of the minimum open spaces; to provide for sanitary, safety, light, and other protective measures; to provide for the maximum number of families that may be housed in dwellings, buildings and structures, including mobile homes; to provide for the administration and enforcement of said ordinance; to provide for appeals and for the description and procedures to be followed by the Board of Appeals; and to provide for penalties for the violation of said Ordinance.

Preamble

Pursuant to the authority conferred by Act 184 of 1943 and Act 168 or 1959 of the Public Acts of the State of Michigan in such case made and provided and for the purpose of promoting and protecting the public health, safety, peace, morals, comfort, convenience, and general welfare of the inhabitants of the Township by protecting and conserving the character and social and economic stability of the residential, commercial, industrial and other use areas; by securing the most appropriate use of land; preventing overcrowding the land and undue concentration of population; providing adequate light, air, and reasonable access, and facilitating adequate and economical provisions of transportation, water, sewage, schools, recreation and other public requirements and by other means, all in accordance with a comprehensive plan, now therefore

ENACTING CLAUSE

The Township of Ingham ordains:

ARTICLE ONE: SHORT TITLE, PURPOSE

Section 101

SHORT TITLE: This Ordinance shall be known as the "Ingham Township Zoning Ordinance".

Section 102

PURPOSE: This Ordinance has been established for the purpose of:

102.1 Promoting and protecting the public health, safety, and general welfare;

102.2 Protecting the character and the stability of the agricultural residential, and commercial areas within the unincorporated portions of Ingham Township and promoting the orderly and beneficial development of such areas;

102.3 Providing adequate light, air, privacy and convenience of access to property;

102.4 Regulating the intensity of use of land and lot areas and determining the area of open spaces surrounding buildings and structures necessary to provide adequate light and air and to protect the public health;

102.5 Lessening and avoiding congestion in the public highways and streets;

102.6 Providing for the needs of agriculture, residence, and commerce in future growth;

102.7 Promoting healthful surroundings for family life in residential, and rural areas;

102.8 Protecting the public and adjacent uses from fire, explosion, noxious fumes or odors, excessive heat, dust, smoke, glare, noise, vibration, radioactivity, and other health and safety hazards;

102.9 Preventing the overcrowding of land and undue concentration of buildings and structures so far as possible and appropriate in each zoning district by regulating the use and bulk of buildings in relation to the land surrounding them;

102.10 Enhancing social and economic stability in the Township;

102.11 Conserving the taxable value of land, buildings and structures in the Township;

102.12 Enhancing the aesthetic desirability of the environment throughout the Township; and

102.13 Conserving the expenditure of funds for public improvements and services to conform with the most advantageous uses of land.

ARTICLE TWO: CONSTRUCTION OF LANGUAGE AND DEFINITIONS

Section 201

CONSTRUCTION OF LANGUAGE: For the purpose of this Ordinance certain terms are herewith defined. When not inconsistent with the context, the present tense includes the future, words used in the singular number include the plural number. The word "shall" is always mandatory and not discretionary. The word "may" is permissive. word "person" includes a firm, association, organization, partner trust, company or corporation as well as an individual. The word "used" or "occupied" include the words "intended", "designed", or "arranged" to be used or occupied.

Section 202

DEFINITIONS: For the purposes of this Ordinance, words pertaining to access, building, property, land use, building use, building measurement and enforcement shall have the following meaning.

202.1 Accessory Structure: A structure customarily incidental & subordinate to the principal structure and located on the same zoning lot as the principal building.

202.2 Accessory Use: A use customarily incidental and subordinate to the principal use of the land or building and located on the same zoning lot as the principal use.

202.3 Agriculture: Any land or building used for pasturage, floriculture, dairying, horticulture, viticulture or livestock or poultry husbandry.

202.4 Alterations: Any change, addition or modification in construction or type of occupancyt any change in the structure members of a building, such as walls, partitions, columns, beams, girders, the consummated act which may be referred herein as "altered" or "reconstructed".

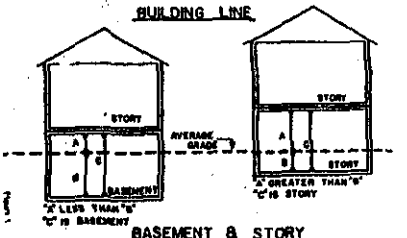
202.5 Basement: A portion of a building more than one half of which is below the average grade level. (See Figure 1)

202.6 Building: Any structure, either temporary or permanent, having a roof supported by columns or walls, and intended the shelter or enclosure of persons, animals, chattels, or property of any kind.

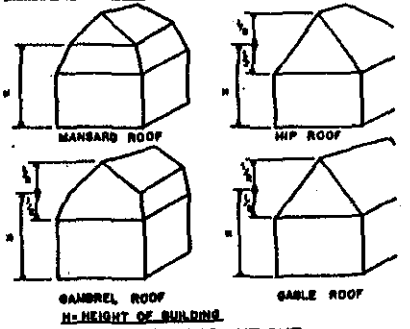
202.7 Building Height: The vertical distance measured from the established grade to the highest point of the roof surface for flat roofs; to the deck line of mansard roofs; and to the average height between eaves and ridge for gable, hip, and gambrel roofs. Where a building is located on sloping terrain, the height may be measured from the average ground level of the grade at the building wall. (See Figure 2)

202.8 Building Line: A line parallel to the front lot line at the minimum required front setback line. (See Figure 3)

BUILDING LINE



BASEMENT & STORY



H= HEIGHT OF BUILDING

BUILDING HEIGHT

The Leslie Local Independent - Leslie, MI 49251 - Thursday September 15, 1988

Letters To The Editor

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were really very pretty!
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nment! This community
people. Thank you for

e more. The suggestions
support in making this
ssful effort!
Let Your Light Shine!
Darlene A. Sherwood

ers for years, and have
end of these years. I have

seven churches! We plan on submitting more articles with pictures from our church, will you be willing to print them?

Patricia A. Graham
Child Bible Church

Editor's Note: Since this is a very small newspaper, there is only one person who writes full-time. The outside part-time reporters cover what they can on assignment. Most news, therefore, is brought in. Pastors who are new in town, or who are leaving, are written about. The various churches in the area send in information regarding special programs, attendance, films, and activities concerning their churches.

Dear Editor,

I am quite concerned about the way Ingham County has been conducting its pursuit of the Superconducting Super Collider (SSC).

Why did Ed Grube (Economic Development Director for Ingham County) go to many townships and local governments for late summer and early fall of 1987, presenting the SSC project and asking them to support an already prepared resolution concerning the SSC? Why was it necessary to get the support of townships and local governments 3 months before affected landowners were notified by the Department of Energy of the state application for the SSC? Was there concern that they would not get this support when the detailed information was released and people began to understand the downside of the SSC?

I wonder if the townships and local units of Government realize that Mr. Grube's statement was to support the state's application for the SSC, not one of total support for the project. *Since the resolution was approved before adequate information was released, it should come as no surprise that townships are taking a second look at the SSC. It makes one wonder just what is being shoved down our throats.*

Anita F. Pelletier
2857 Tomlinson

Public Hearings On SSC Set Sept. 26 At Stockbridge High

Public hearings to collect verbal comments on the draft Environmental Impact Statement (EIS) for the Superconducting Super Collider will be held at the Stockbridge High School gymnasium on September 26.

Two sessions are scheduled by the U.S. Department of Energy (DOE) — from 2 to 5 p.m., and from 7 to 10 p.m. Additional sessions may be held the next day if the number of requests to speak exceed the six hours provided on September 26, the DOE has said.

According to the DOE, the EIS is a key part of the environmental review process for the proposed $4.5 billion high-energy physics particle accelerator. The EIS study is required by National Environmental Policy Act anytime a federal agency undertakes a major action that could affect the environment.

The draft EIS is a 5,000-page, six-volume analysis of the potential impact such a facility would have on water resources, air quality, ecological settings, social and economic factors of nearby communities and infrastructure at each of the seven sites still competing for the SSC project. According to the DOE, it contains as much information as possible at this stage in the project development.

A final EIS will be written after the DOE selects its preferred site in November. It will contain even more details about the potential effects on the surrounding locations and ways in which any serious negative impacts can be avoided or mitigated during construction and operation of the SSC.

John Hanicki, executive director of the Michigan SSC Commission, said he expects to see a mix of supporters and opponents to the $4.5 billion project at the public hearings.

"These hearings are part of the governmental process in our democracy, and I hope that everyone who lives in south-central Michigan and has a comment to make on this proposed project will take time to address the EIS review team and convey their thoughts," Hanicki said.

"In particular, I hope that our residents who support the SSC—an exciting venture in the future in our high-technology state will express their enthusiasm for this world-class facility. If they also have some concerns about the accelerator design or operation, this is the forum set aside by federal law for them to present those concerns as well."

Hanicki noted that some people in mid-Michigan have expressed general support for the project, but are concerned about a particular aspect of the construction or operation of the SSC.

"This is the time to tell DOE that you are in favor of the SSC here, but that you would like to see a particular problem addressed and solved before it is built," he said. "I think the DOE is looking for constructive comments.

"However, it is most important for the Department of Energy to hear from all people who have an interest or who are directly or indirectly affected — supporters, opponents and those who are in the middle of the road on the SSC," Hanicki said.

Each speaker at the EIS hearing will be limited to five minutes. Individuals or representatives may pre-register to speak at the hearing by calling the DOE at (301) 353-6378 or by writing: SSC Site Task Force, Office of Energy Research, OR-63/GTN, U.S. Department of Energy, Washington, D.C. 20545.

The DOE is also collecting written comments on the draft EIS during a 45-day period that began September 2 and ends October 17. To be considered, written comments on the EIS must be postmarked no later than October 17 and sent to: SSC Draft EIS Comments, Dr. William Hess, Chairman, SSC Site Task Force, Office of Energy Research, OR-63/GTN, U.S. Department of Energy, Washington, 20545.

Copies of the draft EIS can be obtained free of charge from the DOE by calling (301) 353-6378. The draft EIS also is available for review at the Ingham and Jackson county public libraries, the SSC Information Office in Stockbridge and in the SSC Commission Office in Lansing.

Yearbook Dance Coming Friday

Leslie High School Publications class will be holding its annual yearbook dance this Friday, Sept. 16, from after the football game until 11:30 p.m. Cost is $2.50 and is open to all interested students. Tickets will be "Tones by T[illegible]". This dance is provided so that students, including last year's seniors can pick up their yearbooks and sign others' books.

C. Public Hearings

1. Participation Procedure

The public is also invited to provide comments on the draft EIS to the DOE in person at the scheduled public hearings. The purpose of the hearings is to receive substantive comments related to the draft EIS. It is not the purpose of the hearings to receive either general endorsements or criticisms of the project. The hearings will not be judicial or evidentiary-type hearings. Advance registration for presentation of oral comments at the hearings will be accepted up to one week prior to the hearing date by telephone or by mail at the office listed above. "Attention: SSC Draft EIS Hearing Registration."

Requests to speak at a specific time will be honored, if possible. Requestants are allowed to only register themselves to speak and must contain the time they are scheduled to speak at the registration desk the day of the hearing. Persons who have not registered in advance may register to speak at the hearings to the extent time is available. To ensure that as many persons as possible have the opportunity to present comments, 5 minutes will be alotted to each speaker. Persons presenting comments at the hearings are requested to provide the DOE with written copies of their comments at the hearing, if possible.

2. Hearings Schedules and Locations

Hearings will be held from 2 to 5 p.m. and 7 to 10 p.m. at each of the following locations on the dates indicated:

September 26, 1988:

Stockbridge High School
Gymnasium
416 North Clinton Street
Stockbridge, Michigan

Southwestern Assemblies of God College
Administration Building
W. B. McCafferty Auditorium
1200 Sycamore Street
Waxahachie, Texas

September 28, 1988:

Fort Morgan High School
Auditorium
709 E. Riverview Avenue
Fort Morgan, Colorado

Middle Tennessee State University

LETTER 312 (CONTINUED)

The Ingham County News

Wednesday, July 20, 1988

35¢

Water running out?

Supply dwindles, expert says

BY RICK MILLS
Staff writer

Recent rain may have helped lawns and farm crops, but it would be one to five years before it affects the underground water supply in Mid-Michigan.

During the drought, experts have seen evidence of a decrease in the underground water supply that feeds all of Ingham County.

They say the decline is slight, but is accelerating the reduction of the water supply that is occurring ever day, rain or shine, especially in highly populated areas.

Experts are saying that underground reserves feeding Ingham County will run out sooner or later and alternatives must be sought.

"If you have continued drought for years, you're going to hit the bottom," said Robert Godbold, assistant director of environmental health with the Ingham County Health Department. "It's not limitless. There is a danger of running out, especially in the metro areas. I have no doubt that we will run out and will have to find other sources some day," he said.

"Theoretically,...you could run out," said Brad Hart, of Hart Well Drilling in Mason.

No way exists to actually measure the underground supply of water, so experts rely on signs of the amount of water by measuring pressure.

The figure used to determine the underground supply is called the "static water level." When a water well is drilled to 200 feet, for example, the static water level is the height to which the water rises without the use of a pump.

IN MUCH OF RURAL Ingham County, the static water level is 18-30 feet below the surface. In higher population areas, the static water level is as low as 150 feet below the surface.

That phenomenon is known as a "cone of depression" with high levels on the rural fringes of the county and a deep center in Lansing.

"Where they are having the most problems are in Lansing, East Lansing, Meridian and Okemos," said Jerry Hart, president of Hart Well Drilling. "They're using so much that it can't recycle fast enough. They're using it too fast, and it's not coming in as fast as they're using it."

> "They're using so much that it can't recycle fast enough. They're using it too fast, and it's not coming in as fast as they're using it."
> —Jerry Hart, president, Hart Well Drilling

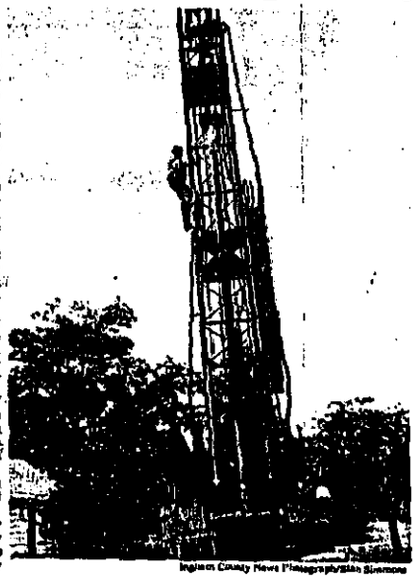
Both well drillers and health department officials have seen an increase this year in the number of new wells. In some cases, wells have actually gone dry, but in most instances the static water level has dropped requiring that a well's pump be lowered to the new depth of the water.

Estimates are that the static water level in rural Ingham has fallen six-eight inches. While not drastic, that has been enough to cause some wells to fail.

"If you could wait long enough and get some rain, then you would have water again," Godbold said, "the problem is you can't wait."

Most Ingham wells use submersible pumps below the static water level— between 20 and 65 feet underground. In most dry well cases, water may be

SEE WATER, Page 2



Ingham County News Photography/Stan Simmons

WATER CRISIS— A drilling rig stands ready to connect water to the home and business of Dr. Joe Simon and Kathy Simon, Williamston. Their well had been low on pressure for weeks and went dry more than a week ago. The family improvised by running a hose from their neighbor's house.

LETTER 312 (CONTINUED)

Ingham County News/ July 20, 1988

General News

Ingham County News Photo/Stan Simmons

WATER WELL BUSINESS ANSWERS CRISIS— (Left to right) Jerry and Brad Hart of Hart Well Drilling say many rural residents are experiencing difficulties with wells.

Water

FROM Page 1

restored by dropping the pump below the new static water level.

In other cases, however, the wells actually dry up to the point where a new well must be dug.

"One year (of drought) probably won't bother us too much, but it could in some areas," said Jerry Hart. "Even this year is going to hurt though."

COUNTY OFFICIALS ADMIT that some day Ingham will run out of groundwater, and they point to studies done in the late 1970s examining the cost of getting surface water from the Grand River, Lake Huron and Lake Michigan.

While water supply experts worry about the supply of water, it is not the supply concerns that have prompted watering bans in many Ingham municipalities. Rather, the bans have been implemented simply because demand has increased to the point that wells cannot pump enough water fast enough.

The greater concern, the experts say, is that the overall supply is decreasing over the years.

Most of Ingham soil is comprised of about 50-60 feet of drift, which is gravel and sand, or loose dirt. Below that is bedrock made of mostly sandstone.

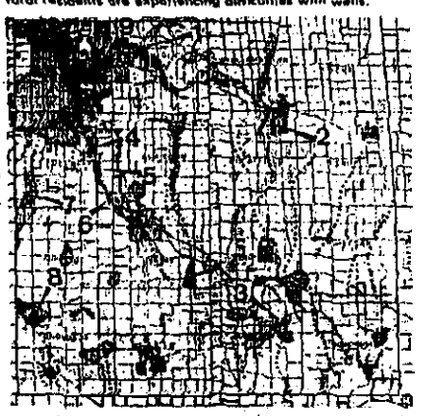
Residential water wells are 200-250 feet deep on the average, but the Hart firm has drilled as deep as 520 feet for water supply.

Most of Ingham's water supply comes from the sandstone formations known as the Saginaw Formation — which goes as deep as 400 feet in most areas. Below that, most wells would pump salt water and brine.

"If you can think of a big chunk of wet sandstone as a reservoir, then it is a reservoir," Godbold said. "It actually is a reservoir because water moves fast through sandstone."

Godbold said that there are only two sources of drinking water — groundwater from below the surface, and surface water — and that if one runs out the other must be used.

The city of Grand Rapids already uses water piped in from Lake Michigan.



Shaded areas are water recharge locations and diamonds indicate the site of water eskers. (Map prepared by the Ingham County Health Department).

LETTER 328

HQ- 660

COMMISSION OF AGRICULTURE
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Elwood Kirkpatrick
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Rita M. Reid

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF AGRICULTURE

P.O. Box 30017, Lansing, Michigan 48909

PAUL E. KINDINGER, Director

STATEMENT

SUPERCONDUCTING SUPER COLLIDER PUBLIC HEARING

DRAFT ENVIRONMENTAL IMPACT STATEMENT

STOCKBRIDGE, MICHIGAN

SEPTEMBER 26, 1988

Good Afternoon.

For the record my name is Christine Lietzau, Director of the Environmental Division at the Michigan Department of Agriculture. I am today representing the Department Director, Dr. Paul Kindinger. Our mailing address is P.O. Box 30017, Lansing, Michigan 48909.

1 The Michigan Department of Agriculture (MDA) has reviewed the Draft Environmental Impact Statement (EIS) for the proposed Superconducting Super Collider (SSC) as it relates to Michigan agriculture.

And although (to my knowledge) MDA was not consulted in the preparation of the Draft Environmental Impact Statement, we believe that the EIS accurately portrays the direct potential impact of the SSC on the prime and unique farmlands of the area.

Michigan is proud of its second largest industry - agriculture and the prime and unique soils that support it. And as part of the state's long term commitment to farmland protection, the Michigan Department of Agriculture was recently given the responsibility of implementing the Governor's Directive on Farmland Preservation.

Because the proposed site in the Stockbridge, Dansville and Onondaga area is actively being farmed, we are committed to a close working relationship with the Department of Energy to assure that the direct, as well as any identified indirect, impacts of the SSC on our important farmlands are minimized.

It is the opinion of the Michigan Department of Agriculture that agriculture can and will successfully co-exist with the Superconducting Super Collider.

Thank you for the opportunity to speak with you today.

LETTER 358

Ida Honorof

P.O. BOX 345
CUTTEN CALIF 95534

Vol XVIII July-88 #16

Report to the Consumer

"REVIVAL MOVEMENT"
IN RADIATION-LAND

Over the years we have been privileged to make available to RTC readers important documents published by the Committee for Nuclear Responsibility (CNR) and with this issue "REVIVAL MOVEMENT IN RADIATION-LAND" we bring you the one "figure," writes John Gofman (Chairman of CNR's Bd/Directors), "which the radiation community, surely hoped never to see...proof that cancer-risk from low doses of ionizing radiation is far more serious than admitted by any of the radiation committees (UNSCEAR (United National Scientific Committee on the Effects of Atomic Radiation), BEIR (Biological Effects of Ionizing Radiation), ICRP (International Commission on Radiological Protection), and NCRP (National Council on Radiation Protection), (which) information was available to the radiation community long ago, and does not depend on the so-called 'new dosimetry' for the atomic-bomb survivors...all aspects of the effort to prevent nuclear pollution of this planet hinge on correcting the 'safe dose' falsehood, and on correcting the SEVERE underestimates of radiation-risk asserted by the radiation community."

"REVIVAL MOVEMENT" IN RADIATION-LAND

by

John W. Gofman, M.D., Ph.D., April 1988

Part of the radiation community has recently been reviving a notion which it used to concede was irresponsible. The notion it is promoting today is that you can be irradiated at low doses and not be harmed at all.

Revival of the "safe dose" idea has direct implications for the hundreds of millions of individuals who receive low-dose exposure to ionizing radiation from medical sources (the new push for repeated mammograms is an example), from occupational situations (like the atomic veterans, and like millions of military and civilian workers today), and from the environment (fallout from Chernobyl reaches at least 500 million people).

The technical name for this notion is "protection by a safe threshold-dose." This paper will show scientific evidence, including the very newest, that no harmless threshold-dose exists with respect to causing extra cancer in humans.

1. WHO IS THE RADIATION COMMUNITY ?

By the term "radiation community," I mean everyone who needs to expose other people to low-doses of ionizing radiation: the entire medical and dental profession (and most emphatically, the radiology and nuclear-medicine specialties), the nuclear electric utilities, the uranium business and its owners, the U.S. Government (which sponsors both civilian and military uses of nuclear energy), and all the scientists, regulators, and dose-monitors whose livelihoods, grants, or advancements depend on the good opinion of those who need to expose other people to low doses of radiation.

With permission from Sidney Harris

"First, we have to convince the people that good health isn't everything."

Both logic and observation confirm that people who need to expose other people to radiation have a bias in favor of experts who will say such exposures create a negligible amount of radiation-induced human cancer, or better still, none at all.

It is inherently unsafe, in terms of health, to let such people sponsor (and thereby control) nearly all the research on radiation-induction of human cancer. It's as if the Tobacco Institute controlled all the research on the potential health hazards of smoking.

Committee for Nuclear Responsibility
A non-profit educational organization, tax-exempt
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Make listening a habit. In Southern California, KPFK (90.7 FM) brings you Consumer Awareness, with Ida Honorof. 3rd and 4th Monday at 5 P.M.

The U.S. Government has always been overwhelmingly the source of funds for research on radiogenic cancer, and it even controls much of the important raw data (for instance, the exposure-records of workers at all the national laboratories and of soldiers and naval personnel). However, governmental research funds are distributed into channels where the conflict-of-interest is not instantly obvious to the casual press. The Departments of Energy and Defense and the National Laboratories are less prominent than they used to be.

Nowadays, many grants are placed with the National Academy of Sciences (for the A-bomb survivor study and the BEIR Committee reports, for instance), the National Cancer Institute (whose former director, Arthur Upton, came from the Oak Ridge National Laboratory), the Environmental Protection Agency, medical research centers, and with countless professors of "environmental sciences", "biostatistics", "physics", and "biology."

These research funds have necessarily created a huge pool of sponsor-friendly radiation experts. Some are available for service with the radiation committees, service as expert witnesses for defendants in radiation lawsuits, service running and advising the professional journals, and for public education via mass media.

- August 7, 1987: In the JOURNAL OF THE AMERICAN MEDICAL ASSN, an invited 'commentary' article entitled "Physicians' Obligations in Radiation Issues" was written by Merle K. Loken, M.D., Ph.D., from the Div. of Nuclear Medicine of the University of Minnesota Hospitals. Loken tells his huge readership (the emphasis is his own) that "Effects, whether genetic or somatic, have been clearly demonstrated ONLY after exposures to relatively large doses of radiation (usually more than 100 rads)...In the final analysis, NO DATA FROM HUMANS EXIST THAT SHOW THAT LOW-LEVEL RADIATION EXPOSURES PRODUCE MEASURABLE BIOLOGIC EFFECTS."
- Fall 1987: U.S. Dept. of Energy report HEALTH AND ENVIRONMENTAL CONSEQUENCES OF THE CHERNOBYL NUCLEAR POWER PLANT ACCIDENT (DOE/ER -0332) put this footnote on its tables of estimated cancers from the fallout: "The possibility of zero health effects cannot be excluded."
- Feb. 1988: Robert E. Alexander, U.S. Nuclear Regulatory Commission, Office of Research, and President of the Health Physics Society, writes about potential cancer and genetic consequences of nuclear power accidents, and urges readers not to eliminate "consideration of the probability of zero effects, a highly significant probability at low doses." (ENVIRONMENTAL SCIENCE AND TECHNOLOGY, Vol.22: 2: p.144.)
- April 4, 1988: Arthur I. Holleb, M.D., Senior V.P. for Medical Affairs for the American Cancer Society, advocated repeated mammograms for women during his appearance on Cable News Network (Sonya Friedman program). Discussing the risk of the exam itself causing breast cancer, he said, "Radiation exposure has been reduced tremendously since the 1980s and the risk — if it exists at all — is negligible."

Numerous additional examples are collected elsewhere (Go88).

3. EVIDENCE: LOW-DOSE CANCER-EFFECTS

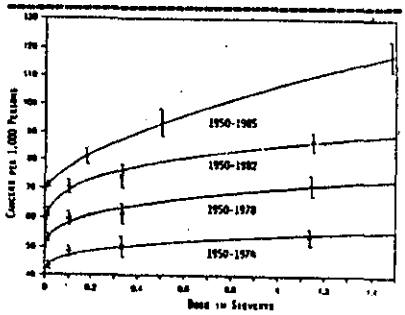
Powerful scientific evidence against any safe "threshold-dose" of ionizing radiation lies in the shape of the dose-response relationship for radiogenic human cancer.

In Figure W are the dose-response curves which the radiation community has surely hoped never to see.

Those four curves condense a mountain of human evidence as it has unfolded over the years in the 1950-1974, 1950-1978, and 1950-1982 follow-ups of the A-bomb survivors, as well as for 1950-1985 in the new DS86 database ("the new dosimetry") whose scientific status is so problematic.

The curves plot the cancer-rate per 1000 persons versus internal organ-dose in sieverts (1 sievert per 100 rems). Where a curve meets the vertical axis, the value of the intercept is the spontaneous cancer-rate during that period per 1000 persons. Of course each curve lies above the earlier curve because the longer you watch a fixed group of people, the more cases of cancer the people develop.

FIGURE W.
Cancer-Rate vs. Dose in A-Bomb Studies



Associated with each curve are four datapoints, with error-bars. These are the actual observations reported by the RERF (Ba78, Na82, Pr86, Pr87). Each curve is the best fit for its own four datapoints, by the method of curvilinear regression. Is curvilinear regression the scientifically appropriate way to handle such data? Indeed it is. Essentially no one disputes that the curvilinear regression which provides the best fit to the available data also provides the soundest idea of what the dose-response is truly likely to be.

It should be noted that Figure W involves no extrapolation. Curvilinear regression is a technique which can take account of the relative reliability of each actual observation and can tell you what curve you would be most likely to see if you had more observations, in between the

ones which you do have. Curvilinear regression interpolates between datapoints and smoothes out the wobble which comes from the random fluctuations in all measurements.

What is self-evident from Figure W is that these dose-response curves have neither the shape of a straight line (the linear relationship), nor the direction of bend illustrated in Figure F (so-called "concave-upward"). All the curves in Figure W have the supra-linear shape (so-called "concave-downward").

Supra-linearity in and of itself is powerful evidence not only against any harmless threshold-dose, for the reasons explained below, but also against additional falsehoods which are promoted by some influential members of the radiation community:

■ FALSEHOOD 1: At acute (instantaneous) LOW doses, the risk per sievert of exposure is much LESS than the risk at acute HIGH doses, so people (like Gofman) who use the linear relationship to extrapolate from high doses down to low doses are exaggerating the cancer-risk at low doses. This claim often includes display of Fantasy Curves, like the "concave-upward" illustrations in Figure F ("F" for Fantasy).

■ SCIENTIFIC REALITY: Figure W ("W" for Woe) is based on evidence rather than fantasy. It shows that the calculation of future cancers from the linear dose-response model will never over-estimate the number of radiation-induced cancers from low doses; the linear model UNDER-ESTIMATES THEM. In all the curves, the steepest rise in cancer-rate occurs closest to the vertical axis --- in other words, THE RISK PER SIEVERT IS THE MOST SEVERE AT THE LOWEST DOSES. Those who claim the opposite may also claim that black is white.

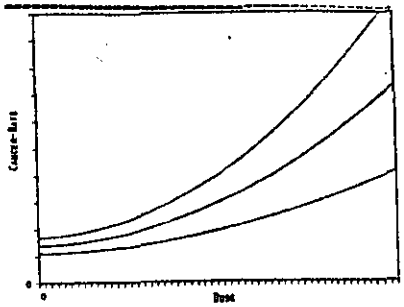
■ FALSEHOOD 2: Whenever doses are delivered slowly, they are less harmful than the same doses delivered instantaneously, so risk-estimates from the A-bomb survivors have to be reduced whenever doses are given gradually over time.

■ SCIENTIFIC REALITY: The above claim is not based on any human epidemiologic evidence whatsoever; the claim is based on speculation from Fantasy Curves like those in Figure F.

Protection from slow delivery of radiation could occur, and probably would occur, if radiation-induced cancer depended on the interaction of two or more injuries. As dose went down, injuries would be less closely packed both in time and space, and the probability of carcinogenic interaction would decrease. If this were happening, the evidence on dose-response would be concave-upward, as explained elsewhere (Go81, pp 389-401).

But the supra-linear shape of dose-response in Figure W tells us something very important: radiogenic cancer does not depend on the interaction of two or more events. The evidence shows that dose-response bends in just the wrong direction for "protection by slow delivery." This is most notable at the lowest doses.

FIGURE F.
Curves with "Concave-Upward" Shapes



■ FALSEHOOD 3: There is a significant probability of a harmless threshold-dose and ZERO radiation-induced cancer from low-dose exposure.

■ SCIENTIFIC REALITY: The available evidence, condensed in Figure W, clearly indicates that (A) the most severe cancer hazard per dose-unit occurs at the lowest doses, and (B) radiation carcinogenesis is not a "two-hit" or multi-injury phenomenon. What the curves of Figure W suggest is that radiation carcinogenesis is probably a single-hit phenomenon --- proportional to dose (linear) at very low doses, and that as dose rises, additional carcinogenic injuries in the same cell are simply redundant, and injuries which prevent cell-replication are also occurring. Under such circumstances, additional dose-units are less and less effective at producing additional cancers. Thus the steep slope at low doses turns to a more gentle rise (less effect per sievert at higher doses).

The available evidence does not contain even a hint of a concave-upward dose-response; the Fantasy Curves are fantasies. This should discredit the speculation that repair mechanisms are swamped at high doses, but that as dose decreases, repair will work better and better, until finally at some very low dose, repair will work perfectly and deliver a safe threshold-dose below which no radiation-induced cancer occurs.

Unfortunately, this is NOT what is actually happening. How do we know? If repair were working better and better as dose decreases, the dose-response curves would be concave-upward, and would be flat as they approached the vertical axis. But what the evidence shows for dose-response is exactly the opposite. In Figure W, the slope --- which depicts the change in cancer-rate per sievert --- grows steeper and steeper as the curves approach the vertical axis.

The no-threshold meaning of Figure W is independently confirmed by human epidemiology in five other studies of exposures at or nearly at the lowest conceivable dose-rate (Go88; Go88).

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→ POB 11207, San Francisco, CA 94101

Submitted by:
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"A Report to the Consumer"
FOOD IRRADIATION:
WHO WANTS IT?
Vol XVIII Oct-88 #422

In October, 1987, Tony Webb, Tim Lang, and Kathleen Tucker authored the book FOOD IRRADIATION: WHO WANTS IT? which helps to untangle the claims and counter-claims, thereby enabling consumers to decide for themselves. The book is more or less a primer on food irradiation, to help better understand that despite its widespread medical uses, irradiation is inherently hazardous and therefore a source of great concern for all who are exposed to it in their daily food. The irradiation industry contends that "hundreds of studies" have proven irradiation to be a safe and beneficial process--but the closer you get to those studies, the less persuasive they look. Michael Jacobson, Executive Director of Center for Science in the Public Interest (CSPI) correctly points out that the Food & Drug Administration (FDA) which has approved irradiation of many foods, has faulted a number of the studies because they were poorly designed or performed by untrustworthy laboratories--that the FDA cited five studies in support of its approval of irradiation, but it doesn't claim that this mere handful of studies can be considered decisive--and it hasn't satisfactorily addressed several studies that did show adverse effects.

FOOD IRRADIATION: WHO WANTS IT? presents a body of scientific literature that points to the adverse effects of food irradiation. Irradiation destroys up to 80% of vitamins A, B, C, D, and K in treated foods, with vitamin E being almost totally destroyed. (Losses in addition to storage and cooking losses) The authors uncover the results of the 413 case studies that had been reviewed by the FDA--with only five of them supporting the technology of food irradiation; while others found links to cancer, lower birth weights, kidney disease and changes in the white blood cells and chromosomes. Instead of responding to the damaging evidence, our government agencies, including the USDA and DOE in addition to their handmaiden, AMA, assist in the funding of new irradiation plants in California, Floride, Hawaii, Iowa, Oklahoma and Washington.

As the authors correctly point out, there is currently no test that can determine that a food has been irradiated---no test to show what dose a food has received--or how many times it has been irradiated. Since irradiated food gives the appearance of looking fresh longer, it presents a problem of counterfeit freshness, which could mislead consumers, who will be encouraged to view that irradiated food as being healthy and wholesome, when they are likely to be older and more depleted in essential health nutrients. The only ones who will gain from food irradiation are the large food manufacturers, especially those engaged in international trade, since their aim is to extend the time that food can remain in storage, in transport, and in the stores before it is sold to the consumers.

According to a study conducted by the National Institute of Nutrition at the Medical Research Center in Hyderbad, India, children fed freshly irradiated wheat developed polyploidy (a defect in the chromosomes of the blood cells). Once the children were taken off the irradiated wheat diet, their blood patterns returned to normal.

Food irradiation plants are powered by Cobalt 60 and Cesium 137, and as part of their waste management program, the Department of Energy (DOE) is preparing to finance six irradiation plants (to the tune of $10 million) in the hopes that they can find some commercial value for their large supplies of nuclear waste. Because of the quantities produced and the time it takes to

In view of what I see from the real-world evidence on radiogenic cancer, it would be reckless disregard for the lives of others if I were to favor revival of the harmless threshold-dose.

4. WHY DO EXPERTS DISAGREE ?

People always want to understand why experts disagree. In any field, one must distinguish between genuine scientists and some experts who may be overly sponsor-friendly. I'm not at all sure that the responsible scientists in this field do disagree. Examples:

Dr. Edward Radford, the epidemiologist who was chairman of the BEIR-3 Committee, wrote a vigorous dissent when the National Academy of Sciences issued an unprecedented "recall" of the Committee's report. After the "recall" and intervention by a special new panel appointed by the NAS, the Final Report on ionizing radiation came out in 1980 supporting a concave-upward curve for dose-response. Radford said, correctly, that the concave-upward model "has already been refuted by the evidence."

Then in 1983, scientists of the A-bomb study published an analysis showing that the evidence from Nagasaki (where neutrons were no issue) was consistent with a linear or supra-linear dose-response, but not with concave-upward (Wa83).

And now, in the very newest report of A-bomb survivors (Sh87, pp29-30), RERF scientists report the dose-response "invariably" comes out of the data looking concave-downward (supra-linear).

Meanwhile, the radiation committees are changing their tune. In the past, they have always emphasized that the shape of the dose-response curve is the key issue in assessing low-dose cancer-hazard, and they have put forth what I call their Fantasy Curves. The final BEIR-3 report stated that it "preferred" those shapes.

But no one wants to look outrageously wrong. With the human evidence from the A-bomb survivors so clearly showing the falseness of their preference, the radiation committees (BEIR 80, UNSCEAR 88) have started to advocate less emphasis on the human epidemiological evidence and more emphasis on cell-studies and animal experiments. This amounts to substituting speculation about what the human observations "ought" to be showing for what the actual observations of irradiated humans truly are showing! This is one way to stand science on its head.

One must never forget that the real-world evidence from whole human beings is always the ultimate reality-check, whether the issue is ionizing radiation, a new pharmaceutical, or a recommended surgical procedure (e.g., radical mastectomy could not pass the reality-check as a necessary treatment for small breast-tumors).

Why do experts appear to disagree about cancer from low-dose radiation?

With respect to revival of the safe threshold-dose, I think it receives support from almost none of the scientists who work directly and personally with the human epidemiological evidence. After 25 years of interaction with the radiation community, it is my opinion that the current "Revival Movement" originates among members of the radiation community who are one stage, two, three, four, five, six stages removed from the actual evidence.

# # # # # # # # #

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• Pr87 Preston, Dale L. + D.A. Pierce. 1987. THE EFFECT OF CHANGES IN DOSIMETRY ON CANCER MORTALITY RISK ESTIMATES IN THE ATOMIC BOMB SURVIVORS. RERF Technical Report TR-8-87. (See Pr88 above.)

• Sh87 Shimizu, Y. + Hiroo Kato + W.J. Schull + D.L. Preston + S. Fujita + D.A. Pierce. 1987. LIFE SPAN STUDY REPORT 11. PART I. COMPARISON OF RISK COEFFICIENTS FOR SITE-SPECIFIC CANCER MORTALITY BASED ON THE DS86 AND T65D SHIELDED KERMAS AND ORGAN DOSES. RERF Technical Report TR-12-87. (See Pr88 above.)

• Wa83 Wakabayashi, T. + H. Kato + T. Ikeda + W.J Schull. 1983. "Studies of the Mortality of A-Bomb Survivors, Report 7, Part 3. Incidence of Cancer in 1959-1978, Based on the Tumor Registry, Nagasaki," RADIATION RESEARCH 93: 112-148

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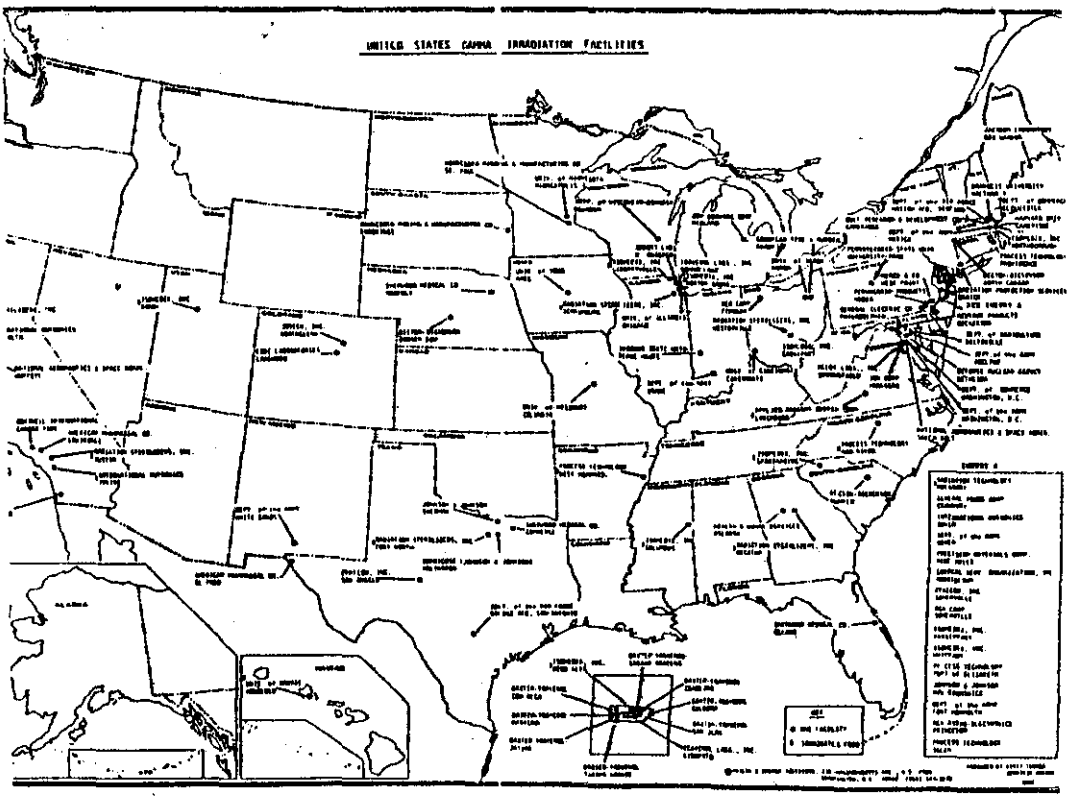
LETTER 358 (CONTINUED)



decay, disposal of Cesium 137 presents a considerable problem. Cesium is a byproduct of nuclear reactor technology and has a 30-year life cycle. It is Cesium 137 that the DOE is most eager to find a use for. FOOD IRRADIATION: WHO WANTS IT? asks the question: "could it be that the whole program to promote food irradiation is little more than a thinly disguised attempt to find a commercial use for radioactive waste?"

Now, more than ever, consumers must understand both the dangers they face and the power they have to educate and protect themselves. FOOD IRRADIATION: WHO WANTS IT? is juse one of many informative books from Thorsons Publishers, Inc (One Park St. Rochester, VT 05767) Send $5.95 for a copy.

The authors: TONY WEBB is the Director of the Radiation & Health Information Service in Great Britain, and coordinator for the London Food Commission's working party on food irradiation. DR. TIM LANG has a PhD in Social Psychology and has taught for several years at the Manchester Polytechnic. In 1984 he was appointed the first director of the London Food Commission, a post he currently holds. KATHLEEN TUCKER is the founder and executive director of the Health & Energy Institute in Washington, D.C., a non-profit organization that addresses nuclear and environmental issues. Ms Tucker is generally credited with bringing the Karen Silkwood campaign to the public eye. A graduate of the Antioch School of Law, Ms Tucker has served as a coordinator for the National No-Nukes Conference and has authored numerous articles on the mismanagement of nuclear energy.

UNITED STATES LICENSED GAMMA IRRADIATION FACILITIES

Company	Location
Abbott Laboratories	North Chicago, IL
Agriculture, Department of	Beltsville, MD
Air Force, Department of	Brooks AFB, TX
	Hanscom AFB, MA
Akron, University of	Akron, OH
American Pharmaceut Co. (Baxter Travenol)	El Paso, TX
	Irwindale, CA
Applied Radiant Energy Corp.	Lynchburg, VA*
Army, Department of	Adelphi, MD
	Dover, NJ
	Fort Monmouth, NJ
	Natick, MA
	Washington, DC
	White Sands, NM
Baxter Travenol	Puerto Rico
Becton-Dickinson	Broken Bow, NE
	North Canaan, CT
	Sumter, SC
Brandeis University	Waltham, MA
Central Serv. Org., Inc.	Morristown, NJ
Cincinnati, University of	Cincinnati, OH
Cobe Laboratories	Lakewood, CO
Commerce, Department of	Gloucester, MA
	Washington, DC
Defense Nuclear Agency	Bethesda, MD
Dow Corning Corp.	Midland, MI (2 licenses)
Ethicon, Inc. (Johnson & Johnson)	San Angelo, TX
	Somerville, NJ
General Electric Co.	Philadelphia, PA
General Foods Corp.	Cranbury, NJ
Goodyear Tire & Rubber	Akron, OH
Gulf Research & Development Co.	Cambridge, MA
Harvard University	Cambridge, MA
Hawaii, University of	Honolulu, HI
Health & Human Services	Atlanta, GA
IBM Corp.	Manassas, VA
Illinois, University of	Chicago, IL
Indiana State University	Terre Haute, IN
International Nutronics	Dover, NJ
	Palo Alto, CA*
	Irvine, CA*
Isotech, Inc.	Northglenn, CO
Iowa, University of	Ames, IA
IRT Corp.	San Diego, CA
Isomedix, Inc.	Columbus, MS*
	Groveport, OH
	Libertyville, IL*
	Morton Grove, IL*
	Northborough, MA*
	Parsippany, NJ
	Sandy, UT*
	Spartanburg, SC*
	Vega Alta, PR*
	Whippany, NJ (6 licenses)
Jackson Laboratories	Bar Harbor, ME
Johnson & Johnson	New Brunswick, NJ
	Sherman, TX
Meloy Laboratories, Inc.	Springfield, VA
Merck & Co.	West Point, PA
Minnesota Mining & Manufacturing Co.	Brookings, SD
	St. Paul, MN
Minnesota, University of	Minneapolis, MN
Missouri, University of	Columbia, MO
National Aeronautics & Space Administration	Green Belt, MD
	Moffett, CA
Navy, Department of	Crane, IN
Neutron Products	Dickerson, MD (2 licenses)*
Pennsylvania State University	University Park, PA
Permagrain Products	Media, PA
Precision Materials Corp.	Mine Hill, NJ

(over)

NEWS FROM FOOD & WATER, Inc.
3 Whitman Dr., Denville, NJ 07834

Earlier this year, Representatives Dorsey and Kelly of the N.J. State Senate and Assembly introduced legislation banning the sale and distribution of radiation exposed food in N.J. After numerous public forums, debates, governmental hearings, and scientific exchanges, both houses overwhelmingly supported the legislation by votes of 30-3 in the Senate, and 62-3 in the Assembly. Conspicuously absent from all of these exchanges were Dr. Molly Coye, Commissioner of the Department of Health (DOH) in N.J., and all other officials from her department.

When Governor Kean received the legislation he sought the opinion of Dr. Coye's DOH. The matter was assigned to individuals whose method of investigation was faulty and haphazard at best. In fact, during the DOH's decision making period, numerous citizen groups, distinguished scientists and concerned consumers attempted to meet with Dr. Coye and her staff to relay their concerns about radiation exposed food and the dangers the food irradiation technology poses to human health, the environment, and workers at the facilities. None of these requests to exchange information was granted. The DOH refused to listen to opposing views on this issue.

Company	Location
Process Technology	Haw River, NC*
	Port of Elizabeth, NJ
	Providence, RI (Design phase)
	Salem, NJ
	West Memphis, AR*
Radiation Protection Services	Darien, CT
Radiation Sterilizers, Inc.	Decatur, GA*
	Fort Worth, TX*
	Menlo Park, CA
	Schaumburg, IL*
	Tustin, CA*
	Westerville, OH
Radiation Technology (see Process Technology)	Rockaway, NJ*
RCA Astro-Electronics	Princeton, NJ
RCA Corp	Findlay, OH
	Somerset, NJ*
Rockwell International	Canoga Park, CA
Sherwood Medical Co	Commerce, TX
	Deland, FL
	Norfolk, NE
Surgikos (Johnson & Johnson)	Arlington, TX
Tuvenal Laboratories, Inc	Aibonito, PR
	Round Lake, IL
Wisconsin-Oshkosh, University of	Oshkosh, WI

*already used for food irradiation

(Sources: Food Irradiation Research Newsletter Santa Cruz, CA December 1986/January 1987; Nuclear Regulatory Commission: Active NRC Licenses - irradiators other > 10000 curies September 1986; NRC in house irradiation Facilities, September 1986.)

Dr. Coye and her department recommended that the Governor veto the legislation. This mysterious decision, which was dictated by information from only one side, was reached behind closed doors, and was announced without any explanation or scientific evidence. It was revealed, however, that the DOH relied heavily on the FDA's approval of food irradiation and the 5 scientific studies cited by the FDA. These are the same studies the FDA itself admitted are flawed "because they had no way of actually testing the safety of such food using traditional toxicological tests." Nevertheless, the Government accepted the advice of his under-informed DOH and pocket-vetoed the legislation, allowing the citizens of N.J. to become the guinea pigs for the irradiation industry.

(The complete report of the confrontation between the N.J. citizen's group and the N.J. Health Commissioner will be fully explored in the November issue of RTC--Dr. Coye's attitude regarding the public's vital health concerns.

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LETTER 427

MY 2¢ DONATION!
BETTY ANN LINDBLOOM
208 ELLINWOOD
OSAGE CITY KAS 66523

CAN GROW WITH THE
4 BILLION SUPER COLLIDER
ATOM SMASHER

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1988 SEP 29

EVERYTHING STARTS OUT
SMALL AND GROWS
"PLEASE LOOK AT KANSAS AGAIN"

Next on collider calendar: Impact

By William Dunn
USA TODAY

This week is your chance to put in your 2 cents worth about the proposed $4.4 billion supercollider atom smasher.

Seven states competing for the world's most expensive physics tool also can respond to the Energy Department's 14-pound, 4,100-page environmental impact statement assessing proposed sites.

"We want comments — wherever they are — where people think the environmental impact statement can be improved," says the Energy Department's Jeff Sherwood. "And where they approve."

Says William Kempiners of Illinois' collider team: "Our papers are crunching the report detail by detail."

Energy Secretary John Herrington will pick a preferred site by November. Final selection is expected in January.

The supercollider would be a 53-mile-around tunnel for high-energy physics research.

Energy officials say the collider is needed to maintain the USA's lead in scientific research — and would yield spin-off benefits in medicine and other fields.

But many people remain concerned about its impact on the environment, the huge cost, the need to relocate families, the loss of farmland and the increase in municipal services that might be required.

CATCH groups (Citizens Against the Collider Here) are in Illinois, North Carolina and Tennessee. There's also Texans Against the Collider.

"Our feeling is a project of this magnitude does not belong in heavily populated areas," says Ed Kist of CATCH-Illinois.

Patricia Sanders of CATCH-Tennessee says: "They ought to take it to the desert."

Where hearings will be

Hearings will be held at these sites, from 2-5 p.m. and 7-10 p.m. each day:

TODAY:
▶ Michigan: Stockbridge High School.

TODAY-THURSDAY:
▶ Texas: Southwestern Assemblies of God College, Waxahachie.

THURSDAY:
▶ Colorado: Fort Morgan High School.
▶ Tennessee: Middle Tennessee State University, Murfreesboro.

OCT. 3:
▶ North Carolina: Burner Sports Arena.
▶ Arizona: State University College of Law, Tempe.

OCT. 6-7:
▶ Illinois: Waubonsie Valley High School, Aurora.

Submit written comments on the environmental impact report by Oct. 17 to:
SSC Draft EIS Comments
Wilmot Hess
SSC Site Task Force
Office of Energy Research
ER-65 GTN
Department of Energy
Washington, D.C. 20545

9-26-88

DEAR JOHN HERRINGTON (ENERGY SECRETARY)
PLEASE! LOOK AT KANSAS SUPER COLLIDER INFORMATION AGAIN.

1 I FEEL THAT THE "HOME" OF THE SUPER COLLIDER
CAN BE IN KANSAS.

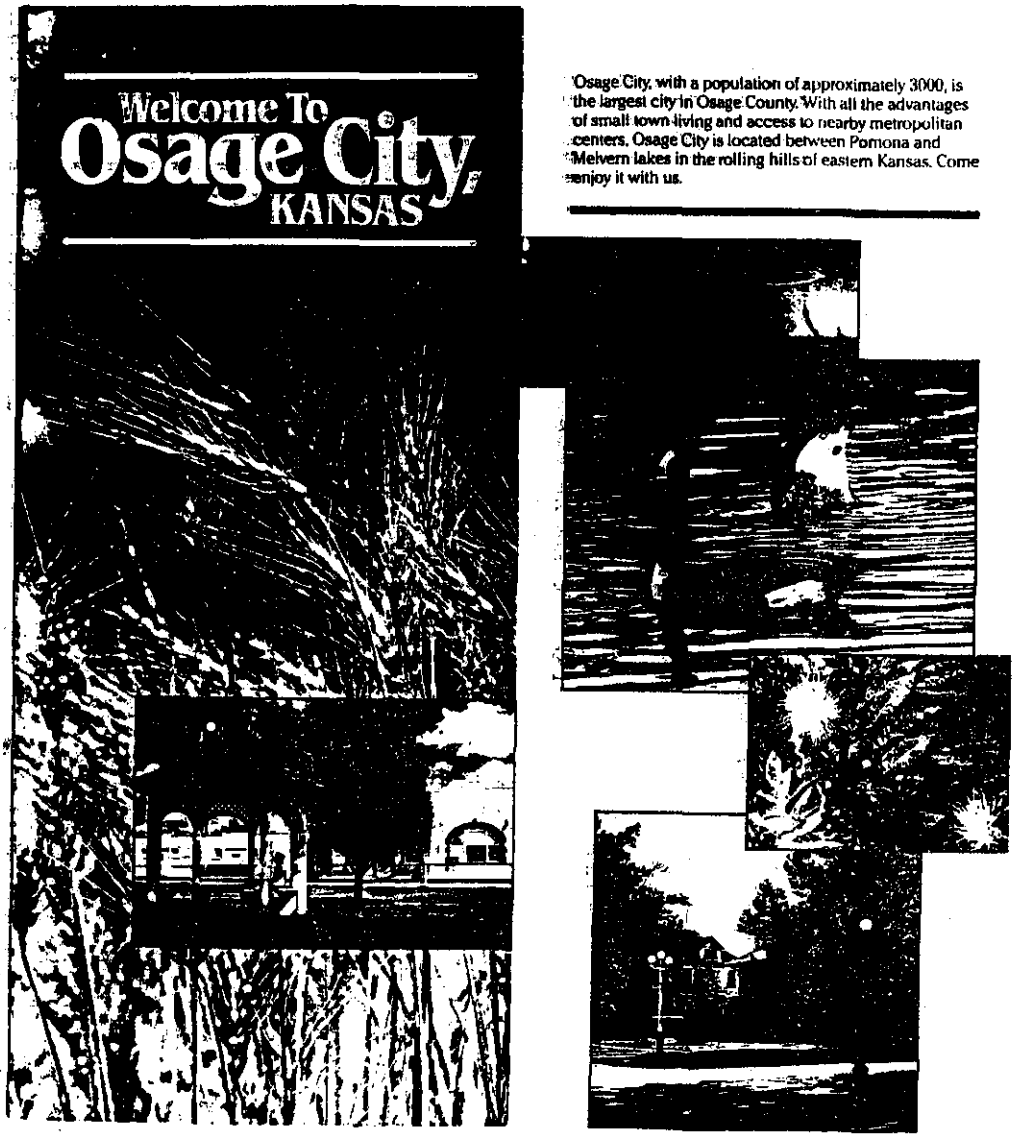
THANK! YOU for Your Time
BETTY ANN LINDBLOOM
208 ELLINWOOD ST
OSAGE CITY KANSAS 66523
PH 913- 528-3460

A Place to Learn: *Osage City's educational system is* another reason for community pride. The Osage City schools, highly accredited by the State of Kansas and the North-Central Association of Secondary Schools, provide a balanced educational curriculum. Osage City schools have placed as high as first in academic testing among all schools in Kansas. The high school is well known *state-wide for its speech, drama, debate, music, and ath*letic programs. These achievements in education have been attained with a low bonded indebtedness (one of the twenty lowest school levies in the state). Six post-secondary institutions, including the University of Kansas, Kansas State University, Emporia State University, and several vocational technical schools, are within commuting distance. Lieber Public Library is a member of the Northeast Kansas Library Association and offers readers over 10,000 volumes plus a wide range of other library services.

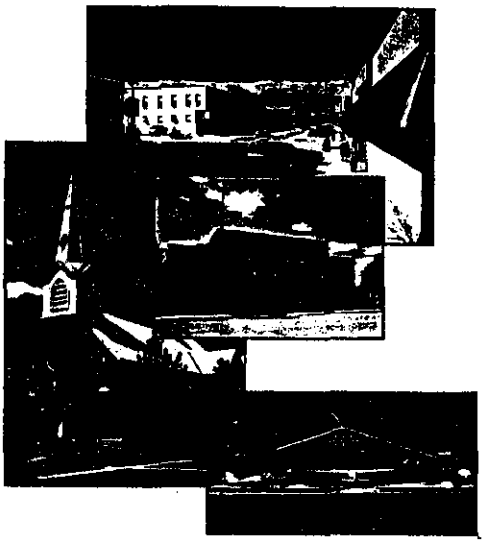
A Place to Relax: Unwind year round in Osage City! Two large federal lakes and a state lake within the county offer excellent fishing, hunting, camping, and water sports. Hunting is both rewarding and diverse. Quail, pheasant, dove, prairie chicken, ducks, geese, small game, and deer are among the many game species *found in the immediate area. Osage City's parks, ball* parks, tennis courts, swimming pool, golf course, and active summer recreation programs offer fun for the entire family. Area universities, public schools, and nearby metropolitan areas provide a variety of cultural and sporting events, including Topeka Civic Theater, Showcase Dinner Theater, Kansas City Chiefs, Kansas City Royals, and Topeka Sizzlers. Motel accommodations and a variety of eating establishments serve individual and group needs.

A Place to Work: Osage City takes great pride in its two major industrial employers and many smaller employers. These employers provide a wide range of jobs for any skill level. Hallmark Cards, Inc. produces paper plates, cups, table covers, and napkins, which are distributed world-wide. Continental Homes of Kansas, a joint venture of J.C. Nichols Company and The Marley Company, produces high quality modular homes and commercial buildings which are sold to buyers throughout the Midwest. Smaller employers from the telecommunication, aviation, beverage, medical, construction, and home furnishing industries market their products and services to the region surrounding Osage County. These smaller employers provide strength and diversity to the local economy. Osage City is also home for a regional highway department facility serving a five-county area, a Kansas National Guard Post, and an FM radio station.

A Place to Live: In Osage City one finds family living at its best. Osage City has housing that satisfies a wide range of income levels and style preferences. Selections include homes in one of the newer housing additions, or stately older homes... rich with history, or modern apartments on one of Osage City's beautiful tree-lined residential streets. Lower costs for land and construction make owning a home more affordable. Schools, public library, parks, churches, and shopping areas are all conveniently located.



Osage City, with a population of approximately 3000, is the largest city in Osage County. With all the advantages of small town living and access to nearby metropolitan centers, Osage City is located between Pomona and Melvern lakes in the rolling hills of eastern Kansas. Come enjoy it with us.



TRANSPORTATION: The city is located on K-31 and K-170, just off US 75 and US 56, with easy access to Interstate 70, Interstate 35 and the Kansas Turnpike. An all-weather lighted airport is located at the east edge of the city. Commercial flights and an air cargo hub are nearby. Osage City is served by two major railroads, many truck lines and virtually all parcel services.

CHURCHES: Most major denominations (Catholic, United Methodist, Presbyterian, Covenant, Church of Christ, Lutheran, Assembly of God, Independent Baptist, Christian) are represented in the city.

TRADE: The retail business section is made up of a wide range of stores and shops offering goods and services to a population of over 45,000 in a large trade area.

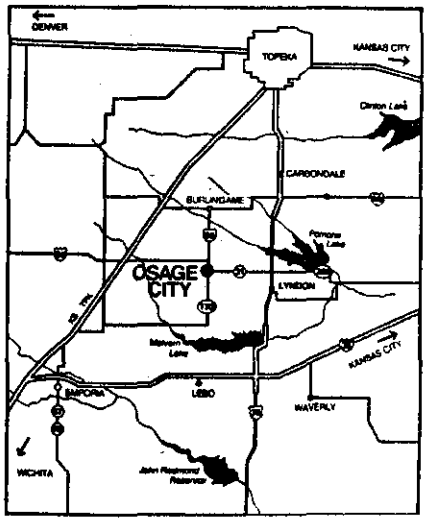
UTILITIES: Osage City has planned well for the present and future utility needs of residential, business and industrial demand. All utilities are provided by the city at reasonable cost.

INDUSTRIAL PARK: Zoned industrial land is available.

For additional information contact:

Osage City Chamber of Commerce
P.O. Box 56
Osage City, Kansas 66523
or
Phone (913) 528-3714

Photography — Francey Hurst
Design & Layout — Nancy Lusk
This brochure made possible by the city of Osage City, KS, and the Osage Chamber of Commerce.



LETTER 428

The University of Arizona
Arizona SSC Project
1317 E. Speedway Blvd.
Tucson, Arizona 85721
(602) 621-6616

September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
United States Department of Energy
ER-65/GTN
Washington, D. C. 20545

Dear Bill:

1 **The Arizona SSC Technical Committee has reviewed the DEIS in considerable detail. The Committee has found it necessary to correct many items of fact and interpretation with regard to the Arizona site. *The complete set of* recommended changes is to be found in the attached document. The purpose of this letter is to bring to your attention those errors or mis-interpretations *that we regard as especially serious* in their detraction from the true strength of the Arizona proposal. (We found no errors that falsely enhanced the strength of our proposal!) The most important issues can be categorized as cost, environment and power availability.**

1) Cost Issues

a) Cut and Cover Construction

2 **The DEIS has reduced our projection of 22% cut and cover to 11%, on the *basis of reasoning that we attempt to refute in the detailed document.* Clearly the flexibility and cost savings of mixed construction methodologies is not something to be casually discarded.**

b) Spoils Disposal

128 **From four separate options for spoils disposal the DEIS has chosen that which is least likely and most expensive. The most likely method is not "disposal" but utilization at a profit or at least break-even.**

c) *Highway Construction Mileage Estimate*

129 **The estimates of new road construction fail to take into account the inevitable *expansion of the greater metropolitan area of Phoenix.* The maximum number of miles of new roads required by the SSC should be 54.**

d) Life-Cycle Costing (LCC)

130 **I note that we have received no response from you concerning our questions about the life cycle cost estimate with regard to the Arizona site. (See attachment; Macpherson, *January 25, 1988.*) *Your response becomes especially* important at this time. The major purpose of the EIS is to compare the environmental effects of the SSC on all seven proposed sites and to esti-**

mate the costs to mitigate those impacts at each site. RTK simply has added the environmental mitigation cost on top of the first faulty life-cycle-costing results. These LCC errors, when combined with the mis-interpretations DEIS drive the Arizona SSC site cost far above where they should be.

2) Environment

3 a) The Tumamoc Globeberry

To list this species as a problem is hard to reconcile with its non-occurrence in the site. The nearest known location is 30 miles away in an area with more rainfall.

4 b) "Prime Farmland"

There is none, as explained in the main text.

c) Visual Impact

5 The idea that the construction of the SSC would comprise a "national" impact is wrong, since the Wilderness Study Areas are not Wilderness and have been anti-recommended for this status by the BLM. Moreover, the adjacent private land is scheduled for development over the next twenty years. The net effect of the SSC is likely to improve the management of the visual resource.

d) Miscellaneous

6 Remarks on the relative cost of desert reclamation, CO emissions on the site, the number of historic sites, the extent of studies of archeological remnants, cactus preservation, desert tortoise status etc. are remarkably wrong and indicate ignorance of data in the Arizona proposal.

3) Power Availability

7 The DEIS suggests that by 1996 the power available from APS will be saturated by "civilian" needs. As explained in the attached document, this conclusion is in substantial error and should be reviewed to reflect the information. Moreover, the cost per kilowatt-hour is considerably less than those presented in the DEIS.

8 We hope very much that you and the Site Task Force members will take these corrections into account as you assess the relative merits of the SSC sites.

Sincerely yours,

Peter Carruthers

Peter Carruthers, Chairman
Arizona SSC Technical Committee

PC:nh
Enclosures: 2

The University of Arizona
Arizona SSC Project
1317 E. Speedway Blvd.
Tucson, Arizona 85721
(602) 621-6616

January 25, 1988

Dr. Wilmot N. Hess
Chairman
SSC Site Task Force
ER-20, Germantown
Washington, D.C. 20545

Re: Arizona SSC Site/Life Cycle Costing (LCC)

Dear Dr. Hess:

On January 19, 1988, Secretary of Energy Herrington formally announced that the Arizona/Maricopa Site had been selected for inclusion on the best qualified list (BQL) in the site selection process for the SSC. Now that the BQL is "official", I write this letter to bring to your attention a matter of some concern to me and to the personnel of the Arizona SSC Project.

In the DOE Invitation for Site Proposals (ISP), it is indicated that Life-Cycle Costing (LCC) studies will be used to evaluate each of the site proposals. In view of the fact that the NAS/NAE report suggested that construction and operating costs for the SSC if located at the Arizona Site would be "...slightly higher than the mean costs for all proposed sites...," my purpose here is to make certain that RTK, the DOE contractor for the LCC evaluation, did not overlook an important fact included in the Maricopa Site proposal. That is, that the Maricopa proposal provides construction schedules which are approximately two years faster than the schedules for the CDG generic examples or any of the other eleven non-Arizona site proposals the Arizona team has reviewed to date. Since the construction schedules for our Arizona Site are uniquely short, attention must be given to the LCC study period used by RTK.

9

The study period is the time period over which the project evaluation is made and includes both the construction phase and the operating phase. Therefore, the period of construction up until the day of initial operation is very important in determining the LCC study results. For the Arizona Site, the construction period must be 4 years rather than 6 years necessary for all other proposals. As documented in the Arizona/Maricopa proposal, the faster schedule is due to the geotechnical characteristics of the site, the weather which allows full-year construction, local availability of equipment and skilled labor force and large and experienced regional support structure. Using Project 2, a planning model commonly used on complicated DOE projects, the

Arizona team generated a cost and schedule model that evaluated the smallest construction details, then backed up the model inputs with commitments from unions and other suppliers. In total, Arizona's investment directly related to a the modeling effort was just under $800,000. Because of these detailed efforts, we feel confident our schedule can be met and that if not already done, the RTK analysts should have included our findings in the LCC studies of the Arizona/Maricopa Site.

Then, to achieve full economic life compatibility with LCC studies for all other sites, two years can be added to the operation phase of the SSC at the Arizona Site. However, by this adjustment, it is important to recognize that DOE has achieved two additional years of experimental time (27 rather than 25 years) for very little cost, but not credited to benefits of the Arizona Site. In other words the LCC will still understate the benefits of the Arizona/Maricopa Site, but not as much if these adjustments are not made.

In light of the magnitude of the SSC project and the need to consider all cost-saving measures -- not simply offers of financial incentives -- I bring this matter to your attention with the hope that it may be of assistance in the final decision.

Please advise if you require or desire any additional information.

Sincerely,

Ian A. Macpherson
AZSCC Project Coordinator

IAM:em

cc: Dr. Edward Temple
Dr. Peter Carruthers
Dr. Richard Jacob

Review Comments on the Draft EIS of the Arizona Site

Volume 1, Chapter 3

pp. 3-25, paragraph 5. The disposal of spoils is an important component of the various impacts and mitigations associated with the construction of the SSC. The following is a summary statement which considers many aspects of the spoils generation and disposal which are found in many sections throughout the DEIS.

Throughout the entire DEIS no consistent calculation for the volume of spoils (excavated material) potentially produced at the Arizona SSC site is given. The document refers to at least three different estimates ranging from 2.45 x 10^6 yd^3 to 2.8 x 10^6 yd^3. All estimates greatly exceed that calculated by the Arizona SSC Project (1.43 x 10^6 yd^3, given on p. 93 of the Maricopa Site Proposal). The DEIS estimate must be in error, for it assumes that the entire 53-mile long collider tunnel will produce spoils. Clearly, because at least 11% (DEIS) to 22% (Arizona-Maricopa SSC Site Proposal, Sept. 2, 1987) of the collider tunnel would be constructed by cut-and-cover methods, a technique that upon completion does <u>not</u> produce spoils, the DEIS has greatly over estimated the amount of spoils that need to be properly disposed. Depending upon the specified density of the backfill, it is conceivable that more material than is produced by the cut-and-cover excavations will be necessary for backfilling. The potential net effect is that substantial portions of the collider tunnel excavation will <u>consume</u> rather than produce "unwanted" excavated materials. This fact further serves to bring the DEIS calculated volume of spoils into question.

10

The DEIS considers four options for the disposal of spoils at the Arizona SSC site: 1) to place the material at established mine dumps at the Sacaton mine, 2) likewise placing the material at the New Cornelia mine, 3) to spread the material on site within the high-energy booster ring, and 4) for use as a building material in the Phoenix metropolitan area (DEIS, Volume IV, Appendix 10, p. 3). The Sacaton mine was selected by the DEIS as the ultimate repository for the Arizona SSC site spoils because it is "the most likely (worst case) choice of the options presented by each state (DEIS, Vol. I, Chap. 5, p. 5.1.6-18)." There is some confusion in the DEIS when discussing "most likely" versus "worst case" options for spoils disposed at the Arizona SSC site. The option evaluated, clearly is a worst case scenario. A most likely case, and for the Arizona SSC site, the most probable option is to use the spoils material for road construction. The DEIS points out that 80 to 121 miles of new or upgraded road construction will be necessary for the Arizona SSC site (DEIS, Vol. I, Chap. 3, p. 3-25). It also recognizes that spoils could be used for aggregate (DEIS, Vol. I, Chap. 3, p. 3-54), and that one mitigation that could reduce adverse impacts is the use of spoils for road construction (DEIS, Vol. I, Chap. 3, p. 3-64). The use of spoils for road construction was advocated in the May 20, 1988 data submittal to the DOE by the Arizona SSC Project (p. 6 of the submittal). To reiterate, the spoils can be used for road construction at and in the vicinity of the Arizona SSC site; to use the Sacaton mine for spoils disposal will ignore the potential use of this material as a <u>needed</u> commodity and <u>waste</u> a greatly needed resource. Preliminary calculations by Sergent, Hauskins, & Beckwith (supplied to DOE with the 5/20/88 data submittal as Appendix 5) suggest that 35,000 yd^3 of borrow (which would be spoils) per mile are needed to construct a 50-foot roadway subgrade sufficient for a 4-lane roadway. If 2.8 x 10^6 yd^3 of spoils are generated (a maximum?), conservatively that is sufficient material for construction

of 80 miles of 4-lane roadway, merely 66% of the potential needs for the site. Clearly this type of analysis presents a more credible view of the appropriate spoils disposal mechanism without unfairly and unjustly overestimating the potential impacts attributed to spoils disposal in air quality, vehicle miles traveled, and safety assessments. These onerous assessments are an example of the errors present in the DEIS when the basic assumptions used do not accurately reflect the site conditions.

In summary, all sections of the DEIS dependent upon the generation, transportation, and final disposition of spoils at the Arizona SSC site are in error, and do not in any way represent the conditions that are most probable for this site. There is an internal inconsistency in the volumetric calculations, a misunderstanding with respect to the most probable use of this material, and resulting from these errors are a series of inappropriate conclusions regarding the ultimate environmental consequences of spoils disposal.

11 pp. 3-27, Table 3-3. Under the section titled miles of new roads, the number for Arizona is listed at 101 miles. This includes the proposed Estrella Freeway running from Interstate 10 (I-10) south to I-8. As mentioned in the DEIS the Estrella Freeway would be constructed for other purposes and therefore need not be included in the DEIS. However, if included, the estimated mileage is too high. The section (approximately 8 mi) running from Big Tank (just northeast of J2) south to I-8 is counted twice. Once as part of the Estrella Freeway (as a new 4-lane road) and once as an SSC site road (new 2-lane road). This section, as drawn in Volume IV, Appendix 1, Figures 1.2.1-3 and 1.2.1-4, follow the same alignment down Vekol Road and therefore need not be counted twice. The correct total miles of new road, including the Estrella Freeway, should be 93 miles. If the Estrella Freeway is not included the total miles of new roads would remain 54 miles.

12 pp. 3-54, Table 3-7. This Table identifies 36 acres of prime and important farmland converted for SSC use at the Arizona site. Prime farmland is defined in the U.S. Code of Federal Regulations (CFR 657) known as the "Farmland Protection Policy Act of 1981." Under section 657.5iC, prime farmland includes soils that have an aridic moisture regime and the area has a developed irrigation water supply that is dependable and of adequate quality. A dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown. All of the soils at the Arizona site have an aridic moisture regime. Therefore, a dependable water supply is essential for any portion of the SSC site to be identified as prime farmland. None of the soils of the Arizona SSC site have a dependable, developed irrigation water supply. This conclusion is drawn from on-site inspections, aerial photos, land ownership maps and discussions with Soil Conservation Service personnel. As a result there is no prime farmland affected by the project and Table 3-7 should state that 0 acres of prime and important farmlands would be converted for SSC use in Arizona. Also, the percentage of inventory in the site region, the next line in Table 3-7, would be 0.

13 Also in Table 3-7 the State of Arizona SSC Site is listed as having 95 Historic sites. This should be changed to 10, as is correctly mentioned in Volume I, Chapter 4, Section 4.10.1.2, second paragraph, third sentence. See also the comment on Volume I, Chapter 5, Section 5.1.9.1, fifth paragraph, found below.

14 pp. 3-63, Sec. 3.6.3, third paragraph. The "Arizona Cactus Law" (which is correctly called the State of Arizona Native Plant Law) has not been properly interpreted here, and does not require restoration and revegetation of disturbed land, as implied in the text. The Law requires only that the Commision of Agriculture and Horticulture be notified 30 days in advance of disturbance (grading). Mitigation is not required as stated in the DEIS. All cacti do not have to be collected. The purpose of *the notification is to allow the opportunity* for cacti to be salvaged, usually by landscaping companies or nurseries. However, mitigation by salvage and replanting remains an attractive option for reducing *environmental impacts of the project.* The interpretation of the Law in this summary volume contradicts that in Volume IV, Appendix 5A, Sec. 5.1.9.5.B, pp.78.

15 pp. 3-67, section 3.7.4. The second paragraph states that: "Arizona, Michigan, North Carolina, and Tennessee will have regional exceedances of NAAQS carbon monoxide limits resulting from SSC-related emissions." Exceedance of NAAQS carbon monoxide limits *will not occur at the Arizona SSC Site. As* explained in comments to Volume IV, Appendix 5a and Volume IV, Appendix 8, background carbon monoxide concentrations in the areas impacted by emissions *from the SSC are well below* NAAQS. Addition of the predicted SSC impact to background ambient carbon monoxide concentrations will not result in an exceedance of NAAQS. Modify DEIS language to reflect these facts.

16 pp. 3-69, Section 3.7.11. The prime and important farmland acres for the Arizona site should be reported as 0. See comment on Volume 1, Chapter 3, pp. 3-54, Table 3-7 for explanation.

Volume 1, Chapter 4

17 • pp. 4-2, Table 4-1. References to variably cemented basin-fill and fanglomerate under the "Stratigraphy at Shaft Locations" and "Stratigraphy at Tunnel Depth" are misleading. Fanglomerate is defined as variably cemented alluvial fans deposits that comprise the basin-fill. These two terms are describing the same rock units. Correct such that only one term appears, fanglomerate is preferable. "Geologic Structure" notes the presence of faults within the ring, please add that no faults are known to intersect the collider tunnel. "Geoengineering *Conditions*".

18 pp. 4-5, Section 4.1.2. This section on stratigraphy refers to basinfill/fanglomerate in the valleys as though these were separate and distinct rocks units. They are not, both terms describe the same rock unit. Correct the written description such that only fanglomerate appears.

19 pp. 4-6, Section 4.1.3. "Geologic Structure" correctly notes that the rocks at the Arizona site are *tilted and faulted, but takes special care to note that* some shear zones are up to 10 feet wide. This passage is misleading and does not accurately reflect the characteristics of the rock units intersected by the

collider tunnel as currently known. The entire collider ring surface trace has been walked out by several Arizona SSC Project team members including geologists, hydrologists, and engineers. No shear zones of that great thickness were ever noted. More typically the shear zones are one to two feet thick, and all shear zones are mylonitic. As a result the shear zones are loci of greater strength than the surrounding bedrock, and not zones of increased weakness as is often the case with shear zones. Correct the passage to read " . . .are also tilted and faulted (including shear zones locally up to 10 ft wide that are not known to intersect the collider tunnel)."

20 pp. 4-23, Table 4-5. The mean annual precipitation for Arizona is listed as 10.33 inches. Nowhere, in any document submitted by the Arizona SSC Project or in the published literature is the mean annual rainfall around the Maricopa site that high. The correct figure should be approximately 7.0 inches as given in the Arizona-Maricopa SSC Proposal, Sept. 2, 1987; Volume 7, Table 7-1), and as found in Sellers and Hill (1974).

21 pp. 4-24, Table 4-5. A heading in the Table reads:

"Mean annual dewpoint
humidity (%)"

This should be strictly; Mean annual dewpoint.

22 pp. 4-27, Table 4-6. The carbon monoxide concentrations shown in this table for Arizona are not representative of the SSC site. The highest annual carbon monoxide measurements made at the Sierra Estrella Sailport from 1976-1981 ranged from 1,486 ug/m^3 (1976) to 13,714 ug/m^3 (1977) for one-hour, and from 915 ug/m^3 (1976, 1979, 1980, and 1981) to 7,200 ug/m^3 (1977) for eight hours. Measurements at the Sierra Estrella Sailport have been used to establish air quality conditions at the SSC site for total suspended particulates, sulfur dioxide, nitrogen dioxide, and ozone. Carbon monoxide measurements made at the Sierra Estrella Sailport should also be used to establish CO conditions at the SSC site.

23 pp. 4-42, Sec. 4.6.2.2, first paragraph. It should be pointed out that control of dust during construction (e.g., wetting the soil) is a successful mitigation procedure for Valley fever spores.

24 pp. 4-44, Sec. 4.7. The first paragraph, last sentence, reads: "The only culturally important species are raptors (all sites) and feral burros (Arizona)". This should read: "The only culturally important species are raptors (all sites)." Rather than being culturally important, feral burros are considered by many to be a "nuisance species", one which competes with native animals such as bighorn sheep.

25 pp. 4-44, Sec. 4.7.1. The second paragraph, first sentence, reads: "...ecological resources are widely used for recreational activities". This should read:

"...ecological resources are widely used for recreational activities and grazing".

pp. 4-44, Sec. 4.7.1. The second paragraph, last sentence, reads: "Unlike the other six sites, the Arizona site is predominantly unmodified by human activities and maintains many wilderness characteristics.". This is not entirely true. Although portions of the Arizona site maintain many wilderness characteristics, a large percentage of the Arizona site has been modified by cattle grazing, off-road vehicles and other human activities. Remove this language for it does not fairly characterize the Arizona site.

26 pp. 4-46, Table 4-16. Second column, second row. "Gila Bend River" should read "Gila River".

27 pp. 4-47, Sec. 4.7.2. The first paragraph, first sentence, reads: "...Gila Bend drainage basin". This should read: "...Gila River drainage basin."

pp. 4-47, Sec. 4.7.2. The third paragraph, first sentence, reads: "The ecosystems...are moderately undisturbed desert scrub systems that: 1) are slow to recover from stress...". This should read: The ecosystems...are moderately undisturbed desert scrub systems that: 1) are slow to recover from disturbance." Sonoran desert scrub systems are by nature adapted to many forms of stress (e.g., moisture stress, heat stress); *this ability to tolerate stress decreases their* ability to recover from disturbance (e.g., habitat destruction, fire.)

28 pp. 4-47, Sec. 4.7.2. The third paragraph, first sentence, reads: "The ecosystems...are moderately undisturbed desert scrub systems that: ...2) behave as a series of islands of biological productivity in the sea of desert pavement...". This should read: "The ecosystems...are moderately undisturbed desert scrub systems that: ...2) behave as a mosaic of interacting units, in which nutrients and energy flow between the more productive desert wash community and the less productive desert scrub communities."

29 pp. 4-47, Sec. 4.7.2, fourth and fifth paragraphs. The term 'ecotype' is not appropriately *used here or elsewhere in the EIS, and should be replaced by* 'vegetational associations'. Ecotype has a precise definition, referring to a population of a species which exhibits distinct morphological, physiological, or *other adaptations.*

30 pp. 4-47, Sec. 4.7.2. The fifth paragraph, last sentence, reads: "The woodland ecotype is limited to the two ephemeral washes traversing the site.". This should read: "There are many ephemeral washes that traverse the site; the larger of these support woodland associations along their edges."

31 pp. 4-52, Sec. 4.7.4.1. An additional summary table should be inserted which lists known occurrences of threatened and endangered species in the specific area of *the proposed site; such a table would list 0 threatened and*

endangered species at the proposed Arizona site.

32 pp. 4-53, Sec. 4.7.4.1. The second paragraph, first sentence, reads: "There is one endangered species near the proposed Arizona site, the Tumamoc globeberry". This should read: "There are no endangered species at the proposed Arizona site; the closest known population of an endangered species in the area is the Tumamoc globeberry, approximately 30 miles south of the Arizona site."

33 pp. 4-56, Sec. 4.7.4.1. The first paragraph, second sentence, states that the tortoise population in the North Maricopa Mountains "is located in areas of proposed activities, especially B7." This should read: " is located in areas of proposed activities, especially E7".

34 pp. 4-56, Sec. 4.7.4.2. The first paragraph, second sentence, reads: "The sites differ drastically in the number of state-protected species in the area of the proposed site.". It would be helpful to add that the reason for these differences include differences in the content of state laws (e.g., some states have Endangered Species Acts which protect animals and/or plants, while others, such as Arizona, have laws which protect certain culturally valuable plant species, and which list, but provide no legal protection for endangered and threatened animals), as well as real differences in numbers of rare species.

35 pp. 4-62, Sec. 4.7.5.1. The first paragraph, first sentence, reads: "The limited ranges of the desert tortoise, the desert bighorn sheep, and the Gila monster make the Arizona site unique.". This statement should read: "The Arizona site, as well as large expanses of the surrounding desert, support populations of two state-threatened species, the desert bighorn and the desert tortoise." The term 'unique' implies that the ranges of these species are limited to the Arizona site, which is not true.

pp. 4-62, Sec. 4.7.5.1. The first paragraph, second sentence, reads: "The Maricopa Mountains are covered by terrestrial plant and animal communities which are similar to those in the immediate region; the Maricopa Mountains have far less riparian woodlands.". Neither the Maricopa Mountains or the immediate surrounding area support any true riparian woodlands; rather, both support a few xeroriparian woodlands, although these are neither extensive in acreage nor well-developed.

36 pp. 4-62, Sec. 4.7.5.1. The second paragraph, first sentence, reads: The desert tortoise's requirement for wash areas and easy water availability may limit its distribution in the area.". This statement is not necessarily true. Factors limiting the desert tortoise in the area are not completely understood at this time, and may include a requirement for ungrazed habitat as well as for appropriate topography (e.g., rocky slopes and washes). A need for 'easy water availability' has not been documented; in fact, tortoises can survive for long periods without free water by obtaining moisture from their food.

37 pp. 4-63, Sec. 4.7.5.1. The second paragraph, second sentence, reads: "...and the species is unique to the Sonoran region of the western U.S. and Mexico", referring to the Gila monster. This should read: "...and the species occurs throughout the large, Sonoran region of the western U.S. and Mexico."

38 pp. 4-69, sec 4.8.3. The fourth sentence reads: "The Arizona site is located in an underdeveloped portion of Maricopa County, not only because of Federal land ownership/management policies, but also because of the lack of water for irrigation." The region around the Arizona site is undeveloped not because of a lack of water but because the size of Arizona coupled with its small population has allowed growth to concentrate in the most optimum areas, such as where Phoenix is located. Phoenix has historically been an important center of habitation because of its location at the confluence of the Salt, Gila, Verde, and Agua Fria rivers. The prior lack of growth around the Arizona SSC site can be attributed primarily to; its isolation from Phoenix because of the Gila River Indian Reservation and Sierra Estrella, and secondarily to the lack of surface water and the greater depth to ground water.

39 pp. 4-75, sec. 4.8.6, paragraph 5. The third sentence reads: "Limited irrigated farming is carried on in the southern part of the SSC site." Since 1985 the Arizona SSC Technical Team has conducted site-specific field investigations covering the length and breadth of the Arizona site. At no time over the last three years has agriculture, irrigated or otherwise been observed in the southern portion of the site. Based on the criterion for prime farmland, as described in the response to Volume 1, Chapter 3, Table 3-7, pp. 3-54 there is no prime farmland at the Arizona SSC site. The nearest farming to the site is approximately two and one-half miles north of F8, and two miles northeast of J1.

40 pp. 4-77, Table 4-23. The table lists potential prime farmland at 3,400 acres and actual prime farmland at 500 acres, with the difference being that potential prime farmland is potential due to its need for irrigation. Previously prime farmland acreage was listed as 36 acres now it appears as 500. Any farming done near the site, or in Maricopa or Pinal County for that matter, needs irrigation. Because there are no irrigation systems within the SSC site footprint there is <u>no</u> actual prime farmland at the Arizona site.

41 pp. 4-94, Section 4.10.1.2, second paragraph. The first sentence states: "Several phases of field research at the proposed Arizona SSC site have been completed by Arizona State University." We feel that full credit for the level of effort done by the Arizona SSC Technical Team is not recognized here. We would like to add that these surveys provide very nearly complete coverage of the SSC site. Historic and archaeological surveys have been conducted of all of Campus Areas A, B, and C; the buried beam access areas J-1 through J-6; and a total of 10.9 mi of the ring circumference that will be impacted by open trench construction. The State Historic Preservation Office and the Bureau of Land Management indicate that surveys are not needed for those portion of the ring circumference that will be constructed by tunneling. Additional surveys will be needed for those ongoing impacts that cannot be identified until the design phase of the project. This would include such activities as the construc-

tion of roads leading to access shafts and the selection of areas to be used for spoil disposal.

Volume I, Chapter 5

42 pp. 5.1.1-2, Section 5.1.1.2. Reference is made to only 50% of the volume of excavated materials would be rock, implying the rest would be soil. The authors of the DEIS have made the assumption that fanglomerate materials are a soil. This is incorrect. By definition fanglomerate is "a sedimentary rock consisting of slightly waterworn, heterogeneous fragments of all sizes, deposited in an alluvial fan and later cemented into a firm rock (Bates and Jackson, 1980)." Even an engineering geology definition of soil refers only to the "unconsolidated materials above bedrock (Bates and Jackson, 1980)." It is clear then that any reference to fanglomerate (or alternatively cemented basin-fill deposits) as a soil is incorrect. There is a consistent misunderstanding about this point throughout the DEIS. Therefore, relative to the volume of excavated materials, the entire volume produced at the Arizona site will be rock because all materials to be excavated are rocks.

43 pp. 5.1.3-7, Table 5.1.3.3. The worst case ambient air CO concentrations for the Arizona SSC site are incorrect. As explained in the above comment (Volume I, Chapter 4, pp 4-27, Table 4-6) and comments to Volume IV, Appendix 5a and 8, the concentrations used to represent the SSC Site should be replaced by those measured at the Sierra Estrella Sailport.

44 pp. 5.1.3-8, Table 5.1.3-4. The estimated PM_{10} and/or total suspended particulate emissions for the Arizona SSC Site are incorrect. It is physically impossible for PM_{10} emissions to exceed TSP emissions.

45 pp. 5.1.5-1, Sec. 5.1.5.1.B, first paragraph. Additional impacts to wildlife include possible changed patterns of human presence in remote areas of the Wilderness Study Area which presently are used by off road vehicle (ORV) enthusiasts.

46 pp. 5.1.5-1, Sec. 5.1.5.1.B.1, second paragraph. It should be mentioned that reclamation could be enhanced by addition of fertilizer which would enhance the rapid development of desert shrub species.

47 pp. 5.1.5-2, Sec. 5.1.5.1.B.1. The third paragraph reads: "The Arizona Native Plant Law prohibits the collection of many plant species in Arizona, including all cacti. Major construction projects require permitting to renew and revegetate disturbed areas." It should be added that the law allows for permitted removal of protected plants through conservation methods, and does not require revegetation.

48 pp. 5.1.5-2, Sec. 5.1.5.1.B.1. *The fourth paragraph, third sentence, reads:* "with sizeable populations occurring in the Bender Wash (E5) and Waterman Wash (F8) areas", referring to the desert tortoise. Although additional censuses of tortoise populations are needed, available information suggests that mountain pediment areas (e.g., E7, F8), rather than the large wash areas, support the larger tortoise populations.

49 pp. 5.1.5-10, Sec. 5.1.5.2.A, first paragraph. It needs to be mentioned that the closest known population of the Endangered tumamoc globeberry is 30 miles from the proposed Arizona SSC site, and that field surveys of disturbance areas around the ring by Arizona State University researchers revealed no globeberry present at the site.

50 pp. 5.1.5-10, Sec. 5.1.5.2.A, first paragraph. Although the nightblooming cereus has been located on the site, as indicated in the text, it needs to be mentioned that this cactus occurs at low densities throughout a large range which includes, but is by no means restricted to, the proposed SSC site.

51 pp. 5.1.5-39, Sec. 5.1.5.4.A, first paragraph. It is not necessarily true that the numbers of individuals who poach reptiles, cacti, and mesquite will increase because of the increased access provided by the SSC, since poaching is often higher in areas of low population density and less developed off-road-vehicle routes.

52 pp. 5.1.5-42, Sec. 5.1.5.4.G. (Texas) Does this paragraph imply that the SSC will allow hunting and fishing to occur uncontrolled on SSC property?

53 pp. 5.1.6-3, Sec. 5.1.6.1.B., second paragraph. The first sentence reads: "The potential for contracting Valley Fever at the Arizona site is a special case requiring special control measures." We question the necessity of using 'special control measures'; mitigation for Valley Fever spores can be accomplished through standard dust control procedures, procedures which OSHA regulations normally require in high-dust areas.

54 pp. 5.1.9-1, Section 5.1.9.1, third paragraph. The second sentence states: "Only limited archaeological field surveys have been completed at any of the proposed sites". However, at the Arizona site <u>all</u> of the areas that will receive direct surface impacts as currently known have been surveyed for archaeological sites and historic buildings. This is a survey of 4,970 acres, and includes all of Campus Areas A, B, C, and 10.9 mi of the ring circumference. Additional surveys would be required only for activities that cannot be currently defined, such as the specific locations of access roads to access chambers or areas used for spoil disposal.

55 pp. 5.1.9-1, Section 5.1.9.1, fifth paragraph. The second sentence reads: "An historic building and sites survey has not been performed at the proposed Arizona SSC site, although standing structures are expected to be rare." This

should read: An historic building and sites survey has been completed at the Arizona SSC site, and a total of five structures were identified, of which only one structure remains standing. Other historic sites include three areas of historic refuse and two historic trails/roads, bringing the total of historic sites to 10 for the Arizona SSC site.

56 pp. 5.1.10-5, Sec. 5.1.10.2. Why is it necessary to modify recognized and widely used visual classification systems and use a separate, untested evaluation scheme for this EIS, when the Arizona site has already been evaluated by the BLM?

57 pp. 5.1.10-8, Sec. 5.1.10.3.A. The second paragraph, second sentence, reads: "The impacts on views from the Wilderness Study Areas would be national in scope". This statement is based on a faulty assumption. For a visual impact to be of national significance, the impact must be to a designated Wilderness Area, not to a Wilderness Study Area.

58 pp. 5.2-3, first paragraph. The fourth sentence states: "Regional exceedances of NAAQS carbon monoxide limits resulting from SSC-related emissions occur in Arizona, Michigan, North Carolina, and Tennessee." This statement is incorrect with respect to Arizona as explained in prior comments (Volume I, Chapter 3, pp. 3-67, section 3.7.4; Volume I, Chapter 4, pp. 4-27, Table 4-6; Volume I, Chapter 5, pp. 5.1.3-7, Table 5.1.3-3, etc.)

59 pp. 5.3-1, sec. 5.3.2.1: This mentions that in the absence of the SSC the Maricopa site would remain a popular multiple use recreational area in the Sonoran desert. How is popular defined, by the number of people that use it, by how much those that do use it like it? As it stands it is an unfair and misleading statement and should be removed to reflect a less prejorative perspective.

60 pp. 5.4-1, Section 5.4. This section refers to the loss of extractable metallic resources in Arizona and other states resulting from siting the SSC. The DEIS does acknowledge that this loss would be of little economic importance. This statement is in complete contradiction with Table 5.6-3 and the conclusions about economic geologic resources in Appendix 5, Sect. 5.1.1.6. For a metallic resource to be extractable implies that the resource is some type of ore and therefore of some economic significance. Table 5.6-3 and the section cited in Appendix 5 point out very clearly that whatever the nature of the resources present at the Arizona site they are uneconomic or of little economic significance. By the logic normally used in evaluating the economic worth of geologic resources, the potential resources at the Arizona site are not extractable because they are not economic. Statements suggesting that there are extractable geologic resources at the Arizona site are in error and contradict more accurate statements in the DEIS itself.

• Appendix 1, sec. 1.2, pp. 1. Under the section on Arizona it reads: "The proposal located 11.9 mi (22%) of the collider ring in cut-and-cover tunnel and the remainder in tunnel boring machine (TBM) tunnel. The proposal limited the maximum depth of cut-and-cover tunnel to 80 ft below the existing ground surface. However, in some areas the proposed cut-and-cover was actually greater than 80 ft, and in these areas this was changed to TBM tunnel. Also, where the cut-and-cover tunnel crossed the Gila Bend-Maricopa Road, the Southern Pacific Railroad tracks, and the Butterfield Stage Route the cut-and-cover tunnel was changed to TBM tunnel because these facilities should not be interrupted or destroyed by open cut construction. This results in a total of 6.0 mi (11%) of the collider ring in cut-and-cover tunnel." Numerous mistakes have been made in these calculations. First, the Arizona-Maricopa SSC Site Proposal, submitted Sept. 2, 1987 did not limit the maximum depth of cut-and-cover to 80 feet. In fact in Volume 3, Page 93, first paragraph, of the Arizona Proposal it says: "The experience of local contractors with the fanglomerate demonstrates, however, stable open-cut excavations to depths of between 80 and 100 feet." Second, at the end of the same paragraph it says: "However, experience shows there is significant increased flexibility and reduced costs using cut-and-fill as an alternative to TBM tunneling up to a depth of 100 feet."

61 Based on Figure 3-2 from the Arizona-Maricopa SSC Site Proposal (the 1:24,000 scale cross-section) and using 100 feet as the maximum depth for cut-and-cover tunnel the following lengths of collider ring could be constructed using cut-and-cover construction:

1) On the west side of the site, from K3 to just south of the Maricopa-Gila Bend Road.

This is approximately 3.85 mi. Assuming a 1/4 mi length of this section would have to be tunneled under the S.P. Railroad this would be 3.6 mi of cut-and-cover tunnel.

2) On the east side of the site, from mile 4.3 to mile 12.75

This is approximately 8.45 mi. Assuming a 1/4 mi length under the Butterfield Stage route, and a 1/3 mi length under the Gila Bend-Maricopa Road and S.P. Railroad (which are alongside each other) would have to be tunneled, this would be 7.9 mi of cut-and-cover tunnel.

These two sections total to 11.5 mi (21.7%) of cut-and-cover for the main tunnel at the Arizona-Maricopa SSC Site.

Volume IV, Appendix 5a

62 Sections of the DEIS discussing earth resources (DEIS, Vol. 1, Chap. 4, Sect. 4.1; Vol. I, Chap. 5, Sect. 5.1.1; and Appendix 5, Sect. 5.1.1) all suffer from basic misunderstandings in the definitions of some technical terms used and the geologic setting of the Arizona SSC site.

pp. 1, Section 5.1, paragraph 1. This paragraph correctly points out that the Arizona site is in the Basin and Range physiographic province, but proper

conventions of grammar necessitate that the words basin and range should be capitalized (VandenDolder, 1988).

The term bajada is incorrectly used to describe the intermontane valleys adjacent to the Maricopa Mountains. Bajada describes "a broad, continuous alluvial slope or gently inclined detrital surface extending from the base of mountain ranges out into and around an inland basin, formed by the lateral coalescence of a series of separate but confluent alluvial fans, and having an undulating character due to the convexities of the component fans. A bajada is a surface of deposition, as contrasted with a pediment, a surface of erosion that resembles a bajada in surface form (Bates and Jackson, 1980)." As the detrital surfaces extending away from the Maricopa Mountains are erosional surfaces (Pearthree, 1988), a correct characterization would be that of a pediment. All references to a bajada are inappropriate and incorrect.

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The geographically correct way of stating the last sentence would be: "Three major drainages are present in the site area: Waterman Wash, which drains the northeast quadrant into Rainbow Valley; Bender Wash, which receives runoff from the south and southwest portion of the ring; and Vekol Wash, which drains the southeast quadrant into the Vekol Valley."

pp. 1, Sect. 5.1.1.2, paragraph 1. The DEIS states that "the time scale used to approximate the ages of rock units is the 'Decade of North American Geology 1983 Geologic Time Scale' (Palmer, 1983)," and yet throughout the entire discussion of stratigraphy and lithologies present at the Arizona site this time scale is not used. For example, the DEIS makes reference to granitic rocks at the site formed 3,400 million years ago during the early Proterozoic (p. 6). According to Palmer (1983) 3,400 Ma is the boundary between the Early and Middle Archean, not the Early Proterozoic, the actual age of the granitic rocks present at the site. Tertiary rocks are given an age range of 1.8 to 65 Ma, yet Palmer (1983) defines the Tertiary as 1.6 to 66.4 Ma. Middle and Late Tertiary age boundaries are defined (20 to 40 Ma and 1.8 to 20 Ma, respectively) by the DEIS, yet Palmer (1983) does not formally divide the Tertiary Period into Early, Middle, and Late Epochs. In Arizona, informal usage defines the Middle Tertiary as Oligocene to Early Mid-Miocene (36.6 to 15.1 Ma), and Late Tertiary as Middle Mid-Miocene to the Pliocene-Pleistocene boundary (15.1 to 1.6 Ma). The DEIS goes on to define the Late Tertiary as 50 Ma. This definition is problematic at best, for the Late Tertiary is 1.6 to 15.1 Ma in Arizona informal usage, or 50 Ma could be defining the Early Tertiary. Usage suggests, but is by no means clear that the DEIS is discussing rocks of Late Tertiary age (1.6 to 15.1 Ma). Finally, the Quaternary is defined in the DEIS as 1.8 Ma to present, whereas Palmer (1983) defines the Quaternary Period as 1.6 Ma to present. Although some might find these distinctions trivial, the problem is symptomatic of the DEIS in general. A time scale is specified by the DEIS, but not used in practice, which in turn leads to misleading and in many instances incorrect conclusions.

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63 pp. 2, Figure 5.1.1-1. The Figure makes reference to the Both Hills; this feature is incorrectly labelled and should read Booth Hills.

64 pp. 3, Figure 5.1.1-2. This Figure suffers from a lack of proofreading,

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violation of the rules of stratigraphic nomenclature, and poorly compiled data. Geologic unit X_{gb} is mislabelled gabbero, the correct spelling is gabbro. The only formal stratigraphic name recognized at the Arizona site is Pinal Schist, *all other rock unit names are informal and should not be capitalized.* Examples of this error include: Booth Hill Quartz Diorite rather than the correct Booth Hills quartz diorite, and Porphyritic Granite rather than the correct porphyritic granite. All Proterozoic rock units, except for the Pinal Schist, all Tertiary rock units, and all Quaternary rock units have informal stratigraphic names, to portray these rock units otherwise is misleading and incorrect. The conventions of stratigraphic nomenclature also are violated in Table 5.1.1-1. Lastly, the approximate maximum thickness of the Quaternary alluvium deposits is vastly overestimated at 210 feet. As stated in the Maricopa Site proposal (Vol. 3, Sect. 3.5.1.1, p. 39) alluvium refers only to those unconsolidated and non-indurated sediments typically found as surface soils. A review of the seismic refraction data provided to DOE in the March 15, 1988 Supplemental Data Submission (Appendices 15-2, 15-4, 15-5, 15-8, and 15-9) suggests that the maximum thickness of alluvium rarely exceeds 20 feet and is more typically 8 to 10 feet. In fact, Table 5.1.1-1 describes the Quaternary alluvium as thin deposits of sand and silt directly contradicting the thickness listed in Figure 5.1.1-2.

pp. 6, Section 5.1.1.2. The most important flaw in this section discussing the stratigraphy of the Arizona site is the written description on DEIS page 6. *The section contains abundant errors and greatly confuses a simple geologic setting.* The text refers to granitic rocks of Archean age that do not exist. No Archean rocks are known in the western U.S. Cordillera south of the Cheyenne belt in southern Wyoming (Karlstrom and others, 1987). The granitic rocks at the Arizona site are thought to be Early Proterozoic (approximately 1.7 Ga) by correlation with similar exposures in central Arizona (Reynolds, 1987). A radiometric age determination for the porphyritic granite is currently underway (DeWitt, 1988). Other errors include incorrect age assessments (discussed above), and references to non-existent rock types such as dionite and porphyrite granite. The following text provides a preferable and correct summary of the stratigraphy present at the Arizona site.

65

> The Arizona site is composed predominantly of Early Proterozoic (1.6 to 2.5 Ga) plutonic and metamorphic rocks. The oldest rock unit, Early Proterozoic Pinal Schist, occurs in the southern Maricopa Mountains. The schist has been intruded by Early Proterozoic granitic rocks, of which most of the site is composed. The plutonic rocks consist of two separate granitic plutons and a dioritic pluton. The Early Proterozoic granites consist of an older porphyritic granite which is intruded by dikes and irregular masses of leucocratic granite. *Mafic and felsite dikes of presumed Tertiary (1.6 to 66.4 Ma) age* locally intrude the crystalline rocks. A sequence of middle Tertiary (15.1 to 36.6 Ma) sedimentary and volcanic rocks overlies the Proterozoic basement in the southeastern corner of the range. This sequence consists of a gently southwest-dipping stack of rocks that form an asymmetric southeasterly plunging trough that disappears beneath younger sediments. From oldest to youngest the middle Tertiary rocks are lower conglomerate, basalt, middle conglomerate, welded tuff, and upper conglomerate. The total thickness of the middle Tertiary section is in excess of 1,250 feet. A whole-rock K-Ar age determination has yielded an age of 20.44 Ma (Early Miocene) for the basalt

from this sequence (Shafiqullah and others, 1980). The alluvial basins surrounding the Maricopa Mountains contain Late Tertiary (1.6 to 15.1 Ma) and younger clastic sediments up to several thousand feet thick. Fanglomerate, locally conglomeratic alluvial fan deposits cemented by calcium carbonate, is the predominant lithology in the basins. Overlying the fanglomerate are unconsolidated and non-indurated sediments (alluvium) typically found as surface soils in the desert basins of the Southwest.

66 pp. 6, Section 5.1.1.3. Proterozoic rocks at the Arizona site are described as over 570-million-years old, which would also include Archean rocks, if they were present. Correct to read Early Proterozoic (1.6 to 2.5 Ga).

Alluvium and fanglomerate are used synonymously to characterize the basin-fill sediments that the collider tunnel will intersect. These two terms are not synonmyns. Alluvium describes only those unconsolidated and non-indurated
126 sediments found as near surface soils. The collider tunnel will not be hosted by any of this material. Fanglomerate identifies those materials underlying the alluvium that are locally conglomeratic alluvial fan deposits cemented by calcium carbonate. It is the fanglomerate units that constitute most of the material the collider ring will intersect.

67 pp. 11, paragraph 1. The second to last sentence reads: "Basin-fill is found at 13 shaft locations, two experimental halls, and the booster facilities." Arizona SSC Project data suggests that basin-fill will be found at four experimental halls (K2, K3, K4, and K5), not two, and at 18 shafts, not 13 (Arizona-Maricopa SSC Proposal, 1987; volume 3, figure 3-2). In addition, the last sentence states, "Fanglomerate is expected at only one shaft location." The terms basin-fill and fanglomerate are used interchangeably so based on the previous comment 18 shafts, not one, are in fanglomerate.

68 pp. 27, paragraph 2. The last sentence reads: "Recoverable groundwater volume in storage has been estimated to be about 3.1 million acre-ft in the upper 1,500 ft of saturated sediments (Hollett and Marie 1987; Wilson 1979)." This estimate of 3.1 maf was first found in Wilson (1979) and assumed reserves of 1.5 million acre-ft from 0 to 500 feet below the water table, and 1.6 million acre-ft from 500 to 1,500 below the water table. Further work by Hollett and Marie (1987) refined the estimate to 375,000 acre-ft from 0 to 450 feet below the water table. Assuming the lower section, from 500 to 1,500 feet to be correct than a more reasonable estimate for basin water reserves would be 2.0 million acre-ft.

This is also found in Vol. 4, Appendix 7, pp. 96

69 pp. 33, Section 5.1.3.2. The second sentence reads: "The extreme high temperature recorded was 123°F in September... This is incorrect it should read: The extreme high temperature recorded was 123°F in July...

70 pp. 42, Section 5.1.4.2, part B. The fourth sentence reads: "It should be noted that no data are available for Sierra Estrella Sailport after 1978 (Provident

Energy Company 1979)." Monitoring at the Sierra Estrella Sailport continued until 1980 for ozone, 1981 for carbon monoxide and nitrogen dioxide, and 1982 for sulfur dioxide and TSP. Data for these years were included in section 5 of the March 15, 1988 Arizona submittal to the Department of Energy. These data are also reported in the annual air quality reports issued by the Arizona Department of Environmental Quality (formerly the Arizona Department of Health Services) under Maricopa, Pinal County (the Maricopa site is the Estrella Sailport Site).

71 pp. 44, Table 5.1.4-3. The Table presents highest 1-hr and 8-hr regional CO concentrations measured in the Phoenix metropolitan area for background CO concentrations at the SSC site. The CO concentrations indicated in Table 5.1.4-3 should be replaced by carbon monoxide concentrations measured at the Sierra Estrella Sailport from 1976 through 1981. During these years, the highest annual 1-hour concentration ranged from 1,486 ug/m^3 to 13,714 ug/m^3 and the highest annual 8-hour concentration ranged from 915 ug/m^3 to 7,200 ug/m^3.

72 pp. 45, Figure 5.1.4-1. The location of the Sierra Estrella Sailport is approximately 6 mi ENE of Mobile not SE as shown in the Figure.

73 pp. 46, part D. The last sentence reads: "The closest PSD Class I area that permits minimal air quality deterioration is Superstition Wilderness 30 mi northwest of the site." The actual distance of the Superstition Wilderness from the SSC Site is 50 mi.

74 pp. 50, Figure 5.1.5-1. The map showing the location of sensitive noise receptors shows a home approximately 1.5 mi east of E9. There are no homes in this area. The nearest home is approximately 2 mi to the northwest of the aforementioned location.

75 pp. 51, section 5.1.5.4: The third sentence reads: "The ring tunnel will be located 100 ft below the railroad on the west crossing and 300 feet below the railroad on the east crossing." This should read: The ring tunnel will be located 125 feet below Interstate 8 on the west crossing and 360 feet below Interstate 8 on the east crossing (Arizona-Maricopa SSC Proposal, 1987; volume 3, figure 3-2).

76 The second to last sentence in the same section reads: "The railroad passes within 1/2 mile of interaction points K3 and K4." This should read: The railroad passes within 1/2 mile of interaction points K5 and K6.

77 pp. 59, sec. 5.1.8.2, second paragraph. Based on the map shown in figure 5.1.8-1 the southwest regional landfill is about 25 to 30 miles from the site not 50 miles.

78 pp. 62-64, Sec. 5.1.9.1. There are no references given for the citations in this section (e.g., Rea 1983; Warren and Anderson 1985; Webb and Wilshire 1983;

Keill 1970; Sundell 1974).

79 pp. 62, Sec. 5.1.9.1.A, third paragraph. This section needs to be modified as in the summary volume (see response to Volume I, Sec. 4.7.2, pp 4-47, third paragraph, first sentence).

80 pp. 62, Sec. 5.1.9.1.B, first paragraph. The author has read a general textbook on deserts and characterized this site accordingly. Many of the characteristics mentioned are not primary at this site. Rather, this site, particularly in areas that will be most impacted by SSC construction , is a relatively low diversity, low nutrient and low organic matter accumulation site.

81 pp. 62, Sec. 5.1.9.1.B, second paragraph. The second sentence, which reads, "...the costs associated with desert reclamation are high" should read: "costs of desert reclamation are no higher than in other biomes and may be considerably lower."

82 pp. 64, Sec. 5.1.9.1.C, first paragraph. The use of the term 'ecotype' is not appropriate here, and should be replaced by "vegetational associations' (see response to Volume I, Sec. 4.7.2, pp. 4-47, fourth and fifth paragraphs).

83 pp. 64, Sec. 5.1.9.1.C, third paragraph. The site supports only limited areas of xeroriparian woodlands, and these are not well-developed examples of this community type.

84 pp. 71-73, Sec. 5.1.9.2. There are no references given for the citations in this section.

85 pp. 71, Sec. 5.1.9.2, 1. Arizona Upland Association. The first paragraph, second sentence reads: "...the association is dominated by leguminous trees, including mesquite, iron wood, and a few palo verde, and by shrubs and cacti". This should read: "...the association is dominated by palo verde, shrubs, and cacti."

86 pp. 71, Sec. 5.1.9.2, 2. Lower Colorado Association. The first paragraph, fourth sentence, reads: "The few annuals are dominated by plantain and Mediterranean grass". This is not entirely correct. There are many, not few, species (and numbers of individuals) of annuals at the site. Although plantain and Mediterranean grass are common annuals at the site, they are not the dominant species throughout the site.

87 pp. 71, Sec. 5.1.9.1, 2. Lower Colorado Association. The second paragraph, second sentence, reads: "Most noticeable along the washes are increased frequencies of triangle leaf bursage, ratany, and the columnar cactus saguaro". This statement is not entirely correct; although these three species do increase

in abundance along washes compared to the surrounding desert, there are many other shrubs and small trees which also occur along washes, and which are equally 'noticeable'.

88 pp. 74, Sec. 5.1.9.3. There are no references given for the citations in this section.

89 pp. 75, Sec. 5.1.9.4. There are no references given for the citations in this section.

90 pp 75-82, Sec. 5.1.9.5. There are no references given for the citations in this section.

91 pp. 76, Table 5.1.9-3. If the Tumamoc globeberry is "not believed to be present in the Maricopa Mountains" as stated in the text, it should not be included in the table entitled "Threatened and endangered species at the Arizona site."

92 pp. 77, Sec. 5.1.9.5.A.3. The third paragraph, third sentence, reads: "During the University of Arizona's reconnaissance of the proposed site...". This should read "During Arizona State University's reconnaissance of the proposed site...".

93 pp. 78, Sec. 5.1.9.5.B. This paragraph regarding the Arizona Native Plant Law is correct, but the Law is not properly interpreted in Volume I, Chapter 3, Sec. 3.6.3, pp. 3-63, third paragraph, and in Volume I, Chapter 5, Sec. 5.1.5.1.B.1, pp. 5-2, third paragraph.

94 pp. 84, Sec. 5.1.9.6.B. This paragraph needs to be modified as in the summary volume (see Volume 1, Sec. 4.7.5.1., pp. 4-62, first paragraph, second sentence.

95 pp. 110, Appendix 5. The last sentence of the second paragraph states: "It is estimated that only 10-15% of the potentially prime farmland at the Arizona site are actually irrigated and performing as prime farmland." As mentioned in the response to Volume I, Chapter 3, pp. 3-57, Table 3-7 none of the potential prime farmland acres at the Arizona site are actually irrigated (no irrigation period is taking place) and therefore no acres are performing as prime farmland.

96 pp. 135, Section 5.1.11.2. Paragraphs one and two read: "APS has plans to bring a fifth unit on line at their Cholla steam generating plant in the year 2005. This will increase capacity to APS by approximately 340 MW (Arizona Public Service Company 1986c).

APS also plans to construct several 230-kV transmission lines and substations, including a new 230-kV line between the existing Santa Rosa and Gila Bend

substations. Construction is scheduled to begin in 1996 with a planned in-service date of 1997. APS has proposed both preferred and alternate routes to situate the new line, and has already filed an environmental assessment report for the proposed construction project (APS 1988, USDOI)."

While the above statements are correct, important facts pertinent to the SSC project are omitted. APS suggests that the two paragraphs be deleted and replaced with the following:

Having a 1987 generating capacity of 3,660 MW, APS plans to make 9 additions to its generating capacity during the 10-year period 1987-1996 to provide an additional 1,361 MW to serve projected load growth, bringing 1996 total generating capacity to 5,021 MW. During the subsequent 10-year period 1997-2006, APS plans 9 more additions to provide another 1,871 MW of generating capacity, bringing year 2006 total generating capacity to 6,892 MW. This resource schedule can and will be adjusted as necessary to correspond with any changes in the load forecast such as the addition of the SSC (Arizona Public Service Company 1986c).

During the next 10 years, APS also plans to construct numerous transmission lines and substations, including a new 230-kV line between the existing Santa Rosa and Gila Bend substations. APS has obtained final approval for a routing of the Santa Rosa-Gila Bend line across the SSC Maricopa Site. When constructed, this 230-kV line will provide the two independent power sources required for the SSC because the existing Santa Rosa and Gila Bend substations are interconnected with other 230-kV lines. The current plan is to begin construction in 1996 with a planned in-service date of May 1, 1997, but the timing of the line can and will be advanced to accommodate the needs of the SSC (APS 1988, USDOI).

pp. 135, Section 5.1.11.2, fourth paragraph. This paragraph reads: "Natural gas demands for the area in the vicinity of the Arizona site are met by the Southwest Gas Corporation (Southwest), El Paso Natural Gas Company, Arizona Public Service Company, the Salt River Project, and the Black Mountain Gas Company (Arizona Department of Commerce 1987)."

97 Neither Arizona Public Service Company nor Salt River Project are involved in the sale or distribution of natural gas. The above statement should be rewritten with these two electric utilities omitted as follows:

Natural gas demands for the area in the vicinity of the Arizona site are met by the Southwest Gas Corporation (Southwest), El Paso Natural Gas Company, and the Black Mountain Gas Company (Arizona Department of Commerce 1987).

98 pp. 150, Sec. 5.1.13.2.D, second paragraph. In addition to the mentioned disturbances, two oil refineries are planned for the area, and a waste facility (in addition to the hazardous waste facility) will be built near the NE corner of the ring.

99 pp. 151, Sec. 5.1.13.3.A, fourth paragraph, and 5.1.13.3.B, pp. 152, second paragraph. If the Wilderness Study Area was designated as Wilderness, the

jeep trails would no longer be usable and therefore visual sensitivity from the trails would not exist.

Volume IV, Appendix 6

no comment

Volume IV, Appendix 7

100 sec. 7.1.3.1, pp. 15. The third paragraph, first sentence reads: "The major surface disturbance would be located in Waterman Wash, where the campus and injector complex, two additional external beam access areas, J3 and J4, and all of the cut-and-cover tunnel excavation comprise about 900 to 1,000 acres of the watershed." The wording of this sentence makes it appear that these structures are located in the wash, which none are. More accurate wording would be: The major surface disturbance would be located in the Waterman Wash drainage basin, where ... of the watershed.

127 In the same paragraph, second sentence, the DEIS says: "Waterman Wash has a drainage area of over 150 mi^2, so the disturbance would be only about 1% of the watershed." The actual drainage area of Waterman Wash is over 400 mi^2 (USGS, 1984; pp. 406). Therefore, the sentence should read: Waterman Wash has a drainage area of over 400 mi^2, so the disturbance would be less than .5% of the watershed.

Volume IV
Appendix 8

pp. 5, Table 8-1. The EPA AP-42 expression used to calculate emissions from material transfer processes

$$"E_3 = (K)(0.0018)(S/5)(U/5)(H/5) \ / \ (M/2)^2(Y/6)^{0.33}"$$

101 has recently been modified by EPA. The new expression (presented in "Interim Report on New or Revised PM_{10} and other Emission Factors," USEPA, April 1988) is:

$$E_3 = (K)(0.0032)(U/5)^{1.3} \ / \ (M/2)^{1.4}$$

102 pp. 12. The third line from the top indicates: that 440m is equivalent to 2.25 mi. Four hundred and forty meters (440m) is equal to 0.27 mi, not 2.25 mi.

103 pp. 12. The first sentence of the fourth paragraph states: " Carbon monoxide (CO) NAAQS exceedances would result in Arizona, Michigan, North Carolina, and Tennessee. These exceedances can be attributed to high CO backgrounds." With respect to Arizona, this statement is incorrect. The high background

referenced for the Arizona Site is from the Phoenix metropolitan area located approximately 30 mi distant. Ambient background CO measurements made between 1976 and 1982 at the Sierra Estrella Sailport located approximately 8 mi from the SSC Site towards Phoenix indicate maximum annual 1-hr CO concentrations of 1,486 ug/m^3 (1976) to 13,714 ug/m^3 (1977). Maximum 8-hr CO concentrations ranged from 915 ug/m^3 (1976, 1979, 1980, 1981) to 7,200 ug/m^3 (1977). Addition of the worst case CO concentration due to construction of the Arizona SSC Site (1,058 ug/m^3 for 1-hr, 867 ug/m^3 for 8-hr, See Vol. IV, Appendix 8, Page 17, Table 8-9) to these background levels would not produce exceedances of the NAAQS for CO. It should be noted that the CO measurements made at the Sierra Estrella Sailport have been documented in: (a) Section 5 of the March 15, 1988 Arizona Submittal to the DOE, (b) the PSD Permit Application of Provident Energy Company, and (c) the annual air quality reports issued by the Arizona Department of Environmental Quality (formerly the Arizona Department of Health Services). Correct the DEIS language so that these facts are recognized.

104 pp. 13, sec 8.4.1. The first paragraph states "Data used in developing the emissions inventory calculation reflect the influence of local conditions on the design, control methods, and operations of the SSC in Arizona." At this time it should be mentioned, as was done in Appendix 8, Table 8-9, that in some calculations air quality data, not likely to be representative of Phoenix or Tucson were used.

105 pp. 14, sec 8.4.1, Table 8-4. This Table gives the percentage of cut-and-cover collider ring as 20%. Yet previously (Volume IV, Appendix 1, sec. 1.2, pp. 1) the DEIS stated that it had reduced the amount of cut-and-cover possible at the site to 6.0 mi (or 11%). In this case the use of 20% is detrimental to the Arizona site as it increases the amount of fuel combustion emissions (Table 8-5) and fugitive dust emissions (Table 8-7). If changes are to be made to that proposed by the Arizona SSC Project some consistency would be appreciated and is rightfully expected.

106 pp. 17, Table 8-9. The specified background 1-hr and 8-hr CO concentrations which are representative of the Phoenix metropolitan area should be replaced by those measured at the Sierra Estrella Sailport. These measurements are discussed in the above comment.

Volume IV
Appendix 10

107 • sec. 10.3.3., pp. 2 The paragraph explaining the proposed sewage disposal comments that the method of sewage treatment proposed by the State of Arizona is unacceptable to the Arizona Department of Environmental Quality (ADEQ). It further explains that a tertiary treatment system would be required. This discrepancy arose from some confusion by P. Scheidiger of ADEQ on the volume of sewage to be produced. The attached letter, dated , rescinds this mistake and further remarks that the initial plan as proposed by the Arizona-Maricopa SSC Site Proposal is in fact adequate. This was supplied to the DEIS preparers

in a supplemental submission to the May 20, 1988 information request but for some reason was not considered in the writing of the DEIS.

Volume IV, Appendix 11

108 pp. 5, Sec. 11.3.1.2, second paragraph. The primary disturbance areas have been surveyed in large part for threatened and endangered species and none were found, supporting the statement that, "globeberry is unlikely to occur".

109 pp. 6, Sec. 11.3.1.2, fourth paragraph. The four locations of the night-blooming cereus have been specified (see Volume IV, Appendix 5A, Sec. 5.1.9.5.A.3, pp. 77); it is not true that these four locations are "...at unspecified sites".

pp. 7, Sec. 11.3.1.2, first paragraph. There is no reference listed for (Ross 1986).

110 pp. 7, Sec. 11.3.1.2. The first paragraph, second sentence, needs to be modified as in the summary volume (see response to Sec. 5.1.5.1.B.1, pp. 5-2, fourth paragraph, third sentence).

111 pp. 9, Sec. 11.3.1.3, first paragraph. The ephemeral drainages on the site have no real riparian communities. Some of the larger drainages support a poorly developed xeroriparian vegetation association. Generally, the desert washes support small desert trees, trees which are also present at lower densities on the pediments and mountain slopes.

112 pp. 9, Sec. 11.3.1.4, first paragraph. It is unlikely that the SSC project will cause an increase in cacti and reptile collection compared to that resulting from the new residential developments in the area. It is more likely that the SSC can prevent collection by controlling access. In either case, the DEIS statement is purely speculative with no basis in fact and it should be deleted.

113 pp. 9, Sec. 11.3.1.4, third paragraph. The correct spelling of 'sagarro' is 'saguaro'.

Volume IV
Appendix 14.2

114 pp. 8 to 10, Section 1, Roads. The following are general comments from The Arizona Department of Transportation given to the Arizona SSC Project for submittal in this document (ADOT 1988). They are concerning the construction of new roads and the upgrading of current ones as described in this section of the DEIS.

Maricopa-Mobile - Gila Bend Road

Any construction activity upgrading the dirt road would have almost zero impact on current traffic, current traffic being so low as to be insignificant. The proposed hazardous waste disposal facility has projected 8-10 trucks per day over the next several years. Mobile community does not generate more than 100 vehicle trips per day, thus such construction impacts would be minimal.

I-8 Access

In regard to connections to I-8 for the lower ring access, the Arizona Department of Transportation does not believe direct access to I-8 at uncontrolled locations is feasible. We proposed one point of connection at the Freeman TI (traffic interchange) with a ring access road providing local site access. Regarding traffic impacts to I-8, there should be none in either the near or long term. I-8 operates well below capacity both now and in the twenty year projections. Project traffic exiting or entering I-8 via the existing interchange would have almost no impact.

Estrella Freeway

Regarding the proposed Estrella Freeway it is anticipated this freeway would be coincident with the SSC access road as it connected to Vekol TI, but separate from the SSC facilities. The Estrella road would, when available, provide employee access to community facilities. Additionally, the Arizona proposal does include funding for temporary access with a 2-lane facility, along this corridor. It should be noted the Arizona proposal does now include funding for a 4-lane road from Vekol TI to the campus area.

The Modified access roads plan shown on 14.2.1-2 essentially depict the proposed Arizona plan with the exception of the 2-lane access north to the possible Estrella Freeway.

pp. 17-18, Section 2, Rail. The following are comments from the Arizona Department of Transportation regarding the sections on Rail.

Southern Pacific Main Line

115 Arizona has never experienced the closing of a railroad during roadway construction. We do not in this plan foresee any closure of rail traffic for any type of roadway construction. Therefore, in the worst case, we anticipate a reduction of rail traffic speeds through the construction zones.

Grade crossings are considered viable in the short-term to permit earliest start up of SSC construction. Grade separations are considered in the longer term when general traffic is present.

116 pp. 100, Section 14.2.2.3, ninth paragraph. The last sentence reads: "On a utility-specific basis APS does not project that its reserves would be sufficient to meet the SSC load in 1996 unless construction of planned generating units is accelerated, power purchases are made, or other arrangements for obtaining

power are concluded.

This statement implies a negative tone tending to obscure the positive statements of commitment and support for the SSC Project by APS management. We suggest that this statement be rephrased as follows:

APS does not plan to have excess reserves in 1996, but when the proposal to site the SSC at the Arizona Maricopa Site is confirmed, APS will modify its resource plan to provide power for the SSC by accelerating the timing of planned generating units and/or power purchases or by some other arrangement to obtain the required power.

pp. 102, Table 14.2.2-1. The subject table shows the APS 20-year load forecast and resource schedule for the yearz 1987 to 2006 from the 1987 APS Long Range Forecast as provided to DOE on 3/15/88. This plan was developed without including the potential load of the SSC; therefore, the final columns in the table which highlight "Planned Reserves w/o SSC" versus "Planned Reserves w/SSC" are erroneous and misleading. The APS plan can and will be modified to accommodate both SSC and secondary loads, a well as the required 16% reserve margin, when the proposal to site the SSC at the Arizona Maricopa Site is confirmed.

117 Any electric utility which gains an unforeseeable 200-MW load such as the SSC will necessarily have to change its resource plan corresponding to the change in load forecast. Most utilities do this on an annual basis in an attempt to iterate towards an action plan which provides an amount of resources (generation plus purchases minus sales) approximately equal to loads plus required reserves.

APS suggest that the entire Table 14.2.2-1 be deleted from the final draft of the EIS because the columns labeled "Planned Reserves w/SSC" and "Percent Reserves w/SSC" do not represent APS plans. The following statements could be substituted for the table:

With 1987 generating capacity of 3,660 MW and a planned capacity of 5,021 MW for 1996, APS more than meets DOE criteria which requires generation capacity to be greater than 2,400 MW (12 times the SSC peak load of 200 MW), both now and in the future. APS operates 5 major power plants (Agua Fria, Kyrene, Ocotillo, Palo Verde, and West Phoenix) located within 50 miles of the Arizona SSC site with 21 generating units having a presently installed generating capacity which totals 5,499.4 MW.

pp. 103, Section 14.2.2.3, second paragraph. The first sentence states: "Because of the influx of construction and operations workers and secondary commercial and industrial activities supporting the SSC and its workers, APS
118 cannot meet the demand of increased growth in the SSC region without affecting the schedule of future generating capacity and power purchases."

This statement implies a negative tone tending to obscure the positive statements of commitment and support for the SSC Project by APS management. We suggest that this statement be rephrased as follows:

APS is committed to meet the demand of increased growth in the SSC region

and will assure a sufficient and reliable supply of power to provide for both SSC load and secondary loads while maintaining a 16% reserve margin.

pp. 103, Section 14.2.2.3, sixth paragraph. This paragraph states: "The final location of the proposed SSC facility may require the relocation of several transmission lines in the vicinity. This would require some rerouting of lines to maintain system continuity and customer service. Any impacts from this rerouting would be short-term and negligible."

These statements do not apply to the Arizona site. The only lines in the area are an APS 69-kV distribution line presently being constructed along the Maricopa-Gila Bend Road at the west intersection of the road and the SSC ring. The next closest line is a Tucson Electric Power Company 345-kV line which is located approximately 5 miles east of the Arizona site. Otherwise, the closest
119 lines are the APS Liberty-Gila Bend 230-kV line, located about 10 miles to the west at its closest approach, and the APS 230-kV lines terminating at Santa Rosa Substation, located approximately 15 miles due east of the site. The Santa Rosa 230-kV lines emanate to the north (one line to Kyrene Power Plant) and south (two lines to Saguaro Power Plant). It is not anticipated that any lines would need to be relocated, nor any outage to customers occur, in order to locate the SSC at the Maricopa Site.

The above paragraph should be deleted and replaced with the following:

It is not anticipated that any existing power transmission lines would need to be relocated nor that any interruption of service to existing customers be required in order to locate the SSC at the Arizona site.

pp. 103, Section 14.2.2.3, sixth paragraph. This paragraph states: "Currently, 12,272 MW of the total 15,803 MW net capacity additions planned to be operational in 1996 are not yet under construction. Thus, the region would have a reduced ability to respond to increases in demand in the 1990s if construction of this capacity does not proceed on schedule."

120 The above information is from page 81 of the September, 1987, publication from the North American Electric Reliability Council (NERC) titled 1987 Reliability assessment, the Future of Bulk Electric System Reliability in North America 1987-1996, which was provided to DOE by APS on 3/15/88 in the response to RRFI Question No. 11, Utility Data Section. These statements apply to the entire Western Systems Coordinating Council (WSCC) power system, including 14 western states, the northern part of the Mexican province of Baja California, and the Canadian provinces of British Columbia and Alberta. Broad statements such as this do not reflect upon APS ability to meet future loads on the APS system, and we suggest that the subject text be deleted from the final draft of the EIS.

The following figures are from the 1986 Arizona Loads and Resources Report 1987 to 1986:

1987 gen. capacity owned by AZ utilities	14,656.1 MW
additional generating capacity 1987-1996	3,022.3 MW
1996 gen. capacity owned by AZ utilities	17,678.4 MW

The following figures are from the most recent APS Long Range Forecast dated 6/3/87 (This is information previously provided by APS on 3/15/88 in the response to RFI Question No. 4, Utility Data Section):

1987 gen. capacity owned by APS	3,660 MW
additional APS gen. capacity 1988 - 1996	1,361 MW
1996 gen. capacity owned by APS	5,021 MW

Of the 1,361 MW of generation planned to be added by APS between now and 1996, the Long Range Forecast shows that only 12 MW (less than 1%) represent construction at a new site. The remaining 1,349 MW of new generation will be provided a follows:

Palo Verde Unit 3 (operational 1/10/88)	370 MW
Cholla Unit 4 recapture from layoff to SCE	350 MW
Ocotillo Units 1 & 2 recommissioning	229 MW
Ocotillo Solar Power Facility	10 MW
Saguaro Units 1 & 2 recommissioning	214 MW
Cholla Units 2 & 3 uprate	68 MW
West Phoenix Units 4, 5, & 6 recommissioning	108 MW
TOTAL	1,349 MW

There should be no doubt regarding the ability of APS to provide power to its customers. APS has a long history of successfully meeting the challenge of rapid load growth in Arizona and has not failed to provide additional generating capacity in a timely manner during a period when the growth rate was much higher than is forecast for the next 10 years.

121 pp. 104, Section 14.2.2.3. The first paragraph states: "An issue expected to be of continuing concern during the next 10 years is the effect of heavy economy transfers on bulk electric power system reliability. Over the last few years, reduced gas and oil prices have allowed utilities to generate energy more economically with local gas and oil-fired units. Because of this increased incentive for economic energy transfers, portions of the regional transmission systems are loaded to higher levels for sustained periods of time. The mode of operation poses greater risks to system reliability because of reduced operating margin. It is expected that over the long term, the cost differential between gas/oil-fired generating units and other generating resources would increase, thereby exacerbating this problem."

APS suggests that the above paragraph be deleted because it is a slightly inaccurate and highly irrelevant paraphrase of text from the September, 1987, publication from the North American Electric Reliability Council (NERC) titled 1987 Reliability Assessment, the Future of Bulk Electric System Reliability in North America 1987-1996. Taken out of context, the above statements appear to present a cause for concern regarding the reliability of transmission to the SSC; however, the paragraph immediately following the paraphrased section of the NERC report indicates that the primary area of concern is the 500-kV alternating current (AC) Pacific Intertie, electrically remote from loads in southern Arizona. The AC Pacific Intertie consists of two 500-kV lines extending from hydroelectric generation in the Pacific Northwest to California utilities. The topic is concluded with these statements: "Operating restrictions (defined by nomograms) have

been imposed to limit simultaneous imports to California. These operating restrictions are required to assure that reliable system performance can be maintained in the event of a disturbance." In other words, no transmission problem exists because California utilities coordinate with each other to limit their power imports from neighboring states.

Also omitted from the paraphrased text was the preceding sentence which states: "The WSCC transmission systems are adequate to accommodate anticipated firm and most economy energy transfer schedules during the 10-year period." Note that an economy energy transfer schedule is a commitment from one utility to sell power to another utility and is agreed to only after all firm loads, such as the SSC, are assured adequate and reliable transmission capacity.

Enclosed is a copy of pages 80 to 87 of the NERC report, which contain the entire report on the WSCC. The portion of text which has been paraphrased in the DEIS is highlighted on pp. 81-82. Please note that a specific report on the Arizona-New Mexico Power Area is on pp. 85-86. APS proposes that the following text containing quotes from this NERC report on the WSCC replace the subject text in the final draft of the EIS:

Generation Capacity

"[WSCC] Generation capacity margins projected for the summer peak decrease from 30% to 22% over the next 10 years. These capacity margins are adequate and will enable WSCC to respond to additional load growth above that forecasted in the event of an accelerated economic recovery." (p. 81)

In Arizona-New Mexico Power Area (AS-NM), consisting of Arizona, most of New Mexico and the western-most part of Texas, "generating capacity margins during summer peak will decrease from 37% to 28% over the next 10 years but will be adequate to supply projected loads." (p. 85)

122

The AZ-NM area utilities continue to forecast generating capacity levels which are significantly greater than their minimum capacity margins." (p. 86)

Transmission Adequacy and Operations

"The [WSCC] transmission systems as planned will be adequate to serve projected loads." (p. 80) Additionally, because there exists transmission capacity above and beyond that require to serve all loads, "the WSCC transmission systems are adequate to accommodate anticipated firm and most economy energy transfer schedules during the 10-year period (1987-1996." (p. 81)

"The AZ-NM utilities are actively working with California utilities, both directly and through WSCC, to increase the assurance that the present and proposed remedial action schemes [associated with the AC Pacific Intertie] will not degrade system reliability in the AZ-NM area." (p. 86) Utmost care is used to ensure that any potential problems with the Pacific Intertie cannot adversely affect other power systems in the WSCC.

It should be noted that the NERC Reliability Assessment does not provide as favorable a report for electric power systems in most other areas of the North American continent.

Volume IV, Appendix 15

References. Please add to the references:

123 Montero, L., Bostwick, T., Minnis, P., and Rice, G. An Archaeological Survey of the Maricopa SSC Site, Arizona. Draft Report on file at the Office of Cultural Resource Management, Department of Anthropology, Arizona State University. Tempe, Arizona. 1988

LETTER 429

SUITE 10
LEGISLATIVE PLAZA
NASHVILLE, TN 37219
(615) 741-2062

P. O. BOX 3028
BRISTOL, TN 37625
(615) 968-4112

Senate Chamber
State of Tennessee
NASHVILLE

SENATOR CARL R. MOORE

SENATE MAJORITY LEADER
MEMBER OF COMMITTEES
CALENDAR
DELAYED BILLS
EDUCATION
ENERGY AND NATURAL RESOURCES
FINANCE, WAYS & MEANS

September 26, 1988

TO: Dr. Wilmot Hess, Chairman
S.S.C. Site Task Force
Office of Energy Research
Department of Energy
Washington, DC 20545

Dear Dr. Wilmot and Fellow Committee Members,

This letter is submitted to lend my supoprt and encouragement on behalf of East Tennessee for placement of the U.S. Department of Energy's Superconducting Super Collider in the State of Tennessee.

Taking into consideration the fact that Tennessee's proposal site contains ideal geological and environmental requirements that could substantially cut the cost of construction and development far below that of other state proposals; along with the convenience of both the Metro Airport, two major highways and an available railroad directly on this proposed site, surely make Tennessee one of the strongest and most viable state contenders for a project of such magnitude.

1 Other very positive factors for placement of such a facility in Tennessee is the convenience to numerous skilled construction workers, our large industrial base in the proposed site area and nearby communities, and abundant water supply and competitively priced T.V.A. electrical power sources. This particular region of Tennessee can also very easily absorb the community of nearly 10,000 scientists, research analysts and permanent employees and their families that would relocate here due to the S.S.C. facility.

Being a member of the Senate Education Committee, I realize that Tennessee stands as a very motivating and visible force in particle physics research nationwide. Research continues at the University of Tennessee, and the physics department there conducts ongoing research at Fermilab in Illinois. The University of Tennessee along with Vanderbilt University in Nashville continue operating the project that began several years ago in heavy ion research. The University of Tennessee and Vanderbilt University are not alone in their research in Tennessee, but other research and technical facilities across the state could contribute to the efforts of

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Senate Chamber
State of Tennessee
NASHVILLE

SENATOR CARL R. MOORE

SENATE MAJORITY LEADER
MEMBER OF COMMITTEES
CALENDAR
DELAYED BILLS
EDUCATION
ENERGY AND NATURAL RESOURCES
FINANCE, WAYS & MEANS

the S.S.C. facility - such as the Oak Ridge National Laboratory, the Tennessee Valley Authority, Tennessee Technological University, and Middle Tennessee State University.

Due to the solid proof that has determined this facility to be enviromentally safe because no nuclear chain reactions are created in the research, and considering the fact that very low-level amounts of radioactive waste material will be generated and the waste will be packaged and transported to a licensed disposal facility, we in East Tennessee are convinced this facility can in no way harm our citizens or the environment in which we live. Thus, we are prepared to give our full endorsement for the S.S.C. facility.

I encourage you to review Tennessee's proposal as the best suited and most productive site for the Department of Energy's Super Collider Project, and certainly offer my complete endorsement and solid commitment to assist in any way necessary to the proposal submitted by Governor McWherter and the entire State of Tennessee.

Sincerely,

Carl R. Moore

Carl R. Moore

CRM/th

cc: The Honorable Ned Ray McWherter
Commissioner Carl Johnson

LETTER 430

JACKSON ALLIANCE
We're good for business

September 26, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER/65, GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

As President of the Jackson Alliance for Business Development, which represents Jackson County economic development efforts, I am pleased to reconfirm our support for the Superconducting Super Collider and the "Stockbridge Site".

The Jackson manufacturing and supplier community offers unique support for this project through a cadre of skilled employees ready to join this effort and assist in construction and continued operation.

1 The realization of this project in Stockbridge will provide an economic development stimulus needed in the Jackson area. Our economic development and planning process is well developed and look forward to guiding the character and direction of a more rapid growth both in manufacturing and support services. It is expected that present land use patterns will accommodate growth resulting from this project.

The Jackson Alliance Board of Directors recognizes the SSC project would be an important source of growth and would bring with it needed diversification in a community heavily flavored by the automotive industry.

We offer a strong base of support for the SSC project and pledge a continuing effort for its construction and operation.

Sincerely yours,

Bernard Levy

Bernard Levy
President

BL/kjh

Jackson, Michigan 49201 • (517) 788-4455

LETTER 431

Dr. Wilmont Hess
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Dept. of Energy
Washington, D.C. 20545

Dear Mr. Hess:

1 I am against the Superconducting Super Collider being placed in Michigan.

Sincerely,

Gayle S. Chipchase
1101 Tuttle Road
Mason, Michigan
48854

LETTER 432

26 September 1988
Apartment 306
2604 Westerland
Houston, Texas 77063

SSC Draft EIS Comments
Wilmot Hess
SSC Site Task Force
Office of Energy Research
ER-65 GTN
Department of Energy
Washington, D.C. 20545

1 I am writing in favor of placement of the Superconducting Supercollider in the area near Waxahachie, Texas.

Placement of the facility in this area will result in little or no harmful enviromental damage while at the same time causing tremendous economic revitalization.

I remain

Respectfully,

Michael Dillingham

LETTER 433

WEST CHAMBERS COUNTY CHAMBER OF COMMERCE

POST OFFICE BOX 501
MONT BELVIEU, TEXAS 77580
TELEPHONE (713) 576-5440

September 6, 1988

Dr. Wilmot Hess
Chairman
SSC Site Task Force
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

The West Chambers County Chamber of Commerce is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

1 We strongly support a Federal decision to locate the SSC in Ellis County, Texas. The positive economic impact of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate.

The beneficial impact of the scientific community which will grow with the SSC are important to our region. By affiliating Texas's universities and our private sector research capabilities with SSC programs, a mutual benefit both to SSC development as well as for our technology base will result.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

Bob Davis, President
West Chambers County Chamber of Commerce

RESOLUTION
OF
WEST CHAMBERS COUNTY CHAMBER OF COMMERCE
BOARD OF DIRECTORS

WHEREAS, the proposed Superconducting Super Collider (SSC) will be the largest and most ambitious scientific project ever constructed in the world; and

WHEREAS, the Super Collider, a 53-mile oval tunnel consisting of two rings of 10,000 superconducting magnets, will allow scientists from around the world to investigate the basic constituents of matter and to obtain knowledge about the origins of the universe; and

WHEREAS, the knowledge gained from both building and using the Super Collider will benefit the nation now and in future generations: and

WHEREAS, Texas is one of seven finalists for this project which will create at least 4,500 jobs during construction and roughly 2,500 positions will become available once the facility is fully operational; and

WHEREAS, Texas is the home of great public and private universities and colleges, which can readily provide much needed expertise for the project and capable resources to accelerate the spin off research and development to benefit mankind;

NOW, THEREFORE, BE IT RESOLVED that the WEST CHAMBERS COUNTY CHAMBER OF COMMERCE, Chambers County, Texas, does hereby wholeheartedly endorse the construction of the Superconducting Super Collider and the scientific, economic and technological benefits it will bring the nation, and that the West Chambers County Chamber of Commerce enthusiastically supports the location of the Super Collider in Texas.

READ, APPROVED AND ADOPTED this 12th day of September, with all board members present voting: "aye".

Robert P. Davis
President

I hereby certify that the above Resolution was adopted on September 12, 1988.

Joseph D. Cook
Treasurer

LETTER 434

September 26, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U. S. Department of Energy
Washington, DC 20545

Dear Dr. Hess:

I strongly urge you to select the most logical, cost-effective site available to build the SSC: ILLINOIS! I fully concur with your findings in the draft Environmental Impact Statement that indicates the proposed site at Fermilab:

1

- -- Offers known, consistent geology for tunnel construction;
- -- Has a strong, established infrastructure of roads, airports, schools, hospitals and utilities that would have to be built from scratch at some other sites;
- -- Features an established, single source of electrical power with sufficient capacity to meet the energy needs of the SSC at a relatively low cost.

I urge you to thoroughly review these points when you make a decision on the SSC. I know you will agree that ILLINOIS is the best choice!

Sincerely,

Bill Farita

LETTER 435

Robert J. Wesolowski
3824 Bradford Square Drive
Ann Arbor, MI 48103

Mr. Hess,

The SuperCollider should be built in Michigan because the geology is right, the academic institutions are right, and the ultimate cost of construction is right. Perhaps most importantly, as you are very aware, the question of security is right.

1 The STOCKBRIDGE area is populated with longtime residents who take great pride in their heritage and their homes. Thus, any threat of outside forces would be quickly noticed by local residents. This may not be considered in terms of money, but the Stockbridge people would help keep an eye on the project.

Sincerely,

R.J. Wesolowski

LETTER 473

Jack W. Plunkett
Post Office Box 100
Boerne, Texas 78006
(512) 755-8810

publisher
Corporate Jobs Outlook!

author
The Almanac of American Employers

September 30, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U. S. Department of Energy
Washington, DC 20545

Dear Dr. Hess,

On September 27th, I made the enclosed statement at the Department of Energy's hearings at Waxahachie.

I thought you might want a hard copy for your records.

Sincerely,

Jack W. Plunkett

Jack W. Plunkett
JWP/ct

LETTER 473 (CONTINUED)

Jack W. Plunkett
Post Office Box 100
Boerne, Texas 78006
(512) 755-8810

publisher
Corporate Jobs Outlook

author
The Almanac of American Employers

September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U. S. Department of Energy
Washington, DC 20545

Mr. Chairman,

Thank you for sending me a copy of your excellent study. I suggest the Waxahachie Chamber of Commerce adopt it as their best sales piece, since it details all of the many reasons why Ellis County is the perfect location for building any large project, especially the SSC.

1 Quoting from your own report, "If the SSC were built, certain environmental impacts would occur no matter which site was chosen....." That's understandable. But, you have detailed no significant impacts on the Texas site. For example, only 2 water wells would be lost, compared to 350 in Tennessee, and less than 10 acres of wetlands would be affected. The SSC would require only a small portion of the community's excess water supply.
Here, your construction would be above the water table, and the spoils from digging would be recycled. Unlike many other proposed locations, conditions for construction are excellent, no adaptations are required for your plans, and there would be no period of public finance loss. Other sites would suffer considerable economic losses. Here, your tunnelling would be entirely within chalk, and there would be the lowest possible seismic risk. Here, habitat loss is nominal. Other sites suffer risks to species including the American Bald Eagle. In fact, in Ellis County, the SSC will be a good neighbor, barely disturbing the gently rolling cotton fields that will lie above it.

I'd like to summarize some factors that will have a positive impact on the environmental issues.
1) First, I ask you to think back a few years to the construction of the Dallas\Fort Worth International Airport. The Greater Dallas Area has a proven ability to efficiently complete mammoth construction projects, and the Airport is

the best example. It's the largest airport in the nation in terms of land size, at 18,000 acres, even larger than the SSC. It is one of the most recently constructed major airports in the country, and Texas' success in building it eximplifies the type of regional cooperation and talent that will make the construction of the SSC successful here. From this project, Texas gained valuable experience in putting together large parcels of land with the least possible interference with the population and environment.

2) Next, a large portion of the SSC's needs is in roads. With the largest highway system in the nation by far, Texas has unequalled experience in building and maintaining the very types of roads necessary for the successful construction and operation of the SSC.

3) Finally, there are the advantages of our favorable cost of construction, and our highly desirable quality of life. I suggest that you consider the Places Rated Almanac, published by Rand McNally in 1985, a respected and objective study of the nation's metropolitan areas. In its comparison of 10 vital environemtal, economic and cultural qualities in over 300 regions of America, the Dallas area scored among the top 10% in Health Care, Environmental Factors, Transportation, Education, The Arts, and Economic Factors. In fact, Dallas' overall Places Rated score was the highest among your potential SSC locations that are near a major city.

These are the same reasons that major corporations have recently relocated their headquarters to the Dallas area, such as J. C. Penney, American Airlines and Kimberly Clark. The same reasons why technical leaders like Collins Radio, Texas Instruments and EDS were born here and have blossomed here. This productive and cost-effective region will be fertile ground for the SSC, enabling its technicians to fulfill missions even beyond current expectations.

Your own study concludes that rapid growth will continue in Ellis County, regardless of whether the SSC is built here, and you are exactly right. But here is a community that knows how to seize this opportunity to control the quality of its future growth, and build upon the top caliber of future residents that this scientific venture will attract.

Your own criteria for site selection paint a vivid case for building the SSC in Texas: based on the ease of tunneling and the nominal impact on the environment, based on available utilities and infrastructure, based on the setting, and based on the regional resources and conditions.

And now for the most important environmental points:
...If you've ever spent a winter in Denver or Ann Arbor, or a summer in Phoenix
...If you've ever tried to get to the Chicago airport on time, or tried to get a direct flight to anywhere from Nashville
...If you've ever been in a community as small as Raleigh/Durham, and tried to find the things you need to complete a major project
you'd have a hard time picking any other site than Ellis County, Texas to build a project as complex and important as the SSC.

Thank you

Jack W. Plunkett,
an Ellis County property owner
JWP/ct

LETTER 487

ROBERT L. TRANTHAM
EXECUTIVE DIRECTOR
BROWNSVILLE-HAYWOOD CO.
CHAMBER OF COMMERCE
PRESIDENT-TENNESSEE
CHAMBER OF COMMERCE
EXECUTIVES (TCCE)
BROWNSVILLE, TN

DEPT. OF ENERGY HEARING
SEPTEMBER 29, 1988
MTSU - 7:40 P.M.
SUPPORT/SSC PROJECT

_____ CHAIRPERSON:

AS PRESIDENT OF THE TENNESSEE CHAMBER OF COMMERCE EXECUTIVES AND ON BEHALF OF THE MORE THAN 95 STATE-WIDE CHAMBERS OF COMMERCE, WELCOME TO OUR SPECIAL PLACE, TENNESSEE. WE ARE HONORED BY THE FACT THAT TENNESSEE IS A FINALIST FOR THIS VERY UNIQUE PROJECT, ESPECIALLY WHEN WE REALIZE, NOT ONLY THE MAGNITUDE OF THE PROJECT, BUT THE FACT THAT 43 PROPOSALS FROM 25 STATES SOUGHT THE POSITION WE NOW FIND OURSELVES IN. . .AN OPPORTUNITY TO BECOME THE HOME OF THE SSC. OUR ORGANIZATION SENT TO GOVERNOR McWHERTER, A LETTER OF UNANIMOUS SUPPORT FOR THE SSC PROJECT AND OFFERED OUR ASSISTANCE IN WHATEVER MANNER MAY BE DEEMED APPROPRIATE. TENNESSEE AND TENNESSEANS ARE PROUD TO BE A PART OF THIS PROCESS.

1

THE FINDINGS OF THE EIS WILL ADDRESS THE ENVIRONMENTAL IMPACT OF THE SSC ON TENNESSEE AND TENNESSEE'S ABILITY TO ACCOMMODATE THE SSC.

TENNESSEE HAS A SOUND BUSINESS CLIMATE FOR SUPPORTING BUSINESS AND INDUSTRY OF THIS MAGNITUDE AND CHAMBERS OF COMMERCE, WORKING TOGETHER, CAN PROVIDE VALUABLE ASSISTANCE IN HELPING SPOUSES FIND JOBS WHO WOULD COME TO TENNESSEE WITH THIS PROJECT. AND OF COURSE, TENNESSEE'S HOSPITALITY WOULD BE EXTENDED TO THOSE FROM FOREIGN COUNTRIES WHO WOULD WORK WITH THE SSC PROJECT.

LADIES AND GENTLEMEN, THIS TENNESSEE IS A GOOD PLACE TO LIVE, TO WORK, TO RAISE A FAMILY, TO START A BUSINESS OR EXPAND ONE. IT IS A TRADITION TO WHICH WE ARE COMMITTED. THIS TENNESSEE WELCOMES THE CHALLENGE OF THE SSC.

THE DESIGNATED SITE WITHIN THE COUNTIES OF BEDFORD, MARSHALL, RUTHERFORD AND WILLIAMSON MEETS THE TECHNICAL REQUIREMENTS ESTABLISHED FOR THE SUPERCONDUCTING SUPER COLLIDER AS ESTABLISHED BY THE DEPARTMENT OF ENERGY.

WE KNOW THAT WHILE THE EXISTING QUALITY OF LIFE WOULD CONTINUE ON THE SURFACE, BENEATH THE SURFACE, SCIENTISTS FROM AROUND THE WORLD WOULD STUDY IN DEPTH AND LEARN ABOUT WHAT IS, TODAY,, ONLY THOUGHT AND THEORY.

IT IS THIS POTENTIAL THAT EXCITES THIS TENNESSEE. THIS IS THE CHALLENGE THAT WE WELCOME. THIS IS THE TOMORROW THAT TENNESSEE IS ALL ABOUT. . .A GLORIOUS PAST AND AN EVEN MORE GLORIOUS FUTURE. , .A PEOPLE AND A PLACE READY TO ASSUME A LEADERSHIP ROLE IN WORLD-WIDE SCIENTIFIC TECHNOLOGY.

FROM THE MIGHTY MISSISSIPPI RIVER TO OUR WEST - TO THE GRAND MOUNTAINS ON OUR EAST, THIS TENNESSEE, LADIES AND GENTLEMEN, IS READY!

LETTER 488

EDWARD FLOYD

Occidental Chemical Corporation, SANTAFE PIKE, COLUMBIA, TN

SUPERCOLLIDER DRAFT ENVIRONMENTAL IMPACT STATEMENT RE: AIR QUALITY STANDARDS

My name is Eddie Floyd. I am the Manager of Environment, Safety and Health for Occidental Chemicals Phosphorus Products Group located in Columbia, Tennessee. I am here to comment on the Draft Environmental Impact statement regarding dust control during the construction phase of the Supercollider project.

My company is involved in surface mining phosphate in the Middle Tennessee area. Because dust is generated during this phase of our operations, we have developed some expertise in dust control. Controlling dust will also be important during the construction phase of the Supercollider project; so I'd like to share our experience with this issue.

1 In our operation, trucks haul material from the mine sites to the processing plant. Since 1980, we have pursued an aggressive dust control program which has been very successful.

By using a 5,000 gallon tandem axle water truck and dust suppressant in key areas, we are confident that 90 to 95% of the road dust is controlled. Ambient air monitors on site document a 50% reduction in total suspended particulates from the manufacturing plant since the road watering project was implemented.

Our experience shows that controlling dust will require watering roads more than twice a day. What's needed is an ongoing watering program. Even if it rains in the morning, roads may have to be watered in the afternoon.

Occidental Chemical Corporation

On unpaved county roads, an environmentally approved dust suppression material called Dustaside can be used in front of residential houses to minimize the nuisance dust. Road dust particles are generally larger and settle out quickly, making road dust more of a nuisance than a health problem.

In short, I would say that there is no reason to believe that Air Quality Standards will be violated by dust during the site construction phase of this project -- if a well planned dust control program is developed and implemented.

EWF/bbr

9/29/88

LETTER 489

STATEMENT ON DEPARTMENT OF ENERGY REPORT

Name: Jay Workman

Address: Rt. 2, Box 327, Franklin Rd., Murfreesboro, TN 37129

Employer: Bill Rice Ranch, Rt. 2, Franklin Rd., Murfreesboro, TN

I would like to thank the Department of Energy for sending the Environmental Impact Statement to us. I have spent several hours going over the report. I must say it is a very good report and filled with much needed information.

As I stated in my introduction, I am a resident of Franklin Road on State Route 96 and also on staff with the Bill Rice Ranch, which is located in this same area. To say that I am concerned about the collider and the many questions that do not have solid yes or no answers would be a great understatement. The collider would engulf my home as well as the Bill Rice Ranch. So, my concern is two-fold.

The Bill Rice Ranch is listed by the D.O.E. report as a recreational camp for the deaf. But, it is much more than that. The Bill Rice Ranch has for the last 35 years reached out across this great country of ours, and now to many foreign countries, to help those who had not been helped before. Nowhere in this exhausted report do I see how the loss of such a positive impact on lives would and could be replaced.

The Bill Rice Ranch is not set aside as a historical site, but history is all around us. Once on the ranch, it does not take long to see this. You can find the grave site of a Confederate State of America Soldier, by the name of William H. Watson of Company D; Alter Mountain, here, also, Indian mounds can be found; and also, the remains of a frontier homestead. There is another pioneer graveyard where you can still read the marker of Sara Haynes, who was born on June 10, 1786, and died Nov. 5, 1856. She was born during the days of George Washington, helped settle the land, perhaps fought Indians, saw Tennessee become a state and died five years before the outbreak of the Civil War. The Bill Rice Ranch is not just a part of past history, but a place where history is made everyday. This year alone, over 8,700 people made their way to the Bill Rice Ranch. Of that 8,700 - 1,393 were deaf young people and adults. And, without solid answers to the danger physically, emotionally, and environmentally, it is hard for us to see a positive effect that the collider would bring to Middle Tennessee.

1

The Bill Rice Ranch is more than a recreational camp, it is a camp where lives are changed, where moral values are taught, and most of all where the deaf and hearing are taught about God.

I do not know how you believe about God. I do not know if you have ever trusted Christ as your personal Saviour, but I do know you understand the importance of strong moral values and the high value it places on life.

In the study put out by the D.O.E., I could not get solid answers to the following questions and their immediate and long term effects:

2 (1) The uncertainty of the handling and distribution of radioactive waste materials

3 (2) The effect on the water supply

4 (3) The amount of radiation that would be released in case of a leak

5 (4) The long-term effect on wildlife

1 (5) The loss of historical value in Middle Tennessee

6 (6) The long-term effect on livestock and land

7 (7) The question whether the collider would even have an over all positive impact on the economy of the three counties involved.

It would seem that with so many uncertainties and unanswered questions, if the collider has to be built, a location that would effect fewer people and have less impact on the environment would be a wiser choice. I realize this is not a popular stand, and I realize this is not a meeting for or against the collider, and I respect this request. I am concerned that we learn all we can about making America a stronger and more competitive country. But, I am more concerned in changing lives for the better and to have stronger 8 values than what the collider would do for America.

In closing, I would like to say the potential of the collider is beyond my imagination. But, this I know, with all the uncertainties that would be caused and all the lives that would be changed, it would be a great loss to Middle Tennessee. It would be sad to lose the Bill Rice Ranch to me, as a resident of this great State, and to have the collider located in this area.

I would like on behalf of the Bill Rice Ranch and myself as a resident of Murfreesboro to thank the committee for the opportunity to express my views and concerns.

Jay Workman

Jay Workman
Bill Rice Ranch, Inc.
Rt. 2, Franklin Rd.
Murfreesboro,TN 37129

LETTER 490

September 29, 1988

STATEMENT BY
J. FREDERICK WEINHOLD
TENNESSEE SSC PROJECT MANAGER

Good evening Mr. Nolan, ladies and gentlemen:

My name is Fred Weinhold; I am the project manager for Tennessee's SSC site proposal. For the past year and a half, I have led the team of scientists and engineers from the universities, state agencies, TVA and private contractors who have developed the Tennessee site proposal. We have also gathered much of the data upon which the Tennessee sections of DOE draft EIS are based.

Having been responsible for preparing another EIS myself, I am aware of the very difficult task which DOE and it contractors faced in preparing the document under consideration today. By and large, I think they did a good job in the limited time available. Our major concerns are being addressed by other members of the team and other experts on these subjects. Our formal comments will be provided in writing at a later date.

In my brief remarks this evening, I would like to focus on the state's proposals for dealing with environmental and socioeconomic impacts which are already known and those where uncertainties remain. Key to dealing effectively with all of them is the SSC Regional Authority which was created by House Bill 1266 and signed by Governor McWherter on April 4, 1988. The authority will be set up when the state is designated as the preferred site. It will be governed by a 17 person board of directors representing the four affected counties, the state government, and the research physics community. It will have broad powers to deal with the concerns of the local residents and local governments as well as being the state's primary interface with DOE.

The authority will play a key role in helping to resolve concerns in several areas:

2 <u>Socioeconomic impacts</u> -- The EIS used a standard model for estimating the numbers of workers and their families that would be moving into the region. This estimate represents about half of the total construction and operating employees. The Tennessee experience noted in our proposal suggests only one fourth to one third of the jobs for a project like this would go to individuals from outside the region. The EIS recognizes the wide uncertainty and recommends that socioeconomic monitoring be done to find out what really happens. The authority would work with DOE and its contractors to develop the necessary information and then use it

to help the local communities plan for the necessary services. It would also be able to go the next step and provide appropriate financial guarantees and support through state agencies and the Legislature as needed.

2 Geology/hydrogeology concerns--From the outset of Tennessee's site selection process, we have employed the technical expertise of individuals in the state agencies, nearby universities and private firms familiar with Middle Tennessee's geology. These individuals have enabled us to propose the accelerator tunnels at a safe, dry depth. They have also enabled us to determine the potential impact of project surface construction on Snail Shell Cave--little since it is down stream and down wind--and to identify the engineering design and monitoring activities needed to protect the groundwater resources in the project area. Since this subject is of concern to local residents, the state water quality agencies and others in the state as well as to DOE, the authority to remain involved in the data gathering and monitoring programs set up to insure water quality.

3 Water supply--The proposal team recognized that existing water wells could be affected by the project and that groundwater should not be used to meet project needs. We therefore proposed to connect the project to existing public water supply system. We also indicated that the state would arrange for alternate water supplies if the wells of remaining residents were disturbed. The alternate supplies might come from new wells paid for by the state or by connections to public water supply systems. As Patricia Thompson mentioned this afternoon, only a small fraction of the 350 wells around the tunnel might actually be "lost."

These are but three examples of how the state, through the SSC Regional Authority, is prepared to deal with environmental and socioeconomic impacts which have already been identified. It will represent the state during the EIS supplement process if Tennessee is selected as the site for the SSC and will play a major role in identifying alternatives for mitigating environmental impacts. The authority will also negotiate the contracts with DOE for land and services. It has the flexibility and mandate from the Governor to deal with any such problems and concerns as they might arise throughout the life of the project.

Thank you.

LETTER 491

WILLIAMSON COUNTY CHAMBER OF COMMERCE

(615) 794-1225

City Hall
Post Office Box 156
Franklin, Tennessee 37065-0156

September 27, 1988

RE: SUPERCONDUCTING SUPER COLLIDER

TO WHOM IT MAY CONCERN:

At the September 27, 1988 meeting of the Williamson County Chamber of Commerce Board of Directors the following position was taken:

1 "The Williamson County Chamber of Commerce supports the efforts for Tennessee to secure the Superconducting Super Collider project providing the Environmental Impact Study finds it safe and healthy for Tennesseans."

The Williamson County Chamber of Commerce applauds and supports the action taken by the State of Tennessee in their efforts to secure the Superconducting Super Collider. We feel that our state has much to offer the high technology community and we encourage our citizens to support this valuable endeavor.

Yours truly,

Cathie Oldham, President

Nancy P. Conway
Executive Director

"HISTORY AND PROGRESS"

LETTER 492

WILLIAMSON COUNTY
Robert A. Ring, County Executive
Franklin, Tennessee 37064

September 29, 1988

MEMBERS OF THE SITE SELECTION TASK FORCE
SUPERCONDUCTING SUPER COLLIDER

I am Robert A. Ring, County Executive of Williamson County. I again wish to speak in favor of locating the S.S.C. in this region and in our County.

1 I also wish to make a part of the record a resolution of support for the S.S.C. project from the Williamson County Chamber of Commerce.

In addition, as past President of the Mid-Cumberland Council of Governments, I wish to file a resolution of support from that organization.

Robert A. Ring, County Executive
Williamson County, Tennessee

LETTER 493

RESOLUTION NO. 88-01

A RESOLUTION SUPPORTING THE LOCATION OF THE SUPERCONDUCTING SUPER COLLIDER IN MIDDLE TENNESSEE

WHEREAS, the United States Department of Energy (DOE) is seeking a location for a Superconducting Super Collider, a system of large electromagnets used to speed atomic particles at nearly the speed of light through an oval ring nearly 53 miles in circumference; and

WHEREAS, the proposed Superconducting Super Collider, or SSC, would be the largest particle accelerator ever designed and the largest basic research investment in the history of the world; would employ an estimated 4,500 workers during its six-year construction phase; would permanently employ some 3,000 persons, including 500 visiting scientists; and would attract researchers from all around the world; and

1 **WHEREAS,** the experience of similar particle accelerators in other parts of the world has proven them to be unobtrusive and environmentally safe facilities, because no nuclear chain reactions are created, because most of the facility is buried in an underground tunnel, and because no more low-level radiation would be generated than at a large research hospital; and

WHEREAS, the State of Tennessee, the Tennessee Technology Foundation, the Tennessee Valley Authority, the Tennessee Higher Education Commission, the Tennessee Board of Regents, the University of Tennessee and Vanderbilt University have joined together to propose a site in Middle Tennessee for the SSC, a site which includes part of two counties in the Mid-Cumberland Region, Williamson and Rutherford, and two counties in the South Central Tennessee Region, Marshall and Bedford; and

WHEREAS, this proposed site is particularly well-suited for the SSC, having a stable geological formation, access to a major airport, good highways and available railroads, abundant and low cost water and electricity, a strong scientific research community, a skilled construction and operating workforce, and a nearby industrial base capable of producing the technical components for the facility.

BE IT THEREFORE RESOLVED, that the Mid-Cumberland Council of Governments and Development District, representing the thirteen counties and forty-nine cities of upper Middle Tennessee, hereby endorses wholeheartedly the nomination of the site in Middle Tennessee and encourages the DOE to select this site as the location for the Superconducting Super Collider; and

BE IT FURTHER RESOLVED, that the Mid-Cumberland Council of Governments and Development District will cooperate fully with the above-named government, agencies, and institutions to assist in developing the proposal to the DOE, and upon approval by DOE of this site, will be prepared to assist in a range of project implementation activities, including technical assistance to area local governments and state agencies in the provision of needed infrastructure and establishment of services such as a public transportation system.

RESOLVED this fifteenth day of July, 1987.

Willis H. Maddox, President

ATTEST:

Maynard Pate, Executive Director

LETTER 494

PRESENTATION AT SUPER-COLLIDER HEARING

4:25 P.M. - SEPTEMBER 29, 1988
MIDDLE TENNESSEE STATE UNIVERSITY

presented by:
Frank Johns, Vice Mayor, Town of Smyrna

The Town of Smyrna is in firm support of the Super Collider locating the facility in Rutherford County. We recognize the quality of the technology and the quality of support and research personnel that will accompany such a viable project.

We are poised in the northwest corner of Rutherford County between Murfreesboro and Nashville and have a variety of small industries along with the largest industry in Rutherford County, Nissan Motor Manufacturing. We also serve as a bedroom community for Metro Nashville. We are located 12 miles southeast of the Nashville Airport Hub Terminal.

1 We are fortunate to have Smyrna Airport with its industrial facilities--8,500 foot runway and other support facilities that accommodate any aircraft size. Full support is available for private aircraft.

The philosophy of our city has been to encourage good growth, good paying jobs and provide the services that are required at a reasonable cost.

We try to operate the city as a business entity and have each service pay its way.

Presently we have an 8 million per day capacity water filtration plant. It is operating at about 50% capacity. We furnish water to La Vergne and have a 12" tie into the Consolidated Water District and to the City of Murfreesboro.

There are two sources of natural gas and an adequate supply to support growth and at very reasonable costs.

Our sewer system is the most modern with a 5.2 million gallons per day capacity. Our use is about 2.5 million gallons per day.

We are presently studying and making preliminary plans for water and sewer plant expansions that will give us capacity well into the 21st century.

Super Collider Presentation
September 29, 1988

Our recreation facilities are outstanding, with a golf course, lighted softball and baseball fields, tennis courts, soccer fields and a Town Club with pool, meeting rooms and athletic facilities and dining rooms.

We have met the needs of our growth in an orderly and planned way and not raised taxes to accomplish this. Our fiscal condition is A-1 and we operate on a budget surplus.

A new city hall expansion is now in progress which will give room for expansion in the future.

It is our belief that the Super Collider will impact our community in residential growth. Being approximately halfway between the campus site of the collider and Nashville. We can easily provide the necessary utilities, services and absorb the growth and provide adequate housing for the personnel who choose to live in Smyrna.

LETTER 495

To The Department of Energy—

I realize your department has its job to do but I certainly feel you all have been unfair to the residents of the states, by being so vage and not answering question we have a right to know.

This is just a job for you but can you imagine how much sleep and worry this has caused? How many people will go to an earlier grave, so many old people at least the people should be informed who is possible loosing thier home whether it come to Tn or not. we have the right to know that and many other things.

1 You know this project should be in the desert farther away from a populated area's

Now the state is coming up with generic statement that is not in black & white. Residents can't depend on the State even.

Most all the official are for this project but most all admit they dont trust the Department of Energy It just doesn't add up.

One who has lost many hrs of sleep & several lbs of weight & couldn't afford to lose

Sincerely Connie Mis Gahee
3713 Yearyan Rd.
Murfreesboro Tn 37129

LETTER 496

Brenda Hamrick
Franklin Road
Murfreesboro, Tennessee 37129

DISPOSAL OF EXCAVATED MATERIAL TENNESSEE SITE SSC

The Tennessee SSC site is estimated to produce 3.1 million yd^3 of excavated rock and soil from the collider tunnel, access shafts, booster and injector tunnels, and experimental halls.

3 possibilities have been suggested to deal with the material:
1. Limestone for Site Development
2. Sale to Industry
3. Disposal in Spoils Piles around SSC Site

1. Limestone for Site Development

This method is not feasable because the roads would have to be constructed before the excavation of shafts and tunnel begins. The material would have to be screened and processed into usable material as it comes from the excavated sites. Some of this material may be used during construction proceedures. The project would not require all of the spoils material produced.

1 2. Sale to Industry

It is highly unlikely industry would be interested in buying the material. I contacted one of the rock quarries in the SSC area and was told they would not need the material. It would cost more to transport the material than it would be worth. The material would have to been screened and processed into the different grades as it is removed from the excavated site. Screening equipment would have to be moved along each site and provided for each site tunneling would be taking place. This seems highly unlikely because of the difficulties required to process on the one acre sites and other problems associated. Since the EIS was correct in noteing middle Tenn. has no shortage of limestone material and has ample stockpiles sale to industry seems unlikely.

3. Disposal in Spoils Piles

It has been suggested to place the excavated material in large piles around the collider ring. The material produced in excavation would be mostly pulverized and small particles. This would produce enormous amounts of dust during the six steps required to move each truckload of material.
1. excavation of spoils material from tunnel to surface pile
2. unloading the material to surface pile
3. loading material onto trucks (dust blows as the material is handled)
4. trucks hauling material off site —dust would blow off the haul trucks and dust would be blowing off the dirt roads
5. unloading spoils at final site
6. trucks returning to shaft sites

All of these steps would create dust blowing. It has been suggested the trucks be covered with tarpaulins to help control dust. This is a Tenn. law that is never enforced. I have seen one truck covered in approximately 5 years. As one truck would be leaving each site every fifteen minutes and in a rural area I am sure the trucks would never be covered.

The EIS indicates water would be sprayed twice a day on areas to keep down dust. This would have no effect at all. To keep dust down in Tenn., especially in the hoter months, water must be sprayed on roads constantly.

The waight of heavy trucks presses moisture out of road surfaces and from my observations of construction sites the dust is never controled. Another suggestion for dust control is a chemical soil stablizer. The EIS does not give the chemical make up of this material. It is highly likely that the runoff from rain or additional watering would further contribute to ground and surface water contamination.

The spoils heaps would all be placed in low areas where natural drainage would flow over them. This would create a large amount of sedimetion and suspended partles in the water runnoff. Dikes are to be used to help control suspended particles. This would help some but would not control all the silt in the runnoff water. What would be the ph of the runnoff? The difference in ph would change the chemical make up of the streams damaging plant life located along and in the streams. The additional suspended particles could kill any mussels, fish, snails, and other aquatic animals that would come in contact with it. The location of spoils sites would cause runnoff to flow into surrounding sinkholes, caves, underground streams and wells.

Trace minerals would be in much of the spoil materials. The EIS says this would have no effect. How do you know? It will not be possible to tell the percentage of possible contanimates until excavation takes place. The trace amounts of materials would posses the ability to futher contanimate all water sources.

3

Water would also leach into the water systems through the bottom of spoils piles and make its way into all water sources.

It has been indicated that ditches would be used to divert some of the natural drainage flow from rain. How would this affect adjacent land? It could cause water to pool on residents land adjacent to these sites. Possibly interfering with normal planting schduals or causing other problems not usually incured with normal run off patterns.

Spoils piles could greatly contribute to additional mosquito populations causing tremendous anroyance to animals and humans. If these piles were sprayed with chemicals to control insects the chemicals would further contanimate water sources.

Who will monitor spoil piles? Check to see when water would be released to streams? The chemical composition of water runoff would need to be checked for leachable materials.

It is not unusual to have rainstorms in the site area of serveral inches of rain within a few hours. This would rapidly fill and flow over spoils taking large amounts of silt into streams, sinkholes and underground streams and caves.

None of the methods suggested for handling excavated material are satisfactory. It would appear the possibility exists for tremendous inconvenience and possible damage to health both from dust and contaminated water to animals and humans, and plant life in the SSC area.

You can correct spelling. You have more time than I do!

LETTER 497

STATEMENT
IN OPPOSITION TO THE SSC IN TENNESSEE
DOE HEARINGS; MTSU; SEPTEMBER 29, 1988

My remarks are submitted as those of a private citizen and do not represent the position of the state of Tennessee or the Rutherford County Department of Health & Environment.

Last February, several of us spoke in opposition to the SSC based principally on losing our homes and properties. We also expressed concern over the effects of possible radiation dangers, the destruction and diminution of water wells, the expected demands on the county infrastructure, the possible danger to the environment. Attached is a later letter of March 23, 1988, to our Representative Bart Gordon from several individuals listing a number of these questions and concerns. *

Of course, we are still concerned, distressed, dismayed over the prospect of losing our homes (as are property owners in the six other contending states). However, the other arguments against the collider in this particular area of Tennessee now seem much more convincing and compelling in lieu of information that has been forthcoming and information gleaned from the recent Environmental Impact Statement (EIS).

1 It is very difficult to accept reassurances the SSC will not produce harmful radiation. Areas of greatest danger are: (1) the six reaction chambers where protons collide to produce highly penetrating neutrons, muons and radionuclides; (2) the abort beam dump areas that are very close to Colonial Estates and its 400 residents and Bill Rice Ranch with thousands of summer campers; and (3) the construction of some 30 huge silo-like ventilation shafts and the tunneling itself that may permit the gradual or accidental leak of water-soluble radionuclides (Sodium 22 and Tritium) into the ground water and hence our water supply. The radionuclides isolated in the air, water and ground at Fermilab are considered "acceptable" or meet certain "standards." As many scientists believe there is no "safe" level of radiation, we are reminded the SSC is to be 20 times more powerful than Fermilab and that accidents do happen. The argument over radiation dangers may not be resolved until the facility is operational, and if misfortune strikes, it may be too late for those thousands of citizens that are thus jeapordized.

2 The EIS estimates 350 wells will be lost. We understand 150 more wells, adjacent to the tunnel, may also be affected. The state has promised to provide water lines to these individuals. Does this mean the state will also pay for the future water bills for farmers who, having lost their wells, must depend thereafter on utility water not only for family members but also for herds of stock animals?

* also attached: letter to Rep. Gordon from Dr. Jack Neff, Sierra Club

R.S SANDERS

3 The EIS informs us there will be markedly increased amounts of dust produced from the dolomite limestone as some four million tons of rock and dirt are brought to the surface during construction of the tunnel and downshafts. These "spoils," enough to fill 200,000 20-ton trucks, may be transported across our country and state roads or stored in huge heaps near the same 30 vertical downshafts. It is feared this dust may seriously affect many individuals who have chronic lung disease, bronchitis, emphysema, asthma and respiratory allergies; especially if such persons live downwind from the major construction, e.g. in Barfield and Murfreesboro areas. Workers in the immediate construction area may be at risk to develop silicosis. This dust, this air pollution, will be with us at least six years or thoughout the construction period.

4 More recent startling information strongly suggests the delicate network of caves, karsts and sinkholes may make this area unacceptable, even a disaster, for the SSC site location.

5 The SSC impact on the local city and county infrastructure will be dramatic and significant. Many public services will require expansion: schools, law enforcement, human services, public health, utilities, roads, water supply, sewage and solid waste disposal. Recent news articles report the state will help; to what extent is not clear. City and county officials should carefully estimate costs for these long-term expansion and service needs and negotiate a clear understanding of financial support from the state.

There is also a sobering concern that this huge, very expensive project could be started, then stopped, abandoned during construction or even after a few years of operation, leaving in our community, our state, yet another incomplete fiasco, such as the Hartsville Nuclear Plant. Several factors could influence such a happening:

6
- Many U.S. scientists believe the billions budgeted for the SSC, a basic science (not applied science) project, will siphon off funds from other more important national programs. Dr. Frank Press, president of the National Academy of Sciences, and Dr. Robert Rosenweig, president of the Association of American Universities, both recently stated (New York Times, May 3, 1988) the SSC should be designated a "secondary priority" to more urgent "highest priority" scientific endeavors such as (1) the training and education of young scientists, (2) the resolution of certain national crises such as "AIDS," and (3) research in superconductivity.

- Space scientists are vigorously competing for these same billions of dollars to build a space station and explore Mars.

- National and international research may, in a few years, provide better and cheaper methods to accelerate and collide protons rather than using this 1970 technology planned for the SSC. Such research could make the SSC obsolete. European scientists (Chicago Tribune, July 10, 1988) believe the U.S. has "jumped the gun" to proceed with the 53 mile SSC; they contend the U.S. should permit the upcoming research at the

R.S Sanders

CERN lab to come to fruition so the U.S. could profit by pitfalls and mistakes at CERN. Apparently, we have decided to rush ahead, to possibly blunder ahead, in order to be "number one."

Our plea, therefore, to the DOE is this: if the SSC is indeed funded, this project will be so immense, so disruptive, so possibly dangerous to this area, we strongly suggest the SSC should go to an alternate site where it will affect far less people and their environment. For example, the ~~surroll~~ tunnel will be above the ground water in Arizona and Texas; and we understand only four homes in Arizona and two homes in Colorado will be moved.

7

Finally, when Dr. Leon Lederman, the Director of Fermilab, first designed the SSC, he called it the "Desertron." Many of us agree with Dr. Lederman's foresight and wisdom, and believe, as he apparently did, this huge project, with so many unknowns, should be correctly and more safely placed in a remote part of the country.

Robert S. Sanders, MD, FAAP
Robert S. Sanders
P.O. Box 1275
Murfreesboro, Tenn. 37133
(615) 896-0255

LETTER 497 (CONTINUED)

SSC Fact Finding Group
P.O. Box 5
Rockvale, TN 37153
March 23, 1988

Congressman Bart Gordon
1517 Longworth House Office Building
Washington, D.C. 20515

Dear Bart,

Thank you for meeting with several of us on March 5 to hear our concerns about the proposed Superconducting Super Collider (SSC).

As you suggested, we are submitting several questions to your office which we understand will be forwarded to certain individuals and agencies in order to obtain definitive answers in writing. As we were further assured, should we consider any answers indefinite, incomplete or unsatisfactory, then your office would seek information from scientific sources, independent of the Department of Energy, and free of possible conflict of interest.

The following are current questions that concern us:

8 1. Will construction of the underground tunnel drain or exhaust adjacent well water?

25 2. Should such damage to well water occur, can the affected farmer and home owner expect the state to supply ample and safe water for both household and stock animal use?

3. Will ground water leak into and damage the tunnel?

26 4. Are not the Arizona and Texas plans for a tunnel above the water table more feasible, both in construction costs and ground water safety?

5. As many of our wells and ground water deposits contain sulfur, as hydrogen sulfide, how does this compound affect construction of the SSC, and later the gaseous environment of the completed tunnel?

27 6. We understand certain radionuclides (such as Tritium, Sodium 22, Cobalt 60, Maganese 54, Beryllium 7) are produced by the SSC. Tritium and Sodium 22 are water soluble. How are these (and other potentially toxic agents) to be safely contained? And, should these agents escape into water, soil or air, what could be their specific genetic, mutagenic or somatic effect on humans, or other mammals, fowl, marine and plant life? What has been this specific experience at the Fermi Lab in Illinois during the past 20 years? Are there measurable levels of these substances in ponds, rivers, streams, drinking water and air adjacent and near the Fermi Lab?

9 7. What are the emission products from the ventilation shafts and the refrigeration units scattered at intervals along the tunnel? Are these airborne products toxic and how? Will the noise produced by the refrigeration units be disturbing to adjacent citizens?

10 8. What are the safeguards in the "collision chambers" (when protons collide) to prevent radiation spill to adjacent rock, ground water, especially as we understand the collision forces will be 40 times greater than that at the Fermi Lab?

11 9. What are potential problems related to removal of the thousands of tons of rock or rubble in construction of the tunnel? Where will this material be stored and how transported and used? How will the resulting dust and leachate affect local air, stream, ground water and plant quality?

12 10. We understand a majority of the nation's scientific community is opposed to proceeding with this exceedingly costly project when so many other research avenues are considered more important. Can your office document this? And, should this not have bearing on the nation's budgeting process for prioritizing scientific projects?

13 11. If the SSC is funded, would it not be more reasonable and fiscally responsible to build/incorporate the SSC adjacent to or in connection with the existing Fermi Lab in Illinois where a campus, including a usable accelerator, and a scientific community are already established?

14 12. We have understood the Franco-Swiss SSC has suffered water damage, that some two feet of water have flooded the tunnel. Could your office document this misfortune? Is this a significant omen for the SSC in this country, especially in those five states where the tunnel is planned to be below the water table?

15 13. We understand there is current research in superconductors, earth oxides and plasma, which in a few years may make the proposed SSC obsolete. If your office can document this startling information, would it not be irresponsible to fund the SSC, to acquire property, to move families, to begin construction only to have the whole project declared obsolete in the light of emerging information? Would this result in not only the loss, even the waste, of billions of federal tax dollars, but also millions of Tennessee tax dollars?

16 14. Inasmuch as an enormous amount of electricity will be needed to supply and operate the SSC, thus creating strong electromagnetic fields both at the SSC facility and about the feeding transmission lines, what are the possible harmful effects to humans of these electromagnetic fields?

17 15. What are the specific plans for "decommissioning" the SSC once its usefulness is exhausted in some 20-25 years? Can we be guaranteed these facilities and tunnel space will be used for purposes that are not harmful to the community? Will it be possible for certain citizens to "buy-back" their property that was condemned and purchased by the state for the SSC?

18 16. Why in New York state would so many citizens and their elected officials so strongly oppose the SSC that their state's proposal was

withdrawn by Governor Cuomo? Does New York know something we don't? You may wish to discuss this with your colleague, Congressman Frank Horton of New York.

17. Can we and other Tennessee citizens be assured there is no "deal" brewing to "reward" Tennessee with the SSC provided Tennessee accepts the Monitored Retrievable Storage (MRS) facility for nuclear wastes in Oak Ridge?

18. Finally, should all these concerns and questions be resolved in favor of proceeding with the SSC, it is our hope and request that you and other elected officials strongly consider the merit of locating the SSC in states whose sites seem more reasonable: Illinois with its existing campus and resident scientists; in Arizona or Texas where the tunnel will be above the ground water table; and, in particular, Arizona, where we understand the proposed site includes significant federally owned land and where very few homes and families will be affected. Further, we hope you and elected officials will insist the DOE name a preferred site by the end of 1988, as promised, even if further funding is not assured. This will relieve the other six states and their anxious and anguished citizens.

We, therefore, appeal to you as affected land owners whose homes will be destroyed, whose rural community and "quality of life" will be severly disrupted, and whose county and city government services (schools, roads, utilities, public health) will be uncommonly strained should the SSC come to Rutherford County. Once the issue is studied and the many questions are answered, we believe our neighbors in Bedford, Marshall and Williamson Counties will similarly urge the Tennessee proposal for the SSC be withdrawn. 19

Please note we are sending copies of this letter to Congressman Jim Cooper and Senators Jim Sasser and Al Gore. Hopefully, these gentlemen and their staffs may be of assistance to you.

Sincerely,

Brady Allred
Amy Allred
Sue Parsley
Bert Parsley
Connie Yeargin McGehee
Everett (Mac) McGehee
Pat Sanders
Robert S. Sanders, M.D.

be

Enclosures

LETTER 497 (CONTINUED)

SIERRA CLUB - Tennessee Chapter

I am enclosing, for your information, a copy of a letter submitted to Representative Bart Gordon by the Tennessee Chapter of the Sierra Club. It deals with four environmental issues that will arise if the Superconducting Super Collider (SSC) is built in middle Tennessee. Background, questions, and comments are presented on each issue. Representative Gordon volunteered to help in finding answers to our questions.

20 The Tennessee Chapter has yet to take a stand on whether the SSC should be built in Tennessee. Before doing so, we would like answers to our questions as well as more inforamtion on subjects still under study such as geology, hydrology, and soil composition in the SSC area. However, we can make the following observations. From our study of the Fermilab report we consider it possible, if not likely, that the SSC cannot operate safely as now proposed. Further, we have not found evidence that infrastructure growth in the area, SSC construction, or SSC decommissioning will be performed in an environmentally sound way.

Finally, answers to our questions on SSC, that you may be able to provide, will be greatly appreciated.

Sincerely yours,

Robert Jack Neff*
SSC Study Committee, Tennessee Chapter, Sierra Club
2116 Westwood Avenue
Nashville, TN 37212.

(615) 297-9870.

*Retired Prof. of Molecular Biology
Vanderbilt University, Nashville

Recyclable

"Not blind opposition to progress, but opposition to blind progress"

LETTER 497 (CONTINUED)

SIERRA CLUB - Tennessee Chapter

10 May 1988.

Honorable Bart Gordon
Representative, Fifth District of Tennessee
1517 Longworth Bldg.
Independence and South Capitol St., S. E.
Washington, D. C. 20515.

Dear Representative Gordon:

The following letter contains questions and comments about environmental problems that would result from the construction of a Superconducting Super Collider (SSC) in middle Tennessee. It is written on behalf of the Tennessee Chapter of the Sierra Club. The questions raised have yet to be addressed by local governments, the State of Tennessee, or by the U. S. Department of Energy (DOE).

To refresh your memory, I was in a group that met with you in your Murfreesboro office on 5 March 1988. At the end of the meeting you volunteered to find answers to questions we had about the SSC. I understand other members in that group submitted questions to you some time ago.

The four environmental issues about which we are most concerned at present are the following: growth impacts on the area; irradiation of the public and the environment; disposition of the excavated limestone; and absence of a decommissioning plan. Each is dealt with below.

1. Growth impacts resulting from the SSC in Tennessee. The magnitude of the problem can be sensed by considering the influx of SSC work forces. The numbers were found in the State's brochure "The SSC for Tennessee." Initially a construction work force of 4,500, many with families, will invade the area. This will be followed in 6 years by a permanent work force of 3,000, most with families. This may involve a total of 10,000 new citizens in all. Many families of the new work force (1,000? 3,000?) will require new homes. Also, more than 100 families who now reside in homes located over the SSC will lose them and must find new ones.

21 We are told by local planners that many parts of the infrastructure, including waste disposal sites, sewerage systems, roads, schools, etc, are largely overburdended in many areas. The planners also complain of overloads. It is very expensive to upgrade and maintain the current infrastructure. It is even more expensive to expand it in an environmentally sound way so as to avoid damage to local ecosystems, and to maintain open spaces, clean air and clean water. It is of interest that the State, in its brochure, has stated that "Open Spaces Will NOT Be Destroyed." However, we have yet to find, in any of the documents, information detailing who will pay for the expanded infrasture while preserving a clean open-spaced environment.

Questions on growth impacts of the SSC. 1. Who will plan and who will pay for expanding, in an environmentally sound way, the new infrastructures necessitated by the construction of the SSC? 2. Will the local communities be expected to realize

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"Not blind opposition to progress, but opposition to blind progress"

enough funds in additional revenues to provide for the expansion? 3. Will the State be willing to underwrite an environmentally sound expansion of infrastructure? The State has already agreed to buy 16,000 acres of surface and subsurface rights and *give them to DOE.* 4. *Or will DOE pay?*

Comments. The Sierra Club believes that the growth impacts on local communities and the environment, due to SSC, must be addressed and committments made for funding solutions before the SSC is accepted by the State. With proper planning and funding *the usual loss of open spaces and wildlife, characteristic of unplanned and under-*funded development, can be mitigated if not avoided completely.

2. Irradiation of the public and the evironment. Both DOE and the State of Tennessee have stated categorically that the SSC will be radiologically safe. As proof, both cite *the exemplary radiological record of the Fermilab in Illinois. Fermilab is* said to be much like what the SSC is to be in that both will have accelerators which accelerate protons and produce the same products after interacting with targets, beam abort dumps, or various ring components. The products are intense beams of subatomic particles, mainly neutrons and mesons as well as radioactive atoms, also called activation products or *radionuclides. All are or produce, ionizing radiations.* In order to understand how Fermilab and SSC could be as safe as touted, the following publications were read: "Fermi National Accelerator Laboratory, Site Environmental Report for Calender Year 1986," Baker, Samuel I., May 1, 1987 (Fermilab 87/58, 1104.100, UC-41); "An Introduction to Radiation Protection for the Superconducting Super Collider," Metropolis, Katherine (Ed.), November 10, 1987, SSC-SR-1027.

General information from the reports. Several pieces of general information gleaned from the above reports, seem pertinent. They are the following. First, the composition of the intense beams of ionizing radiations and the radionuclides produced are identified and said to be identical. The amounts and intensities will differ at the two accelerators. Secondly, a comparison of the topography of the two sites indicates that the relationship between citizens and the site topography will be markedly different at the two. For example, at Fermilab most, if not all, of the citizens live outside the site boundary. They come close to interaction
22 areas only when they visit or go to work at that site. At the SSC, citizens will be able to live over or adjacent to interaction areas. Of most concern, for radiological safety, would be SSC areas I and H which appear to contain beam abort dumps, intense particle beams, and ventilation shafts for dispersing radioactive gases. Thirdly, continuous individual monitoring of the dose of ionizing radiation received by citizens living around the Fermilab site was not done - even for those people living on the down-beam end of the muon (mu meson) beam. Many monitors and monitoring strategies were reported but none for any off-site individual. Rather, the very low dose of ionizing radiation reported was an averaged dose to citizens at site *boundary calculated by assuming the main source of radioactivity was airborne,* was propelled by wind of an average 10.4 mile per hour speed, and provided only external body irradiation. The variable nature of wind, weather, and individual location is excluded in such a calculation. Fourthly, Fermilab disposes of radionuclides into air, surface waters and soil. The methods being used now at Fermilab were state of the art in 1940, that is, *at the beginning of the nuclear age.*

It is also clear from these two reports that there are three potential avenues by which the public and other living things may be irradiated both during the operation and following the final shutdown of the SSC. Irradiation may be by way of a. intense ionizing rays, b. airborne radionuclides, and c. soluble or *waterborne radionuclides.* Background, comments and questions about each follow.

a. Ionizing rays. There are two categories here. In the first, intense beams composed mainly of neutrons and muons are produced when the proton beams smash into

the beam abort dumps or into solid targets, such as may be used in future experiments at the SSC. The second category is residual (or fixed source) radiation consisting mainly of gamma rays and given off by "activated accelerator components and shielding, mainly iron and concrete."

Consider the first category. There should be at least two beam abort dumps at the SSC, one for each beam of non-collided protons. Neutrons and muons emanating from these dumps would fan out under the I regions. Such neutrons and muons are very energetic and very penetrating. For example, at Fermilab the muons were detected at the site boundary which appears to be about three miles from the target source. The beams at SSC should be even more penetrating in that the protons will be accelerated to 20 TeV whereas those at Fermilab have a maximum energy of 1 TeV. Further, the neutrons and muons will be scattered in all directions by the media through which they move. Whether soil and water, as at Fermilab, or limestone, soil and water, as at the Tennessee SSC site, one would expect some of the ricocheting particles in the beam to penetrate the surface and consequently penetrate and cause ionizations in any living thing on the surface that might be in their path. The citizen-topography relationship at SSC is such that residents above or adjacent to the SSC, especially in the I and H areas, may be receiving extra ionizing radiation any time the SSC is in operation. At Fermilab, no one appears to live above the beams with the possible exception of off-site citizens.

In the second category, residual ionizing radiation, resulting from activation products, will be coming from SSC components such as beam pipes, magnets, detectors, cememt, rocks, cryostats, etc. The radiation of concern will be energetic and very penetrating gamma rays. The half lives of the activation products range from 54 days for beryllium-7 to 5.3 years for cobalt-60. Thus, accelerator components will be producing ionizing radiations, dangerous to the public, for many years - even after accelerator operations cease. Danger from residual ionionizing rays would be found both above and below ground. Defective and discarded accelerator components would be found in surface storage sites. At Fermilab the storage area, called the boneyard, is located at the site boundary and is used to store defective radioactive accelerator components. It was found necessary to add additional shielding at the boneyard to reduce irradiation of people off site. Underground at the SSC, radioactive components will be found in and around the beam tunnel walls, beam abort dumps, and in all beam components in the tunnels. Because of the intimate association of area residents and the SSC, both during operation and years after shutdown, the problem of preventing access of residents to residual radiation, either above or below ground, may be a difficult one to solve.

Questions on ionizing rays. 1. What will be the individual doses of ionizing radiation to residents that live above or adjacent to the intense beams of neutrons and mesons originating from the beam abort dumps and/or targets (I and H areas)? 2. Will each individual resident in these areas be monitored continuously (such as by special film badges) for exposure to scattered neutrons, muons and their products? 3. Will above ground storage of discarded radioactive accelerator components occur at SSC? If so, for how long? How will above ground storage be managed so as to guarantee no public access to it? 4. How will access of public to underground radioactive components of the SSC, via any of thirty-odd surface access shafts, be guaranteed both during operation and after conclusion of all experiments at SSC?

b. Airborne radionuclides. Carbon-11 (^{11}C) and tritium (^{3}H) are reported to be the major airborne radionuclides at Fermilab. ^{11}C is said to contribute the largest source of off-site ionizing radiation.

^{11}C originates in the air around the beam dump and target as a result of transmutation of air atoms (^{14}N ?). The air atoms are actually bombarded by secondary subnuclear

particles that leave the vacuum tight containers surrounding the beam dump and target. ^{3}H arises by transmutations that occur throughout the system but the airborne ^{3}H is said to come from two sources. The first is from epoxy resins. They release ^{3}H during heating at the high temperatures used to debond (separate) defective magnets from their beampipes. Debonding is done at the boneyard. The second source is from the evaporation of closed loop cooling water contaminated with ^{3}H. Tritium contaminated water was not evaporated in CY 1986. The molecular forms of the airborne radionuclides are not given.

The amounts of airborne radioactivity released at Fermilab were as follows. In CY 1986 . . "A total of 3.4 curies of carbon-11 were released compared to 150 curies from the Nutrino Area Stack in CY 1985." The smaller amount in 1985 was because the accelerator was in operation less than a month that year. Airborne ^{3}H was .003 for 1986 and not given for CY 1985. All ^{3}H released was said to be from debonding in CY 1986.

The calculated annual site boundary dose for ^{11}C was .0007 mrems for CY 1986 and 1.5 mrems for CY 1985. The dose due to ^{3}H was not given for either year but was termed "negligible." The reported doses for ^{11}C were calculated with the aid of a computer program AIRDOSE-EPA. Using amounts of ^{11}C determined from stack monitoring, the program assumes a gaussian plume diffusion model with neutral wind conditions and an average wind speed of 10.4 miles per hour. Radiological damage is assumed to be due to external body irradiation by the ^{11}C gamma ray. Dosage is given in mrems and is the annual dose an individual living at the site boundary would receive under the assumed conditions.

Clearly, the doses given are hypothetical. It is unlikely that few people living in the area have received the dose calculated for a given year. This is because in real life weather is variable and may change dramatically the dose a real individual receives. In real life, one experiences wide variations in weather such as wind speed, wind direction, temperature inversion, rain, etc. Each can change the concentration of and/or exposure time to the radionuclide thereby changing the dose. For example, with high wind speed the exposure time would be reduced, turbulence could reduce the concentration, and thereby the dose would be small. On the other hand, in a temperature inversion the wind speed would remain low, the ^{11}C in the ground-hugging cloud would remain concentrated, and individuals living in areas encompassed by the cloud could be exposed for long periods. Such individuals could receive very large doses of ionizing radiation under such conditions. Thus, in real life one would not expect a single average dose as calculated by AIRDOSE-EPA. Due to the vicissitudes of weather, as indicated above, one would expect people living around the accelerator area to receive doses ranging from zero to many times the average dose calculated by Fermilab personnel. Therefore, the only way to decide the actual doses received is to monitor continuously a large number of people that live in the area. There is no indication that Fermilab has actually monitored continuously any off site individual, or group of individuals, at risk of exposure to airborne ^{11}C from the accelerator.

The site boundary dose calculated by Fermilab may be too low. The dose of ^{11}C depends on whether the individual receives only gamma rays externally or both the positron and gamma rays internally. Externally positorns would not contribute to body irradiation. Internally, the positron would cause many more ionizations in body tissues than the gamma ray. The molecular form of ^{11}C was not given. However, ^{11}C when just transmuted is very reactive and should react with the nearest atom. The most numerous atoms present are nitrogen and oxygen. If, for example, carbon monoxide and/or cyanide are major molecular groups formed, they would form stable complexes with hemoglobin on entering the lungs. Such complexes are known to have physiological half lives much longer than the radionuclide. If ^{11}C is an internal irradiator, the Fermilab calculated dose is too low by several fold.

Questions about airborne radionuclides. 1. What are the locations of the stacks that will vent ^{11}C compounds into the air at SSC? 2. What will be the molecular forms of ^{11}C and ^{3}H released into the air at SSC? 3. Will ^{3}H be released during debonding at SSC? 4. Will water contaminated with ^{3}H be evaporated into the air at SSC? If so, where and how much? 5. Have groups of individuals living off site and at risk been monitored continuously at Fermilab? If so, what are the results? 6. Will individuals who live on or near the SSC site be monitored individually and continuously for their exposure to airborne radionuclides? If so, how? If not, why not? 7. If individuals living on or adjacent to SSC are found to be receiving large doses of radiation from airborne radionuclides, how will County, State, or DOE resolve the problem? 8. The best environmental solution to the problem of releasing airborne radionuclides would be to prevent their release. Will DOE pursue this solution? If not, why not?

Comment on airborne radionuclides. DOE's assurance of the safety of citizens that live off site at Fermilab is based on a low average annual site boundary dose which was calculated using a computer program (AIRDOSE-EPA). At least two of the assumptions on which the program is based guarantee a low dose calculation. As indicated above, the assumptions are probably incorrect. Further, the applicability of the calculated dose to the real world is unclear. The calculate dose is no substitute for knowledge of the actual doses received by individuals in the area as determined by continuous individual monitoring. The unfortunate result is this. Without such individual monitoring there is no way to determine whether Fermilab was operated safely in the past or if individuals will be able to live safely on or near the SSC.

c. Water borne radionuclides. It is convenient to identify two categories here. They are the contained radionuclides which accumulate in closed loop recirculating systems and uncontained radionuclides that may be leached from the rocks or soil in which they are formed.

The contained radionuclides found in water used to cool beam components, including beam dumps and targets, were identified as tritium, beryllium-7, sodium-22, calcium-45, manganese-54, and cobalt-60. During circulation the water passes over ion exchange resins which remove all of the above radionuclides except tritium. Presumably the molecular form of tritium in the contained water is as tritiated water. At Fermilab, the resins are regenerated and the radioactive effluent is pumped to an on site land dump called a "clay tile field." The effluent percolates through the soil. The report indicated the personnel assumed a strong chemical affinity of the soil for the radionuclides. It should be noted that this is the same assumption made by early AEC (now DOE) landfill operators (such as at Oak Ridge, Tennessee) and by commercial radioactive waste landfill operators (such as at Maxey Flats, Kentucky). In all such facilities leaching has occured and continues. It was not recorded whether the contained tritiated water was ever fed into surface waters or put in the land dump. It was, as indicated above, evaporated into the air.

Uncontained radionuclides were found in water sumps, underdrains, and in soil around vent stacks. They were in particularly high concentrations in the water under a beam abort dump. The radionuclides identified were ^{3}H and ^{22}Na. They were assumed to have been leached by water percolating through the activated soil. To reduce the amounts of radionuclides, the radioactive water was pumped from the sumps and drains into surface waters. Concentrations were said to be "below DOE Concentration Guides for release to surface waters." One wonders why only the abort dump itself was designed to be water tight but the volume of soil around it, that becomes transmuted, was not. Prevention of leaching would seem to be the prudent thing to do from the point of view of environmental safety.

In the DOE Scoping meeting of 12 February 1988, it was pointed out by DOE officials that the contained tritiated water would be used to make cement in which other low level radioactive waste would be embedded. The resulting solid waste would be transported to an authorized low level waste storage facility. Methods for disposing of uncontained radioactive water or of radionuclides trapped on ion exchange resins, at SSC, were not discussed.

Questions on water borne radionuclides. 1. Will the resin be used only once at SSC and then shipped to an approved low level radioactive waste storage facility - rather than land-dumping the radioactive effluent on site as now done at Fermilab? If not, why not? 2. Will the design of the beam dumps, targets, intense ray areas, and vent stacks be such at SSC that water leaching of radionuclides can be prevented? If so, how? That is, what is the design? If not, why not? 3. Will all water contaminated with tritium, both contained and uncontained, be disposed of by incorporating it into cement as now planned for contained water? What percent of the tritium incorporated into the cement will be lost by evaporation or leakage? Proof?

Comments on release of radionuclides into the environment. Writers of both reports are quick to point out that the radionuclides, once released into the environment, do not exceed standards for air and water. The standards referred to are the maximum permissible doses or maximum permissible releases which the nuclear and medical industries or research institutions should not exceed. It must be emphasized that the standards are not to be interpreted as safe doses or safe releases. H. J. Muller, winner of a Nobel prize for his discovery that ionizing radiations (medical X-rays) induce mutations in living organisms, was the first to realize that there is no safe dose of ionizing radiation. Even the lowest dose has the potential to induce a mutation. This truth remains as valid today as when Muller first identified it. Therefore, the Sierra Club believes the laxities demonstrated at Fermilab, such as dumping radionuclides into air, land and water and the permitting of activated atoms to leach from soil or rock, should not be permitted at SSC. As a general principle, the responsible behavior is to avoid the introduction of any excess radioactivity into the environment.

3. Excavated limestone gravel. We calculate the excavation of tunnels for the accelerator rings will produce at least 1.3 million cubic yards of dolomitic limestone gravel. Various interaction rooms as well as thirty-odd access and ventilation shafts will increase that volume. The State has recognized that the twenty-odd heaps of gravel around the main ring will be an eyesore. The State has said it would make them as inconspicuous as possible, such as, putting them in convenient ravines.

We note this type of broken limestone is dusty when dry and leaches or sheds particulate debris when wet. The carbonates in this type of limestone yield slightly alkaline runoff. If there are appreciable nutrients in the limestone, such as phosphate, eutrophication of area streams and reservoirs could be increased. Drainage to three main rivers of the area (Duck, Harpeth, and Stones) occurs from the area encompassed by the main ring of the SSC. There may be increased siltation in these drainages. As yet, there is no indication that any attemp will be made to contain the dust and the leaching by Counties, State, or DOE. 23

Questions about the excavated limestone. 1. If not contained, how much damage will the leachate do to aquatic wildlife in the drainage areas due to increased alkalinity, turbidity, and siltation? 2. If not contained, what nutrients will be leached from the limestone gravel and in what concentrations? How much will these nutrients exacerbate eutrophication already present in streams and reservoirs in the drainage area? 3. Will Counties, State, or DOE attempt to contain the heaps of limestone gravel? If so, how will containment be accomplished?

4. Decommissioning the SSC. DOE's answer to the question of how the SSC will be decommissioned, as found in "Questions and Answers to SSC Invitation for Site Proposal", was that decommissioning would be dealt with later.

Decommissioning the SSC, or taking it out of active service, will involve more than locking the doors and walking away. Walking away is not possible because parts of the SSC will become dangerously radioactive with use and will remain dangerous for many years. Radiation hazards found above ground may include defective magnets, beampipes, etc, in the storage areas, and radioactive land dumps. Hazards below ground would include ring components, abort dumps, cement walls, rocks around the rings, water in the sumps, etc. Two radionuclides of long term concern would be cobalt-60 with a half life of 5.3 years and tritium with a half life of 12.3 years. Even after 50 years cobalt-60 would be producing about 1 % as much gamma radiation. Thus, many areas would remain dangerous for extended human exposure. Tritium, which will be produced in large amounts, will still be producing about 1 % of its original radioactivity at 120 years. Inside the human body, the radiation from tritium is an effective mutagen and carcinogen.

Because the basic problem of coping with the residual radioactivity is the same for nuclear reactors and the SSC, it is likely that decommissioning of the SSC will be similar to that of nuclear reactors. In both the question is how to prevent public access to the residual radioactivity. Documented decommissioning of two civilian
24 reactors involved taking them apart and moving all of the radioactive pieces and materials to a federal site where they were stored on a tarmac and covered with dirt or were placed in a landfill. In effect, this type of decommissioning is a complete decontamination of the reactor site at the expense of the federal site. A second type considered by DOE has been entombment. The reactor would be filled and covered with concrete so as to make access to the radioactivity by the public difficult. The radioactivity would be allowed to decay for the centuries needed. A third type of decommissioning considered was long term institutional security surveillance. Admission to the sites would be prevented by an active cadre of security guards. Long term monitoring of the site would be required in types two and three and possibly type one. Each of the above methods could be used at SSC. The SSC would impose special problems not encountered with reactors. All types of decommissioning would be expensive.

Questions on decommissioning the SSC. 1. What is DOE's plan for decommissioning the SSC? 2. What impacts will the decommissioning have on citizens and communities in the SSC area? 3. How will the decommissioning be financed? Who will foot the bill?

Comments on SSC decommissioning. After the SSC stops performing experiments there may be long term health and safety effects on area citizens. There may be unanticipated financial demands on Counties and State. Therefore, it is essential that DOE's detailed decommissioning plans be available for all to study before the SSC is finally accepted by the State. Without a firm plan for study, a deliberate balancing of benefits against costs cannot be made.

Sincerely yours,

Robert Jack Neff
2116 Westwood Avenue
Nashville, Tennessee 37212.

LETTER 498

REMARKS ON LOCATING THE SUPERCONDUCTING SUPER COLLIDER IN TENNESSEE

BY

W. A. RICHARDSON, JR., STATE SENATOR
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As we gather here today athletes are competing for medals in Seoul, Korea. The host nation has invested billions in preparation. Participating athletes have devoted long hard hours training for this event. This is good.

There is an arena in which nations compete with minds for the advancement of knowledge. This is where I see our nation in considering projects such as the Super Collider. In 1957 we saw our nation rise to the challenge of Sputnik and achieve world leadership in space. This present proposal affords the opportunity for leadership in the exploration of the atom. We should open the door for such exploration.

I am beginning this way to say that there are many people in this area who have expressed an interest in the continued quest for scientific knowledge as well in the economic rewards which are anticipated. We have all profited from the space program. We have everything from ballpoint pens which write upside down to TV programs beamed into our living rooms via satelite. We have benefitted from the splitting of the atom in the areas of energy and medicine. We recognize that these advances are not without dangers, but this is true of other advances such as electricity, the automobile and the airplane.

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Here in Tennessee we know what it means to be on the cutting edge of scientific and technological advance. Oak Ridge is synonomus with the exploration of the atom. Not far from here is AEDC which continues experimentation in aerodynamics. Just south of here in neighboring Alabama is the Huntsville Space Center. We have advanced and are prepared to go farther.

The desire to have the SSD in Tennessee is not one rising from jobs and economic opportunity alone. We desire to have the influence of the people who will be drawn into this area. Experience has taught us that people whose lives are spent in the pursuit of knowledge make good citizens and contribute to the community in ways that are of far greater value than can be measured by economic standards. Their presence tends to raise the quality of all around them.

Our continued concern for the quality of life and the quality of our physical environment is not a radical extreme but an expression of a desire that we show consideration for others and for the generation which is to follow.

I join with the elected officials and community leaders in the SSD county in my district (Williamson) in offering support for the location of the SSD in Tennessee.

LETTER 499

I wish to welcome the D.O.E. to Tennessee, because it seems they have to come here before a public meeting can be held. This welcome does not apply to the Superconducting Super Collider.

This project poses a threat to Tennessee's environment, economics, and the health of the residents in the four county area. I base this statement on information I gathered from ongoing research. The information is from the Environmental Impact Statement, Fermi National Laboratory reports, the book "Policide," news reports about the Brookhaven accelerator in Long Island, New York, and personal conversations with the Mayor of Batavia, Illinois.

From the outset of this contest, it has been surrounded by misrepresentation, cover-up, and political pressures put on state, county and local officials. I have lost what confidence I had in state and county governments regarding to, looking after the best interests of their constituents. I never had much confidence in the D.O.E.'s efforts to safeguard the environment, health or best interests of residents near their projects.

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It seems to me that this so called "contest" to land the SSC, is all a cleverly designed tool to gain support both financially and politically for the project. The participating states have fallen for the tactic "hook, line and sinker." The people, who did the work on Tennessee's proposal, were so intent on landing the SSC that they hastily chose a site that would comply with D.O.E.'s outline. They failed to do all the studies on the impact it could cause on the area. They didn't do effective studies on the environment, geology, or the impact on local economics. When they were caught short on answers when they were asked about these areas, they started to make statements bordering on lies. They used every means they could to avoid answering any of these questions in an honest and straight forward way. It is because these answers showed the potential dangers of the project to Tennessean's environment, health, and economic well being.

Tennessee's proposal team didn't just cover-up to Tennessee's residents, they also made misrepresentations and supplied insufficient information to the D.O.E. This is shown by Tennessee's proposal on the geology of the area. The caves and ground water in this area are extensive and complex, contrary to the statements made in the proposal, which states "no significant karst in the area." No specialist in caves or hydrology were consulted about this sites' features. The white paper, made by requests from the D.O.E., will show the insufficiency of the proposal's information.

There are also several endangered or threatened animal and plant forms in the area that could be destroyed or damaged by the project. The state and the D.O.E.'s answer to these life forms is "we can mitigate these dangerous conditions." In case the planners for the state and D.O.E. have forgotten, the definition of mitigate is "to make milder or less painful." I guess when these animals and plants are destroyed and eliminated from the site area, this word will make it more pleasant. This word is also applied to every problem that is caused by this project. Radiation, ground water contamination, air pollution, increased taxes, and destruction of the cave system and countryside will not be prevented, but

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their mitigating measures will make everyone effected feel less pain.

The reason I speak about words such as mitigate, negligible and insignificant, is they don't offer a solution to problems related to this project. They do, however, make them sound less severe. If you have read the proposal and the E.I.S., they are full of such words.

If all these factors aren't enough to persuade you to eliminate Tennessee from this competition, there is one other consideration--the people who are expected to live and work around this instrument. It is unbelievable to me for anyone to put them at risk of everything from radiation to effects on the air they breathe and the water they will drink, by an instrument whose effects can only be theorized. I think it is ridiculous to put this experiment in any populated area just for the convenience of scientists and personnel who will work there.

If you want this project to be successful and run smoothly, then you had better not choose Tennessee as the preferred site. Because in those famous words, "We have not yet begun to fight!!"

Brady Allred
Rt #1
Rockvale, Tn.

LETTER 500

BART GORDON
6TH DISTRICT, TENNESSEE
RULES COMMITTEE
SELECT COMMITTEE ON AGING
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Congress of the United States
House of Representatives

September 29, 1988

Dr. Wilmot Hess
Chairman
SSC Site Task Force ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Re: Comment on Draft EIS

I appreciate this opportunity to comment on the draft environmental impact statement for the proposed superconducting super collider.

It is vital to conduct the most careful, complete and scientific analysis of the environmental and economic consequences and benefits of this project on the land and the people of Middle Tennessee. 1

I have supported the concept of the super collider for some time. I would like to see Tennessee become an international leader in high energy physics research.

If our various concerns are answered, I believe the super collider would bring with it the kind of good jobs we want here in Middle Tennessee. It would add to the already fine reputations held by our institutes of higher education.

But I am particularly concerned about the effects the super collider will have on Tennessee. I am the sixth generation of my family to live in Middle Tennessee, I have many friends and relatives here, and I will be living here long after the super collider is completed.

2 One reason the Academy of Sciences selection board decided Tennessee was one of the best locations for the super collider is the quality of life we have here. I want to make sure that if the super collider is built here, the state and federal governments will provide the necessary infrastructure to maintain our quality of life without adding to the tax burden on local citizens.

We must also make sure all questions about the effects of the super collider on the environment are answered. The draft EIS answers many of those questions, but I believe some additional 3 clarification is needed. I would like to ask a few specific questions that concern some of the people who live around here.

First, water flows through the underground cave system on the super collider site and connects to water supplies used by the surrounding communities and farms. How will the builders of the super collider avoid contaminating underground water during construction, and how will the operators avoid the same problem?

Another concern is the susceptibility of the area to sinkholes. What steps will be taken to avoid this problem?

4 Third, are radiation safety precautions adequate, particularly in the abort or beam absorption areas? I understand that these are where there will be the highest concentration of radioactivity. Is there any chance of this radioactivity leaking out, either into the air or into the water supply? Will there be higher level radioactive waste produced in this area, and what are the plans for removal of that waste?

If environmental concerns can be answered adequately, I think the superconducting super collider will be a benefit and a source of pride for the state of Tennessee. As I noted at the previous public hearing on the super collider, this project is a partnership between the Department of Energy and the people of Tennessee.

Tennessee is a finalist for the super collider not only because of its favorable geology, but because of its fine quality of life. By making sure all environmental questions are answered, we can offer the super collider the best possible home.

Sincerely,

Bart Gordon
Member of Congress

LETTER 501

At every point in history when mankind has attempted to advance the fronteirs of knowledge and technology there have been detractors who have attempted to halt the progress. Every excuse from "If God had wanted man to fly, he would have given him wings" or the reluctance of society to accept immunization from communicable diseases has set up barriers to impede the progress of mankind. About 92 years ago it was even seriously proposed in the Congress that the U. S. Patent Office should be closed since all possible inventions had already been created.

We, in Tennessee, now have the opportunity to participate in another great adventure in pushing back the boundaries of ignorance and building upon the learning that has already taken place to reap technological advantages for the future. The implications of this effort reach far beyond the boundaries of our region, our state, even, indeed our country--they have worldwide significance.

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John Stuart Mill said " Great economic and social forces flow like a tide over half-conscious people. The wise are those who foresee the coming event and seek to shape their institutions and mold the thinking of the people in accordance with the most constructive change. The unwise are those who add nothing constructive to the process, either because of ignorance on the one hand or ignorant opposition on the other."

It beehooves us to be wise as we contemplate the great project of the Superconducting Super Collider.

Doug Rogers
Mayor Town of Vinegar Hill
Tenn. 37034

LETTER 502

To SSC

I have studied the proposed sites for Super Collider and there are many questions and concerns on this subject.

#1 With 7 states being considered for this project, how much time has been spent on the environmental impact Super Collider will have on the people & the surrounding area

1 All I see are the advantages Tennessee would have that are conducive to the operation of Super Collider! Not the impact it would have on this area and its people over a long period of time.

#2 You state the Super Collider is the largest scientific instrument ever built and would be used to

2 investigate the basic structure of matter. In other words it is experimental and you do not know the impact it would have on water or air pollution or other possible environmental consequences.

#3 The operating life of the SSC is expected to be 25 or 35 years. And then it would involve - removal, closure and decontamination of the area. What about the contamination to this area during the 25 or 35 years?

Super Collider should not be placed near such a populated area when you do not know for sure what the long term consequences will be.

In Tennessee there would be 434 parcels of land with relocation of 112 residences and 4 business. In Colorado there would be 157 parcels of land with relocation of 4 residences and 1 business.

NO Tennessee does not want Super Collider.

A Land Owner
Mrs. Janell Herring
P.O. Box 167
Hillsboro, Tenn. 37342

LETTER 503

Bertha C. Chrietzberg

1715 Elrod Street • Murfreesboro, Tennessee 37130 • (615) 896-1146

NEGATIVE ENVIRONMENTAL IMPACTS ON TENNESSEE SITE
FOR THE SUPERCONDUCTING SUPER COLLIDER

I am opposed to the Superconducting Super Collider being built in the location chosen for the Tennessee site, because of the environmental damage likely to occur during its construction and its operation.

1 The area encircled by this collider ring is unique in that it is the headwaters of two rivers, Harpeth and West Fork Stones, that are tributaries of the Cumberland River, and on the far side it contains several tributaries of the Duck River which drains into the Tennessee River. It contains one of the largest cave systems in the State of Tennessee -- Snail Shell Cave -- and several other cave systems which may or not be connected with it. A large underground creek, Overall Creek, flows through Snail Shell Cave, and as this is located near Fee Simple B, it would be difficult not to experience cave-ins, encounter large underground streams and thus damage this delicate underground environment which contains several endangered species. 350 wells are located within the 1000 foot band of this 53 mile ring which will probably have to be removed. Disturbance and pollution of both surface and ground water during the construction and operation of this Collider are unavoidable. With the possibility of cave-ins and encountering underground streams and water sources, construction of this type will be very difficult.

2 Quoting from the EIS*, "The headwaters of two permanent streams, Harpeth and West Fork Stones Rivers, are within the ring and both of these rivers cross the ring alignment. West Fork Stones River is crossed by the ring near E1 within the near cluster where some impacts can be expected depending upon final project design requirements. The Harpeth River is crossed by the ring between area E8 and F8 and is not expected to be affected by surface construction. Likewise, the headwaters for many small tributaries of the Duck River are found within the ring, and a number are crossed by the ring in the far cluster area. The Duck River is a significant regional aquatic environment. The West Fork of Spring Creek at E6, Plum Branch at K6, Clem Creek and North Fork at E5 appear to be most likely to be impacted by current placements."

QUESTION: How will East Fork Stones River and the above mentioned Duck River tributaries be impacted and how do you intend to deal with this problem that could kill aquatic organisms and possibly pollute a municipal water supply? You mention possible solutions such as relocation or diversion, and careful control of run-off and sedimentation during construction.

* Volume IV Appendix 10-13 of 16 -- Tennessee p 47.

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Your plans call for sealing off water encountered during construction of the downshafts, and you are aware that you may encounter large streams, but you fail to mention any method of
3 conduits or the like so these underground streams can continue their normal routes.

QUESTION: How do you intend to deal with this problem of possible flooding of underground caverns and destroying the environmental habitats of the endangered species living there, as well as changing routes of these underground streams?

You plan to permanently dispose of spoils in 35 "spoils piles" most of which are in unlined gullies with retention ponds to prevent leacheates from entering ground and surface water. The first two methods of disposal suggested, (1) use in highway building and (2) selling the spoils, may not immediately materialize and will probably not dispose of all the material, therefore, I feel very strongly that the third method of "spoils piles" will materialize as the final solution. I understand
4 that a significant amount of this aggregate is ground as fine as baby powder in the actual tunnel construction.

QUESTION: How do you propose to prevent leachates from these unlined spoils piles from entering surface and underground water? Dykes can overflow during flooding and unlined piles of spoils can flow through limestone crevices into underground water systems.

In addition to the spoils piles, sediment ponds for dewatering discharge will be built near each of the 33 downshafts.

5 QUESTION: How do you plan to dispose of this water which may contain industrial solvents and oils, and where do you intend to place these "sediment ponds?"?"

In the far cluster, you mention that you will utilize septic tanks for domestic sewage.

6 QUESTION: Have percolation tests been conducted for these systems? Karst formation does not effectively absorb these wastes.

Air Pollution is another problem that could affect humans, animals, plants, and surface streams. You state you will have approximately 48 trucks a day carrying spoils a mile or less to 35
7 spoils piles over the 5-7 year period of construction. With the accompanying blasting, loading and unloading, this could become a problem for all nearby living things as well as affecting surface waters.

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QUESTION: How do you propose to control this dense cloud of dust during this construction period?

During operation of the Super Collider, you will be utilizing 23 cooling towers. You have not mentioned a specific method of dealing with "cooling tower blowdown". You mention evaporation
8 basins, leach fields, or land application spray fields, all of which place additional impact on the environment.

QUESTIONS: Does this blowdown contain any low level radioactive waste? How do you intend to handle this waste material without harm to surface and ground waters?

Quoting from your EIS*, An accidental loss of beam at any point along the collider ring can activate the soil adjacent to the tunnel, thereby generating radionucleides including tritium and NA-22." These "could migrate to nearby water wells and other water supply facilities." If this does occur, you state that you will investigate to determine the extent of ground water contamination, but you give no satisfactory solution should this problem occur.

9 QUESTIONS: How do you plan to deal with this radioactive water should loss of beam occur? Why would not the 500+ beams aborted each year into the area designated as "abort area", not contaminate ground water in that area? Can these radionucleides migrate and activate ground water perhaps several years hence? (I understand this has happened at the closed Long Island facility.)

I am also concerned about loss of plant and animal habitats. There are many rare and endangered plants in the cedar glades in this area. Snail Shell Cave System has four endemic species, two vertebrates, and two invertebrates. You cannot protect and
10 maintain a healthy environment when contending with 35 spoils areas with haul roads, 33 sediment ponds, 23 cooling tower blowdown ponds in addition to new four-lane highways, access roads, building construction, blasting and tunnelling, and heavy vehicles coming and going. I hope you will consider the delicate environment of this area and withdraw this site from your consideration.

*Volume IV, Appendix 10-13 of 16 -- Health Impact Assessments p. 18.

LETTER 504

Accurate Automation Corporation
Suite A 180 • Sheraton Office Center
409 Chestnut Street
Chattanooga, TN 37402
(615) 267-5959 • (404) 433-6362

September 29, 1988

Program Manager, Superconducting Super Collider
U.S. Department of Energy
Washington, DC 20545

Gentlemen:

This letter is being written in SUPPORT of the proposed Superconducting Super Collider. Accurate Automation Corporation and I strongly encourage the U.S. Department of Energy to select and build the Superconducting Super Collider in the State of Tennessee.

Accurate Automation Corporation is a computer systems house doing real-time process control systems and large data communications networks. In 1985, Accurate Automation moved to Chattanooga from Georgia based upon the benefits to be derived from being in Tennessee. The move to Tennessee has been a good move for Accurate Automation. We found a willing and qualified labor pool. We have worked with the University of Tennessee Space Institue and the University of Tennessee, Chattanooga. The faculty and students have been as good if not better than our previous experience.

1

The contractors in Chattanooga have provided us with excellent quality work. We have not had to import talent from other areas on any of our projects. The work ethic of the people is very different than in Chicago or Detroit/ Lansing or even Dallas. The state financial benefits and educational facilitiea have exceeded our expectations in our move. Accurate Automation Corporation recommends that the Department of Energy locate the Super Conducting Super Collider in Tennessee.

Your Draft Environmental Impact Statement does not indicate the boundaries where your labor pool estimates were derived from. I believe that the Department should include Chattanooga, Knoxville, Huntsville and Atlanta as well as Nashville in the local area. Accurate Automation does work for government agencies located in and routinely drives to Tullahoma, Nashville and Knoxville. The contractors that built and support, Marshall Space Flight Center, Redstone Arsenal, Oak Ridge and Arnold Engineering and Development Center as well as the Nissan Plant Komatsu Factory and Saturn Plant are all within the area. I believe the Corp. of Engineers in Huntsville has a good idea of the available resources.

2

The State has been very supportive of high technology. In a small federal program, Small Business Inovation Research, this state earlier this month held a seminar for small businesses like
3 ourselves bringing leading experts from around the country. They have held procurement meetings with governemnt agencies a couple of times a year. The university system has followed and looked at the management and operation procurement you have out for bid. they have talked with us and other small businesses about the Super Conducting Super Collider project.

Having been a student at Columbia University in the mid-1960s, I had the privilege of studying under Nobel Prize winning Professor James Rainwater and the late Professor Isidore Isaac Rabi. I appreciate what Fermilab did when it was located in Balavia, IL. I would never have expected Professor Leon Leaderman to leave New York and start another center of excellence in high energy physics as he did at Fermilab. The location of the Fermilab accelerator in Illinois, instead of Brookhaven, did not destroy Brookhaven: it started a fresh team that has developed major new areas of high energy physics that was collaboratively influenced by the homogeneous nature of the new people working together. I believe that the contemplated Superconducting Super Collider should not be in New York, Illinois and California all of which have major Labs and research accelerators. The location of the Superconducting Super Collider near a site at Brookhaven, Balavia or Livermore/Palo Alto will not stimulate
4 fresh new concepts in high energy physics. It will only lead to less use and less innovation in doing research with today's existing high energy particle accelerators.

WHY TENNESSEE?

There are a number of justifications for the selection of Tennessee as the selected site. Our location being close to Nashville, Chattanooga, Knoxville Huntsville and Atlanta will attract many talented people and be easily accessible from anywhere in the world. The Colleges and Universities of the area work with the business community and the business community works with them. ACCURATE AUTOMATION CORPORATION is located in the Sheraton Office Center in Downtown Chattanooga, where a campus of Chattanooga State Technical Community College is also housed. I know that Chattanooga for example can offer technology in metallurgy and has foundries corporately owned by companies like Combustion Engineering, Eureka and Wheeling, to name a few. The technological base is made up of extremely capable small high technology businesses like ourselves, many of which work with the various government facilities in Oak Ridge (Y-12, K-22 and [illegible]), Tullahoma (Arnold AFS) and Huntsville (Redstone Arsenal,

Marshall Space Flight Center and Strategic Defense Command). The Davis-Bacon wage scale for this area is extremely attractive compared to some of the other sites. This area has many resources a number of important specialties that are going to be needed to make this project come to fruition in a cost effective and timely manner.

BACKGROUND ON ACCURATE AUTOMATION CORPORATION

ACCURATE AUTOMATION CORPORATION is a computer systems house that does real time systems and large data communications networks. We have been in business in Tennessee since 1983, and previously in Georgia since 1976. Our capability is built upon experience in this discipline since 1964. Our expertise in the real time capture of data and instrumentation can be applied to this project. We are working with the University of Tennessee on very advanced work in the area of neural network technology. This technology is directly applicable to the Superconducting Super Collider.

5 I strongly urge the U.S. Department of Energy to develop this unique research tool for high energy physics. The concepts as outlined in the various documents on this project lead me to believe that this new research lab will find new elementary phenomena and will allow new exploration of matter in this pioneering domain of high energy physics.

If the United States is to remain the foremost leader in high energy physics, we have to build a research tool of the magnitude of the Superconducting Super Collider. We can not defer our pre-eminent capability in high energy physics by not building the Superconducting Super Collider. Some of the other areas of technology that will also be hurt if the Superconducting Super Collider is not built include Parallel Computing, Instrumentation, Artificial Intelligence, Cryogenic Technology, Metallurgy, Materials Technology, Mathematics and Theoretical Physics, to name a few.

ACCURATE AUTOMATION CORPORATION and I hope that the U.S. Department of Energy will use this information for construction of the Superconducting Super Collider in Tennessee.

Sincerely yours,
ACCURATE AUTOMATION CORPORATION

Robert M. Pap

Robert M. Pap
President

RMP/pc

LETTER 505

Patricia Thompson
TN Division of Geology
701 Broadway, Nashville
TN 37219
3007 Throne St.
Murfreesboro TN 37129 hm

STATEMENT TO DOE

DRAFT EIS - LOSS OF WATER WELLS

GOOD AFTERNOON: I AM PATRICIA THOMPSON, FROM THE TENNESSEE DEPARTMENT OF CONSERVATION, DIVISION OF GEOLOGY. I HAVE BEEN A MEMBER OF THE STATE'S SSC PROPOSAL TEAM FOR ALMOST TWO YEARS AND HAVE WORKED ON THE GROUNDWATER OF THE SITE PROPOSAL.

MY STATEMENT CONCERNS DOE'S REPORT IN THE DRAFT EIS THAT IN THEIR ESTIMATION 350 WATER WELLS COULD BE LOST BY THE CONSTRUCTION OF THE CAMPUS, INJECTOR SITES, J-SITES AND TUNNEL. THIS INTERPRETATION IS BASED ON THE WATER WELL SURVEY CONDUCTED IN JANUARY 1988 BY THE TENNESSEE DEPARTMENT OF HEALTH & ENVIRONMENT. THIS SURVEY WAS REFERENCED IN THE MARCH 15TH SUBMITTAL TO DOE AND THE RESULTS OF THE SURVEY
1 AND WERE GIVEN TO RTK CONSULTANTS WHO PREPARED THE DRAFT EIS.

WE HAVE REVIEWED THE WELL SURVEY AND FEEL THAT THIS ESTIMATE IS MISLEADING AND NOT REALISTIC FOR THE FOLLOWING REASONS:

FIRST:

ABANDONMENT OF ANY WATER WELL IN MOST CASES WILL ONLY AFFECT THE ACCESS TO THE GROUNDWATER, NOT THE QUALITY OR QUANTITY OF GROUNDWATER. SO IT IS UNLIKELY THAT ANY OF THE WELLS AFFECTED BY THE SSC WOULD "DRY UP".

SECOND:

2 THERE ARE 155 ACTIVE WATER WELLS ON APPROXIMATELY 8000 ACRES THAT WILL BE BOUGHT IN FEE SIMPLE BY DOE. THE WATER WELLS ON

THESE PROPERTIES MAY BE TAKEN OUT OF PRODUCTION, BUT THE GROUNDWATER WILL NOT NECESSARILY BE AFFECTED.

THIRD:

TO OBTAIN A REALISTIC COUNT OF THE NUMBER OF WELLS WHICH MIGHT BE AFFECTED IN THE NON FEE PROPERTIES, LYING WITHIN THE SURVEYED AREA (8000 PLUS ACRES), THE DIVISION OF GEOLOGY REVIEWED EACH INDIVIDUAL WELL RECORD.

THREE CRITERIA WERE USED TO EVALUATE THE REMAINING WELLS TO DETERMINE IF THEY MAY BE AFFECTED BY THE CONSTRUCTION. THE CRITERIA USED ARE CONSIDERED CONSERVATIVE; THAT IS OUR ESTIMATION IS EXAGGERATED. THEY ARE AS FOLLOWS:

3

1. DEPTH OF WELL - IF THE BOTTOM OF WELL WAS WITHIN 150 FEET OF THE TOP TUNNEL OR DEEPER THAN THE TUNNEL IT WAS CONSIDERED AFFECTED.
2. LOCATION OF WELL - IF IT WAS WITHIN 500 FEET OF ANY SHAFT, J-SITE OR OTHER FEE PROPERTY, IT WAS CONSIDERED AFFECTED.
3. UNKNOWN DEPTH WITHIN THE TUNNEL TRACE- IF THE TOTAL DEPTH OF THE WELL WAS UNKNOWN AND WITHIN THE 1000 FOOT TUNNEL TRACE IT WAS CONSIDERED AFFECTED.

THE COUNT REVEALED THERE ARE 70 ACTIVE WELLS THAT FALL INTO ONE OF THE THREE ABOVE MENTIONED CATEGORIES.

OVER HALF OF THE 70 WELLS HAVE UNKNOWN TOTAL DEPTHS. MOST WELLS IN THE SITE AREA ARE LESS THAN 250 FEET DEEP, AND THEREFORE, IT IS LIKELY THAT LESS THAN 70 WOULD ACTUALLY BE AFFECTED.

FUTHERMORE.IN ORDER FOR THE SSC TO OPERATE SUCCESSFULLY. THE TUNNEL AND ALL UNDERGROUND FACILITIES MUST BE AS DRY AS POSSIBLE. THIS MEANS THAT IN THE EVENT UNDERGROUND FRACTURES BEARING WATER ARE INTERSECTED DURING CONSTRUCTION. THEY MUST BE SEALED. THIS FURTHER SUPPORTS THE CONCLUSION THAT THE LOSS OF WATER WELLS WILL BE MINIMIZED BECAUSE THE WATER BEARING FRACTURES WILL BE SEALED AND WATER CAN NOT DRAIN INTO THE TUNNEL.

A NEWSPAPER ARTICLE RECENTLY RELEASED IN THE NASHVILLE TENNESSEAN STATED THAT "HUNDREDS OF WELLS WOULD BE LOST" IF THE SSC WAS LOCATED IN TENNESSEE. THE U.S. GEOLOGICAL
4 SURVEY SUPPORTS OUR POSITION ON THE LOST WATER WELL ISSUE. IN RESPONSE TO THE ARTICLE, A LETTER FROM THE TENNESSEE DISTRICT CHIEF, DIRECTED TO WILMOT HESS, CHAIRMAN, SSC SITE TASK FORCE, DATED SEPTEMBER 2, 1988 STATES:

"AGAIN, THE QUESTION NEEDS TO BE ASKED WHAT CRITERIA WERE USED TO DETERMINE WHICH WELLS WOULD DRY UP AND WHICH WELLS WOULD KEEP THEIR WATER? IF THE CRITERION WAS SIMPLY THAT THESE WELLS ARE LOCATED NEAR THE PROPOSED TRACK OF THE SUPER COLLIDER, THE CONCLUSION THAT "HUNDREDS OF WELLS" WOULD BE WIPED OUT" (AS REPORTED IN THE NASHVILLE TENNESSEAN) IS GROSS SPECULATION".

IN CLOSING, THE REVIEW CONDUCTED BY THE DIVISION OF GEOLOGY DETERMINED THAT PROBABLY MUCH LESS THAT 70 WELLS
5 WOULD BE AFFECTED AND THAT GROUNDWATER IN THE SITE AREA WOULD NOT DRY UP. IT SHOULD ALSO BE NOTED, THAT THE STATE OF TENNESSEE HAS PROMISED THAT WATER WILL BE SUPPLIED TO ANY

LETTER 505 (CONTINUED)

RESIDENT WHO CAN DEMONSTRATE THAT HIS (OR HER) WATER SUPPLY WAS LOST BY THE CONSTRUCTION OF THE FACILITY.

PATRICIA THOMPSON
TENNESSEE DEPT. OF CONSERVATION
DIVISION OF GEOLOGY
701 BROADWAY
NASHVILLE, TN 37219

LETTER 506

WALTER LOOD FKR.

JIM COOPER
4TH DISTRICT TENNESSEE

COMMITTEES:
ENERGY AND COMMERCE
SMALL BUSINESS

WASHINGTON OFFICE:
129 CANNON BUILDING
WASHINGTON, DC 20515
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Congress of the United States
House of Representatives
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OFFICE #3
311 SOUTH MAIN STREET
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CROSSVILLE, TN 38555
TELEPHONE: 615-484-1884

SEPTEMBER 29, 1988

STATEMENT BY FOURTH DISTRICT U.S. REPRESENTATIVE JIM COOPER:

I strongly support the supercollider project because it offers an unparalleled opportunity for Tennessee and surrounding states.

We already have many outstanding high-tech companies and facilities operating in Tennessee, including the Arnold Engineering Development Center, the Oak Ridge National Laboratories, Chattanooga State Community College's Robotics Program, the Memphis Bio-Medical Research Zone, and the Tennessee Valley Aerospace Region.

1

We feel confident we can handle the supercollider and we welcome its presence in Middle Tennessee.

This project is widely supported by the people in my home county, Bedford County. We want to help our nation's top scientists explore new areas of knowledge. We appreciate the opportunity for decent jobs for ourselves and our children. We want to be part of this unique team.

I look forward to working with other Congressmen on this important project.

LETTER 507

IMPACT OF THE SSC ON HIGHER EDUCATION

William M. Bugg, Head
Department of Physics
University of Tennessee, Knoxville, TN 37996-1200
(615) 974-3342

I would like to briefly call to your attention the potential beneficial impact of the Supercollider project on the system of higher education in the State, and more particularly on those institutions in close proximity to the SSC site. In the Tennessee site proposal, great emphasis was placed on the contributions that Tennessee's excellent educational facilities and institutions would make to the SSC project. Today I would like to emphasize for you the tremendous educational benefits which would accrue to the State and the local region from the presence of the SSC in Tennessee. First, and in my opinion most importantly, the infusion of over 1,000 of the finest scientific and technical minds in the world into the center of our State will provide a tremendous uplift to
1 our intellectual well-being and to our academic institutions. I can assure you from personal experience at the University of Tennessee in Knoxville where the creation during World War II of Oak Ridge National Laboratory provided the major stimulus for the University to move from a primarily undergraduate school to a major graduate research and teaching institution with more than 150 masters programs and more than 60 Ph.D. programs that there is nothing more likely to induce a quantum leap in educational quality in Tennessee than a decision by DOE to locate the Supercollider here.

As great as are the benefits to be reaped at my institution by the SSC's location in Tennessee, I must tell you that I am extremely envious of those of you that will live near the site. Middle Tennessee State University, the University of Tennessee Space Institute, Vanderbilt University, Tennessee State

and even the more distant University of Tennessee-Chattanooga and Tennessee Technological University, by their proximity, will receive incredible stimuli from the SSC laboratory both for their student body and their faculty. No less affected will be the liberal arts and community colleges, as well as technical institutes and vocational schools. Nearly 20 such institutions lie in central Tennessee near the site.

But it is not through educational institutions alone that the area will benefit. The cultural stimulus from the SSC employees, their support of theatre, music, and recreational programs, and their interaction with nearby communities will enrich immeasurably the lives of those around them. I have seen this directly in East Tennessee with Oak Ridge National Laboratory, Knoxville and surrounding communities, and I assure you that you will be amazed at the community benefits resulting directly from the SSC project and its personnel, both newcomers and natives.

Finally, I would like to say a few words about safety, based not on detailed scientific studies, of which there are many, but on personal experience. Accelerator laboratories are basically benign, unlike many sources of negative environmental impacts. An accelerator can basically be thought of as a device like a television tube or an X-ray machine which can be turned off at will. It does not generate large quantities of radioactive material as do, for example, nuclear reactors. Small versions of these devices exist in universities for research, hospitals for treatment of illness and in industry for testing and fabrication of modern electronic devices.

I have personnaly lived with my family in close proximity to the largest accelerators in the world at Fermilab and at CERN in Geneva, Switzerland.

A large accelerator is under construction which will be located in its entirety under the large city of Hamburg, West Germany and which will have no adverse affects on the citizens of that city. I assure you that you need have no concern about the location of the Supercollider near Murfreesboro.

The SSC, while somewhat larger than these present-day accelerators, is equally benign. As with all large projects, e.g. new major industries, etc., there will be some adverse effects, but these will be far outweighed by the incredible benefits to the State and particularly to the local community. As an East Tennessean I only wish we could match the superb geology and unsurpassed regional resources of central Tennessee so that I might today be advocating the location of the SSC near my university and my home.

LETTER 508

S S C

D E I S

PUBLIC HEARING, SEPTEMBER 29, 1988, 8:00 PM

Good Evening, Ladies and Gentlemen, my name is Jerry P. Jones and I represent the TN Department of Transportation. The Right-of Way Office was responsible for the Land Acquisition Studies for the SSC Team and we would like to make the following clarifications:

In the Draft Environmental Impact Statement (DEIS) (Vol. IV, Appendix 4, p. 3), it is indicated that there would be 898 PARCELS of land to be acquired, 434 in FEE SIMPLE and 464 in STRATIFIED FEE. Based on follow-up studies, the SSC Authority would acquire only 880 TRACTS, 382 in FEE SIMPLE and 498 in STRATIFIED FEE. Total number of OWNERSHIPS as presented in the DEIS is 807. However, the later studies indicate only 719 OWNERSHIPS.

1 As to the number of relocations, the DEIS indicates 116; 112 residential and 4 businesses. The current data reflects a total of 138 relocations: 126 residential, 12 Non-residential which includes farms, non-profit organizations and businesses. We have studied modifications to some of the J, E, and F areas which could reduce the relocations from 138 to 128, if the modifications are accepted by the Department of Energy. Other modifications under study could reduce the number of relocations considerably.

A portion of the Department of Transportation's field study was a land acquisition cost analysis which reflects a variance in the socioeconomics

section of the DEIS (Vol. IV, Appendix 14, p. 256), as it relates to the yearly taxes lost due to our proposed acquisition of real property. Our estimate of value would indicate approximately $215,000 instead of 1.4 million ($1,400,000) in property taxes lost in Rutherford County; $11,000 instead of 0.5 million ($500,000) property taxes lost in Marshall County and $24,000 instead of 1.1 million ($1,100,000) property taxes lost in Bedford County.

This does not take into consideration a real estate economic theory which indicates that within a couple of years after acquisition, houses that have been purchased will be replaced with equal or better houses. Thus, the tax base could consequently be increased.

The DEIS (Volume IV, Appendix 14, p. 68), as it relates to access roads states the following: total road construction system modifications would include 6 miles of new four-lane highways, 4 miles of two-lane roads, 12 miles of upgraded two-lane roads, and 3 miles of one-lane road.

However, additional studies indicate the following:

2 Included would be a 5.4 mile multi-lane divided highway with partial control of access that would link the SSC campus area with Interstate 24 at the State Route 96 interchange. Also included would be a two-lane secondary highway access road to all J, K, and F areas. This is estimated to require the upgrading of 20.8 miles of existing roadways and the construction of 4.2 miles of new roadways. Approximately 2.4 miles of new roads would be constructed to the Area E access points while some 0.57 miles of existing roads would require

upgrading to provide 15-foot gravel roads. The bridges on these roads will be constructed to handle the state legal load limit of 40 tons. The State or Local Agency would maintain these roads to ensure easy access to the campus and all of the significant activity areas around the SSC.

Stratified Fee Legislation has been implemented by the State of Tennessee. Stop by the Tennessee Department of Transportation's Exhibit in the hallway and someone will be glad to explain what that means. Also our Representatives are present to answer other questions concerning the acquisition process and/or the relocation program. They are easily identified by their name tags.

LETTER 509

LAWRENCE WEBER
2501 Pleasant Green Rd
NASHVILLE, TENN 37214
615-889-2880

STATEMENT BY
LAWRENCE C. WEBER
ENGINEERING GEOLOGIST

Ladies and Gentlemen, my name is Larry Weber; I'm a resident of Nashville and a registered professional geologist. I am employed as an engineering geologist with Geologic Associates in Nashville where I work as a consultant to architects and engineers on matters of geology and subsurface conditions as they relate to foundation design and construction. I am here this evening to discuss the geology, foundation design and surface construction within the campus area of the SSC site.

As you have heard in previous discussions, the area of the SSC project, as well as all of Tennessee, is underlain
1 by limestone. The hard crystalline limestone of this area provides a very competent, stable foundation for structures of all types, including large, heavy industrial-

type structures that typically require high-capacity foundation systems.

We have also heard about the tendency of limestone to undergo a process of solution weathering, which is responsible for the development of caves and sinkholes. Although caves and sinkholes present some degree of risk to structures built above them, you will find that karst development within this area of Middle Tennessee is not so intense nor is it developed to the extent that large caverns and deep active sinkholes cause major problems for construction. Within the SSC project area, you will find that sinkhole development is pretty much limited to weathering along linear fractures, or joints, within the bedrock; these widened fractures usually extend to depths of ten or twenty feet, or sometimes even to depths of fifty feet, but the lateral extent of these features is limited. Certainly, the majority of the

rock weathering and karst features are confined to the upper bedrock intervals.

What effect does the presence of shallow karst development have on foundation safety? For structures bearing on bedrock, it has little, if any, effect. Because the rock weathers very slowly over geologic time, once the structure is safely founded on rock, any further weathering of the bedrock would not be significant during the life of the structure. For structures that bear on soil overlying the karst features, it presents some risk of future subsidence or loss of foundation support. But, as most of you that are familiar with soil conditions in the Murfreesboro community will realize, the soil in this area is very thin. Typically, the soil is less than five feet in thickness and in many areas, there is essentially no soil, and bedrock crops out at the ground surface. Because the soil is thin, any sinkholes in the bedrock are

usually apparent at the ground surface, or in other words, there is not a thick soil cover to hide or mask the karst features within the bedrock. This greatly lessens the risk of possibly building above an unknown sinkhole, which sometimes happens in Florida or in other areas of Tennessee and Kentucky.

Because the bedrock is stable and capable of supporting heavy foundation loads, and because the soil above the bedrock is thin and not likely to lead to significant, active, sinkhole development, I characterize the site as being of low risk with respect to problems generated by karst conditions. This risk can be further mitigated by proper investigation and, if necessary, remedial treatment.

All significant structures located in this area should be preceded by a geotechnical investigation which serves

to identify potential sinkhole problems so that they can be treated on the front end. This investigation process and treatment is commonplace and routine for this geologic setting.

In summary, it is my opinion that construction at the SSC campus area will be no different than at any number of other sites in the Murfreesboro area where large buildings have been routinely constructed and have experienced no problems associated with karst
2 conditions.

My company has served as a geotechnical consultant for the Heritage Farms Dairy located on Highway 99 near the SSC site and for the Termicold Warehouse and White Stagg facilities located in that same general area, for the Murfreesboro Water Treatment Plant and the large blue and white water tank located across town

and numerous other projects located throughout Murfreesboro including the 15-story CityCenter and the Murphy Center located on this campus. All of these structures are underlain by the same types of rock that underlie the SSC site. All of these facilities were investigated and foundation systems properly designed to accommodate the subsurface conditions. All of these structures are performing satisfactorily today and I expect them to continue to perform satisfactorily throughout their service life. I fully expect the same to be true for facilities constructed within the campus area of the SSC project.

Thank you.

LETTER 510

PREPARED STATEMENT
STATE REPRESENTATIVE CLIFF FRENSLEY
FRANKLIN, TENNESSEE

I am Cliff Frensley, State Representative from Franklin, Tennessee in Williamson County and a member of the House Transportation Committee.

Franklin is a city of about 20,000 located 25 miles northwest of the proposed SSC campus area. It is less than half that distance from the new Saturn plant at Spring Hill. Thus my
1 constituents are well aware of the benefits a carefully planned and implemented large development can bring to our area. We look forward to the SSC coming to Tennessee and know that it can be an asset to the region just as Saturn and other developments are.

One of the key elements to a successful development is good highway access. According to the draft EIS, the most heavily congested highway in the area during the construction and operation of the SSC will be Route 96 between I-24 and I-65. However, we are already planning to build I-840 which will alleviate the problem. I-840 will run from I-24 near Murfreesboro to I-65 south of Franklin and will pass close to the SSC site. The Tennessee Department of Transportation has already held public hearings for that part of I-840 between I-24 and I-65 to the North and is expected to announce the final route shortly. The hearing on the section between I-~~24~~ 40 and I-65, the critical one for us in Franklin, will be held late this year or early next year. If the DOE schedule for naming the preferred site for the SSC holds, we should know that decision before the final route for I-840 is determined. The schedule for completing the highway will depend on the annual funding available, but I am certain that it will be complete before the SSC is operational.

Completion of this new highway link will make it easier for new scientists and engineers moving into the area to choose Franklin and neighboring communities in which to live. This diversity in community and lifestyle choices is good for the new residents and existing residents alike. When people have choices, they do not need to bunch up and overload the schools and other public resources of one or two communities. We think many will choose our community. All of us in Williamson County are most interested in the SSC coming to Tennessee

Thank you.

LETTER 511

COMMENTS OF DANIEL C. EAGAR
DIRECTOR OF ECOLOGICAL SERVICES
TENNESSEE DEPARTMENT OF CONSERVATION

GOOD AFTERNOON. I AM DAN EAGAR, DIRECTOR OF THE TENNESSEE DEPARTMENT OF CONSERVATION'S DIVISION OF ECOLOGICAL SERVICES, AND A MEMBER OF THE STATE'S SSC PROPOSAL TEAM. THE PROGRAMS I MANAGE INCLUDE RARE SPECIES AND CRITICAL NATURAL COMMUNITY INVENTORY AND PROTECTION ~~PROGRAMS.~~ I HAVE BEEN RESPONSIBLE FOR THE PORTIONS OF THE STATE'S PROPOSAL WHICH ADDRESS ECOLOGICAL RESOURCES.

1 WITH THE EXCEPTION OF TYPOGRAPHICAL AND MINOR EDITORIAL ERRORS, THE PORTIONS OF THE DRAFT EIS FOR THE SUPERCONDUCTING SUPERCOLLIDER DEALING WITH ECOLOGICAL CONSIDERATIONS FOR THE PROPOSED TENNESSEE SITE IS A GOOD ACCOUNTING OF CURRENT CONDITIONS AND PROJECTED IMPACTS OF THE PROJECT.

2 THE DRAFT EIS GIVES APPROPRIATE CONSIDERATION TO THE UNIQUE CEDAR GLADE PLANT COMMUNITIES OF THE CENTRAL BASIN WHICH ARE HABITAT FOR THE FEDERALLY LISTED TENNESSEE PURPLE CONEFLOWER AS WELL AS A DOZEN OR SO OTHER FEDERAL CANDIDATES, OR STATE LISTED SPECIES. SINCE OUR INFORMATION SUBMITTAL IN RESPONSE TO TENNESSEE'S SELECTION AS ONE OF THE BEST-QUALIFIED SITES WHICH WAS USED IN THE PREPARATION OF THE DRAFT EIS, THE DIVISION OF ECOLOGICAL SERVICES HAS CONDUCTED SOME ADDITIONAL SEARCHES FOR POTENTIALLY SIGNIFICANT CEDAR GLADES IN AREAS WHICH WOULD BE DISTURBED BY CONSTRUCTION ACTIVITIES. THIS CONSISTED OF CHECKING SATELLITE IMAGERY AND AERIAL PHOTOGRAPHS FOR POTENTIAL GLADE HABITATS AND CONDUCTING GROUND SURVEYS OF LIKELY SITES TO DETERMINE IF RARE SPECIES WERE PRESENT, OR POTENTIALLY PRESENT.

THUS FAR, WE HAVE NOT CONFIRMED THE PRESENCE OF ANY FEDERAL OR STATE LISTED RARE PLANTS WHICH WOULD BE DIRECTLY AFFECTED BY THE SSC PROJECT. THE EIS APPROPRIATELY RECOGNIZES THAT ADDITIONAL SURVEYS SHOULD BE CONDUCTED AS PLANNING PROCEEDS AND WE WILL CONTINUE TO WORK WITH DOE ON THIS ASPECT.

3 SINCE CEDAR GLADES ARE TYPICALLY SMALL IN SIZE, IT IS EXPECTED THAT IF IMPORTANT GLADES ARE DISCOVERED IN THE IMMEDIATE PROJECT AREA, SLIGHT ADJUSTMENTS COULD BE MADE IN ALIGNMENT OR CONSTRUCTION WHICH WOULD RESULT IN THEIR PRESERVATION RATHER THAN THEIR DESTRUCTION. THE DIVISION OF ECOLOGICAL SERVICES HAS SUCCESSFULLY WORKED WITH DOE FOR PROTECTION OF ECOLOGICALLY SIGNIFICANT SITES ON THEIR OAK RIDGE RESERVATION AND WOULD DO SO IN THE SUPERCOLLIDER AREA IF TENNESSEE IS THE SELECTED SITE.

4 ANOTHER BIOLOGICALLY IMPORTANT RESOURCE WITHIN THE SSC PROJECT AREA IS THE SNAIL SHELL CAVE SYSTEM. WE HAVE OBTAINED ADDITIONAL INFORMATION ABOUT THE BIOTA OF THE SNAIL SHELL SYSTEM BY COMMISSIONING A STUDY BY DR. THOMAS C. BARR, JR. OF THE UNIVERSITY OF KENTUCKY since our last information submittal. That report has been delivered to DOE today. THESE INVESTIGATIONS HAVE CONVINCED US THAT WE SHOULD BE WORKING FOR THE PROTECTION OF THE SNAIL SHELL CAVE ECOSYSTEM REGARDLESS OF WHETHER THE SUPERCOLLIDER PROJECT COMES TO TENNESSEE. THEY HAVE ALSO STRENGTHENED OUR CONVICTION THAT WITH CAREFUL PLANNING AND IMPLEMENTATION THE PROJECT WOULD HAVE NO SIGNIFICANT ADVERSE IMPACT ON THE CAVE OR ITS BIOTA. SINCE THE CAVE ORGANISMS DOCUMENTED IN THE SNAIL SHELL CAVE INVESTIGATION CAN ALSO BE EXPECTED TO OCCUR IN OTHER UNDERGROUND PASSAGES IN THE VICINITY, MEASURES SHOULD BE TAKEN TO ASSURE THAT

DISRUPTION OF THE RELATIVELY SHALLOW SUBSURFACE DRAINAGE SYSTEMS IS AVOIDED. THE DRAFT EIS ACKNOWLEDGES THAT THIS WILL BE DONE.

THE DRAFT EIS DOES NOT OFFER CLEAR RATIONALE WHY SOME ENDANGERED SPECIES ARE GIVEN MORE ATTENTION THAN OTHERS. ALTHOUGH IT INCLUDES CONSIDERATION OF ALL FEDERALLY LISTED SPECIES KNOWN FROM THE VICINITY WHICH MIGHT BE AFFECTED BY THE PROJECT, IT GIVES MORE EMPHASIS TO THE TENNESSEE CONEFLOWER AND THE INDIANA BAT THAN TO OTHER ENDANGERED SPECIES. WHILE ALL OF THE LISTED SPECIES MENTIONED IN THE DRAFT EIS SHOULD BE SEARCHED FOR IN SUITABLE HABITATS WHICH MIGHT BE AFFECTED BY THE PROJECT, OUR CURRENT INFORMATION ON THESE SPECIES INDICATES THAT THEY WOULD NOT LIKELY BE JEOPARDIZED BY THE SSC. NONE OF THE federally LISTED SPECIES HAVE BEEN OBSERVED IN THE IMMEDIATE PROJECT AREA. THE DUCK RIVER, WITH MINOR TRIBUTARIES AT THE SOUTH SIDE OF THE COLLIDER RING, IS AN ECOLOGICALLY SIGNIFICANT RESOURCE, BUT IT IS NOT A DESIGNATED WILD AND SCENIC RIVER AS INDICATED BY THE DRAFT EIS. IT IS NOT CONSIDERED LIKELY THAT THE ENDANGERED FRESHWATER MUSSELS OF THE DUCK RIVER WILL BE ADVERSELY AFFECTED BY THE PROPOSED PROJECT IF PROPER SEDIMENT CONTROL METHODS ARE USED.

THE DIVISION OF ECOLOGICAL SERVICES WILL CONTINUE TO WORK WITH DOE TO ASSURE THAT IF TENNESSEE IS THE SELECTED HOST STATE FOR THE SSC, ITS CONSTRUCTION WILL NOT COMPROMISE IMPORTANT ECOLOGICAL RESOURCES.

LETTER 512

STATEMENT - SUPER COLLIDER MEETING - SEPTEMBER 23, 1988

I am Thomas Hutchinson, President of Consolidated Utility District of Rutherford County. CUD has been asked to furnish potable water to this project in the amount of three and one-half (3.5) million gallons of water per day. Consolidated Utility District, with $30 million in net assets, is willing and able to serve the water needs for the Super Collider.

Our water plant is located on the upper end of Percy Priest Lake, an ample source of raw water. The Corp. of Engineers estimate states that if 20 million gallons of water per day was pumped out of the lake for 200 days, with no water running into the lake, the lake would be lowered one foot.

1 Our water plant has a four million gallon per day capacity now with a four million gallon per day expansion that will be in operation a year from now. The plant is designed to be expanded to 30 million gallons per day capacity.

CUD has sufficient water lines in the projected campus area now to meet the construction needs of the project for water. Additional water lines from our water plant to the Super Collider site will need to be laid, and a three and one-half (3.5) million gallons per day water plant expansion with additional water storage reservoirs will be required. The State of Tennessee will furnish the financing for these water needs, ~~which will be approximately 13 to 14 million dollars~~.

Serving this large customer should not have any affect on the customers of Consolidated Utility District.

K. Thomas Hutchinson

K. Thomas Hutchinson, President
CONSOLIDATED UTILITY DISTRICT

By 450 Hutchinson Lane
Murfreesboro Tn 37129 890-4760

IIA.1- 682

LETTER 513

STATEMENT

THE HONORABLE MARILYN LLOYD

ON PUBLIC HEARING IN MURFREESBORO, TENNESSEE

ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

1 TODAY A HEARING IS BEING CONDUCTED ON THE DEPARTMENT OF ENERGY'S DRAFT ENVIRONMENTAL IMPACT STATEMENT ON THE TENNESSEE SITE FOR THE SUPERCONDUCTING SUPER COLLIDER (SSC). THE SELECTION OF THIS SITE AS ONE OF THE SEVEN BEST-QUALIFIED SITES FOR LOCATING THIS IMPORTANT NEW SCIENTIFIC FACILITY WAS, IN ITSELF, AN ACCOLADE FOR OUR STATE.

2 THE PROPOSED SITE IS LOCATED ABOUT 30-MILES SOUTH OF NASHVILLE AND EXTENDS THROUGH THE DISTRICTS OF TWO OF MY FRIENDS AND COLLEAGUES, REPRESENTATIVES JIM COOPER AND BART GORDON OF THE 4TH AND 6TH DISTRICTS. THIS SITE IS CENTRALLY LOCATED WITHIN OUR STATE AND THE SITE WILL, I'M SURE, BENEFIT MORE THAN THE FOUR COUNTIES IN WHICH IT WILL BE LOCATED. IN FACT, THE DEPARTMENT'S DRAFT ENVIRONMENTAL IMPACT STATEMENT SUGGESTS THAT ABOUT 21 OF THE 95 COUNTIES WITHIN THE STATE OF TENNESSEE WILL DIRECTLY OR INDIRECTLY BENEFIT FROM THIS SITE LOCATION.

3 IT IS MY FIRM BELIEF THAT THE STATE OF TENNESSEE WOULD BE AN IDEAL LOCATION FOR THIS SUPERCONDUCTING SUPER COLLIDER. THIS NEW SCIENTIFIC FACILITY IS INTENDED TO EXPLORE THE MOST FUNDAMENTAL ASPECTS OF NATURE. THE INFORMATION TO BE DERIVED FROM THE EXPERIMENTS PERFORMED ON THE SSC WILL HELP MANKIND BETTER UNDERSTAND THE FUNDAMENTAL FORCES THAT GOVERN ALL EXISTENCE ON EARTH AND, IN FACT, WITHIN THE UNIVERSE ITSELF. CLEARLY THIS IS A REMARKABLE GOAL, AND THE FACT THAT TENNESSEE COULD BE THE CENTER OF EXCELLENCE FOR SUCH ACTIVITY WOULD INDEED PLACE OUR COMMUNITIES THROUGHOUT

THE STATE IN THE UNIQUE POSITION OF BEING THE CENTER OF HIGH ENERGY PHYSICS FOR THE WORLD.

IN MY VIEW, THE PROPOSED LOCATION IS IDEALLY SUITED TO THE NEEDS OF THE SCIENTIFIC COMMUNITY THAT WOULD BE WORKING ON THE SSC. IN ADDITION, THE NEARLY 5,000 CONSTRUCTION JOBS THAT WOULD BE ASSOCIATED WITH THE SEVEN TO EIGHT YEAR CONSTRUCTION SCHEDULE FOR THE SSC WOULD BE AN ECONOMIC PLUS, NOT ONLY FOR THE REGION, BUT FOR THE WHOLE STATE. IT IS ESTIMATED THAT THE COST TO CONSTRUCT THE SSC WILL RANGE BETWEEN $4.5 AND $4.7 BILLION DOLLARS. SUCH A MAJOR FEDERAL INVESTMENT IN THE STATE'S ECONOMY CAN ONLY ENHANCE THE QUALITY OF LIFE THROUGHOUT THE WHOLE STATE AND THE SOUTHEASTERN REGION OF THE COUNTRY.

4 REVIEWING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT SUGGESTS THAT THE STATE OF TENNESSEE WOULD INDEED MEET ALL THE GEOLOGIC, ENVIRONMENTAL AND RESOURCE REQUIREMENTS FOR THIS PROJECT. BESIDES HAVING AN ATTRACTIVE SITE FOR THE ACTUAL CONSTRUCTION OF THE PROJECT WHICH WOULD INVOLVE TUNNELING BELOW THE WATER TABLE, THE REGION OFFERS ACCESS TO SEVERAL AMENITIES THAT ARE A DESIRABLE FRAMEWORK FOR THE ACTIVITIES THAT WOULD TAKE PLACE AT THE SSC FACILITY. FOR EXAMPLE, THREE IMPORTANT UNIVERSITIES ARE LOCATED IN THE REGION, AND ALTHOUGH THE SSC ITSELF WOULD PROVIDE A CENTER OF EDUCATIONAL ACTIVITIES, THESE UNIVERSITIES WOULD INDEED BOTH ENHANCE AND CERTAINLY BENEFIT FROM THE LOCATION OF THE SSC AS WOULD THE ENTIRE STATE UNIVERSITY SYSTEM. THE SITE IS LOCATED NEAR THE NASHVILLE INTERNATIONAL AIRPORT IN ADDITION TO TWO SMALLER AIRPORTS LOCATED NEAR SMYRNA AND MURFREESBORO. THERE IS ALSO AN ABUNDANCE OF RECREATIONAL AND OTHER RESOURCES SUITABLE TO ENHANCE THE QUALITY OF LIFE OF THE WORKFORCE THAT WILL BE LOCATED AT

THE SSC SITE. IN ADDITION, THE SUPPORT THAT THE PROGRAM COULD RECEIVE FROM UNIQUE INSTITUTIONS AND FACILITIES LOCATED WITHIN THE STATE, INCLUDING MY DISTRICT, SUCH AS THE OAK RIDGE NATIONAL LABORATORY, TVA AND THE MULTITUDE OF IMPORTANT CORPORATIONS CAN ONLY SERVE TO ENSURE THAT THE SSC INDEED IS A SUCCESSFUL SCIENTIFIC, TECHNOLOGICAL AND EDUCATIONAL ENTERPRISE.

IN FACT, ALTHOUGH CLEARLY ONE OF THE MOST IMPORTANT SCIENTIFIC ENTERPRISES EVER UNDERTAKEN BY THE UNITED STATES, THE SSC PROJECT IS ONLY ONE OF SEVERAL IMPORTANT SCIENTIFIC PROGRAMS THAT MUST BE ACCOMPLISHED BY OUR NATION OVER THE NEXT DECADE. IT IS IMPORTANT THAT THOSE OF US WITHIN THE STATE WHO SUPPORT THE SSC RECOGNIZE THAT THIS PROJECT MUST BE ACCOMPLISHED IN CONJUNCTION WITH THE IMPLEMENTATION OF A BROAD SCIENTIFIC AND TECHNOLOGY DEVELOPMENT PLAN FOR THE NATION. WE IN CONGRESS WHO ARE VITALLY CONCERNED ABOUT THIS COUNTRY'S TENDENCY TO FALL INTO COMPLACENCY REGARDING OUR SCIENCE AND TECHNOLOGY PROGRAMS, VIEW THE SSC AS ONE OF SEVERAL ENTERPRISES THAT CAN RESTORE THIS NATION'S PRIDE AND STATUS AS THE WORLD LEADER IN SUCH ACTIVITIES. IN MY POSITION AS CHAIRMAN OF THE SCIENCE, SPACE AND TECHNOLOGY SUBCOMMITTEE ON ENERGY, RESEARCH AND DEVELOPMENT, I HAVE THE RESPONSIBILITY TO SEE THAT A JUDICIOUS BALANCE IS MAINTAINED ACROSS THE BROAD FRONT OF SCIENTIFIC AND TECHNOLOGY INITIATIVES.

I LOOK FORWARD TO WORKING WITH MY COLLEAGUES FROM THE 4TH AND 6TH DISTRICTS AS WELL AS SENATORS BASSER AND GORE TO SUPPORT THE SELECTION OF TENNESSEE AS THE LOCATION OF THE SUPERCONDUCTING SUPER COLLIDER.

LETTER 514

REMARKS BY
KEN SCHNEIDER
OF
NISSAN MOTOR MANUFACTURING CORPORATION U.S.A.

AT THE
DEPARTMENT OF ENERGY PUBLIC HEARING
SUPER CONDUCTING SUPER COLLIDER
SEPTEMBER 29, 1988

Thank you very much.

I am pleased to be here this evening representing Nissan Motor Manufacturing Corporation U.S.A. I would like to extend a welcome to the Committee from Jerry Benefield, the president and chief executive officer of Nissan, who was unable to be here this evening. I will focus my comments on Nissan's very positive experience here in middle Tennessee over the last eight years.

In 1980 our parent company, Nissan Motor Company Limited of Japan, announced a decision to begin manufacturing in the United States. Nissan was one of the first Japanese automotive manufacturers to build a facility in this country.

Marvin Runyon, a retired Ford executive, was named president of the new company, and Mr. Runyon, advisors from the parent company and others in the new manufacturing subsidiary reviewed potential sites in almost every state in the U.S. The selection team narrowed its decisions to two sites in the state of Georgia and to the Smyrna site in Tennessee. Then they began to talk with
1 officials in all three locations in order to make a final decision.

Nissan was very impressed by Tennessee for a number of reasons. First of all, the local and state government leaders and the business leaders were extremely cooperative and interested in having the company build our facility in Tennessee.

The state legislature and the city and county governments agreed to assist in many ways such as creating the infrastructure that was needed to build a 3.2 million square foot manufacturing operation. This included energy provisions, upgrading of existing utilities such as water and sewer, and the building of a connector road from our plant to the interstate highway three miles away. They also agreed to help us train Tennessee employees, since most of these people had no previous experience in building automobiles.

We were impressed by Tennessee for other reasons. An important one is that Tennessee is very centrally located in the United States. It's in the middle of the country from north to south, and also from east to west and within 500 miles of half of the nation's population. We import some parts and supplies for our vehicles, and they come by train and truck from both the west coast and the east coast. Tennessee is also well located for the outbound shipment of our finished products, since many major interstates come through the state.

The best thing that we discovered about Tennessee was the quality of potential employees for our workforce. Officials in our parent company were initially concerned that U.S. workers would not be able to build a vehicle as well as the Japanese. For that reason, the company decided to start with a truck which is not as complex as building a passenger car.

Some people expressed concern about whether unexperienced Tennesseans could develop the complex skills that are needed in a state-of-the-art manufacturing facility. However, as we talked with Tennesseans, we were impressed with the people's strong work ethic, their company loyalty and their potential to become outstanding employees.

Applicants for jobs at Nissan applied at state employment offices, and the state did the initial screening. Then a Nissan recruiter did a second screening, and candidates who met our basic requirements were scheduled for panel interviews.

In those interviews, we looked for people who were capable of a high level of cooperation and teamwork, who were motivated by group as well as personal achievement and who shared the company's goal which is to build the highest quality vehicles sold in North America.

We have had over 200,000 applications for our 3,100 jobs, and today 95 percent of the 2,500 technicians working on Nissan's plant floor are from Tennessee. They've proved that Nissan was right. People with good work habits and an ability to learn can master even the most complex work assignments.

We asked the state for help in providing general vocational training for people interested in working at Nissan, and they responded by committing more than nine million dollars to that educational effort. Nissan also made a large investment in training its employees. The company sent 400 engineers and senior technicians to Japan to train at our sister plants in that country and learn more about the automotive manufacturing process.

Our philosophy statement says that people are our most valued resource. High technology is very important, as you obviously know. But people make the technology work. And we have found people with the ability to do just that here in Tennessee.

Let me give you a few statistics that demonstrate this. Our employees are happy and productive. Our absenteeism is less than 3% compared to over 10% for the rest of the industry, and our turnover rate is only 2%, while many startup operations experience a rate of 50% or higher. Our Tennessee employees are already building vehicles that are equal to or better than the same Nissan vehicles built in Japan. Our dealers in the U.S. initially thought that their customers might want the Nissan version made in Japan instead of the one made in Tennessee. Just the opposite has happened. All the dealers tell me that their customers ask for Tennessee products from Nissan.

Our experience has been extremely positive because of the quality of employees we have hired and our overall relationship with the middle Tennessee community. We're more convinced than ever that we made the right decision eight years ago. And we wish you good luck in making your decision.

Thank you very much.

LETTER 515

September 29, 1988 - F.C. Mason 2017 COLLEGE VIEW, MURFREESBORO, TN 37130

Speaking as a private citizen, an educator in physics at MTSU, and a person concerned abou future of our area, I support the SSC in Tennessee for the following reasons:

1) The superior geology of the proposed Tennessee site over other possible sites makes the tunnel construction and maintenance less of a problem.

2) The jobs related to the construction and operation of the SSC would be high quality, high paying ones, many of which would go to the residents of Middle Tennessee, since we have a broad base of technically trained people.

3) This facility would represent quality growth of our area, not just the ordinary "urban sprawl" growth we now are experiencing. Much thought has been given to the selection of the site as a possible SSC location, much more so than is given to ordinary growth. This could be an advantage, since limitations in the other type growth might naturally occur in order to insure the proper functioning of the completed SSC.

4) There would be opportunities for internships and cooperative education at the SSC for those students interested in attending MTSU in the future. More enrollment in science and engineering related fields would occur at regional universities such as MTSU

5) The SSC would be a facility which would offer MTSU faculty opportunities for research not presently available to them.

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6) The SSC in Tennessee would blend into the local surroundings in such a way that the natural beauty of the area would be less affected than it would if located in other less populated areas of the country, like Arizona

7) The SSC would enhance the mid-south image of being a center for research and development. It would join AEDC in Tullahoma, TN, Marshall Space Flight Center and Redstone Arsenal in Huntsville, Alabama, and the Oak Ridge facilities in Oak Ridge, TN. With any new discoveries that would occur at the SSC, our community would be uppermost in national and international thought, ~~by supplying an increased number of significant contributions to the human endeavors that might lead to a higher quality of life for all mankind.~~

8) The proposed Tennessee site is easily accessible by highway, air, and rail transportation. Also, a natural waterway is available at Nashville.

9) The Nashville-middle Tennessee area would be appealing to people who would re-locate here and to visiting world scientists.

10) The general level of educational opportunities for students of all levels would be enhanced.

There are many other reasons for my being in favor of the SSC in Tennessee, but time does not permit me to enumerate them.

In conclusion, I offer the following thought. Reading from the opening page of Chapter I of Stephen Hawking's best seller, A Brief History of Time:

"A well-known scientist (some say Bertrand Russell) once gave a public lecture in astronomy. He described how the earth orbits around the sun and how the sun, in turn, orbits around the center of a vast collection of stars called our galaxy. At the end of the lecture, a little old lady at the back of the room got up and said: 'What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise.' The scientist gave a superior smile before replying, 'What is the tortoise standing on?' 'You're very clever, young man, very clever,' said the old lady. 'But it's turtles all the way down!'"

My observation is this. We now have a clearer understanding of how the universe works on a grand scale, and for that matter, what holds atoms together. But what about the proton? What holds it together? Wouldn't it be great if the answer to this fundamental question came from the SSC located in Tennessee?

LETTER 516

SSC PUBLIC HEARING, SEPTEMBER 29, 1988
MURFREESBORO, TENNESSEE
LOGAN NICKERSON, PRESIDENT-ELECT, RUTHERFORD COUNTY CHAMBER OF COMMERCE

BASED UPON THE ASSUMPTIONS THAT THE PROJECT IS CONSTRUCTED AT THE PROPOSED LOCATION IN TENNESSEE AND ~~THE ASSUMPTION~~ THAT THE PROJECT IS ENVIRONMENTALLY SAFE, A PROFILE OF THE IMPACT TO THE BUSINESS AND ECONOMIC CLIMATE IN RUTHERFORD COUNTY AND THE STATE OF TENNESSEE CAN BE EASILY PROJECTED:

1 * THE NISSAN EXPERIENCE IN 1980 MADE AN INTERNATIONAL STATEMENT ABOUT INDUSTRIAL AND BUSINESS OPPORTUNITIES IN TENNESSEE. THIS MARKED THE BEGINNING OF ACCELERATED GROWTH IN RUTHERFORD COUNTY. THE POPULATION WAS SLIGHTLY MORE THAN 84,000. IN SIX SHORT YEARS, THE NUMBER OF RESIDENTS INCREASED TO 102,700. 1987 WAS A RECORD YEAR WITH APPROXIMATELY 9,000 NEW PEOPLE CHOOSING RUTHERFORD COUNTY AS HOME. THE HOME BUILDING INDUSTRY EXPERIENCED RECORD GROWTH WITH ALMOST 3,000 HOMES CONSTRUCTED DURING THE LAST YEAR. COUNTY ASSESSOR OF PROPERTY. TOMMY SANFORD, SAID ALMOST 4,000 NEW PARCELS WERE ADDED TO THE TAX ROLLS. THE FUTURE LOOKS EVEN BRIGHTER WITH MORE BUSINESSES AND INDUSTRIES CONSIDERING LOCATION HERE. THOSE POSSIBILITIES INCLUDE MANUFACTURING, SERVICE, TRANSPORTATION, AND EVEN ENTERTAINMENT. SOME ECONOMISTS EVEN PREDICT THAT RUTHERFORD COUNTY'S POPULATION WILL SWELL TO 220,000 BY THE YEAR 2005.

* A PROJECT SUCH AS THE SSC WILL HAVE A SIMILAR IMPACT.

* THE EDUCATIONAL OPPORTUNITIES, THE OPPORTUNITIES FOR STRENGTHENED MARKET POTENTIAL FOR GOODS AND SERVICES, AND OTHER BUSINESS OPPORTUNITIES PRECIPITATED BY THIS ~~PROPOSAL~~ PROJECT ARE WELCOMED BY MOST TENNESSEANS.

* MURFREESBORO IS THE GEOGRAPHIC CENTER OF THE STATE. THERE ARE MORE STATES CONTIGUOUS TO TENNESSEE THAN ANY OTHER STATE IN THE NATION. THESE SURROUNDING STATES ALSO RECEIVE THE ECONOMIC BENEFITS OF THIS LOCATION. ALSO, THIS LOCATION IS IN THE DEMOGRAPHIC CENTER OF 75% OF THE AMERICAN POPULATION.

* THE PER CAPITA PERSONAL INCOME OF THE SOCIOECONOMIC REGION OF INFLUENCE FOR THE TENNESSEE SITE IS THE LOWEST PER CAPITA INCOME OF ALL OF THE SITES CURRENTLY CONSIDERED FOR THE SSC. WE TRY HARD TO BRING OUR PER CAPITA INCOME LEVELS AND OUR STANDARD OF LIVING UP. WE KNOW THAT IF THE SSC LOCATES IN TENNESSEE THAT THIS PER CAPITA INCOME WILL BE INCREASED. (Elements)

* WE KNOW THAT THE POPULATION IN THIS MIDDLE TENNESSEE AREA WILL CONTINUE TO INCREASE EVEN IF THERE ARE EFFORTS TO CONTROL GROWTH. WE HAVE CONSISTENTLY ENCOURAGED THOSE TYPES OF GROWTH WHICH PROMOTE A HIGH QUALITY OF LIFE IN OUR COMMUNITY. WE KNOW THAT THE SSC WILL BRING WITH IT THE NATION'S BEST AND BRIGHTEST TECHNICAL BRAIN POWER. THIS WILL PROVIDE A GIANT STEP IN THE DIRECTION WHICH WE HAVE BEEN PURSUING.

225-775 - 88 (Part 2)

* OUR REGIONAL EXPERIENCE WITH THE ARNOLD ENGINEERING DEVELOPMENT CENTER NEAR TULLAHOMA, TENNESSEE, ASSURES US THAT THE LOCATION OF A GOVERNMENT—OWNED RESEARCH FACILITY CONTINUES TO PUMP ECONOMIC BENEFIT INTO THE COMMUNITY IN GOOD TIMES AND HARD TIMES, THUS PROVIDING AN ECONOMIC STABILITY WHICH IS EXTREMELY DIFFICULT TO OBTAIN OTHERWISE.

* WE WELCOME THE SUPERCONDUCTING SUPERCOLLIDER PROJECT TO TENNESSEE.

LETTER 517

Remarks
by
RANDY BYBEE
(Senior Physics Student)

Tennessee Technological University
Cookeville, Tennessee

Members of the site task force, I am Randy Bybee, a senior physics student at Tennessee Technological University. I am here to speak in support of the Superconducting Super Collider being located in Tennessee.

There are many aspects of the Super Collider which should be considered. The rate at which scientific advancements are being made is astounding. Moreover, more countries than ever before are capable of significant, scientific endeavors. For the United States, the Super Collider will be a major scientific accomplishment because it will ensure that we play a major role in high-energy nuclear physics in the decade of the 1990's and on into the twenty-first century. Because of the new range of energies which will be attainable, many nuclear theories will be subjected to the scrutiny of experiment for the first time. Undoubtedly, several topics at the forefront of physics, such as the Grand Unification Theory, will be progressed by the experiments which will be performed at the Super Collider.

As a university student, I have had the privilege to assist the professors at Tennessee Tech in their nuclear physics experiments. For the past three years, during which time I have worked with Dr. Ray Kozub, we have looked specifically at neutron-rich nuclei in the mass 40 region. These experiments were conducted at the Argonne National Laboratory in Illinois. Hands-on experience with the instruments of nuclear physics is essential for a student who plans to enter the field of experimental nuclear physics or one who wishes to have as complete a knowledge as

possible of the instruments of physics. It is easy to sit in a classroom and think that you understand a topic fairly completely; but, it is a completely different situation altogether to go to a laboratory and see how experiments are done to determine various parameters relating to that topic. One's knowledge is truly enriched by actively participating in scientific experiments. This occurs because one must acquire a thorough, clear understanding of the physics of the apparatus and the physics of the experiment. Thus, the Super Collider will be a tremendous learning tool for undergraduate and graduate students alike.

In addition to these aforementioned points, the Super Collider will be a major factor in the employment sector for scientists as well as engineers. Also, during summers and school terms, students will be able to work in areas which are interesting to them. Working at the Super Collider will be a fantastic experience for those who are fortunate enough to be involved in research there. Moreover, working there would provide a tremendous advantage to those undergraduate students who plan to attend graduate school since those individuals will have already been introduced to the state-of-the-art equipment of nuclear physics. In addition, interaction with other students and faculty will enable one to keep abreast of the developments in the field of nuclear physics. High-energy physicists and elementary particle physicists the world over would converge to the Super Collider and, thus, opportunities for collaboration between physicists would abound. With association like this among physicists, more opportunities for students would naturally exist. Thus, from a science student's point of view, the Super Collider would be a tremendous asset to this region.

In conclusion, the Super Collider will indeed be a multifaceted resource for the United States, not only for students but also for faculty and scientists alike since they will be able to perform new and exciting experiments which will further the cause of science.

LETTER 518

Remarks
by

Carol Baltimore
Physics Student

Tennessee Technological University
Cookeville, Tennessee

Members of the site task force, my name is Carol Baltimore, I am a senior physics major at Tennessee Technological University. I am here before you this evening to speak in support of the Superconducting Super Collider being located in Tennessee. I will address some of the benefits that it would provide for middle Tennessee, specifically in the areas of education and research.

First, no matter where it is located, the Superconducting Super Collider will provide opportunities for research in the area of high energy nuclear physics that were hitherto impossible. As a result of this, it will create an atmosphere that will attract physicists from all over the world; thus, if it were located in middle Tennessee, it would make the area a hub of international research activity.

1

Secondly, the SSC will provide opportunities for the research involvement of college-level physics students. At Tennessee Tech, many of the undergraduate physics students have been employed by the physics faculty to assist in their individual research projects. These students have had the opportunity to go to such research facilities as Argonne and Oak Ridge National Laboratories as well as to laboratories at the University of Notre Dame and Duke University. At these research labs, students are able to see in action some of the physics principles they have learned in the classroom. They are also able to use the problem solving capabilities they learn from working problems in books, in much more complicated, real-life situations. In short this laboratory

experience is a vital part of the learning process.

I was employed by a nuclear physicist this summer and went to Notre Dame University's nuclear structure lab for an experiment in September. Being involved in original physics research was an exhilarating experience. It was fascinating to me to see equipment that really worked because of the physics principles I had studied. It was also exciting to finally see some of the nuclear physics equipment that I had previously only read about. The most intriguing and stimulating part of the experience, however, was the feeling of excitement in the air when all of the hundreds of pieces of equipment started to come together into a working unit to produce useful, new contributions to the field of physics. If the SSC were located in Tennessee, there would most likely be more such research opportunities for physics students in Tennessee and other parts of the southeast.

Another major benefit that the SSC would provide for middle Tennessee is the improvement of local educational systems. Because 2,500 scientists and technical people will be employed permanently at the SSC, they and their families would locate in the middle Tennessee area. These types of people are typically concerned about the health of the communities in which they live, especially about the quality of education which their children receive. When a large number of educationally minded people are concentrated in one area, the educational standards of the voting majority increase. And thus, the quality of education in that area must increase. This has previously happened with both the establishment of Los Alamos and Oak Ridge National Laboratories, where towns were essentially founded by educationally minded people. I submit that if the SSC were located in middle Tennessee, the educational systems of the region would

considerably improve.

In short, I believe that the location of the Superconducting Super Collider in Tennessee would be greatly beneficial to all of the students of Tennessee.

LETTER 519

STATEMENT OF JOSEPH M. IMORDE
TENNESSEE MANAGER FOR ECONOMIC DEVELOPMENT
SOUTH CENTRAL BELL TELEPHONE COMPANY

BEFORE THE

DOE ENVIRONMENTAL HEARING PANEL

SEPTEMBER 29, 1988
MURFREESBORO, TENNESSEE

SOUTH CENTRAL BELL CAN PROVIDE THE TELECOMMUNICATIONS NEEDS OF THE SUPERCONDUCTING SUPER COLLIDER (SSC) AT THE SITE PROPOSED BY THE STATE OF TENNESSEE. WE DO NOT ANTICIPATE ANY SPECIAL PROBLEMS OR POSSIBLE ENVIRONMENTAL IMPACTS ARISING FROM THE CONSTRUCTION OR ROUTING OF ADDITIONAL TELECOMMUNICATIONS EQUIPMENT.

THE INFORMATION INCLUDED IN THIS STATEMENT HAS BEEN SENT TO DR. MACK RIDDLE, PROJECT MANAGER FOR RTK, FOR INCLUSION IN THE FINAL ENVIRONMENTAL IMPACT STATEMENT.

1 SOUTH CENTRAL BELL AND OUR PARENT COMPANY BELLSOUTH CORPORATION ARE COMMITTED TO HIGH TECHNOLOGY AND ECONOMIC GROWTH IN TENNESSEE AND SUPPORT THE LOCATION OF THE SUPERCONDUCTING SUPER COLLIDER (SSC) IN THE STATE OF TENNESSEE.

THE PROPOSED LOCATION FOR THE SUPER COLLIDER "CAMPUS" IS 6.5 MILES FROM THE MURFREESBORO CENTRAL OFFICE. THIS EXCHANGE IS SERVED BY A NO. 5ESS WHICH IS A DIGITIAL, ELECTRONIC STORED-PROGRAM CONTROL MACHINE. IT HAS CAPACITY TO SERVE THE NEEDS OF THE PROJECT. OF PARTICULAR INTEREST IS THE ABILITY OF THIS SWITCH TO SERVE AS A HOST FOR A REMOTE SWITCHING UNIT WHICH COULD BE LOCATED ON THE CAMPUS. THE NO. 5ESS SWITCH CAN BE CONVERTED TO COMMON CHANNEL SIGNALING SYSTEM 7 WHICH IS THE BASIS FOR ALL INTEGRATED SERVICES DIGITAL NETWORK (ISDN) SERVICES.

THE INTEROFFICE FACILITIES THAT CARRY CALLS FROM MURFREESBORO TO NASHVILLE, WHERE THEY CAN INTERCONNECT TO THE WORLD, ARE EXCELLENT. THERE ARE TWO MAJOR ROUTES. ONE IS DIGITAL RADIO AND THE SECOND WILL BE AN ENTIRELY FIBER-OPTIC ROUTE. IT IS IMPORTANT TO NOTE THAT AN ALTERNATE ROUTE THROUGH THE TRIUNE AND FRANKLIN OFFICES COULD BE PROVIDED.

FURTHERMORE, A FIBER-OPTIC CABLE PROVIDING LOCAL LOOP FACILITIES COULD BE INSTALLED ON VERY SHORT NOTICE. THIS WOULD PROVIDE THE EQUIVALENT OF 24,192 VOICE CHANNELS.

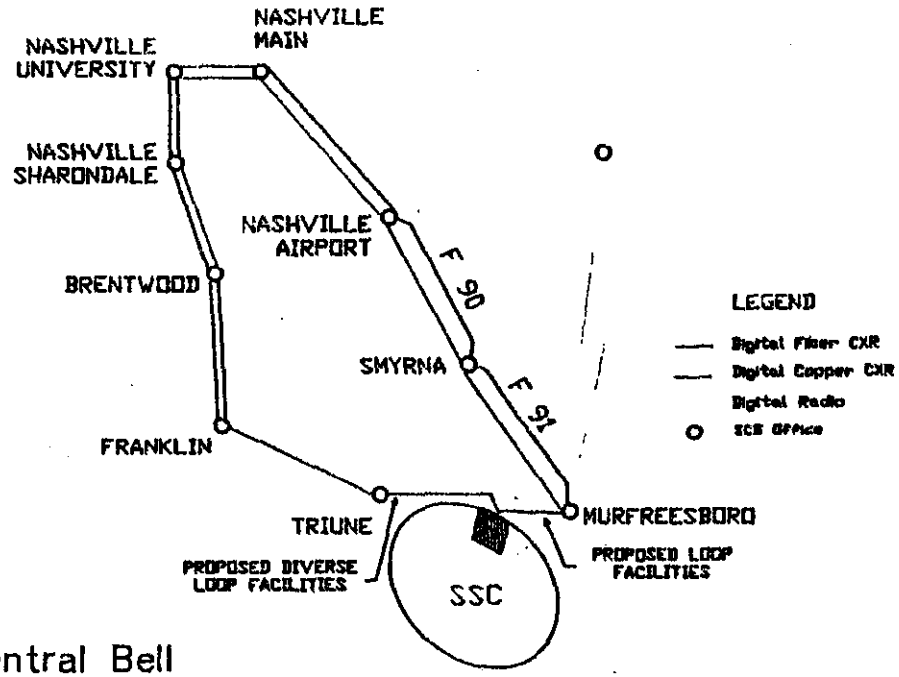
WE AT SCB BELIEVE THAT OUR FUTURE ECONOMIC WELL-BEING IS CLOSELY LINKED WITH HOW THIS COUNTRY INVESTS IN SCIENCE AND TECHNOLOGY. WE BELIEVE THAT TELECOMMUNICATIONS PLAYS A MAJOR ROLE IN THE ECONOMIC DEVELOPMENT OF THE STATES WE SERVE. HENCE, WE HAVE A SPECIAL RESPONSIBILITY TO BUILD THE BEST POSSIBLE "ELECTRONIC HIGHWAYS FOR THE FUTURE". WE MUST MANAGE THE PUBLIC TELEPHONE NETWORK AND THE TECHNOLOGIES DERIVED FROM IT IN WAYS WHICH WILL STIMULATE ECONOMIC GROWTH AND EXPANSION IN OUR REGION. WE ARE DOING THAT TODAY IN TENNESSEE.

THE TELECOMMUNICATIONS SCENARIO FOR THE PROPOSED SSC SITE FULLY SUPPORTS LOCATING THE FACILITY IN TENNESSEE. IN FACT, BY 1990 ALL 206 OF OUR SWITCHING CENTERS IN TENNESSEE WILL BE USING COMPUTER BASED "STORED PROGRAM CONTROL" SYSTEMS AND OUR INTEROFFICE NETWORK WILL HAVE 100% DIGITAL CONNECTIVITY. THIS INFRASTRUCTURE IS THE FOUNDATION THAT POSITIONS TELECOMMUNICATIONS AS AN IMPORTANT ECONOMIC DEVELOPMENT TOOL IN THE 21ST CENTURY.

OUR COMPANY HAS RESPONDED QUICKLY TO MEET THE COMPLEX COMMUNICATION NEEDS OF THE NISSAN AND SATURN MANUFACTURING PLANTS AND WE ARE CONFIDENT WE CAN PROVIDE THE TELECOMMUNICATION NEEDS OF THE SSC WHEN THEY NEED IT WITH MINIMAL FUNCTIONAL IMPACT ON THE ENVIRONMENT.

SOUTH CENTRAL BELL IS TRULY SHAPING THE FUTURE OF TELECOMMUNICATIONS IN TENNESSEE.

DIGITAL FACILITIES SERVING SSC SITE



South Central Bell
A BELLSOUTH Company

LETTER 520

Rt. 2, Box 46 A-7
Indian Mound, Tn. 37079
Martha Jane Hyskyn
Superintendent YANCHYSHYN

Concerns in Tn.

1 1. The amount of money spent on this project could better be spent in research to help farmers & gardeners deal with the climate changes that attend global warming.

2 2. The project itself, due to the use of fossil fuels in construction, contributes to global warming. The project itself will use tremendous amounts of energy. What impact will this have on global warming? Will this energy ultimately take the form of heat?

3 3. One thing projects of this sort do is generate massive amounts of paper. Problems with the project, if the project is implemented, will be the subject of more endless government reports; notice, for example, how much paper TVA's Sequoyah Nuclear Reactor & its problems have caused. Trees are killed to make paper. These trees should be left to take CO_2 out of the air, not to paper over mistakes and justify welfare

projects for the overeducated.

We have lost, nationwide, 1/3 of our farmers. Tennessee has during that time been 2nd or 3rd in the nation in farmer loss. If the
4 state turns to a desert and farmers are dispossessed, where will our food come from? How can money or "economic development" buy food that does not exist?

4. General politicians or their staff members spoke. Only the person from Sen. Gordon's office showed any familiarity with the environmental issues involved in this proposal.

5 My experience with Tennessee politicians is that they communicate poorly, if at all, with their constituents. No one in my community ~~except me~~ knew of the vote in the State Legislature concerning the SSC either before or after it happened. I have written to Sen. Riley Darnell about this issue and received a reply entirely off the subject. I wrote again & received no reply. I have

Martha Yanchyshyn p. 3
Supercollider comment

written to Gov. Mac Wharter ~~several~~ several times on different issues and never received a reply. Not one state politician has ever come to Stewart County to hold a public meeting to inform the public & hear our opinions on any subject.

This situation is more what I would expect of the Soviet Union or Nazi Germany than a democracy. I used to read a lot of science fiction as a child; it led me to believe that bug-eyed monsters might constitute a threat. It is now obvious that the bug-eyed monsters that threaten our world are our own government.

5. The money that would be spent on this project must instead be spent on dealing with the problems that face our farmers and food system. Not to do so can only lead to less food production at home, more food imports (the U.S. is already the world's #2 importer of food), a worsened trade balance, more global warming due to food transport, & national vulnerability. Currently, I know of

6

no federally funded research on these issues.

6. Another reason for having no supercollider inquiries is that a new bureaucracy will be created. Bureaucracies almost immediately, in my experience, forget the public service mission for which they were established and devote their energies to self-perpetuation. This leads to papering over serious mistakes, as at the Sequoyah
7 nuclear installation, which has resulted in the firing of many bureaucrats & the death of many trees. The Supercollider, if located in Tennessee, will furthermore be a source of justification for TVA's overbuilt nuclear program & locating of the monitored retrievable waste system in Tennessee. This amounts to a massive welfare program for the over-educated.

7. In my opinion, the main
8 motivation behind this project by the politicians is Gov. McWherter's

Martha Yanchyshyn
Supervalidator
p. 5

desire to outshine Lamar Alexander, who took credit for bringing Saturn (General Motors) to Tennessee. We need better justification than "me too-ism."

Another ~~key final~~ reason for opposing this is that 1. as a taxpayer of both Tennessee & the United States, I do not want to pay for this 2. I do not want my government either writing bad checks or borrowing money to pay for this.

9 Finally, I question the legality of University of Tennessee's involvement in a project that will have a negative impact on farmers or agriculture. Land grant universities, including

10 U.T., were established under the Morrill Act to help farmers & other rural people achieve & maintain economic & social equality with the rest of society. I do not think this means turning farmers & other rural people/places into urban people/places.

I do not know what vision

11 others hold for our future; I am afraid that vision is really a nightmare in

p. 6

which we find, too late and to our horror, that we cannot continue to do as we please and find a technological fix for all our environmental sins. My own vision is far simpler and clearer: I work toward a future in which, in Biblical terms, every family can have its own vine and fig tree, or the microfiscal equivalent, and none to make them afraid.

Incidentally and for what it's worth, I am myself overeducated. I graduated with honors from Vanderbilt University in Nashville. I do not feel, however, that the government therefore owes me a job.

Just because a project is technologically possible does not mean that it can or will be safely implemented. Humans are capable of and prone to error.

46% of the land area of the county I live in (Stewart) is government-owned. I know of no case in which displaced citizens were compensated to fair market value. Even

There is nothing we can make even a fraction as fine as the natural wonders we have been given. Will we have sense enough to preserve the earth, or will we all depend on will we use it up for technological toys?

LETTER 521

Lisha Preston
102 Russell Street
Shelbyville, TN 37160 or

P.O. Box 2832
Murfreesboro, TN 37133-2832.
Home # 615/684-2051
Work # 615/898-7787 or 898-7877

I am an MTSU student (criminal justice major; ① psychology + ② political science minors), and I work at the Rutherford County Sheriffs Dept.

1 I agree with the Environmental Impact Survey that Bedford and Marshall Counties would have a very high "negative" economic impact. I am from Shelbyville, TN.

It is being said that TN would benefit greatly and lots of money would be brought in .... The TN government

2 will have to pay for the SSC + where does the government get its money? from the taxpayers! Everything about the money is all just a mask — to cover up all of the other disadvantages.

This only covers a very very small part.

LETTER 521 (CONTINUED)

The environment in TN needs
to be protected. This is where
we live —— If you were a
3 bird or a fish, if your entire
area of habitation was destroyed
gradually over a period of time, do you
think your species would survive ??
Technology is great; learning
4 is great —— But, can't this be
put in a location away from TN,
away from such a populated area?

Asha Preston
9-27-88

LETTER 522

COMMENTS PRESENTED AT THE DOE'S SSC PUBLIC HEARING
REQUEST FOR INPUT CONCERNING THE SITE PROPOSAL OF THE STATE OF TENNESSEE

BY JODY LANDRUM CO-CHAIRMAN
SSC KARST IMPACT CONSERVATION TASK FORCE
OF THE NATIONAL SPELEOLOGICAL SOCIETY

My name is Jody Landrum. I am a representative of the National Speleological Society. I am Recording Secretary of the Nashville Grotto and Co-Chairman of The SSC Karst Impact Conservation Task Force of the National Speleological Society.

1 At the July 1988 NSS convention in South Dakota, a resolution was passed expressing concern over the possible selection of Tennessee's proposed site for the SSC and it's impact on karst. They appointed a task force to investigate all seven state site proposals. As of today's date the only potential site we have recommended against is Tennessee's proposal.

2 We have prepared a report outlining our concerns for consideration in the Environmental Impact Statement. We feel we have been denied our right to participate in this public forum. This occured as a result of not delaying this public hearing to provide time to receive, evaluate and comment on The Tennessee Karst White Paper. I received my copy 10:00 P.M. September 28, 1988. This report suggest specific steps to protect a delicate environment. We have not had sufficent time to evaluate these steps. Therefore, I will not comment on those recommendations.

3 I will comment on Snail Shell Cave system. A portion of this cave will run under the "B" complex of the near cluster. Dr. Nicholas Crawford, a recognized karst expert, was commissioned by Tennessee to do a limited hydrological study in the "A, B & C" areas. Dr. Crawford, in this study, states: "Snail Shell Cave is the most important natural feature in Tennessee". He further states: "The caves, springs, karst windows and exposed limestone surfaces in the Snail Shell Karst should be protected perhaps as a state park or natural area. We agree with this statement. Dr. Thomas Barr, respected biologist, states: "The system contains 3, possibly 4 endemic species. The Blind Salamander, The Stream Snail, The Trechine Beetle and possibly one of the millipedes. Consequently, it must be regarded as fragile ecosystem that should be carefully monitored and vigorously protected". Again we agree.

Dr. Crawford states the actual construction and operation of the project, if his guidelines are stringently followed, would not affect Snail Shell Karst. It is our intention to submit written comments concerning the DEIS and Dr. Crawford's suggestions in the coming weeks.

4 Dr. Crawford and Dr. Barr, do however state that urban encroachment is a real and present danger that would be dramatically accelerated by this project. This encroachment would be fatal to Snail Shell Cave and it's delicate lifeforms!

There is no proposal for protection against urban encroachment in Tennessee's White Paper. There is no protection plan mentioned in the DEIS for the protection of Snail Shell Ecosystem.

It matters little to us if Snail Shell is destroyed outright by blasting and tunneling or if it is destroyed by the rapid influx of people and housing developments this project will certainly bring. Dead is dead, no matter how it happens!

5 Therefore, the task force will recommend that without a protection plan in place the NSS should vote, in it's October board meeting, to oppose the selection of Tennessee's site. If Tennessee's site is selected, we will recommend opposing funding for this project.

In closing, I would like to state that we are available to the state of Tennessee, to help in developing such a plan. We request the opportunity, to represent the legitimate concerns of enviorenmental groups in this plan. We would certainly reconsider our opposition to this proposed site, if a workable plan can be developed.

LETTER 522 (CONTINUED)

THE SSC KARST IMPACT CONSERVATION TASK FORCE

OF THE NATIONAL SPELEOLOGICAL SOCIETY

OFFICIAL FINDINGS AND RECOMMENDATIONS

CONCERNING THE STATE OF TENNESSEE SSC SITE PROPOSAL

Jody Landrum
208 CHEATHAM DR
SMYRNA, TN 37167

SEPTEMBER 29, 1988

SSC Karst Impact Task Force of the National Speleological Society

The Case Against Tennessee's Proposal

by Jody Landrum

The following information is by no means the full definition of problems with Tennessee's site proposal for the SSC. The Task Force will continue to issue statements concerning the DEIS past the cutoff date of October 17. On September 13 I had a conversation with Dick Noland of the SSC site task force. It was explained that our group had not received all the information we had requested. In fact we have not received any reply to all correspondence sent to the Department of Energy. But, we accept Dick Nolands offer to comment past the October 17 date. Among those items we have requested but not received are:

6

(1) A written policy concerning access to caves on DOE land.

(A) This access is part of continuing valid research in the sciences of Biology, Speleology, Geology, Hydrogeology and Botany.

7

(B) Access is an important issue for conservation reasons. Will anyone have access or will access be by permit only? What are valid reasons for access? Will a management plan exist? Who will manage these resources?

8

(C) Is the non-response to our correspondence an example of what to expect of the DOE in dealing with environmental groups?

(2) A request to delay the public hearing in Murfreesboro.

(A) We have not received parts of Tennessee's Karst White Paper. Nor have we had time to evaluate those parts not received. Therefore we accept Dick Noland's offer to extend the time period to submit input to the EIS.

9

(B) We still consider this an infringement on our right to participate in the public hearing. If our legal department suggest that this is a basis to challenge the EIS, then we will do so.

(3) Tennessee's Karst White paper. (see above)

(4) Decommission plan.

(A) The provided decommission outline is generic and does not address site specific details.

10

(B) The decommission outline does not address environmental problems particular to Tennessee's site.

(C) The lack of a decommission plan prevents environment groups to input for EIS purposes. This is another area for potential legal challenges.

We will however comment to the best of our ability on those areas we have knowledge of. Those areas can be loosely divided into three categories.

I. The SSC threat to endemic species and critical habitat.

II. The SSC threat to caves and karst areas.

III. The threat of caves to the SSC project.

The SSC Threat to Endemic Species and Critical Habitat

Recent biological studies have shown that the Snail Shell Cave System is both a sensitive ecosystem that houses some 15 troglobitic species and the critical habitat for at least one endemic species. For clarification it is noted that terms like critical habitat and endangered species are legal terms that carry protection to the identified species. Currently the 3 or 4 endemic species do not have the protection of law nor does the critical habitat of Snail Shell Cave. Snail Shell Cave is protected by Tennessee's Cave Law (included in karst resources section). But, let it be known that petitions are being prepared to
11 protect both Snail Shell Cave's hydrological extent (critical habitat) and the endemic species (endangered species). We are hopeful to have both these status within 1 year under provisions of Part 424 of Title 50 U.S. Code of Federal Regulations concerning the Endangered Species Act.

Environmental groups have been examining the DEIS to gauge the impact to local resources. The National Speleological Society passed a resolution expressing concern for possible karst impact at Tennessee's site (see karst resources section) and appointed a task force to evaluate possible impact at all seven states. The SSC Karst Impact Task Force of the NSS voted unanimously to recommend that the NSS go on record against selection of Tennessee's site. This task force is still examining the remaining six states. Two other states have listed Indiana Bats as possible affected species. This is cause for concern. The extent of that impact is being measured. Potential karst impact is being checked in the remaining states.

Task force members had reservations about Tennessee's proposal when it
12 became obvious that the significance of Snail Shell Cave and 41 additional caves were overlooked. These concerns were raised at the earliest possible public hearing. In addition to concerns for local caves it was reported that Snail
13 Shell was home to what we suspected was a unique species of blind cave salamander. Tennessee defended itself by denying that any cave impact would occur. The DOE had the wisdom to request additional information. This request would take form in Tennessee's Karst White Paper. Among the experts Tennessee recognized and hired were Dr. Nicholas Crawford from the Center for Cave and Karst Studies Department of Geography and Geology Western Kentucky University and Dr. Thomas Barr Jr. Professor of Biological Sciences University of Kentucy.
14 This task force was fortunate to have access to both these gentlemen. Dr. Crawford hired local cavers to help with dye traces and searching for caves. This gave us knowledge of field results and raw data. Dr. Barr used local cavers to assist in collecting field samples, so we were interested to hear of excitement concerning snails. As reports came in our concern grew to alarm. We were justified in our desire to protect area caves since it is the critical habitat of three possibly four endemic species. The hydrological extent of Snail Shell was much more extensive than previously known. More caves existed than previously known. After this localized examination of one part of the ring it is obvious that much still remains to be done. We still have not received all information, but more than enough to convince the task force that Tennessee should be dropped from further consideration by the DOE.

Of all the troglobitic species described in Barr's draft report, there are four endemic species (for purposes of this report it is assumed the blind cave fish is endemic as believed by Barr). Two of these species are aquatic including the Cave Snail which is a strict endemic and unique to Snail Shell Cave. Two
15 additional endemics that are not aquatic are a blind cave salamander and a cave beetle. The critical habitat would include the extensive hydrological passageways which cross the SSC surface facilities areas "A" and "B". It will be impossible to prevent insult to these passageways. These are possible impacts to these species:

(1) Change to the cave hydrology by dewatering or flooding due to covering or
16 collapse of passageway. This would affect the flow of food to these species through normal aquatic means. Flooding would kill the two endemic species that are not aquatic. Changes to the hydrological flow would affect the food source to all four endemics.

(2) Influx of leachate, increased erosion normally associated with a construction project of this magnitude, pollution associated with spills of
17 contaminated material in karsted areas, sewage from urban encroachment, radiation (no studies have been done to measure tolerable doses on these species) in subterranean streams and the inevitable increase of human traffic in area caves.

(a) Barr described to this task force member, how dust could clog the gills of salamander, cavefishes, crayfishes and snails leading to quick deaths. Dust is described in the DEIS as reaching high levels and eroded runoff from construction sites would occur. This would happen, no matter how well
18 intentioned site proposals are. It is reality that accidents will occur even if intentions are good.

(b) Barr further explained that dust would coat the cave clays and disrupt normal ecosystems. These systems are complex and sensitive to even small disturbances. Disturbance of normal food chains would lead to death of delicate lifeforms.

(c) Influx of sewage in small amounts is an increase of food stuff to
19 certain troglobitic species. This would benefit some species at the expense of others, leading to an imbalance and an alteration of normal cycles. Sewage in heavier amounts will simply kill all forms. This type of destruction can be examined in detail in caves in Cookeville.

(d) Snail Shell Cave has been a concern for years. Increased popularity in caving has led to an increase in human traffic in all Tennessee Caves. Some caves are more sensitive than others. This project has increased public knowledge of the location and particulars of Snail Shell. Regular trips reveal
20 defacing of formations, spray paint, sacks full of beer cans, 12 volt car battery, dead animals and human excrement. It is hoped public support for a park or preservation area will exist after Tennessee's propsal is dropped. Snail Shell has taken human life as well. Uneducated cavers are a threat to themselves and to the cave.

(e) No plan has been suggested to control urban encroachment that will be a
21 normal part of a large construction project. Increased septic tank use would certainly spell the end of these species. While this encroachment is not exclusive to this project, it would certainly increase beyond current rates. This would surpass efforts to protect critical watersheds.

It is apparent that Tennessee's original site proposal was defecient in it's estimation of the extent of karstic features in the near cluster. It grossly underestimated the number and types of impacted species. It should be pointed out that limited research has been done in a limited part of the proposed ring. It is reasonible to assume that if research were done in other areas more discoveries will be made. Searches to prove "no caves" found
22 previously unknown caves. New species were found in biological searches. The hydrological extent of Snail Shell was quadrupled in an attempt to downstatus it's significance. This raises questions that reflect on the accuracy and legality of any EIS done on the basis of this research.

These questions are:

23 (1) Is it the opinion of the DOE, that no other caves exist in the Near Cluster Karst? What is the basis for this belief?

24 (2) Is it reasonible to assume no habitats exist for Gray and Indiana Bats, even though it has been shown that these species have been identified locally? The total number and location of area caves are still unknown after new research in the Near Cluster Karst. Other areas of the ring karst features are unexamined.

25 (3) Will similar research be done for other parts of the ring? There are karst features in virtually all of the ring.

26 (4) Has a botanical inventory been done, in the field? By whom? What is the date of the research done? If Tennessee's botanical field work was as deficient as it's biological, then a high risk exist for omission for some threatened plant life. We believe that there is probable cause to believe this. When will this be done? Who will do this work?

27 (5) Who would monitor the DOE's impact of threatened or endangered species? What would be the outcome if it were demonstrated collider construction or operation threatened the existence of these endemic species? Would access to DOE lands be provided for this purpose?

28 (6) Will a decommission plan be provided, for the possible abandonment of Tennessee's site, in the event of legal obstacles to it's completion? Why not?

29 (7) Will the DOE answer my letters? What is the environmental impact of ignoring environmental groups?

30 (8) Since the DEIS ignores karst engineering problems how will input from environmental groups be solicited concerning implementation?

31 (9) Will additional studies be done concerning specifics of the life cycles for all four endemic species? Would these studies be done prior to construction?

32 (10) What are some examples of remedial action to repair collapsed passageways?

33 (11) How would a spill of contaminated material be handled (specific to karsted areas) to minimize impact on endemic species?

34 (12) How will the DOE prevent urban encroachment? Will a plan be provided in the EIS? Why not?

35 (13) How will the DOE protect the watershed of Snail Shell Cave? Will a plan provided? Why not?

36 (14) How will area cavers be protected during construction? Threats include cave collapse and flooding by hydrological blockage? Would they be protected by the same plan for protecting endemic species?

37 (15) Will new discoveries of caves during construction, automatically be considered part of critical habitat? Who will monitor this?

These are just a few concerns raised during SSC Karst Impact Task Force discussions.

Conclusions

Enclosed with this portion of the report are the following items:
(1) A draft of Barr's biological report and two letters to Mr. Paul Hamel of the Tennessee Department of Conservation.

In his letters to Mr. Hamel several important points are raised. This is the reason for their being included here. Point number one is the belief of Dr. Barr that something may have missed during their inventory (letter dated August 31 page 2). It is very possible that much has been missed in the limited time allocated for these studies. This study includes a small area near the "A" "B" and "C" portion of the SSC project. Point two is the implication that "The attention to detail in the proposal suggests that any "failure" (to communicate with cave experts) was the result of ignorance of construction engineering problems in a karst terrain. How Tennessee could have been ignorant of karst problems is hard to understand. I have included a 1982 hydrological study of Snail Shell (now replaced by more recent studies as a result of this project) and a 1986 EPA map that graphically demonstrates the karst hazard and potential threat to water and aquatic endemic species. Dr. Crawford recently stated to task force co-chairman John Hoffelt, that the 1986 EPA map redone today with recently obtained knowledge, would make the areas containing the campus and laboratory "all red". This would indicate a high risk for sinkhole collapse and groundwater contamination. If task force members easily obtained these pieces of information, then why not the state of Tennessee?

38

The letter of September 13 contains several suggestions that I will examine and respond to.
(a) Shift the site of the campus a mile or two eastward.

We wish this were possible but this would significantly change the DEIS and possibly open legal challenges. How would the other seven states feel about giving Tennessee special consideration? They had their sites correct the first time. If these problems could be resolved we would consider the new proposal.
(b) Acquire Snail Shell and watershed for a protection area or a state park.

The SSC Karst Task Force is examining several alternatives for protection of Snail Shell. We believe this site will not be selected for the SSC. Our concern will not end with the elimination of Tennessee's proposal. We have initiated contact with members of the current administration. We hope our opposition will not prevent working together to protect important resources. If we had been contacted during the planning stages of this site proposal, we would have strongly recommended against this particular site. We are available as a future resource. Consideration of this suggestion must be free of linkage to the SSC project. If it has merit it should be pursued regardless.

39

(c) Institute rigid controls and inspection.

No proposed controls and inspection plan are available for us to examine. We insist on our right to evaluate any proposal as part of the DEIS. Not as part of a final solution. We would not have any input on such a proposal and therefore reject it.

(continued next page)

(d) Launch an aggressive information campaign.
The reverse of this has been done. Members of Tennessee's site task force have lost all credibility with environmental groups. It is fortunate that different individuals will deal with the issue of protecting critical habitat.

Dr. Barr's preliminary faunal report describes fifteen possible affected species. He points out that this critical habitat is an island surrounded by the geological barrier of the Central Basin. If this habitat is destroyed or severly impacted it would not recover. It would be lost forever. He closes by stating that currently the ecosystem is in good condition. He futher states that the fauna of Snail Shell are unique and fragile and constitute a strong argument for the protection and preservation of a significant biological resource.

(2) Also included with this portion of the report are the 1982 hydrogeologic study and the 1986 EPA map. These were prepared by Dr. Nicholas Crawford.
The EPA map speaks for itself. I will however comment on Dr. Crawford's 1982 hydrological study. In the conclusion of this report on Snail Shell Dr. Crawford states "Conclusions concerning the hydrogeology of the Snail Shell Karst must be considered preliminary." He further states that much remains to be done. I suspect the same conclusion will highlight the end of the most recent studies. Snail Shell Karst is extremely complex and not suitable for the purpose proposed by the state of Tennessee. The complete hydrogeologic of Snail Shell remains unknown today.

(3) My letter requesting a delay in the public hearing in Murfreesboro scheduled for September 29. If this is the wrong address please let me know.

The SSC Karst Impact Conservation Task Force of the National Speleological Society is actively engaged in drafting a petition for protection of Snail Shell Cave Karst as a critical habitat. We are further seeking protection of the four endemic species listed by Barr as endangered. By the time funding is given to the DOE (assuming this happens) we believe this protection will be in place. We will vigerously defend with all legal means against any and all encroachment. We are evaluating alternatives for protecting this habitat against future threats. We are actively seeking the help and guidance of every interested environmental group. This issue has great appeal to a variety of organizations. It is our desire that the knowledge obtained evaluating this site will be the foundation of a preservation area and a deterrent to misguided land utilization.

LETTER 523

KARST HYDROLOGY INVESTIGATION
IN THE VICINITY OF THE CAMPUS - INJECTOR COMPLEX
FOR THE PROPOSED MIDDLE TENNESSEE SITE
FOR THE SUPERCONDUCTING SUPER COLLIDER

Nicholas C. Crawford, Ph.D.
Professor and Director
Center for Cave and Karst Studies
Western Kentucky University
and
Karst Hydrology Consultant
Tennessee Division of Geology
and
Tennessee Technology Foundation

phone 502-843-4979
Bowling Green, KY 42101

Dye injected into the Cherry Grove Karst Window in Area A of the Campus - Injector Complex was detected at the Pike Karst Window and at McKnight Spring. Therefore, it appears that the drainage from Areas A and C of the Campus - Injector Complex flows to McKnight Spring without joining any of the streams in the Snail Shell Cave System. After resurging at McKnight Spring, the stream flows down Overall Creek for 1.0 kilometers (0.6 miles) before sinking at McKnight Swallet. During low discharge, the surface channel of Overall Creek is dry all the way to its confluence with the West Fork of the Stones River. Dye traces revealed the location of the subsurface Overall Creek at the Jack Wright water well, the Ida Haynes cave stream, the Dennis McDonald cave stream, the Donald McDonald water well, the MTSU Blue Hole Karst Window, the Stone Man Quarry Spring, the Chunka Trunk Cave stream, the West Fork Cave stream, the Wallace Karst Window and a final resurgence at Wallace Spring on the West Fork of the Stones River. The two streams in Snail Shell Cave were detected at the Blue Sink Karst Window and Overall Spring. It is believed that the Snail Shell Cave stream then flows through Three Bridges Plunge Karst Window to join the subsurface Overall Creek somewhere between McKnight Swallet and Dennis McDonald Cave.

1

Following heavy rains the subsurface Overall Creek cannot handle the increase in discharge and it rises to the surface at several overflow springs which flow into the usually dry Overall Creek. From the headwaters of Snail Shell Cave to Wallace Spring on the West Fork of the Stones River the entire surface - subsurface karst drainage system is perched above the shale layers of the Pierce Confining Layer. The decision by the Tennessee Division of Geology to place the SSC tunnel deep at an elevation of 107 meters (350 feet) MSL in the Murfreesboro Limestone was made to protect the karst and associated groundwater resources. It was also chosen to avoid the problems of tunneling in karstified carbonate rock. This investigation supports their conclusion that the karst is shallow and not hydrologically

connected to the Murfreesboro Limestone at the level of the proposed tunnel. Therefore, the karst should not have an impact upon the tunnel and the tunnel should not have an impact on the karst.

All of the known and mapped passages of the Snail Shell Cave System lie to the west and upstream of the proposed site for the SSC Campus - Injector Complex. Since underground streams, like surface streams, cannot flow uphill, it is hard to imagine any activities in the Campus - Injector Complex site which could in any way affect the explored and mapped passages of the Snail Shell Cave System. 2

The Campus - Injector Complex is however drained by cave streams which could carry contaminates into the subsurface Overall Creek system and then all the way to Wallace Spring on the West Fork of the Stones River. The author recommends that extra precautions be taken to protect these downstream caves, groundwater resources, and people living above the caves. In addition to secondary containment systems for underground tanks and other precautions mentioned in the SSC Conceptual Design Report to prevent accidental spills and leaks, the author recommends that a special groundwater monitoring and emergency recovery system be installed. This would consist of continuous monitoring instrumentation in the cave system which flows under Areas A and C. The Pike Karst Window is ideally located for continuous monitoring, being just inside the proposed eastern boundary for the Campus - Injector Complex. If a contaminant is detected, an alarm would be sounded and recovery pumps, already in place, would pump the flow of the entire cave stream into a lined surface impoundment. A small earth dam across the usually dry Armstrong Branch would make a good surface impoundment. With gates which could be electronically controlled, both groundwater from the cave stream and surface flow down Armstrong Branch could be contained in the lake for treatment if necessary in the event of a spill or leak of hazardous chemicals. Since additional land would not be necessary, it is estimated that the system would cost less than a million dollars. If a spill occurs, only a small section of the underlying cave would be contaminated. Due to the frequent flushing of water through the cave with each rain, it would not take long for the cave to recover from the spill. Storm water runoff could also be directed into the surface impoundment as part of the storm water management plan. Sinkhole flooding and sinkhole collapses should not be a problem for this site if sinkholes and other low areas are avoided. Hopefully, this system would never need to be used, but in view of the extreme vulnerability of karst aquifers to contamination, the author believes that it is justified at this location. Development upon karst terrain need not result in groundwater contamination or damage to the underlying caves if special precautions are taken. The SSC project could be an excellent example of how development should be done in karst areas. 3 4 5

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE, TENNESSEE 37219-5237

MEMORANDUM

TO: Interested Parties

FROM: William T. Hill, State Geologist
Daniel L. Eager, State Ecologist

DATE: September 30, 1988

SUBJECT: Ground Water and the Snail Shell Cave System in the Superconducting Super Collider (SSC) Area.

The following discusses recently completed reports by Dr. Nicholas C. Crawford of Western Kentucky University (WKU) and Dr. Thomas C. Barr, of the University of Kentucky (UK) concerning the hydrology of the SSC Campus Area and the Snail Shell Cave system (Crawford) and the cave's Fauna of the Snail Shell Cave system (Barr).

From the outset of the project planning process in 1987, it was recognized that there is a relatively well developed karst system in Middle Tennessee in the proposed site for the Superconducting Super Collider (SSC) near Murfreesboro. Knowledge of this karst system played an important role in selecting the final site, depth, and alignment of the ring. Further work, including drilling before and after the Tennessee site was placed on the Best Qualified List (BQL), added to our knowledge of the areas karst and groundwater systems. It became evident several months ago that we needed more understanding of the karst system, particularly that of the Snail Shell Cave and its environs, which at the time was the subject of considerable public concern. This was obtained by contracting with the investigators and authors of the above mentioned reports, both recognized experts in their particular fields. Neither Dr. Crawford's nor Dr. Barr's investigations was entirely completed because the time available was short for the amount of work that had to be done, but enough was done to permit some important conclusions and recommendations.

6

The report by Dr. Crawford, entitled "Karst Hydrology Investigation in the Vicinity of the Campus-Injector Complex for the Proposed Middle Tennessee Site for the Superconducting Super Collider", September 26, 1988 was contracted through the Tennessee Division of Geology for the Tennessee Technology Foundation.

The report includes a detailed description of the Snail Shell karst system and its hydrology. Dr. Crawford, assisted by staff from the Tennessee Division of Geology and a WKU graduate student, inventoried the karst hydrologic features in the area of the Campus-Injector Complex, the Snail Shell Cave area, and the Overall Creek-West Fork of the Stones River area. In addition, members of the Nashville Grotto of

the National Speleological Society, in conjunction with the SSC Karst Impacts Conservation Task Force of the National Speleological Society and the Tennessee Cave Survey were employed by Dr. Crawford to assist in the inventory. Dr. Crawford designed and implemented dye trace studies to determine the flow routes of subsurface streams in the area of the proposed SSC Campus and Injector Complex and Snail Shell Cave. This information, coupled with previous work done by Crawford in 1975-76, enabled him to determine the groundwater flow routes in the Snail Shell Cave and Campus areas north to Stones River. Because of severe drought conditions during this phase of the project, the dye traces took longer to work through the system than expected, making it impossible to complete some of the work as of this writing.

Nevertheless, Dr. Crawford has been able to draw some conclusions from the work completed to date. He reports that in his opinion, the potential threat to Snail Shell Cave by the proposed SSC has been greatly overstated. This is principally because all of the presently known passages of the cave are upstream from any part of the proposed Campus-Injector Complex. Since underground streams, like surface streams, cannot flow uphill, activities in Campus area could not affect the explored and mapped passages of the Snail Shell Cave system.

7

In the Campus area, the dye tracing revealed that there are several cave streams under the area which flow to the north, eventually draining into Stones River. If extra precautions are not taken during construction or operation of Campus facilities, contamination of the underground streams could take place. Dr. Crawford recognizes that all of the facilities, except the linear accelerator and the Central Laboratory facility, are to be located near tunnel level at 350 MSL, well below the cave systems, and do not present a threat to them. For those facilities to be constructed on the surface, he presents several recommendations that address the problem, including relocation of some of the buildings, monitor wells to detect any migration of fluids into the groundwater, and containment systems and recovery wells. He recommends the installation of a recovery system before a spill or leak occurs, a system that would detect and then stop any contamination in groundwater and any contaminations in surface runoff from getting off site.

8

He considers the encroaching urban sprawl and development of the area a greater threat to the caves and groundwater than the SSC. He concludes his report by stating that he does not see any adverse impacts to the Snail Shell Cave System which is upstream and even upwind from the proposed Campus-Injector Complex, and believes that if the recommendations outlined in the report are followed, there will be no adverse impacts to the caves and groundwater downstream from the site.

9

The Faunal Report

The Snail Shell Cave Faunal report was prepared by Dr. Thomas C. Barr Jr., Professor of Biological Sciences at the University of Kentucky. The study of the cave's fauna was contracted through the Division of Ecological Services, Tennessee Department of Conservation, also working through the Tennessee Technology Foundation, and is independent of Dr. Crawford's report.

Dr. Barr's report includes a detailed description of the cave structure, geology, hydrology, and fauna. Because of the short period

of time available for the project, Dr. Barr was unable to identify all of the fauna collected, consequently the report is presented as a draft; but he was able to draw conclusions from the work that was finished.

The Snail Shell Cave fauna contains three, possibly four, endemic troglobites, animals found only in the Snail Shell Cave system. Dr. Barr points out that the fine, dust-size particles from the limestone spoil piles that will be located at various sites, could possibly be washed into the caves, threatening the delicate ecosystem if not stringently controlled. Other pollutants, as sewage and industrial chemicals could also find their way into the caves and damage the system. Only carefully controlled construction and monitoring activities as described by Crawford can prevent these impacts. Dr. Barr indicates that if these precautions are followed, the proposed Superconducting Super Collider Project need not adversely affect the Snail Shell System.

10

cc: Elbert T. Gill, Jr., Commissioner, Dept. of Conservation
Thomas Ripley, Deputy Commissioner, Dept. of Conservation
Roy Ashley, Assistant Commissioner, Dept. of Conservation
Jim Ball, Governor's Staff
Fred Weinhold, Tennessee Technological Foundation
John Crothers, Dept. of Economic and Community Development
Wayne Scharber, Assistant Commissioner, Dept. of Health and Environment

KARST HYDROLOGY INVESTIGATION IN THE VICINITY OF THE CAMPUS - INJECTOR COMPLEX FOR THE PROPOSED MIDDLE TENNESSEE SITE FOR THE SUPERCONDUCTING SUPER COLLIDER

Prepared By

Nicholas C. Crawford, Ph.D.
Karst Hydrology Consultant

SNAIL SHELL CAVE FAUNAL REPORT

Prepared By

Thomas C. Barr, Jr., Ph.D.
Professor of Biological Sciences
University of Kentucky

LETTER 523 (CONTINUED)

KARST HYDROLOGY INVESTIGATION IN THE VICINITY OF THE CAMPUS -INJECTOR COMPLEX FOR THE PROPOSED MIDDLE TENNESSEE SITE FOR THE SUPERCONDUCTING SUPER COLLIDER

Prepared for :

Tennessee Division of Geology
and
Tennessee Technological Foundation

Prepared by:

Nicholas C. Crawford, Ph.D.
Karst Hydrology Consultant

September 26, 1989

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ABOUT THE AUTHOR

SNAIL SHELL CAVE FAINAL REPORT

Prepared By
Thomas C. Barr, Jr., Ph.D.
Professor of Biological Sciences
University of Kentucky

DRAFT OF REPORT MANUSCRIPT..... 1

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LETTER 524

FROM: "Human Receptor"
PAT SANDERS
"CATCH" TENN
CO-CHAIR
P.O. Box 1275
MURF. TN 37133
615-896-0265

I'm the person quoted in U.S.A. Today - "They ought to take it to the desert." 9-26-88

This SWISS CHEESE is the 'heart-of-the-matter' — a preview of coming attractions. It represents the vast cave (or KARST) system we have here in Rutherford County and where you plan to put your injector, booster, and surface buildings.

"Our Restless Earth" states caves are a distinguishing feature of this part of the state. You are in The Central Basin - a hole — a depression.

book

The DOE was smart to demand a WHITE PAPER of Tenn. re: Caves and hydrology — since Tenn's proposal stated "...no significant Karst exists in the area," and was, thus, insufficient.

1

The WHITE PAPER now states, "Snail Shell Cave is the most important geologic feature in Tennessee." WOW! Too bad you guys couldn't see it instead of Jack Daniel's Distillery in June! We even had you lined up with a guide.

You might not care about the cave system and our drinking water but you ought to care about your project. "It's not nice to fool Mother Nature." Besides, you will seriously jeopardize your success by locating the SSC here — where your surface facilities could fall into an earthen

(Sanders)

Page 2

collapse, where you'll affect our underground streams and rivers, and where you'll have enormous volumes of WATER to deal with. (There are 30 million gallons of water - at least - in Snail Shell Cave's Grand Canal.)

50% of Tenn. relies on groundwater as its water supply.

There is SULPHUR WATER in this area. It's very corresive and it smells.

1982 EPA map: KARST (CAVE)

map → HAZARD ASSESSMENT of Tennessee - sinkhole flooding, sinkhole collapse and groundwater contamination, showing how Tennessee's site for the SSC is very substandard and how there is a tremendous possibility for groundwater contamination. (So, where was everybody "when the lights went out"? Someone goofed and didn't tell the D.O.E. - that you'll have trouble - "I'm talking about trouble - right here in river city".

Dr. Nicholas Crawford didn't know there are ARTESIAN WELLS here. College Grove relies on one.

MAP

GO TO A SITE ABOVE WATER TABLE! SAVE OUR WATER!

(Sanders)

page 2

The expense ($) of your project will be more here than above-water table sites.

It's an underestimate that 500 wells will be impacted!

It's an underestimate that 395 acres of prime farm land will
2 be seized. One farm alone has 200 acres to be seized — now growing soybeans, cotton, and wheat. Go see it.

My husband, as Director of Rutherford County Health Dept., raised questions about the water, air, infrastructure, etc., to be affected by SSC. The STATE DEPT. of HEALTH and Environment squelched all that in May, '88 — wanted no "debate" or "public forum".

Now, what's the matter with the RTK VENTURE GROUP (Calif.) that they didn't put our protest
3 in the EIS? I know it "doesn't make a whopping bit of difference", Dick Nolan, but we sent in 3,400 signatures on petitions to Pres. Reagan and to D.O.E. in early Aug. '88. Here are some more. We have formal, registered protest.

quote from Tennessean 9-29-88

(Sanders)

Page 4

Tennesseans are laid back, saying (1) SSC isn't coming to Tenn. and (2) SSC isn't going to be funded. Our Congressman, Bart Gordon, says it's going to TEXAS. So, what's this charade/farce here today??

The D.O.E.'s horrible track record is known about in Tenn. We heard about the radioactive trees at Oak Ridge. You left your "calling card" 30-40 years ago (as Atomic Energy Commission). We know about Hanford, Wash., Brookhaven, N.Y., Fermilab, Ill. (and the book POWSCIDE). You don't answer our questions and you keep the public in the dark. (Feb. 12, '88 SCOPING REPORT was never sent to our library.)

"TREES" chipping Nash. BANNER

The D.O.E runs 76% of the
4 1900 federal waste sites that have not met cleanup requirements under the 1980 Superfund law. A recent ('88) issue of the Nuclear Waste News (NWN) quoted Rick Jacobi of the Texas Low-level
5 Radioactive Waste Disposal Authority and two engineers from Fermi lab as estimating that this (SSC) project

Page 5 (SANDERS)

will create 30,000 cubic feet of low level nuclear waste annually! The June 11, 87 issue of NWN states, "Fermi is storing MW on-site, because none of D.O.E.'s
6 LLW disposal facilities can meet the Resource Conservation and Recovery Act (RCRA) requirements to accept this material.

Lastly, 50% of D.O.E.'s budget is for making nuclear weapons.
7 Many of us feel the SSC property could eventually be used to store nuclear fuel and/or nuclear weapons — if not toxic waste.

WE HAVE ENOUGH OF D.O.E.
8 IN OAK RIDGE — FOR TENN. WE DON'T WANT YOU IN THE CENTRAL BASIN.

Pat Sanders
P.O. Box 1275
Murf. TN. 37133

9/29/88

SSC THREATENS COLONIAL ESTATES

In its wisdom our state government has, without consulting us, selected our area as the proposed location for the Superconducting Super Collider (SSC). Specifically, if the project does come to Tennessee, Colonial Estates will be in the "buffer area and buried beam zone," sometimes called the "abort area" or "absorption area." Radioactive protons moving at almost the speed of light and propelled by "an energy of 20 trillion electron volts" would be fired into the ground under our homes. Strangely, at the much smaller Fermi collider
9 now operating in Illinois no one is allowed to live above any part of the project, and visitors are not permitted there, but the state and the Department of Energy would expect us to assume this risk.

Apparently no one knows the full danger of this risk - the probable increase in the number of cases of leukemia in children and other cancers in our neighborhood. Many experts believe that there is no safe dose of radiation, that any increase should be avoided. This is the major risk!

Other risks and disadvantages include:

10 1. Blasting and dust from the removal, transporting and dumping of enough crushed rock to fill 600,000 dump trucks.

11 2. Loss of existing water wells and inability to drill wells in the future.

12 3. Possible contamination of our water supply.

13 4. A tremendous increase in our property taxes resulting from at least 7,750 acres being removed from the tax rolls and the need to increase expenditures for schools, roads, utilities, police and fire protection.

14 5. The Christiana Elementary School property would be required, and the school would need to be rebuilt outside the project area.

15 6. While the increase in area population might increase property values at some distance from the project, the risks of living on top of it would certainly cause our property values to drop.

TIME IS SHORT! After September 29 there will be nothing we can do or say which will make any difference. What can we do now to get more information or express our concerns?

1. Attend a meeting Monday, September 12, at 7:00, p.m., in the courtroom on the second floor of the Courthouse. The County Commissioners have agreed to hear our concerns.
2. Sign the petition at Mullins' Jewelry Store or Bart Gordon's office.
3. Attend the public hearing scheduled by the DOE, Thursday, September 29, 2:00 to 5:00 and 7:00 to 10:00, p.m., at the James Union Building, M.T.S.U.
4. Make a statement at the meeting on September 29. If you want to be on the schedule, call Mike Wolf at 301-353-6583 or 301-353-6570 or sign up at the door.
5. Contact Representative Bart Gordon's local office by calling 896-1986 or by writing him at P.O. Box 1986, Murfreesboro, TN 37133.
6. If you need a bumper sticker on more information, call one of us.

Noel Hinote, 436 Liberty Court, 893-3915

Ann or Russell Driver, 433 McKaig Road, 893-3262

LETTER 524 (CONTINUED)

16

Trees contaminated with radiation

OAK RIDGE — About 15 trees at the Oak Ridge National Laboratory have fallen victim to leaking radioactive waste stored 30 to 40 years ago near the Oak Ridge National Laboratory, officials say.

The trees' roots apparently absorbed radiation from contaminated areas below ground where nuclear waste was buried in tanks in the 1940s and 1950s, said Tom Row, director of ORNL's environmental and health protection division.

"What you're seeing is the trees' roots have reached into an area where soil has become contaminated from spills, and it's worked its way into the tree system," Row said.

The laboratory's health physicists discovered the contaminated trees during a recent monitoring sweep of the ORNL grounds. They were surprised at the amount of contamination, Row said.

The trees aren't considered a health threat, but they are emitting measurable amounts of beta radiation, he said.

The Nashville Banner
8-29-88

LETTER 524 (CONTINUED)

for DOE

RAYMOND P. GIBBS
ATTORNEY AT LAW
PUBLIC SQUARE
105 NORTH MAPLE STREET
MURFREESBORO, TENNESSEE 37130

OFFICE (615) 896-1830
HOME (615) 896-0364

August 8, 1988

President Ronald Reagan
The White House
Pennsylvania Avenue
Washington, D.C.

Re: Super Collider
SSC Fact-Finding Group
CATCH
Middle Tennessee

Dear Mr. President:

On behalf of the residents of Middle Tennessee, and Rutherford County, who have organized themselves into an ad hoc committee known as "Citizens Against the Collider Here", we are asking your help in having the Department of Energy withdraw from its consideration the "Rutherford County" site for the super-conducting super collider as proposed.

17 We are sending to you, courtesy of our congressman, the Honorable Bart Gordon, our original petitions seeking your help in opposing this site, manually signed by approximately 3,400 Tennessee residents.

While many of these residents do not oppose the building of a super-conducting super collider, they are united in their opposition to the proposal made for the "Rutherford County" site, which is inappropriate for the Rutherford County area and is likely to be more expensive to both the federal and state governments than alternative sites. The project is estimated to cost billions of dollars; choosing the most economic site is regarded as important. Mr. President, there are safer alternative areas than our area.

Thank you very much for your considerations and attention to these matters.

Respectfully yours,

RAYMOND P. GIBBS

RPG/cg
cc: Congressman Bart Gordon
Washington, D.C.

Mrs. Pat Sanders
Co-chairperson SSC Fact Finding Group
Murfreesboro, Tennessee
Enclosures

PETITION AGAINST THE SUPERCONDUCTING SUPER COLLIDER IN RUTHERFORD, BEDFORD, MARSHALL, AND WILLIAMSON COUNTIES IN TENNESSEE

We, the undersigned [redacted] and residents of Tennessee do petition the President of the United States and the Secretary of Energy to disapprove the construction of the Super Collider project by the Department of Energy in Rutherford, Bedford, Marshall, and Williamson Counties as proposed by the state of Tennessee.

Our opposition is based on these facts:

1) A significant number of homes would be taken from their owners, many of which have been occupied by the same families for generations.
18 2) Over 18,000 acres of land would be taken, including many farms with prime agricultural soil. This would severely disrupt the agro-business and quality of life in these affected rural communities.
19 3) City and county government services, especially in Rutherford County, would be adversely affected. The local infrastructure of roads, schools, utilities, and public service agencies would be seriously strained.
4) There are many scientific unknowns about the environmental effects of the SSC project, including:
   a) the extent of radioactive contamination to ground water, wells, streams, and air and the related damage to humans, mammals, plants, and marine life.
20 b) the health hazards of the electromagnetic fields created by the SSC and transmission lines that power it, and
   c) the immense transportation, disposition, and pollution problems with the thousands of tons of rock and rubble produced in the construction of the tunnel.
21 5) The people of Tennessee are being asked to take risks that they do not choose to take. Less expensive and more appropriate alternatives are available. Both federal and state governments already own vast land areas which are far more suitable and less costly. A project like this belongs in an area with a population not nearly so dense as that of Middle Tennessee.
22

Respectfully submitted:

LETTER 524 (CONTINUED)

for D.O.E.

Rutherford County
Department of Health and Environment
909 N. Church Street P.O. Box 970
Murfreesboro, Tennessee 37133-0970

April 6, 1988

TO: HONORABLE MEMBERS OF THE COUNTY BOARD OF COMMISSIONERS AND CITY COUNCILMEN OF MURFREESBORO, SMYRNA, EAGLEVILLE AND LA VERGNE

Building Search in La Vergne-Smyrna

23 The search for space for the health department clinic in the La Vergne-Smyrna area continues as plans proceed for the Tennessee National Guard to take over the building being currently used. The city of Smyrna is cooperating in locating possible property sites. Considerations include the purchase of two double-wide trailers as the least expensive approach.

Concerns Regarding the Super Collider

As enthusiasm for the Superconducting Super Collider continues, a number of citizens are raising questions of civic and public health concern. Some of these questions are:

24 1. Will construction of the tunnel drain or exhaust adjacent well water and should this occur, can affected farmers or home owners expect the state to provide replacement water for household and stock animal use?

25 2. How will the county and state tax structure be affected as several thousand agricultural acres will be removed from the tax rolls and as millions will be spent to promote and service the SSC?

26 3. Will the local infrastructure of roads, schools, utilities and public service agencies be seriously strained?

27 4. What will be the extent of radioactive contamination to ground water, wells, streams, and air and the related damage to humans, mammals, plants and marine life?

28 5. Are there health hazards of the electromagnetic fields created by the SSC and transmission lines that power it?

29 6. What are the transportation, disposition and pollution problems associated with the thousands of tons of rock and rubble produced in construction of the tunnel?

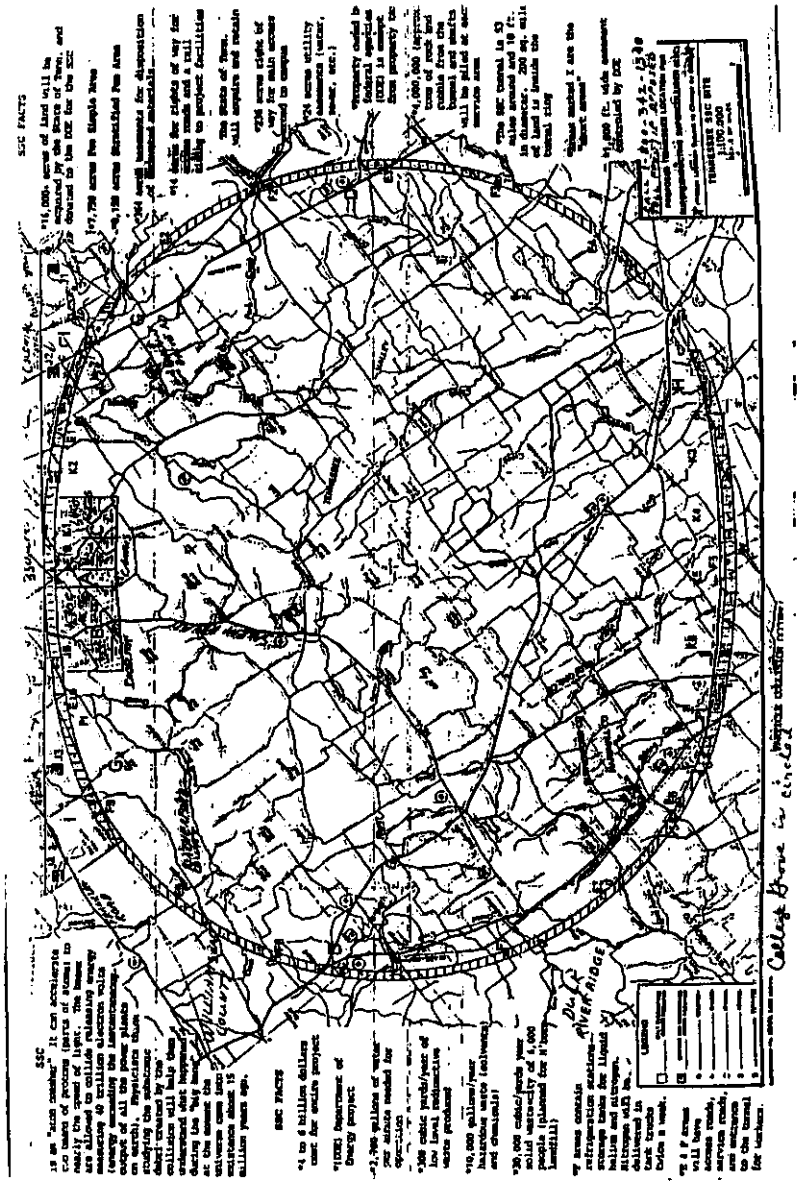
Should the SSC be funded and should Tennessee be selected, the above concerns and questions must be considered and responsibly answered.

Respectfully submitted,

Robert S. Sanders

Robert S. Sanders, MD
Director

hc


SSC FACTS
SSC FACTS
Calloway Bone to circle
Pulaski County
Gilmer County
Dallas
RIVER RIDGE
TEMPORARY SSC SITE
LEGEND

LETTER 524 (CONTINUED)

for DOE 9-25-88

Sun., Sept. 25, 1988, Murfreesboro, Tenn. THE DAILY NEWS JOURNAL

OPINION

Letters to the Editor

Page Four, Sunday, Sept. 25, 1988
Sunday News Journal

Few commissioners understand collider

To the editor,

A big thank you to County Commissioners Grant Kelley, Roy Wood, Buddy Woodson, Stan Vaught and Carl Brown for understanding the impact on their constituents that the super collider (SSC) would have and for voting on Sept. 12 to oppose the construction of the super collider in Rutherford County. The county commission voted to defeat the resolution that opposed the SSC because they didn't know enough facts about the project's impact, but the SSC Fact-Finding Group invited to the meeting to present facts and provide information was not asked one single question. The state people (proponents of the SSC) and the Murfreesboro-Rutherford County Chamber of Commerce president did not refute any facts presented by the SSC opposition group, especially when Jody Landrum presented the map of the Karst (CAVE) Hazard Assessment of Tennessee-sinkhole flooding, sinkhole collapse and groundwater contamination, telling us Tennessee's site for the SSC is substandard and there is a tremendous possibility for groundwater contamination. (Unfortunately, half of the opposition was not permitted to speak.)

The SSC issue has cost many of us time, energy, anguish and uncommon frustration. It is unconscionable to put the SSC in Tennessee, with its immenseness, its disruption of homes, farms, groundwater and the infrastructure (schools, roads, utilities, police, public health, etc.) when there are alternate, remote and sparsely-populated sites in areas of Arizona, Colorado, or Texas where the research purpose of the SSC would be just as well served.

Many of us feel it is arrogant and outrageous of scientists to think they are entitled to live on our land and push us off. Many of us have ancestors who cleared, homesteaded and cared for this land beginning over 170 years ago. One landowner has a War of 1812 land grant signed by Tennessee's Gov. Sam Houston, stating, "...to your heirs forever." That document, framed and hanging on her wall, is apparently meaningless to the state of Tennessee. Thus, we've learned, there are no guarantees, it can happen to any of us, no person is secure. Who knows what's next?

Pat Sanders
Murfreesboro

9-23-88

for DOE

THE TENNESSEAN • Friday, SEPTEMBER 23, 1988

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A GANNETT NEWSPAPER

LETTERS to the editor

Put SSC in remote site such as Arizona

To the Editor:

Did the editorial writer of "Collider opposition premature" (Sept. 17) read Jim East's article "Collider opposed as 'ecological nightmare'" (Sept. 4)?

Mr. East's article pointed out recent evidence that suggests the SSC site will be unsuitable because of the Swiss Cheese Karst (cave) and sinkhole formations in Rutherford County. Much of the SSC site is at high risk for sinkable flooding, sinkhole collapse and groundwater contamination. The editorial writer should see the 1982 EPA report on the latter and should be aware of the White Paper recently called for by the DOE since the Tennessee site proposal was considered insufficient regarding caves and hydrology.

The SSC issue has cost many of us time, energy, anguish and uncommon frustration. It is unconscionable to put the SSC in Tennessee with its immenseness, its disruption of homes, farms, groundwater and infrastructure (schools, roads, utilities, police, public health, etc.) when there are alternate, remote and sparsely-populated sites in areas of Arizona, Colorado and Texas where the research purpose of the SSC would be just as well served.

Many of us feel it is arrogant and outrageous of scientists to think that they are entitled to live on our land and push us off. Many of us have ancestors who cleared, homesteaded and cared for this land beginning 170 years ago. We've learned there are no guarantees. Anyone's property can be seized. No person is secure.

Pat Pelot Sanders
P.O. Box 1275
Murfreesboro 37133

LETTER 524 (CONTINUED)

FROM PAGE A-1

State team says estimates too high on collider impact

By David Logsdon
Banner Staff Writer

Weak spots in Tennessee's bid for the Superconducting Super Collider are less serious than indicated in a federal analysis released last week, says the state's team leader.

"The Environmental Impact Statement brought up several points we had recognized in the spring and hadn't dealt with in the original proposal," Dr. J. Fred Weinhold said.

"Much of the additional work we have done is not reflected in the EIS, so there's a little confusion."

As an example, he referred to concerns raised in the Department of Energy document about endangered species in the 53-mile loop through Bedford, Marshall, Rutherford and Williamson counties about 35 miles south of Nashville.

The EIS questioned the SSC's effect on the habitat of the gray bat and some rare plants found in cedar glades peculiar to Middle Tennessee.

"The Fish and Wildlife Service have some general maps showing in large regions where one would expect to find some of these species," Weinhold said.

"What they did not do is what we have done. Go down and pinpoint habitats for some of these species.

"Are they in the collider area? The answer is no."

Weinhold said his team also disputes an EIS statement that Marshall and Bedford counties will lose money providing services required by the influx of people.

The EIS conclusion is based on an exaggeration of property tax losses from land taken over by the government for the SSC, Weinhold said.

"They're assuming a quarter of the whole property tax revenue for the whole county," the team leader said. "That just doesn't make sense.

"We think it will be more in a couple of hundred thousand dollars.

"In using our numbers, our is going to find the impact on the community is positive rather than negative."

State and DOE estimates also differ on the number of people who will converge on Middle Tennessee to build and work at the $4.4 billion underground research facility.

The EIS projects the SSC will bring 13,000 people into Middle Tennessee and 3,990 additional housing units will be needed during the peak year of construction. The housing needs will drop to 2,870 in the SSC's first year of operation.

"Local area housing markets mostly would not experience sizable impacts caused by the SSC, compared to projected housing stocks," according to the EIS.

But Weinhold said his team has concluded the EIS impact estimate is too high. The DOE predicts 3,775 people will be at work during peak construction of the SSC, which will indirectly employ another 5,756 people at the same time.

In its first year of operation, the underground facility will have 3,248 people on its payroll, which would spur the creation of another 3,638 jobs not related to the SSC.

The EIS projects 65 percent to 74 percent of the SSC construction force will come from outside the Midstate, but Tennessee's SSC team has concluded at least half the work force will be people who live in an easy commuting distance.

"The result is a significantly lower number of people moving in than the DOE numbers would suggest," Weinhold said.

Opposition in Rutherford County to the SSC stems in part from fears residents will have to pay for a huge school expansion program to educate children of SSC construction workers, who will move out of the area when their jobs end and before the new schools are paid for.

The EIS says the SSC work force will add 2,988 students to the school rolls during the peak year of construction. The number of new students will hit 3,058 in the SSC's first year of operation.

But the Tennessee SSC team sees a smaller impact on Midstate schools.

"Our analysis shows only about a fourth of the construction workers will have to come into the area," Weinhold explained.

"The DOE figures are more like half."

Even if the DOE figures are correct, Weinhold said, the students and school needs would be spread over a 21-county area.

One point of agreement with the EIS is on radiation, Weinhold said.

Some people living in the proposed site are afraid dangerous radiation will be released by the smashing of proton beams in attempts to break atoms into smaller pieces.

"The analysis shown in the EIS clearly shows the radiation impact would be immeasurable," Weinhold said.

"Particularly down as deep as we are proposed to be.

"We've always been saying with good housekeeping, there is no radiation hazard, and the EIS confirms this."

One factor the EIS does not fully cover is the relationship between Rutherford County's Snail Shell Cave and the SSC's tunnel, Weinhold said.

The question arose after the deadline for the states to submit their proposals, on which the EIS is based.

However, the state has commissioned a study of the cave complex, and that information should be available by Sept. 29, when the DOE will host a public hearing in Murfreesboro on the SSC.

Weinhold is confident neither the cave system nor its underground streams would be affected by the collider.

At a depth of 350 to 400 feet, the tunnel will be well below the caves and any streams running through them, Weinhold said.

"It's not that we were lucky when we picked this site," he added.

"We were concerned with keeping the water away from the tunnel."

Tennessee is one of seven states still in the running to be selected as the site for the SSC. The others are Arizona, Colorado, Illinois, Michigan, North Carolina and Texas.

The Department of Energy is going to recommend a site in November.

LETTER 524 (CONTINUED)

Nashville Banner

MONDAY AFTERNOON, SEPTEMBER 12, 1988 □ Nashville, Tennessee □ Vol. 114, No. 154 □ 40 pages □ 5 sections □ First edition □ TODAY'S NEWS TODAY

Others seek collider as Midstate site fought

By David Legeden
Banner Staff Writer

Internal opposition to the Superconducting Super Collider being proposed for Tennessee is expected to mount tonight just as other states vying for the $4.6 billion plum tout community support for the project.

A resolution against the SSC will be presented to Rutherford County commissioners tonight, said Grant Kelley of the Public Works Committee.

"It's probably going to be a mixed vote, but we'll probably go on record against it," Kelley predicted.

The SSC will hurl beams of protons together so scientists can find out how far down they can break the atom.

The Environmental Impact Study (EIS) released last week by the U.S. Department of Energy (DOE) is stiffening resistance to building the project in Rutherford, Bedford, Marshall and Williamson counties, Kelley said.

The document summarizes proposals submitted by the seven states being considered for the site — Arizona, Colorado, Illinois, Michigan, North Carolina, Tennessee and Texas.

Ian McPherson of Arizona's SSC team said community support is a major advantage Arizona has over Tennessee, Illinois and North Carolina.

Opposition to so great because only four families will have to be moved from Arizona's proposed site, he explained.

"We have foundations and dwellings from virtually every city and county," McPherson pointed out.

"The 'Citizens Against The Collider Here' (CATCH) folks in Illinois have actually supported the Arizona site and have suggested the SSC be located in Arizona because of its remote location and diminished ecological impact."

Nancy Ebbert of the Illinois SSC team said the CATCH "folks are very good at making noise, but, beyond that, they have not had much impact."

"What we do have is almost unanimous support from local governments, unions, civic organizations."

However, Ebbert conceded Illinois will have a problem in relocating 140 homes that will have to be sacrificed for the SSC site.

"The eastern side of our ring is in a suburban area," she said. "Most of our ring is in farm land."

On the positive side, the Illinois team found some good news in the EIS.

"The DOE job estimates are

Please see COLLIDER, page A-6

substantially higher than ours," she said.

"In addition, the DOE did point out in several places the impacts from construction would be less because of our existing infrastructure. For example, in Arizona and Colorado the DOE thought maybe boom town conditions would emerge.

"But, in Illinois, the construction workers will virtually live in the area already. Some will come in, but it won't be a substantial number."

Existing housing and schools can accommodate any population growth caused by the SSC, Ebbert continued.

Illinois' experts who studied the EIS comparison of states have found no serious weakness in their bid for the SSC.

"Our scientists have been studying the site for five years," she explained. "We started studying that area when talk first started about the SSC.

"Any potential environmental problems have been identified long ago and work started on them."

Asked about reports the DOE has secretly eliminated all but Texas and Illinois, Ebbert replied: "We have no indication at all that there is an official short list.

"But it matches our estimation of the competition.

"We have long felt the top contenders are Texas and Illinois.

"Both states are strong politically, which makes a difference."

"Texas has offered to cap in $1 billion for building the SSC on its proposed site; Illinois is dangling a $570 million cash offer plus the smaller Fermilab collider, which can be incorporated into the SSC and save the DOE millions of dollars.

Illinois also has several research universities in the area, Ebbert noted.

The Texas SSC team spokesmen could not be reached for comment, but John Hanesiki of Michigan's SSC team said the EIS shows the Lone Star State and Illinois have built lads on weak geology.

"The National Academy of Sciences ranked geology as the most important consideration," he pointed out. "We see Michigan leading Texas and Illinois on that score."

Tennessee, too, seems to have a geologic weakness in the cave network running near the proposed SSC site. "Tunneling could prove more difficult than expected," Hanesiki said of the Tennessee site.

"If a tunnel boring machine were to hit a water filled cave, that could do evil things to the machine operator."

Illinois' bid is further weakened by the CATCH group's opposition, Hanesiki continued.

"This is not a simple little building project," the Michigan spokesman explained.

"This is a massive project, requiring thousands of workers over years of effort.

"Inevitably, there are going to be public relations issues associated with it.

"If it starts off with a negative environment in terms of public relations, it will not get better," Hanesiki said, referring to comments by DOE officials that they want the SSC built in a friendly place.

"Illinois has very serious public opposition led by very sophisticated people.

"These are people that wear business suits and power neckties. They know how to use the legal system and public relations.

"That will cause Illinois no small degree of difficulty."

Opposition to the SSC also exists in Michigan, Hanesiki conceded, but it is small and is found among people opposed to change in any form.

"We call them NIMBYs," he added. "'Not In My Back Yard'."

Most Michigan residents will support the SSC if it is presented truthfully, the spokesman predicted. "It's our challenge to mobilize the great middle ground of Michigan residents."

A few glitches in the EIS that give the NIMBYs and Michigan's rivals some false hopes, Hanesiki said.

A table projects the loss of 2,000 acres of wetlands, for example, but only 160 acres will be affected. "And we can create new wetlands elsewhere to compensate, so there is no wetlands loss," Hanesiki said.

Colorado also counts heavily on its geology. Its proposed site for the underground research facility is a large, dry slab of rock, known as the Pierre Shale.

It's thick enough to hold the entire 53-mile tunnel, and its tight grain does not permit appreciable water movement, said Jim Bryant of the state's SSC team.

Colorado's proposal calls for running the tunnel at an average depth of 100 feet, at least 200 feet above the level projected for Tennessee's site.

Whereas Tennessee's site is clouded with controversy over the effect the SSC would have on an extensive cave system running through part of the ring area, few caverns exist in Colorado and none touches its SSC site.

"We think we're very strong on the environmental area as well," Bryant continued.

"Our site is mostly open range land and dry, with some irrigated crops. It would be very compatible with the SSC.

"The only negative thing in the EIS is some loss of the bald eagle habitat, but I don't think that's really a concern.

"The bald eagle is essentially a raptor, seen streams and reservoirs for habitat. We're not really going to be influencing that."

The rare black-footed ferret once lived in the Colorado SSC site area, but the animal hasn't been seen in the vicinity for more than 15 years. "We're going to do another site survey, just to make sure there are none," Bryant continued.

"If there are some, there would be a relocation plan."

Another edge Colorado has in the SSC chase is the absence of opposition. The project would affect only 68 landowners and require relocation of four residents.

"We have very gung-ho proponents in the proposed area," Bryant said. "The oil and gas industry has been down for a number of years. That's been our major economic production in our site area.

"People don't want to be so completely reliant on those cyclical industries."

North Carolina, on the other hand, does have opposition to its bid for the SSC.

"We have a group that calls itself CATCH-North Carolina," said Susan Dakin of the state's SSC team.

"The people in Illinois tell us they're in contact with the CATCH group up there.

"The opposition here seems to be concentrated among directly affected property owners, . . . a small core of people living in the immediate area, especially a high-price new subdivision."

These resistance stems from unwillingness to move and suspicion they will not be adequately compensated, Dakin explained.

Opposition from other sectors comes from fears continued development in the proposed site area will affect the watershed supplying Durham and Raleigh.

Though feasibility studies show the SSC "if built and if it abides by the regulations, won't have any significant effect on the watershed," another study is in progress, Dakin said.

On the plus side, she noted, the EIS revealed North Carolina has a slight edge in the endangered species category.

"We're the only site with no federally listed endangered or threatened species," she explained.

The EIS summary of North Carolina's proposal contained a few typographical errors and minor inaccuracies, but it revealed no fatal flaws, she continued.

"It's very much as we expected," Dakin said.

"We're pleased with how our site stacks up."

LETTER 524 (CONTINUED)

EDITORIALS

THE TENNESSEAN

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A GANNETT NEWSPAPER

Difficult times for technology

AMERICAN scientists and technologists have been having their difficulties lately.

Since the Challenger disaster in 1986, the nation's space program has been having all kinds of trouble getting manned vehicles back into the sky. One thing after another has gone wrong, and launch of the space shuttle discovery has been postponed repeatedly.

And the B-1 bomber is only one of several weapons systems that have failed to perform as they were designed to do.

Now a $115 million atom smasher at the Stanford Linear Accelerator Center near San Francisco is acting up. The taxpayer-funded collider was supposed to begin in 1987 to produce what is known as Z particles to give scientists insights into the birth of the universe. But the collider is still not working right and scientists expect it will be the end of this year before one Z particle is made.

The atom smasher is somewhat like the federal government's proposed Superconducting Super Collider which Tennessee officials hope will be built in Middle Tennessee. But there are big differences between the two.

The underground Stanford collider is three miles long and cost $115 million. The Superconducting Super Collider would circle for 53 miles underneath the ground in four Middle Tennessee counties and would cost $5 billion to build.

Those interested in the SSC no doubt will watch the Stanford collider with great interest. For if the Stanford collider fizzles, Congress could lost interest in funding the the super collider.

Mr. Burton Richter, director of the Stanford center, said there are "thousands of components to this machine which all have to work at a high level of reliability." But he expresssed confidence in the final outcome.

"We'll make this thing work," he said. "I have no doubt about it."

Mr. Richter sounds something like a farmer tinkering with his combine. But supporters of the SSC hope he gets the dang thing to working. ■

LETTER 524 (CONTINUED)

for DCE

Collider opposed as 'ecological nightmare'

JIM EAST
Staff Writer

A draft environmental impact statement indicates that locating the federal government's Superconducting Super Collider in Middle Tennessee would cause "an ecological nightmare," a conservationist opposed to the site said yesterday.

The 780-page report, drafted by the Department of Energy, assessed environmental changes likely if the government chooses Tennessee to locate the project. Six other states are vying for the $4.5 billion super collider project.

"It would cause an ecological nightmare," said Jodie Landrum of Rutherford County, co-chairman of an super collider task force for the National Speleological Society.

"The site is just not that good," Landrum said, because of the impacts that the super collider would have on water levels, caves, plant life and wildlife.

He said the task force will make its opposition known to federal officials at a public hearing at Middle Tennessee State University in Murfreesboro on Sept. 29.

The super collider is a proposed system of giant electromagnets that will hurl atomic particles in opposite directions at nearly the speed of light through an underground oval ring about 53 miles in circumference.

Scientists want to study the resulting collisions to learn more about the basic makeup of matter and energy.

Competing with Tennessee for the project are Arizona, Colorado, Illinois, Michigan, North Carolina and Texas.

The Tennessee site is located in Bedford, Marshall, Rutherford and Williamson counties.

If it is located in Middle Tennessee, Landrum said, public water supplies would "absolutely" be affected.

"We're concerned for Snail Shell Cave because people don't understand that caves are natural water lines and Snail Shell Cave is an enormous natural water line and they are trying to put an enormous construction project right in the middle of subterranean water systems."

Federal officials will release the final environmental impact report in December and announce its preferred site in January. Construction would not begin before early 1990.

DOE officials say that the super collider would provide thousands of construction jobs, a permanent work force of about 3,000 people and an annual budget of about $270 million to the host state.

But the report indicates that some 350 water wells in the four counties would be lost with construction of the super collider.

A state official told the Associated Press last week that the estimate on lost wells is misleading, if it is in fact accurate.

"It may be a factual statement that 350 wells would be lost," said Joan Crothers, director of high technology for the state Department of Economic Development.

But Crothers said that more than half of the wells listed are on 8,000 acres that "would have to be deeded to the federal government. That makes the question of people losing their water wells irrelevant."

Crothers said the Tennessee proposal promises that the state would pay for municipal wells, such as College Grove's, or new wells for anyone forced to move.

Landrum predicted that the water system in Snail Shell Cave would ultimately "jeopardize the super collider project.

"The project would jeopardize the water system and then, once those two things affect each

▶ Turn to PAGE 2B, Column 4

THE Sunday TENNESSEAN

Metro/State SECTION B

SEPTEMBER 4, 1988

Opponent says collider a 'nightmare'

FROM PAGE 1B

other, the life forms in the cave environment will be adversely impacted," he said. "The type of impact that we are afraid of is flooding, if they sever an important trunk in the downstream hydrology of this cave.

"They are not going to just let it keep gushing water into their construction site, assuming that they can stop it."

"If they stop it, then the system backs up and floods Snail Shell," threatening "two types of endangered bats — the Gray bat and the Indiana bat," Landrum said. "The reverse that could happen would be that they could affect the water in the cave and actually lower the water system.

"There are blind fish that would be adversely affected, but they are not addressed in the EIS at all and that is another concern of mine."

He called parts of the EIS "irresponsible" and "actually alarming" enough to endanger the project.

Landrum cited part of the statement which discussed the super collider effects on Rutherford County's Snail Shell Cave "in the heart" of the proposed site.

"What they are saying is that they have, in effect, studied this area as much as they are going to study it until it is either picked as a site or rejected as a site."

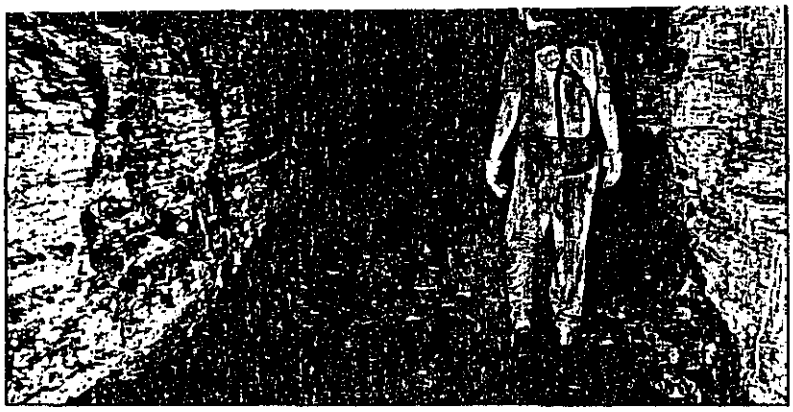
Landrum also was critical of state officials who selected the site without consulting groups such as his task force.

"We believe that this site is not suitable and if we had had input with the state of Tennessee we could have steered them away from this site," he said.

"We don't want to be portrayed as some kind of spoiler or the bad guys in this. We would have loved to have had input up front, before the state of Tennessee got locked in on site selection, because we could have steered them away from this site.

"We could have been just as excited about this project as other people are and instead we have a substandard site that the state of Tennessee is locked on selling because they can't change it now."

"We would have loved to have seen the state of Tennessee get this," he added. "But not there." ■



Banner photo by Courtney Fay

Down under

Jody Landrum leads the way into Snail Shell Cave, which spelunkers fear will be damaged by the Superconducting Super Collider. A task force is exploring the SSC's impact on the cave.

Stream system under study near site of proposed SSC

By David Logsdon
Banner Staff Writer

The geologist studying the effect of the proposed Superconducting Super Collider on the Snail Shell Cave streams in Rutherford County placed dyes in the cave streams to help track where they flow.

But he is puzzled by reports that the dye has already shown up near Nice's Mill Dam more than 10 miles away.

"We put some dyes in last week. I think Friday," said Dr. Nicholas Crawford of Western Kentucky University.

"None have showed up yet. It takes quite a while for it to travel.

"It will take several weeks for the dye to come through."

Crawford has been hired by the state of Tennessee to find answers to questions U.S. Department of Energy officials have about the cave system, which runs through part of the proposed site for the SSC.

Scientists hope the $4.4 billion federal project will reveal more about the structure of the atom. In an underground tunnel, beams of protons will be smashed together to see how far parts of atoms can be broken down.

The state that wins the 53-mile oval will become a world center for physics research and could be in for an economic boon the project would bring.

Learning more about Snail Shell's underground streams is important to several groups, especially if Tennessee wins the SSC project, said John Hoffelt, a cave explorer assisting in Crawford's survey.

"If this project comes to Tennessee, we would want to know where these streams enter the collider zone and where they leave the zone, so we can test the water quality entering the site and leaving the site," Hoffelt continued.

"Constructors would want to know where the streams are so they wouldn't drill into them and have water, or build something that will flood in high water."

As an example, Hoffelt pointed to the rock quarry between U.S. 41 and the Old Nashville Highway.

"They hit a cave stream, and they got three pumps in there, large pumps, and they could not keep the water out of there," Hoffelt said.

"To this day, the quarry is filled with water and they had to abandon the operation."

If SSC construction projects hit a similar underground stream, the water might be too much to keep out, he added.

"In a broader sense," Hoffelt said of the state survey, "information like this is necessary for an adequate management plan for the area.

"There are different zoning considerations to protect the water quality."

Intensive dye tracing work by Crawford's team should reveal how many streams are involved and what other bodies of water they touch.

"We thought we knew what was happening," Hoffelt said.

"Now we're getting a little more detailed into it, and we're finding more things than what we knew before."

Crawford said it will be about two weeks before he looks in nearby streams for the dyes dropped into Snail Shell.

"We're using several dyes, and most of them are invisible," he said.

"We have a machine that can detect this dye.

"We don't have to wait around for the dye to show up. We have detectors at over 30 locations."

for DOE 8-24-88

The Daily News Journal

RUTHERFORD COUNTY'S HOME NEWSPAPER SINCE 1849

28 Pages, 2 Sections | 224 N. Walnut St. Murfreesboro, Tennessee 37130 | © | Wednesday, Aug. 24, 1988 | Phone 893-586

Protestors: Collider detrimental

By LEE ANNE BENZ
News Journal Staff Writer

A citizens group opposing the Superconducting Super Collider (SSC) last night told a County Commission committee it has new information proving the collider will be detrimental to Rutherford County.

The group, led by Pat Sanders, was asked by the Welfare, Health, Education and Personnel (WHEP) Committee to appear before the County Commission at its Sept. 12 meeting to present the information to the commission.

The request came after a motion made by Commissioner Grant Kelleys to have the committee go on record as opposing the collider failed for lack of a second.

The group's information concerned Fermilab, located in Weston, Ill., which is the sub-atomic particle accelerator in the world. According to Murfreesboro resident F. M. Hall, in a conversation with the mayor of Batavia, a neighboring town of Weston, the collider has had no positive economic impact on the area.

"The mayor told me in a telephone conversation that the SSC has had little or no effect on their development," said Hall. "He said they have received nothing, and no industry has come to the area because of the SSC."

Sanders said the reason the mayor of Batavia was consulted was because the city of Weston has been dissolved.

Hall presented committee members with a book, "Polliscide" written by two Cornell University professors, that explained how the Department of Energy (DOE) took the land of more that 100 property owners in Weston and all but five of them lost money.

The book, written in conjunction with nine other political scientists, said after DOE acquired the land, Weston was dissolved.

Hall said the mayor mentioned one benefit that being that the residents, being near Chicago, wanted to halt the industry boom spreading to their rural area and that building the collider seemed to accomplish that goal.

The collider in Illinois is four miles long, considerably smaller than the 52-mile collider proposed by DOE.

Opposition group member Dr. Robert Sanders said that a smaller collider is one year from completion in Switzerland and it is probable that by the time a collider could be completed in Tennessee, the information it could obtain would be obsolete.

"I think the SSC should be built in an area where it would cause the least amount of disturbance to the community," Sanders said. "In Arizona, construction of an SSC will take four homes and two trailers [illegible]."

Sanders emphasized to the committee that his interest in the collider was as a private citizen and not in his capacity as county health department director.

DOE is conducting a public hearing tonight at 7 p.m. at MTSU to hear comment on the

(Please see Protesters, page 10a)

LETTER 524 (CONTINUED)

old SSC — NO PUBLIC FORUM — NO question the state AFRATE. because him to not speak out

IIA.1- 747

Tuesday/AUGUST 23, 1988 - THE TENNESSEAN ● 3-B

Oak Ridge PCB source sought

Contamination found in Clinch

OAK RIDGE (AP) — Scientists are searching for the source of PCBs polluting lakes and streams near the Department of Energy's Oak Ridge operations.

"We believe that the levels are sufficient to warrant further investigation of the source," said Jim Loar, an aquatic ecologist at Oak Ridge National Laboratory. "Those investigations are under way."

Contamination by PCBs has been found in the Clinch River near where the drainage system from the Oak Ridge reservation enters the river. No warning signs are posted on the Clinch, although PCB levels are similar to those found in Fort Loudon Lake, where fishermen are advised not to eat the catfish.

"Obviously we view this with concern. It may well be that we would go ahead and include the Clinch on an advisory with Fort Loudon and the upper portion of Watts Bar, where the levels have given us a concern," said Earl Leming, head of the state's water quality office in Knoxville.

Fort Loudon Lake is an impoundment of the Tennessee River about 20 miles south of Oak Ridge. Watts Bar Lake is an impoundment of the Clinch a few miles downstream of the Energy Department's huge installation.

Loar said research so far has indicated less than half the PCB contamination in the Clinch River comes from the national laboratory. He said it is important to find the source of all the pollution so that it can be cleaned up.

"What we're saying is, whether or not we have a problem, we have PCB levels that are similar to ones in Fort Loudon," Loar said. "We need to find out why and then take remedial action."

Laboratory studies on animals have indicated PCBs, or polychlorinated biphenyls, can cause cancer.

PCBs once were used widely to cool electrical transformers, although their manufacture now is banned in the United States.

The Food and Drug Administration requires warnings where levels greater than 2 parts per million of PCBs are found in fish.

The drainage system from the Oak Ridge reservation enters the Clinch River about three miles below Melton Hill Lake.

PCB levels in catfish taken last year from creeks in the reservation had levels as high as 1.59 parts per million of PCB, Loar said. Fish taken from the Clinch near where the Oak Ridge reservation is drained into it had levels ranging from 1.61 downstream to 1.69 upstream.

In Melton Hill Lake, upstream about three miles, the level was about half that — .81 parts per million.

At Fort Loudon Lake, where warning signs are posted, an average of 1.9 parts per million of PCB was found

Loar said it appears some of the PCB contamination is coming from the national laboratory, but that no one is sure exactly of the source. He said researchers also are looking for PCB sources at K-25 and Y-12, the other two major operations at Oak Ridge. ■

LETTER 524 (CONTINUED)

The Daily News Journal

Radiation to become fourth 'R'

By F.M. HALL

A few months ago, our household received a brochure from the state of Tennessee assuring us that the proposed Superconducting Super Collider (SSC) would be *environmentally safe and an economic asset* to this area. Indeed, Middle Tennessee was in contention to become the high energy physics research center of the universe, and our quaint farmhouse was located in the middle of all this anticipated activity.

It was, however, in a chance conversation with a member of Citizens Against *The Collider Here* (CATCH) that we discovered the activity around our home should the SSC be located here could potentially *be radioactive.*

The CATCHer provided us with a copy of the 1986 site environmental report for the Fermi National Accelerator at Batavia, Ill., a *prototype of the 54.6 facility* that some folks want constructed here.

"Radioactivity is produced as a result of the interaction of the accelerated protons with matter," the study related. "Operation of the accelerator produced some airborne radioactivity as well as some radiation which penetrates the shielding material. Also, some radioactivation occurs in the soil and in the water used in cool beam components."

According to the report, the types of radiation released into the environment at Fermilab are tritium and a radioactive gas called carbon 11, in addition to penetrating radiation from gamma rays, muons and neutrons.

The fact that there is any such radiation at an accelerator/collider project runs counter to statements made by a University of Tennessee physicist as reported by The Daily News Journal July 24. The physicist "called untrue claims that radioactive gas would be released into the atmosphere from the collider..."

Perhaps physicists are callous about radiation and look at it as *merely an occupational hazard* — it can only be assumed they wear badges that monitor their levels of radioactive particle exposure. If the SSC is *constructed here, will the fourth "R,"* radiation, be added to our schools' curricula, and our children provided with similar badges? Is that idea absurd? Is it laughable?

More absurd was an article in The Sunday Tennessean, July 10, that related radioactive isotopes had been found in 26 fish taken from a holding pond at an East Tennessee nuclear plant. The 6,000 pounds of fish still in the pond "posed(d) no hazard to anyone," and a health inspector confirmed radioactivity levels in the fish were "well below allowable limits." Yet officials were puzzled. They couldn't decide to burn or bury the fish. Apparently, eating these "safe" fish hadn't crossed their minds.

In his 1982 book, "Scientific Temperaments — Three Lives in Contemporary Science," Philip J. Hills describes what happens when the Fermi *accelerator* is in operation. "The thin jet of protons which is the product of the process cannot be seen directly. But even with the beam *ended up inside* a tube surrounded by magnets, the likely result of being in the tunnel while the machine is on is death. The few stray particles from *the beam are enough to raise a great amount of* radiation by knocking particles off the tube, the magnets and the walls."

Hills says that when the beam is *bumped off course,* "it pops a hole in the steel tube like a Buck Rogers' disintegration ray."

The Daily News Journal

D. G. "PETE" BENNETT, Publisher
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At one point, Hills relates, a Fermi team videotaped a beam hitting a target — a 3-foot-long aluminum rod. After several futile attempts to hold down the rod as it was struck by the beam of protons, the target was finally welded in place. "The rod flashed like a light bulb — on for the second it was being hit, and then off. *Another pulse struck it and the rod began a continuous* glow. The next pulse caused the metal to smoke, the next caused it to bubble, and finally the metal just *drooled out of range of the pulsing beam."*

Buck Rogers disintegration ray? Smoking, bubbling metal? Can one be faulted if these concepts bring to *mind the movie "Star Wars?" The state of Tennessee'* brochure states emphatically that high energy physics accelerators are not involved in weapons research or *production.*

"Experimental physicists make machines of dangerous power," Hills says, "whose operations are only *incompletely understood."*

In short, physicists are not sure what they will find when the SSC is operational. If they did there would be little point in building the facility — a facility with 20 times the electron-volt capability of the Fermi ring.

A concern of the CATCH group is the deposition of the SSC tunnel when its use as a research tool is surpassed by higher technology. A government official was recently quoted as saying that on decommissioning, the Department of Energy will determine if it has another use for the tunnel, and if it does not, it *could* possibly lease it out to a third party.

Traditionally, the DOE has contracted out to third parties, the disposal of low-level nuclear wastes. One such disposal area, called Maxey Flats, is located just outside Morehead, Ky. As early as 1976, John J. Berger revealed in his book, *"Nuclear Power: The Unviable* Option," that radioactive isotopes had escaped from the Kentucky burial trenches. More recently, the dump has *been closed, the "third party" has pulled out,* and the Commonwealth of Kentucky is strapped with cleanup and monitoring expenses.

Could a similar scenario be in store for Middle Tennessee? Who can predict the future as it is shaped by nuances of world politics and high technology?

Can we *rely* on the technology of the SSC being "perfect" — that nothing will go wrong? According to Hills, the Fermi accelerator experienced technical *problems in its early days of operation. More than 250* of its high-powered magnets developed cracks in their fiberglass wrapping, resulting in some magnets *exploding. We have only to look at the Space Shuttle* tragedy to find an instance where our best technology has gone awry.

We are caught up in a technological marathon that will no doubt continue. The SSC is a continuation of that race, but are Middle Tennesseans willing to turn their *environment into a laboratory* by accepting this untested machine?

Nashville Banner

SATURDAY MORNING, AUGUST 6, 1988. □ Nashville, Tennessee □ Vol. 114, No. 119 □ 52 pages □ 4 sections □ First edition □ TODAY'S NEWS TODAY

Collider foes send petition, Farm Bureau to join fight

By David Logsdon
Banner Staff Writer

MURFREESBORO — Petitions signed by more than 3,500 Tennesseans who don't want the Superconducting Super Collider are on their way to the White House, the state's congressional delegation, the Department of Energy's boss and Rutherford County's executive.

As the material fans out toward its targets, officials of Farm Bureaus in Bedford, Marshall and Williamson counties will consider a request to join the Rutherford bureau in encouraging the DOE to put the $4.4 billion federal project in one of the other six competing states.

The petitions and a flurry of cover letters went into the mail Friday, said SSC Fact-Finding Committee co-chairman Pat Sanders. The committee is a citizen group opposing locating the collider here.

If the atom-smasher project is located in Middle Tennessee, it will run through parts of the four counties.

The SSC would be an underground tunnel used to hurl beams of protons together. Scientists hope the collisions will further break down the atomic parts and reveal more about the structure of atoms.

In June, Rutherford County's Farm Bureau, which represents about 9,000 families, went on record as opposing the SSC. Bureau officials are seeking support from their counterparts in the other three counties.

"We just told them of the action the Rutherford Farm Bureau has taken, a stance against the Super Collider, and the reasons why," said John Batey Jr., president of the Rutherford bureau.

Fears that local property owners will be stuck with the bills for building all the roads, schools, water and sewer lines required for growth expected from the SSC are the main reasons for opposition, Batey said.

Asked if the Rutherford bureau will seek support from additional counties, Batey replied, "I expect we'll keep it confined to the four counties, unless something else develops."

Bedford County Farm Bureau president Marty Davis said he received the Rutherford letter Friday and "it was a surprise to me."

"This is the first time we have been asked by any group to take a stand on it."

The Rutherford organization's action is strictly a local matter, said Tennessee Farm Bureau spokesman Murray Miles.

Please see PROTEST, page A-6

FROM PAGE A-1

. . . Protest

"The Tennessee Farm Bureau has no official stand on it," he added.

Asked how much sympathy other bureaus in the organization may have for the Rutherford position, Miles replied he doesn't know and that he had only heard about the Rutherford vote indirectly, from a Williamson Farm Bureau member.

"All these county units are separate entities and take whatever action they want," Miles said.

"The only time we take any action is at the state conventions the first week in December."

Davis indicated no action is likely soon by his board members, but they will discuss the Rutherford letter. Bedford County's Farm Bureau represents roughly 7,500 people, the president noted.

Batey said he will follow up on the letters during the Farm Bureau Presidents Conference this month in Columbia.

"I figured that's where I'd probably see them and sit down and talk with them, and by then they would have met and have made some sort of decision, either yea or nay," he added.

Concerns raised by the Rutherford bureau are reflected in the petitions circulated by the SSC Fact-Finding Committee.

Point 2 of the petition objects to the loss of more than 16,000 acres of land, which "would severely disrupt the agribusiness and quality of life in these affected rural communities."

Point 3 cites the tremendous financial burden of providing adequate roads, schools and sanitary services for growth triggered by the SSC.

Point 4 of the petition objects to the SSC on grounds "there are many scientific unknowns about the environmental effects of the SSC project, including (a) the extent of radioactive contamination to groundwater, wells, streams and air.

As part of the site selection process, the DOE is compiling an Environmental Impact Statement on the SSC's effect on Middle Tennessee, said DOE spokesman Jeff Sherwood.

The 300-plus page report and its 400 pages of indices should be ready for distribution later this month.

Copies will be sent to all state agencies involved in the project, interested parties and other selected recipients. Libraries in the proposed site's area will receive multiple copies, Sherwood said.

Private citizens can get a free copy of the report, but not the indices, by writing to: U.S. Department of Energy, SSC Site Task Force, Office of Energy Research, ER 45, Washington, D.C. 20545.

LETTER 524 (CONTINUED)

IIA.1- 750

LETTER 524 (CONTINUED)

The Daily News Journal

OPINION

Editorial

Gordon keeps heat on DOE

Sixth-District Rep. Bart Gordon was right on target this week with his comments about the temporary nuclear dump proposed for Oak Ridge.

Gordon said the MRS — for monitored retrievable storage — facility was a bad idea from the start.

We have to agree. And bad ideas don't get any better by hanging around.

The $2 billion "temporary" dump for the nation's radioactive wastes would not do anything to solve the problem of long-term storage of those wastes. Instead, it would give the Department of Energy more time to hedge on building a permanent storage facility for nuclear wastes.

Tennessee's own Oak Ridge — where millions of pounds of uranium, mercury, and other toxic substances have been leaked, spilled or lost over the years — does not need nuclear garbage from out of state, even on a temporary basis.

And as Gordon so aptly pointed out, the nation's ratepayers and taxpayers do not need to spend $2 billion for a facility that solves no problem at all.

Nuclear wastes are dangerous, point conceded.

They need proper storage and handling, and especially, proper long-term disposal, point conceded.

However, those wastes don't need to travel through — or stop in — Tennessee on their way to whatever permanent site is finally selected in the American West.

The bureaucratic, cumbersome, bloated DOE should have seen the light by now.

The MRS concept only disguises the true problem, which is long-term storage of radioactive wastes. There is plenty of short-term storage available right now.

If DOE wants any credibility, it needs to get off its backside and begin serious efforts at siting and building a permanent storage facility.

That was its mandate from the Congress quite some time ago. At the time the mandate was given, DOE had some 15 years to solve the long-term storage question.

The clock that was ticking then, still ticks.

Now it has 10 years and is apparently bent on missing the Congressional deadline.

DOE needs to be more responsive to orders if it expects to keep its bloated budget and bureaucratic staff intact.

On the other hand, maybe problem of how to deal with radioactive wastes should be given to another agency.

Maybe Gordon and Tennessee's other congressional leaders can help make that possible.

Congressional mandates are supposed to be followed to the letter, not disputed, distorted, and hedged against while time runs out.

DOE obviously hasn't heard yet.

We applaud Bart Gordon's efforts to make them hear.

The Daily News Journal

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LETTER 524 (CONTINUED)

The Daily News Journal

129th Year—No. 134 | RUTHERFORD COUNTY'S HOME NEWSPAPER SINCE 1849 | Phone 893-5860

Tuesday, July 12, 1988 | 724 N. Walnut St. Murfreesboro, Tennessee 37130 | Good Afternoon

OPINION

The Daily News Journal

If built, SSC should be elsewhere

EDITOR'S NOTE: The following guest column was written by Brady Allred, Bertha Christberg, Brenda Hamrick, Noel Hunter, Judy Landrum, Bob Sanders and Pat Sanders.

The SSC Fact Finding Group (also know as CATCH Citizens Against the Collider Here) believes Tennessee is not the appropriate site for the enormous multi-billion dollar project to study atomic particles.

The Superconducting Super Collider (SSC) consists of a compact facility, underground tunnel and buildings, above ground support buildings and several roads. The 53 mile underground tunnel will be 30 feet in diameter.

Inside the tunnel encased in vacuum pipes wrapped in superconducted magnets, minute bunches of protons — propelled by the magnets — will race in opposite directions at nearly the speed of light. In collisions inside underground multirooms, the beams will be allowed to collide, releasing energy measuring 40 trillion electron volts.

The energy released will be 20 times that achieved by the Tevatron (currently the world's largest atom smasher at the Fermi National Accelerator Laboratory (Fermilab) located in Batavia, Ill. Because the proton bunches are so small, only a few will collide; still 100 million collisions will occur every second.

The scientists think studying the subatomic debris created by the collision will help them understand what happened during the "big bang" at the moment the universe came into existence about 15 billion years ago.

The SSC is not an alternative energy source, nor does it have anything to do with research in super conductive wire in fact, it utilizes 1970's super conductor technology.

It has been suggested the $4 billion plus required for construction would be better spent on other scientific projects ("Big Science Trend," May 2 New York Times).

The publicity from the state has emphasized the 2,000 permanent jobs and the 4,000 construction jobs. All but a few of these jobs will be filled by people brought in from out of state. The permanent jobs require highly skilled people. The construction jobs will be temporary and go through a nationwide bid process. This type of construction firm has a core force that moves from job to job. That's most likely the manner of Tennessee residents qualified for the construction jobs.

Tennessee has already spent over $[illegible] trying to get the SSC. If vetoed in Tennessee, over $[illegible] million dollars have been promised for supporting programs for the SSC. If the SSC is built here, the county property tax could go past $[illegible], according to Property Assessor Tommy Sanford (June 10 Daily News Journal). In actuality, more than Mr. Sanford mentioned would come off the tax rolls.

The local infrastructure of roads, schools, utilities and public service agencies will be certainly strained.

The SSC will require 300 megawatts electric power and 2.7m gallons of water per minute, needs comparable to a town populated over of 20,000 inhabitants.

Some of the underlying will feature a new 500/161 kV substation to be built on 150 acres at the I-24/Florence Road area. These 161 kV power lines must run on large metal towers. A wider right-of-way will be required, because of the higher voltage, where 69 kV lines are now. Laying 75 feet back of after water pipes, 4,000 feet on Veterans Hall Road, and the upgrade of two pump stations will be lost for the gas consumers.

The state will provide, through the SSC Regional Authority, all utility connections at no cost to the DOE (Department of Energy).

The immense amount of electricity, required by the SSC, will siphon high tension power lines that will create potentially harmful electromagnetic fields. The TVA New York Power Lab Study suggests children living near large power lines have increased leukemia rates. Studies in California, Colorado, Louisiana and Texas concern similar concerns for the health effects of electromagnetic fields.

According to Jack Hoff, retired molecular biologist at Vanderbilt University and Sierra Club member, there are three potential avenues by which the public and other living things may be irradiated, both during the operation and following the final shutdown of the SSC. These are by way of: (a) escaping rays or intense proton beams sneak into the beam short through or miss and target, and no residual irradiation from SSC components such as beam pipes, magnets, detectors, cavern, rocks, crystals, etc.; (b) airborne radioactivity, especially carbon-11 and tritium; and (c) waterborne radioactivity, such as tritium and sodium-22.

Tritium and other radionuclides, produced by the Fermilab in Illinois, are considered to meet certain "standards," but it should be emphasized that standards are only to be considered as safe doses or safe exposure since there is no safe dose of ionizing radiation.

The SSC will be 20 times more powerful than Fermilab. Irradiation has long been known to produce cancer and leukemia in humans. Geneticists implicate tritium in causing mutations and abortions.

It stands to reason that if the Fermilab in Illinois people do not live on top of the tunnel or within the loop the tunnel surrounds, as will be done in Tennessee.

The U.S. Department of Energy (DOE) will build, operate and monitor the operation of the SSC. Sen. Jesse Helms, R-N.C., stated on CBS-TV's "West 57th Street," the DOE's monitoring itself is like the "fox guarding the hen house."

Sen. Jim Sasser told Murfreesboro on March 4 he doesn't trust the Department of Energy and "I don't trust John Herrington (DOE Secretary) as far as I can throw him." (Daily News Journal, March 4).

Aside from the surface buildings on the campus, accelerator and experiment areas (10,000 acres), 20 small industrial plants will be scattered around the 53-mile ring. A perimeter area bordering will be constructed every 3.5 miles above the thoroughfare, providing elevator service, electricity, gas, and water for the tunnel below.

In addition, a large refrigeration building will be built every 1 miles, equipped with large (height) fans, helium and nitrogen storage tanks — 300 to cool the tunnel. Nearby lush service and refrigeration buildings will contain chemical stocks that will result a variety of issues.

An area of concern for some Rutherford County residents is the so-called short area, located outside of the tunnel ring and campus complex. This area has been called a "hot spot" by some scientists. This 10.30 area the collider beam will be directed into at the end of an experiment. It contains large underground shields to catch the beam when it is no longer needed.

Concrete Entrance is in this area, and is a recommending area out Franklin Road to the Bell Rice Ranch, where the short shield will be near Old Asheville Road.

Retired Farm subdivision and Deerfield, with an about people area located on Deer Creek Lane, are near to the short area.

An estimated 1 million tons of rock and rubble will be removed in construction of the 53-mile tunnel, the uniform cab short, deep shorthorn, and 30 vertical downcuts. This "spoil" material will be piled in huge berms around the ring, remaining not only on-site, but becomes dust when dry and siltation includes when wet.

If not safely contained, this leachate could affect area streams and drainage to three main rivers of the area, the Duck, Harpeth and Stones.

The possible contamination or drying up of wells in the tunnel area is a factor to be considered. During construction, which will last at least five years, many underground streams will be diverted and wells contaminated.

Tennessee's manner in this is to sign on to public water systems. Because only about 10 percent of the tunnel will be lined, radioactive components will be transmitted and around the beam tunnel walls.

Continuous contamination in the Tennessee site proposal radiating, the radionuclides sodium-22 and tritium will pick up Tennessee soil 300 feet from the tunnel walls after 50 years. Sodium from tritium will still be producing about 1 percent of its original radioactivity at 150 years.

Sand Sink Cave System (SSCS) is an extensive cave system located in the Northwest area of the SSC proposed site. Approximately 6 miles of this cave have been mapped and possibly connects with other caves and voids in the area. A vast underground network of caves and aquifers lying in this area is adjacent of the main campus. The subterranean watershed of the Sand Sink Cave System could be totally and irreparably damaged by the construction of the SSC.

The Tennessee site proposal states that "no significant karst exists in the area." This statement shows geological ignorance on the part of those proposing this project. All of the karsts in this area, including the Nashville, Carters, Lebanon, Hobbs, Pulaski, Murfreesboro Limestone and the Ross group contain caves, sinkholes, sinking streams and underground drainage.

Drainage in the SSC area involves three major streams, the Duck River that drains into the Tennessee River, and the Harpeth River and Stones River, which drain into the Cumberland River. The entire area is so interconnected hydrologically that the project should be abandoned for this reason alone.

The public is not aware of the DOE plans to decommission the SSC after up to 20 years of operation. Parts of the SSC will become dangerously radioactive with use and remain dangerous for many years. These radioactive hazards will be both above the ground (detractive magnets, hardware, radioactive heat dumps) and below the ground (ring components, short downs, control walls, rock around the ring, water in the ramps, etc.).

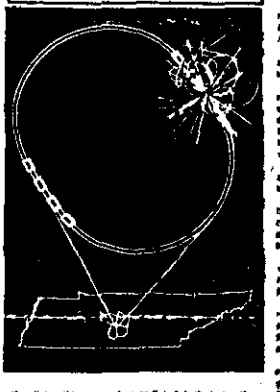
Decommissioning procedures will be expensive and the radioactive areas must be secured for many years to protect the public.

Should the SSC be built, the research goals could be accomplished at alternate sites in other states where operations, downtimes, disappointments and possible danger would affect far fewer people, and the unique locality Tennessee environment would not be so endangered.

Those people who have petitions are urged to turn them in by July 15 to SSC Fact-Finding Group, P.O. Box 5, Rockvale, Tenn. 37153, or to Stuffins' Jewelry Store on the Square. A petition is available at Stuffins' for those who would like to sign against the SSC.

Tennessee residents may sign regular State opinion by calling toll-free 1-800-342-1562.

Guest Column



2 Fri., May 13, 1988, Murfreesboro, Tenn. THE DAILY NEWS JOURNAL

State asks Sanders to cool it

Official opposition to collider questioned

By TOM SPIGOLON
News Journal Staff Writer

The state Health Department's chief medical officer has asked Dr. Robert Sanders no longer to oppose the proposed Superconducting Super Collider through his position as county health director.

Dr. Richard Light, who also doubles as the department's chief of health services, last week made the suggestion to Sanders that he no longer oppose the project unless he acts as a private citizen.

"It's been suggested by some of the administration people in the state ... it would be more appropriate to address the collider as a private citizen," Sanders said Thursday.

"I understand that and I'm not really surprised. I will try to honor that request," he said.

Linda Tidwell, spokesperson for the state Health Department, said Light "just didn't feel it was right for (Sanders) to use his position" in opposing the proposed $4.4 billion atom smasher.

Light also reminded Sanders of Gov. Ned McWherter's support for the project, she said.

"He said it wasn't a verbal reprimand. He didn't feel like it was a real big thing. He just asked (Sanders) to use some discretion," Ms. Tidwell said.

Light was attending a meeting in Nashville Thursday and could not be reached for comment.

Sanders had listed questions brought by some residents about the collider in the health department's quarterly report in early April to all elected officials in the county.

"As enthusiasm for the Superconducting Super Collider continues, a number of citizens are raising questions of civic and public health concern," Sanders wrote in the report.

The report included questions on the collider's effect on well water, county tax revenues and infrastructure. They also asked about possible health hazards from radioactivity and electric lines, and risk of water pollution during construction.

(Please see State, page two)

State...

(Continued from page one)

"Should the SSC be funded and should Tennessee be selected, the above concerns and questions must be considered and responsibly answered," Sanders wrote.

Sanders is part of a group called the SSC Fact-Finding Group, which is asking the state to provide answers on the effects the 53-mile long tunnel on Rutherford County.

The county's chief health official is also one of 130 property owners in four counties who stand to lose their land to the collider if the federal Energy Department selects Tennessee from among seven states in November.

Ken Renner, spokesman for McWherter, said the governor's office had "tried to work with this group" as much as possible.

He said members of the state group attempting to lure the project to Tennessee recently voiced similar concerns to Energy Department officials. They have also regularly met with environmental groups, Renner said.

"We don't want to go into this thing with any unanswered questions. We want to make sure of what will be good for the state and what will be good for the area," Renner said.

He added that at least 30 inches of dirt would be needed to protect adjacent groundwater from low-level radioactivity within the proton beam used in the project. The site will provide much more than needed — 285 feet of rock, he said.

DNJ Photo by Mar

Bridgestone ceremony

Gov. Ned McWherter congratulates Bridgestone: on the of its new passenger tire production line at La Vergne.

LETTER 525

Dear Sir

Your decision upon the S.S.C. project is one of the most important in the country. Unfortunately during a political year things become more complicated. I fully support any decision you make on placing the SSC project. I only hope the looking at the Illinois proposal
1 you will not let your decision be swayed by a small group of C.A.T.C.H. people who do not understand the magnitude of your decision. This project is important to the United States and the scientific community of the world.

Respectfully

Terry Walker

LETTER 526

Mr. Phil Davey
400 Warner Street
Fort Morgan, CO 80701

September 23, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Re: SSC DEIS Comments

Dear Mr. Hess:

I have reviewed the draft Environmental Impact Statement and find the following citations need clarified:

1 5.1.8.3 - (2nd paragraph) "Rural eastern Adams County in Colorado would require a major expansion of its services, and services in Morgan County also would require expansion."

2 5.2.12.2 - (2nd paragraph, last line) ". . . these small towns would experience even greater difficulty absorbing the substantial impacts expected."

3 14.1.3.2 - (1st paragraph, section 3, last line) ". . . would likely create substantial impacts to local public services and facilities in the county."

4 14.1.3.2 - (3rd paragraph, section 3, last sentence) ". . . to accommodate a greatly increased demand generated by in-migration."

5 14.1.3.8 - (2nd paragraph, section B, last line) ". . . difficulty absorbing the substantial impacts expected."

Within the past five years, the public safety agencies in Morgan County have projected needs for the future and funded several major capital expense projects.

The Morgan County Government Criminal Justice Center was occupied in January, 1987, this facility includes a modern state of the art detention facility, sheriff's department, courts, probation and district attorney's offices. The facility also houses a highly technical, modern county-wide communications center with radio, telephone, and computer services for the public safety system. The City of Fort Morgan completed a $1.2 million police building in 1986. This building has the capacity to house the department should it grow by three times.

This area has experienced two major growth cycles with our oil boom in the 1950's and the construction of the Pawnee Power Plant in late 1970. Local law enforcement agencies are adequately prepared to deal with a growth environment. In fact, during the construction of the Pawnee Plant (peak year construction total of 2,239 jobs), the City of Brush only added one (1) full-time officer to its staff and the City of Fort Morgan did not have to add any officers to its police
6 force. Many of the officers and all of the current police administrators were administrators during the Pawnee construction period.

Having the major fixed assets in place now will reduce the financial impact drastically, should major personnel expansion be necessary.

Morgan County has a communications system that is on the "cutting edge" of communications technology with highly trained communications personnel and modern equipment. The system includes a county-wide computerized police management system for police records as well as access to state records (CCIC) and national computer access (NCIC). With this communications system in place and functioning, the community is able to handle SSC growth impacts and extend service areas.

Based on the above factors, the above citations should be clarified.

Our public safety agencies are well prepared to handle the projected in-migration of people and are quite experienced in this type of population boom.

If I can further clarify this comment, please contact me.

Sincerely,

Phil Davey
Director of Communications

rh

LETTER 527

Dear Dr. Hess:

I strongly urge you to select the most logical, cost-effective site available to build the SSC: Illinois.

I fully concur with your findings in the draft Environmental Impact Statement that indicates the proposed site at Fermilab:

- Offers known, consistent geology for tunnel construction;
- Has a strong, established infrastructure of roads, airports, schools, hospitals and utilities that would have to be built from scratch at some other sites;
- Features an established, single source of electrical power with sufficient capacity to meet the energy needs of the SSC at a relatively low cost.

I urge you to thoroughly review these points when you make a decision on the SSC. I know you will agree that Illinois is the best choice.

Sincerely,

Name [illegible]

Address [illegible]

Town/Zip Code [illegible]

Choosing a different location — I mean: a) the irresponsible wasting of millions of dollars on what is already built at Fermilab b) a decision based on

LETTER 528

SSC Draft EIS Comments
Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

FOX VALLEY Labor NEWS
P. O. Box 1585, Aurora, Ill. 60507
Over 60 Years
Serving Northern Illinois Workers
897-4022 - 892-0366

September 27, 1988

Dear Dr. Hess;

I have been and will continue to be a strong supporter of the SSC. I sincerely believe, for many reasons, that it should be built in Illinois.

I have done exhaustive studies on all the implications, detriments, and advantages. I have also studied the proposal, any data available, pros and cons, and the environmental impact study.

As with any large project, there are bad points, but I feel the advantages at Fermilab far out way the disadvantages.

All the sites will move residents, some will dislocate businesses. All the sites will need changes, improvements, roads, wells, protection for the environment, and new facilities.

1 In Illinois, most of these things will cost the American taxpayer less. We have the roads, electrical power, adequate water, and, most importantly, a laboratory facility that can accommodate the injector.

Illinois has the best dolomite and tunnelling experience in the country. The housing and schools to accommodate the construction workers and the new staff necessary to operate the SSC is already available.

I would like to point out that I'm not an uninformed lay person. I have been reporting on the SSC since last year. I am employed by the Fox Valley Labor News, a newspaper that delivers to union members in the Fox Valley area. I have been sent, by the DOE, everything that has been printed on the SSC, been to numerous meetings, and have read the Environmental Impact Study from beginning to end.

I have based my support of the SSC in Illinois on all the facts and figures. Not only will it be less expensive to build it in Illinois but the people of Illinois desperately need the increased jobs, funding, and educational benefits that would come with the SSC.

Thank you for taking the time to read my letter and I hope you will select Illinois as the most cost-effective and beneficial site for the SSC.

Sincerely,

Wendy S. Worley

Wendy S. Worley
Home ADDRESS:
411 BUTTERFIELD RD.
NORTH AURORA, IL 60542
312-496-2566-HOME
312-897-4022-WORK
312-859-2772-WORK

LETTER 529

The Holmstad - Apt. 338C
Batavia, Illinois 60510
September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

I strongly urge you to select Illinois as the most logical and cost-effective area to build the SSC.

I agree with your findings in the draft Environmental Impact Statement that indicates the proposed site at Fermilab:

> Offers known, consistant geology for tunnel construction;
>
> 1 Offers a strong well-established infrastructure of roads, airports, schools, hospitals and utilities that would have to be built at some other sites;
>
> Features an established single source of electricity with sufficient capacity to meet the energy needs of the SSC at a reasonable cost.

Many of the people who are opposed to the construction of the SSC in Illinois are the very ones who were opposed to Fermilab fifteen years ago.

I urge you to thoroughly review these points when you make a decision on the location of the SSC. I think that Illinois is the best choice. I hope you will agree.

Sincerely yours,

Helen Hotchner

Helen Hotchner

LETTER 530

September 26, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U. S. Department of Energy
Washington, DC 20545

Dear Dr. Hess:

I strongly urge you to select the most logical, cost-effective site available to build the SSC: ILLINOIS! I fully concur with your findings in the draft Environmental Impact Statement that indicates the proposed site at Fermilab:

2

-- Offers known, consistent geology for tunnel construction;

-- Has a strong, established infrastructure of roads, airports, schools, hospitals and utilities that would have to be built from scratch at some other sites;

-- Features an established, single source of electrical power with sufficient capacity to meet the energy needs of the SSC at a relatively low cost.

I urge you to thoroughly review these points when you make a decision on the SSC. I know you will agree that ILLINOIS is the best choice!

Sincerely,

LETTER 531

United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada

Composed of journeymen and apprentices who have jurisdiction over every branch of the plumbing and pipe fitting industry

LOCAL NO. 554 STREET ADDRESS 400 Federation Place

CITY, STATE ZIP Elgin, Illinois 60123

SUBJECT MATTER

DATE Sept 29, 1988

SSC Draft EIS Comments
Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess;

As Business Manager of Plumbers & Pipefitters Local Union # 554 UA. with the jurisdiction of Northern Kane County on behalf of my members, strongly urge the selection of Northern Illinois for the SSC site.

The findings of the Environmental Input Statement show that Northern Illinois would be a outstanding site for the SSC.

As a Building Trades Official I would like to point out that there is more than a adequate number of skilled Tradesmen based in northern Illinois to build the SSC, as the recently constructed nuclear powerhouses in the area demonstrated.

Another factor of interest to the Union members is the return of Federal tax dollars, where Illinois is at or near the bottom of the fifty states in the receiving of Federal tax money. Building the SSC in Illinois would help compensate for this financial inbalance.

We would hope your Task Force after evaluating the numerous advantages of locating in Northern Illinois, select us for the new home of the SSC.

Sincerely Yours,

Charles F. Clark, Jr.
Business Manager

MARVIN J. BOEDE, General President
JOSEPH A. WALSH, General Secretary-Treasurer
W. EDDIE MOORE, Assistant General President
CHARLES J. HAGEL, Asst. General Secretary-Treasurer

AFL-CIO-CFL

Letters should be confined to one subject

IIA.1- 761

LETTER 532

[redacted]
204 Spring Creek Dr
Waxahachie TX 75165

Gentlemen:

I noted where public hearings were recently held in Waxahachie concerning the SSC. Public forums are not considered to be entirely proper by me, since one can make enemies with the opposing factions through the exposure.

I am concerned about many things relative to the SSC in the Waxahachie area.

Firstly, Agent Orange was originally considered harmless by the U.S. Government. Now many Vietnam veterans are dying from its effects. What
1 tests have been made relative to the effects of the SSC? Are you sure it is safe?

I understand the Fermi labs in Illinois are similar in their work to the SSC. What has been
2 the health record of the employees there relative to the general population?

Secondly, those in this area supporting the SSC are politicians (for votes), real estate people (eg E. Farrar to sell more property), business
3 men (to increase revenues and profits). Where is the grass roots support eg farmers, the average working man and churches. What sacrifice does the Waxahachie area have to make to satisfy the greed of a few?

Thirdly, when a casino opens, its management and owners are screened for Mafia and other

underworld connections. What type of review
4 will be made of those working for the SSC?
What is their integrity and security clearance?
How has this been explored, if at all?

Fourthly, land is being taken from some.
5 Are they to be fairly compensated or again
overrun by the horde of those seeking
self interests.

I am not completely opposed to the SSC. Texas
needs the money and additional work. I am
just asking for some sanity and common
sense before proceeding willy-nilly.
6 Certainly, the boost to Texas colleges and
universities would be terrific and not unwelcome.

My comments might apply to sites
being considered in other states as well. Let's
take the FDA approach and not put
something in the market until it is
thoroughly reviewed and fairness shown to all.

By the Federal Govt. taking property off the
7 tax rolls, who picks up the slack - my
neighbors and I? Apart from jobs, what will
the Federal Govt. put into the area to offset taxpayers?

My concerns are real and varied.
Your response either publicly or to me personally
would be appreciated

Wesley S Johnston

LETTER 533

KANELAND COMMUNITY UNIT SCHOOL DISTRICT 302
47W326 Keslinger Road
Maple Park, Illinois 60151

September 26, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Dear Dr. Hess:

The Board of Education of Kaneland Community Unit School District No. 302 has adopted a position of neutrality on the construction of the Superconducting Super Collider (SSC) in the Fox Valley area. However, the Board would be remiss if it did not object to and voice concerns about certain elements of the SSC Proposal that will directly affect our students' educational opportunities and environment. 1

The Kaneland campus is located on Meredith and Keslinger Roads just west of the town of Elburn, Illinois, near the proposed siting of the SSC ring and near one of its Access Entrances on the south side of Keslinger between Francis Road and Dauberman Road. We are adjacent to the proposed location of the far experimental areas.

After reviewing various SSC materials and the DOE's August, 1988 draft of the Environmental Impact Statement for the SSC, and following extensive public discussions, the Kaneland Board of Education hereby goes on record with the following objections and concerns about the SSC's partial siting in its educational district: 2

I. The Kaneland Board of Education strongly objects to the loss of $85,000 in local revenue by the removal of taxable property from within the Kaneland District boundaries for the SSC ring and service facilities.

II. It further objects to the inclusion of the Kaneland District's main bussing artery, Dauberman Road, in the SSC proposed ring siting.

III. It is extremely concerned about the safety of bussing its students with the increased truck traffic predicted during the SSC's construction. 12

IV. It is also concerned about the disruption of classes at the Kaneland Junior/Senior High School due to noise generated during the construction of the Access Area on Keslinger Road between Dauberman and Francis Roads. 13

V. Further, of major concern to the Board of Education is the emotional well-being of its Kaneland students whose families and properties are affected by the construction of the SSC.

3 VI. The Department of Energy also needs to be cognizant of the Board of Education's concerns over the potential loss of the District's water supply in relationship to the hydraulic needs of the SSC.

4 VII. And, most importantly, the Kaneland Board of Education is very concerned about the District's ability to generate future educational funding, for both educational services and buildings, directly resulting from projected SSC student growth.

For the Department of Energy to fully understand the impact of these elements of the SSC Proposal on Kaneland District and why it has serious objections and concerns to them in relationship to its students' educational services and facilities, the Board of Education offers the following reasons:

I. The District will lose $85,000 in property tax revenue --

Considerable properties are to be taken off the tax rolls, while student population is projected to increase. This will place a greater burden on a decreased tax base. Combine this with the District's projected 1990 deficit of $189,000 and the SSC Proposal has now put the District $274,000 in debt.

5 Even though Governor Thompson has recently signed state legislation, the so-called "Good Neighbor Bill," no appropriations have been made to fund this legislation's intent, and until they are, the bill is meaningless. A serious weakness of the "Good Neighbor Bill" is that it only intends to replace lost revenue for five years. We recommend that the duration be extended to twenty years.

II. The inclusion of Dauberman Road in the SSC's Ring Siting --

Kaneland District busses travel approximately 231,911 miles a year. Every student in the District is bussed to the District's campus on Meredith and Kaslinger Roads. Dauberman Road is the District's main thoroughfare between its campus and Kaneville and also serves as the main artery to the community of Sugar Grove, some 15-20 minutes to the south.

Along Dauberman Road, our school busses have many rural and subdivision pick-up and drop-off points. Dauberman Road minimizes bussing times which are crucial to the length of a student's school day! Dauberman Road carries express busses to and from Sugar Grove. It also minimizes the amount of time the Kaneland busses have to be on
6 State Highway #47 where traffic is congested, making it more dangerous to pick-up and drop-off students.

When the Illinois East-West Tollway (I-88) was constructed, the Kaneland School District experienced considerable disruption to its bussing routes until the section spanning the tollway was replaced. The District's concern is based upon experience.

The intentions of the Department of Energy and the Illinois Department of Natural Resources are not clear with regard to the use of Dauberman Road by the public and this School District. This information and information about construction or removal of sections of this road is vital knowledge to the Kaneland Board of Education.

Dauberman Road's inclusion in the proposed SSC ring siting is very definitely a mitigating circumstance to the District that needs to be addressed by the U.S. Department of Energy and the State of Illinois.

III. The safety of bussed students in relationship to truck traffic --

On page 5.1.4-16 of the DEIS Volume 1, Chapter 5, letter E. "Spoils Hauling," it is explained that "Spoils hauling activities are expected to take place during normal working hours (7 a.m. to 7 p.m.) only." This is unacceptable to the District, especially when Table 5.1.6-4 of the environmental draft projects an increase of 9.5 accidents due to SSC truck traffic per year.

The safety of the Kaneland students when being bussed to the campus and home is one of this Board of Education's highest priorities. Provisions need to be made for no SSC truck traffic during the hours of 7-8 a.m., 2:45-3:45 p.m., and 5:30-6:00 p.m. on Kaneland's bussing routes. Kaneland students will be subjected to a greater risk if large hauling rigs are on the highway during bussing hours. 7

The District's Board of Education feels that lower truck speed limits will be necessary in the vicinity of Meredith and Keslinger Roads, Dauberman Road, Francis Road, Main Street Road and Route #47 near Quarry 4 (DEIS Volume IV, Appendix 10), as these are main arteries for Kaneland busses.

From experience, the Board members of this District already know how fast the trucks heading for the quarries in our area travel down Fabyan to Main Street to Route #47, and that drivers do not always practice safety. There is very little monitoring of speeds in this sector of the county by the State of Illinois Police Department or the Kane County Sheriff's Department.

The Board cannot stress enough the importance of the Department of Energy and the State of Illinois working with the Kaneland Board of Education to make the District's bussing routes as safe as possible for Kaneland students should the SSC be sited here in Illinois.

IV. The disruption of classes due to construction noise --

The Kaneland Board would like to point out that its campus was left off Figure 5.1.4-3, DEIS Volume 1, Chapter 5: Human Receptors, Illinois Site. It can't emphasize enough the importance of uninterrupted classroom time on task for its students. Undesirable times for blasting and drilling, heavy equipment operations, road construction, and/or spoils loading activities would be between the hours of 8:00 a.m. and 3:00 p.m. 8

Interruption of classes due to noise during blasting, drilling, tunneling and construction of E6, the Intermediate Access just south of Keslinger Road between Dauberman and Francis Roads, and H, the Far Cluster to the West of Francis Road, needs to be discussed by the District and Illinois Department of Natural Resources should Illinois be selected as the site state.

V. The Kaneland students' emotional well-being--

The emotional well-being of our students currently living in the proposed ring siting is of grave concern to this Board of Education. The Kaneland District is not characterized as a transferee area where its students move in and out of the District an average of every two to three years. They are not used to relocation and the disruption of their education. On the contrary, the District's students represent generations of students from the same families or are from families who usually remain in the District until their children graduate. They have not experienced being uprooted from their home, community and school. 9

These students living in the proposed ring siting are surely feeling the stress and insecurity of not knowing what is happening to their homes and if they will ever be with their school friends again. They are also feeling the turmoil of discussions on the SSC by their parents. The District cannot stress enough that these feelings of forced relocation are absolutely devastating to these students and parents. These negative feelings will surely have to be addressed as they directly affect a student's ability to successfully accomplish educational tasks and yet no funding provisions have been made for social services such as family counseling for the children affected by the SSC.

The District additionally hopes that the Department of Energy will make its site selection decision by the end of 1988 and end this process quickly for the renewed harmony of all involved.

VI. The depletion of the District's water supply --

The water supply for the Kaneland campus is acquired through two wells, one situated at its elementary school and the other at its junior/senior high school. Much has been discussed in the news media about the SSC's enormous water consumption and the regional overdraft being incremently increased by the indirect water uses of the SSC. Being
10 near the proposed ring, there must be some guarantee by the Department of Energy or the State of Illinois' Department of Natural Resources to the Kaneland District to replace its wells should they go dry as a direct result of the tunneling for, or operation of, the SSC. With a school budget already severely strained, the District can not afford the costly replacement of these wells.

VII. Future funding -- The District's ability to generate future taxpayer supported referenda --

Kaneville residents have been our strongest supporters of local educational revenue through referenda. This District can always count on these residents to get out the vote for local tax funding for our students' educational programs. They value education highly, but their village and rural existence are being threatened and torn apart and, in essence, so is the District's ability to fund its schools. The destruction of this village located on the proposed ring siting directly affects our ability to generate tax funds to support services and build facilities for the student growth predicted in the August, 1988 Environmental Impact Study as an outcome of siting the SSC in the Fox Valley area.

11 If the nine school districts of Kane County were to equally share the student growth predicted from the construction of the SSC on Table 5.1.8-6 of the 1988 Draft Environmental Impact Statement, Kaneland District would encounter 220 new students. The Department of Energy needs to be aware that the Kaneland District is presently nearing capacity with space available for only 125 new students at its elementary school. It's current student enrollment is 1065. Please remember, this District has only two buildings and will still be approximately $189,000 in debt in June of 1990, and, if the SSC removes property from the tax rolls, it will have to eliminate educational services to keep the budget deficit from growing.

The approximate annual cost of 220 new students would be $762,553 based on 1986-87 Kaneland costs of $3,466.15 per pupil, necessitating a $0.75 additional educational referendum increase to our District's taxpayers.

It must be further pointed out that a building referendum in the millions would also be needed by the District to provide facilities for these students. The last four building referenda have failed in the Kaneland District. The parents of this District are the minority population. Without Kaneville's referendum support, the Board of Education will be hard pressed to provide quality educational services and facilities for student growth due to the SSC.

We all know that student growth in a school district does not develop evenly; however, this funding concern needs to be addressed completely, not just for Kaneland, but for all the school districts involved.

Governor Thompson and other key legislators need to develop State legislation and appropriations, perhaps in the form of a State Aid Formula Revision, to accommodate and include SSC student growth multipliers. In addition, revisions to State of Illinois Educational Life Safety Regulations to allow additional construction of classrooms to accommodate SSC student growth should be considered.

Higher land-cash fees for operations, as well as for facility impact, should be considered. And State legislation increasing the amount a unit district can levy for its operation, building, and maintenance fund to equal that of dual districts would be another way to partially address this revenue concern.

To conclude, the Kaneland District's Board of Education will oppose SSC plans that do not adequately address our educational objections and concerns. These are important mitigating elements of the SSC that need viable solutions. Please contact Superintendent Dr. Ray J. Bandlow for further information. The cooperation of the Department of Energy and the Illinois Department of Natural Resources will be of the utmost importance to the Kaneland District, its students, parents and community members.

Respectfully submitted,

The Kaneland Community Unit School District No. 302 Board of Education:

David L. Anderson, President
Joseph R. Wolf, Vice President
Sandra M. Joseph, Secretary
Board of Education Members,
Andrew J. Costello
Kathleen C. Whildin
Jon K. Stults
Leland R. Thompson

Superintendent Dr. Ray J. Bandlow

David L. Anderson
President, Board of Education

Sandra M Joseph
Secretary, Board of Education

Ray J Bandlow PhD
Superintendent of Schools

cc: James R. Thompson, Governor
Forest D. Etheridge, Senator
Suzanne L. Deuschler, Representative
Dennis Hastert, U.S. Representative
Dr. Ray J. Bandlow, Superintendent
Board Members
Minutes

LETTER 534

510 Elm St.
Greenville, NC 27858
1988 Sept. 28, Wed.

To: Dr. Wilbur Hess, Chairman
SSC Site Task Force
Department of Energy

Re: Comments on Draft EIS

Dear Dr. Hess:

Your DEIS is remarkably thorough, but I have five neglects to point out. If not covered in Vol. II' appendices 1-3, 5-15, they may be significant. My references are to page numbers.

The opportunity **gains** of the No Action alternative (I.3-23) are not pointed out. At least the following factors have bearing:
1 the probability of a CERN hadron collider, the funding of physics education with tremendous long-term research effects, alternative social uses of the funds (including deficit reduction). A rough estimate of total SSC costs (including operation) should have been made (just the present dollar value of the costs). Congressman Buddy MacKay has spoken to this point, though not (I believe) the
2 program sequence of: 1. CERN collaboration in the 1990s(SSC,1992)
2. US next-tech collider after the year 2000, maybe warm magnet, maybe combined hadron-lepton tunnel!

3 A **quantitative** estimate of vibration at the seven sites is not given (I.4-29). This would include the low-frequency wave amplitudes as attenuated by the local soil/rock. Effect on tunnel-building costs?

4 Total electric power but not peak power requirements are stated (I.3-50). (A North Carolina group alleges this could be a problem.)

The scientific need for the SSC (I.2-1) is overstated. Accelerator technology has not led to superconducting magnets; it is the other way around. The "equipment for medical diagnosis and treatment" duplicates "PET scans and (MRI)"; "whole new industries" suggests
5 a little too much. How much of the "research in subatomic physics over the last eighty years" needed accelerators for its results is not clear; arguably "communications, consumer electronics, and computers" would have been about the same without accelerators. The debate between Big Science and Little Science, between individual science and team science, will continue; your draft ignores it, unless the unprinted lines (top I.2-2) mention it(unlikely).

State-of-the-art decision-making methods may not have been used for choosing the SSL. On III-3, I read "IN ORDER OF IMPORTANCE the criteria were...:" and on III-3 "No explicit weighting or ranking
6 method was implemented..." The second statement makes more sense; however, though simple aggregation of ratings is wrong and no essential is less important than another essential, the explicit decision tree should be put on paper. There is a big literature on (site) selection -- was it well-used? I hope the EIS and NCP will address this, helping the Secretary of Energy and satisfying the public.

Yours truly,

Carroll Webber, Jr.

Carroll Webber, Jr.
(919) 758-4958

LETTER 535

ARTHUR C. ROGERS
670 ST. CHRISTOPHER CT.
AURORA, IL. 60506
OCTOBER, 6, 1988

SSC DRAFT EIS
SSC SITE TASK FORCE
ER-65, GTN
OFFICE OF ENERGY RESEARCH
U.S. DEPARTMENT OF ENERGY
WASHINGTON, DC 20545

DEAR GENTLEMEN;

1 I HAVE BEEN A RESIDENT OF KANE COUNTY ALL MY LIFE AND HAVE LIVED IN MY PRESENT HOUSE FOR OVER 20 YEARS. I LIVE IN THE PROPOSED AREA FOR THE SUPERCONDUCTING SUPER COLLIDER AND I AM 100% IN FAVOR OF THE PROJECT.

2 I HAVE A PRIVATE WATER WELL ON MY PROPERTY AND SEE NO REASON TO FEAR POLLUTION FROM THE PROJECT.

3 I HAVE OVER 20 YEARS EXPERIENCE AS A WATER WELL DRILLER IN NORTHERN ILLINOIS, AND HAVE WORKED IN THE DEEP TUNNEL PROJECT IN CHICAGO. THEREFORE I FEEL I CAN SAY WITH CERTAINTY THAT ILLINOIS HAS FINE CONTRACTORS AND PLENTY OF SKILLED LABOR TO DO THIS PROJECT WITH THE UTMOST SAFETY AND QUALITY OF WORK.

4 I SEE NO REASON FOR ANYONE TO HAVE FEAR OF POLLUTION OR PROBLEMS OF ANY KIND.

SINCERELY
Art Rogers
ARTHUR C. ROGERS

P.S. I PRAISE THE POLITICIANS THAT SUPPORT THIS PORJECT.
PLEASE KEEP FIGHTING FOR US.

LETTER 536

The Collider Chronicle

Vol. I No. 3 | SSC Project Office Newsletter | September 1988

THIS IS YOUR LAST CHANCE....

to let the federal officials know that you support the SSC in Illinois

D.O.E. PUBLIC HEARINGS IN ILLINOIS
Waubonsie Valley High School in Aurora
Intersection of Eola Road and Route 34

Thursday - October 6	Friday - October 7
2 p.m. - 5 p.m.	9 a.m. - 12 Noon
7 p.m. - 10 p.m.	2 p.m. - 5 p.m.
	7 p.m. - 10 p.m.

IT IS IMPORTANT THAT WE GET SUPPORTERS THERE
BRING YOUR FRIENDS - WEAR YOUR T-SHIRT OR BUTTON

ARRIVE EARLY - OUR OPPONENTS WILL!!

C.A.T.C.H. has publicly stated that this hearing will be its last stand. In fact, C.A.T.C.H. is expected to turn out its largest show of force at the hearings. October 6 should be made the day that C.A.T.C.H. learns the truth: It is in the minority when it comes to the SSC.

ALSO...We urge you to clip out, sign and mail the following note to Dr. Hess IMMEDIATELY. Or better yet send your own personalized message to Dr. Hess with comments about the draft EIS.

---clip here---

Dear Dr. Hess:

I strongly urge you to select the most logical, cost-effective site available to build the SSC: Illinois.
I fully concur with your findings in the draft Environmental Impact Statement that indicates the proposed site at Fermilab:

1

- Offers known, consistent geology for tunnel construction;
- Has a strong, established infrastructure of roads, airports, schools, hospitals and utilities that would have to be built from scratch at some other sites;
- Features an established, single source of electrical power with sufficient capacity to meet the energy needs of the SSC at a relatively low cost.

I urge you to thoroughly review these points when you make a decision on the SSC. I know you will agree that Illinois is the best choice.

Sincerely,

Name M. J. GROPPI
Address 4215 GRAND
Town/Zip Code NAPERVILLE SPRINGS ILL. 60552

LETTER 537

October 6, 1988

The Beacon News
101 South River Street
Aurora, Illinois 60506

Dear Editor,

Once upon a time there was a farmer with more than his share of problems in coping with the elements. Life for the farmer was a challenge, but on top of it all he could not get a good night's sleep.

The farmer lived at the edge of a pond where the nocturnal croaking bull frogs were keeping him awake all night. With all the racket he thought there must be thousands. He was nearing the end of his rope when he heard that a bounty had been placed on bull frog hides. This news, he thought, could not have come at a better time.

1 The very next day the gleefull farmer gave up on all his farm chores to sound out bull frogs. He planned to use the bounty money to save the farm, gain a good night's sleep and live happily ever after.

In just a few weeks, however, the farmer was back working his regular chores and muttering to himself -- "I thought there were so many, but I thought there were so many."

The moral of the story is simple: A FEW LOUD MOUTH BULL FROGS CAN TEMPORARILY MISLEAD EVEN THE MOST DEDICATED FROM THEIR TRUE COURSE.

It is my belief that the vast majority of Illinois residents are ready and honored to house the SSC project in the manner and dedication necessary to make the project everything it should be for the United States of America.

Sincerely,

Harold C. Scholle

Harold C. Scholle
Yorkville

cc: Dr Wilmot Hess

IIA.1- 772

LETTER 538

THE WESTERN SOCIETY OF ENGINEERS

Suite 1734 Midland Building 176 W. Adams Street Chicago, Illinois 60603

October 14, 1988

SSC Draft EIS Comments
Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research, ER-65, GTN
Department of Energy
Washington, DC 20545

Dear Dr. Hess,

1 The members of the Western Society of Engineers wish to express their total support for the SSC in Illinois. Our Society of professional engineers is the fourth oldest in the United State (established in 1869) represents all fields of engineering in the Chicago area.

We strongly feel the SSC belongs in Illinois for the following reasons:

2 1. This area has a strong technical base of personnel, many technical research facilities and many excellent Universities to draw people and knowledge need for the future needs of the SSC.

3 2. The SSC is a natural addition to the present Fermi Lab since most of the skilled people in this type of research are already located here. Further the physical plant already in place will save millions of taxpayers dollars.

4 3. The Chicago area has the skilled people necessary to build the SSC tunnel as it already has completed a similar project with its deep tunnel sewage system. The geology of the area is ideal for this type of tunnel construction.

5 4. The majority of the technical and political people feel that Illinois is the best location for the SSC and will give it great support.

Sincerely yours,

Kenneth E. Gerler

Kenneth E. Gerler
Past President, WSE
2076 Gladstone Dr.
Wheaton, IL 60187

LETTER 539

BEN ATCHLEY
SENATOR
DISTRICT 6

SENATE REPUBLICAN LEADER
MEMBER OF COMMITTEES
FINANCE, WAYS AND MEANS
EDUCATION
STATE AND LOCAL GOVERNMENT
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AND RETIREMENT

Senate Chamber
State of Tennessee
NASHVILLE

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Nashville, Tennessee 37219
(615) 741-3791

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6324 Bowstring Trail
Knoxville, Tennessee 37920
(615) 577-4833

September 27, 1988

SSC Draft EIS Comments
Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research ER-65,GTN
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

I write this letter to support the proposal of the State of Tennessee relative to the location of the Superconducting Super Collider (SSC).

In 1988, the Tennessee General Assembly passed legislation to create the SSC Regional Authority to assist the United States Department of Energy in establishing and operating the Superconducting Super Collider within the areas of Bedford, Marshall, Rutherford and Williamson Counties of Tennessee. The creation of this Authority provides a mechanism for recognizing and addressing environmental issues, utilities, roads, and other citizen concerns. It is my belief that the Tennessee Legislature does not intend to abandon this project once the site decision has been made but is willing to work with the Department of Energy and local citizens through this Regional Authority.

1

Additionally, through passage of a Joint Resolution, the Tennessee Legislature has expressed intent to authorize the issuance of $100 Million in General Obligation Bonds for funding debt service and other costs as required for this project.

I wholeheartedly support the SSC site proposal submitted by the State of Tennessee. If I can be of further assistance as you begin your deliberations, please do not hesitate to contact me.

Sincerely,

Ben Atchley

Ben Atchley

BA:jhj

CC: Tennessee Department of Economic
and Community Development

LETTER 540

CLEARVIEW PRINTING
Specializing in Quality and Service

P.O. BOX 1084
237 STARWASHED DRIVE
MIDLOTHIAN, TEXAS 76065
TELEPHONE (214) 775-2041
DALLAS TELEPHONE (214) 939-0809

September 24, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research, ER-65, GTN
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

The firm of Clearview Printing is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider in Ellis County, Texas.

We are most supportive of a Federal decision to locate in our area and feel this decision will benefit the entire State as well as our region.

1 Texas is known as a state with vast resources regarding qualified personnel with the ability to support such a program and a willingness to pursue it in an ethical manner. Therefore, we feel Texas is the best location and will be of mutual benefit both to SSC development as well as for our technology base will result.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

James Roy Elliott

James Roy Elliott

LETTER 541

LINCOLN ELEMENTARY SCHOOL
CORSICANA I.S.D.
Dr. William Alexander, Principal
Mr. Ron Odom, Assistant Principal

A REVIEW OF AND A RESPONSE TO:
" ENVIROMENTAL CONSEQUENCES
AND MITIGATIVE MEASURES ", A REPORT
(Dr. William Alexander)

I N T R O D U C T I O N

Five types of impacts are noted in the report and each is significant in regard to minorities. This review will however focus on the following three impacts: (1). Economics Activity, (2). Demographics and Housing, (3). Quality of Life and Social Well-Being.

Minorities are herein defined (operationally) as those groups subordinated in term of power and privilege to the dominant group. Notice, the concept implies differential treatment and exclusion from full participation. Minority status is not necessarily the result of being out numbered.

ECONOMIC ACTIVITY

By the year 2011, according to current literature and data, Texas will be a minority state. This fact is important because peak construction of the Superconducting Super Collider(SSC) is scheduled for 1992. The first full year of operation is predicted for the year 2000.

1 It seems expedient then to use and use efficiently the pool of minority workers. Peak employment in 1992 will be between 3800 - 3900 jobs in Texas. These figures refer to both direct and indirect, or total SSC- related employment impacts. Secondary employment at its peak will range from 5000 - 6000 jobs. Secondary employment includes transactions among industries and other direct effects which are regional characteristics. This fact suggests the need for full participation by minority owned businesses.

Indirect and induced economics effects are triggered by direct SSC- related regional spending including the goods and services procured in the region for construction and operation of the SSC, and consumes spending in the region by workers directly employed by the SSC. These sales demands range from about 144 million (in Texas) to nearly 160 million in Arizona during full operation.

Considering unemployment data regarding minorities, it seems logical and safe to predict that resident labor forces would seek SSC related employment. In-migration in Texas would be at the mid-range level of about 3300 workers during peak construction and about 2400 workers during full operation.

DEMOGRAPHICS AND HOUSING

2 Regionally, total population increases related to the SSC during peak construction would range from nearly 6,700 persons to about 15,000 persons. Texas, it is estimated, would experience a population impact of 0.3 percent or less of baseleine population. Housing demand was estimated based on in-migrant workers.

TWO(2):

It was estimated that two-thirds of the in-migrants typically have families. Each family, it was assumed, would demand housing. Singles were assumed to demand housing at a rate of 2.4 individuals per unit demanded.

Estimates of peak housing demands during construction range from 1800 to nearly 4100. During full operation, the range would be about 1,250 to 3,000. While local impact could result from the implementation of the project, local area housing markets mostly would not experience sizeable impacts caused by the SSCs compared to local housing stocks.

In Texas, SSC related population and housing impacts during Peak construction and full operation respectively are: population impact 9,880 and 7,960. Percent over baseline 0.28 and 0.20, Housing unit demand 2,700 and 1,880.

QUALITY OF LIFE/SOCIAL WELL-BEING

3 Richard T. Schaefer, author of Racial and Ethnic Groups notes that the United States government is concerned with providing educational, financial and legal support for activities focused on particular racial or ethnic groups, although not pursued to the extent many minoritiy group people would like. There are however afforts to impose, according to Shaefer, universalistic criteria which encourages minority participation in the larger society. Utilization of the expertise and talents of minorties would have economic benefits for the state of Texas. Selected social problems could be minimized, but more importantly, the encouragement of full participation by minorities would genuinely manifest a willingness by the majority or dominant society to move toward social equality.

Redarding the quality of life and social well-being, Shaefer says it well in the following paraphrased statement: " What may well emerge is the recognition by human beings that people are fundamentally alike and share the same abilities, weaknesses, and dreams.

Increased participation in decision making in general and full participation in the SSC project in particular can be viewed as an acceptable goal- Let's go for it!

LETTER 542

Charles P. Thomas II
1522 Jones Blvd.
Murfreesboro, TN 37129
26 September 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Dear Dr. Hess:

I am writing to comment on the Draft Environmental Impact Statement for the Superconducting Super Collider.

1 I would like to urge that the "3.3 No Action Alternative" on page 3-23 of Volume I be adopted in order to wait for results of experiments at colliders in Switzerland and the USSR. If the decision is made to build in the US, I would urge that all mitigations listed under "3.6.3 Possible Mitigations to Further Reduce Adverse Impacts" (pages 3-62, 3-63, and 3-64) be adopted. All other possible mitigative measures should be implemented wherever mentioned in the DEIS. An example is that concerning paleontological resources on page 5.1.9-7 of Volume I.

2 I would also urge that the SSC not be built in Tennessee. Of the seven sites being considered the one in Arizona would seem to be the best choice. Five reasons for opposing the building of the SSC in Tennessee follow:

3 1. Relocations. According to the table on page 5.1.8-9 of Volume I, 116 relocations would be required if the SSC is built in Tennessee. In Arizona, however, only four relocations would be necessary. This is the lowest number of any of the seven sites.

4 2. Water wells. According to page 139 of Volume IV, Appendix 7.2.3.6.A.6., "there are in excess of 500 domestic wells within 0.25 mi of the proposed tunnel alignment" and "slightly in excess of 350 domestic wells within a 1,000-ft band along the tunnel alignment or within the campus, buffer and buried beam zone, and far cluster areas (Figure 7-20)." Assuming the proposed mitigation is adopted, "there would still

be a measurable, site level, and irreversible impact to presumably less than 350 local groundwater users. The impact is considered to be significant based on the number of wells and well owners that might be affected." (page 140) In contrast to the proposed Tennessee site, at the Arizona site "there are no known wells within a 1,000-ft band along the tunnel alignment or within the campus, buffer and buried beam zone, and the cluster areas." (Volume IV, Appendix 7.2.3.1.A.6., page 96)

5 3. Cemeteries. According to page 57 of Volume IV, Appendix 15.1.3.6.A.5., there are "a total of ten cemeteries in the proposed project area in Tennessee that range from two to 75 graves and date earliest interment from 1813 to 1856. These cemeteries include the following: Clark Cemetery . . . Willison Cemetery . . . Cherry Grove Cemetery . . . Isaac Miller Cemetery . . . McCord Cemetery . . . Snell Cemetery . . . Morton Cemetery . . . Ransom Cemetery . . . Jarrett Cemetery . . . Cocke Cemetery. . . ."

6 4. Drainage. In case of contamination the course of the water leaving the proposed sites is important. According to Table 4-2 on page 4-10 of Volume I, the Tennessee site is "divided among Cumberland and Tennessee River basins; eventually drains to the Mississippi River and Gulf of Mexico." At the Arizona site the "Gila River basin eventually drains to Colorado River and Gulf of California." Drainage from the Tennessee site requires a much longer course through more heavily populated areas before reaching salt water than from the Arizona site.

7 5. Hazardous Waste Disposal. According to page 109 of Volume IV, Appendix 10.1.3.2.B.3.b., "hazardous wastes generated by the SSC, if constructed in . . . Tennessee, would be shipped to out-of-state disposal facilities." However, Arizona is "in the process of constructing a RCRA-permitted disposal facility within 5 mi of the proposed SSC location."

8 I believe the negative impacts mentioned above should eliminate Tennessee from among the states being considered for the SSC. This is especially true when another state would have fewer negative impacts.

I am glad those interested have been given a chance to comment.

Sincerely,

Charles F. Thomas II

LETTER 543

TESTIMONY

of

The Honorable Ted Strickland
President of the Senate
State Senator - 23rd District
Colorado General Assembly

to

The U. S. Department of Energy

Thursday, September 29, 1988
PUBLIC HEARING

Regarding the
Draft Environmental Impact Statement
for the
Superconducting Super Collider

LETTER 543 (CONTINUED)

TED STRICKLAND
9361 Knox Court
Westminster, Colorado 80030

Senate Chamber
State of Colorado
Denver

President of the Senate

Room 257
State Capitol Building
Denver, Colorado 80203
(303) 866-3342

September 29, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/G304
Office of Energy Research
U. S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

As president of the senate of the state General Assembly and as a long time resident of Colorado, I value this opportunity to comment on the Draft Environmental Impact Statement for the Superconducting Super Collider. I appreciate the special difficulties you faced in evaluating not one but seven potential sites, and I commend the Department of Energy for the disciplined research and analysis which resulted in this substantial and comprehensive document.

1 Setting aside, for the moment, my prejudices on behalf of a Colorado site, I want to underscore what I consider to be one of the strongest messages from the DEIS as a whole: that there are sites where SSC impacts to the natural and human environment will be relatively slight and mitigable; and that long term benefits from the SSC will be significant nationally as well as locally. I have previously, both in public forums and to Secretary Herrington, stated my support for the Super Collider, wherever it is sited. I am pleased that the EIS confirms the need for and national importance of the laboratory. It is essential to this country's economic, scientific and technological well being that we move forward vigorously to construct the SSC.

2 Obviously I would like to see the SSC built in Colorado. I am generally satisfied overall with the EIS' treatment of potential impacts at a Colorado site; however, I do want to respond to two conclusions reached in the EIS: one, that the site and the adjacent communities of Fort Morgan and Brush are "remote"; and two, that the area will be unable to respond adequately to SSC-related growth. I consider both conclusions to be significant misimpressions, and I would like to persuade you to re-evaluate them.

With respect to the EIS characterization of the Colorado site area as "remote -- which The American Heritage Dictionary tells me means "located far away" and "distant in time" -- I offer the following:

> In most of the West, including northeastern Colorado, it is more useful and accurate to measure distance in driving time then in miles. This fact is especially pertinent to the Draft EIS which, for example, compares miles from each site to the "closest" major airports. I propose that site accessibility be assessed temporally as well as spatially.
>
> Secondly, while acknowledging population projections and other trend factors, the EIS does not sufficiently take into account regional growth patterns, as described in our proposal. The growing eastern metro area, with its array of services and amenities, is rapidly diminishing the distance between "eastern Colorado" and the "Front Range." Our new Denver worldport, E-470 and other planned infrastructure will be in place before the SSC is operational. Whether measured in miles or minutes, the distance between the metro area and our SSC site continues to shrink and further belies the idea of "remoteness."

Short of disabusing EIS authors of the notion that our site is "far away," I propose that, insofar as possible, such subjective descriptors be deleted in the Final EIS and replaced with a quantitative assessment which consistently reflects both baseline data and trends.

Following this erroneous assertion that our site is remote, the DEIS then questions the area's ability to accommodate and manage SSC-related growth and its impacts. I'm especially concerned that the authors apparently overlooked assurances, presented in our proposal and re-affirmed on several occasions, about community capacity and the State's commitment to help local communities deal with growth impacts. I offer as a counterclaim:

> One, we are not only a "can-do" state, we are a "have-done" state. Both the site region and the communities in the vicinity of the site are experienced with and prepared to manage "boom" -- to our advantage and DOE's. The State of Colorado has a nationally recognized, successful track record in managing large scale, rapid development. We have the institutional experience and the tools to ensure smooth and orderly assimilation of SSC construction and operations personnel.

Two, these cities -- Fort Morgan and Brush -- rather than being isolated communities as portrayed in the EIS -- are part of an interdependent network of communities in northeast Colorado, including Brighton, Greeley, Sterling and other towns with the capacity, foresight, know-how and hard-won experience to absorb SSC impacts with minimum disruption. This region can support SSC-related growth.

Three, above and beyond the abundant capacity in the site region -- which I believe the EIS underestimates -- the legislative and executive branches of Colorado have jointly pledged "to provide infrastructure support [and] impact mitigation." The State of Colorado is a full partner in this endeavor; we're prepared, and we've committed, to assist our local communities meet the challenges of the SSC.

Four, other significant support systems in the state are likewise prepared to assist local communities, including the Colorado Municipal League (CML) and Colorado Counties, Inc. (CCI). To provide a single forum for local government issues in the state and to better assist local communities, we recently created a State Advisory Council on Intergovernmental Relations. CML, CCI, school districts, special districts, the state executive and the state legislative comprise the Colorado ACIR, which also stands ready to help.

Concerning, therefore, the capacity and ability of communities in the site vicinity to accommodate SSC-related growth, conclusions in the Final EIS should acknowledge:

(1) the discrete aspects of these particular Colorado communities (as opposed to aspects of "small towns" in a model);

(2) the phenomenon of regionalism in the site area (as opposed to viewing the communities as insular jurisdictions);

(3) the commitments of the State of Colorado; and

(4) other assets in Colorado pledged to supplement or strengthen the resources of local communities.

Because I am a Coloradan by choice as well as a representative of thousands of Coloradans in the region of impact, I would be remiss not to emphasize in closing that our site is an ideal location: an hour or less from a major metropolitan area, yet removed enough from highly developed areas to assure minimum disruption of human and natural environments, and offering SSC personnel

Dr. Wilmot Hess
September 29, 1980
Page Four

a choice of urban, rural or suburban living along with the unparalleled recreational resources of the Rockies. We offer not remoteness, but lifestyle choices. And, perhaps most importantly, we offer a partnership of state government, capable local communities and welcoming citizens united in a commitment to help realize one of the greatest scientific undertakings of all time.

Sincerely,

Ted Strickland

Ted Strickland
President of the Senate

LETTER 544

1079 Devonshire Av.
Naperville,IL 60540
September 25, 1988

SSC Draft EIS Comments
Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S.Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

I would like to submit comments concerning site selection for the SSC.

In this time of large budget deficits, mandated Gramm-Rudman budget cutting measures, and budget cuts in many federal programs it is unreasonable to me, as a taxpayer, to build the SSC in a location other than FermiLab. The federal government already has a considerable investment in FermiLab. Why waste money to reproduce in another location facilities already in existance. Also to be considered is the PROVEN ABILITY of the FermiLab team to construct and operate the facility and to do this within the budget.

1 Economic problems in Texas have been cited as a reason to locate the SSC there. Although all decent people have sympathy for those suffering from economic hardship, it was not too many years ago when the price of home heating oil and gasoline were very high. I recall other areas of the country suffering from these high prices. If memory serves me correctly, a large number people in New England suffered great economic hardships due to the high price of home heating oil. Did those who now ask for consideration because of their economic plight show any consideration or sympathy for the plight of others? Did they lower the price of home heating oil or did Congress have to impose a Windfall Profits Tax?

I would like to address my last comments to CATCH concerns. Of course, anyone who loses their farm or home MUST be fairly and adequately compensated. I believe the bill passed by the legislature and signed by Governor Thompson will accomplish this. Governor Thompson stated at the signing ceremony for this bill that the highway the CATCH

people drove on to protest the signing of this bill was land that was at one time privately owned. The highways and tollways coming from the city to the suburbs were also buildt on land that was once privately owned homes and farms and these people did not have the special protection this bill provides. Recently, in Naperville, a number of people lost their homes so a new City Hall could be constructed. Does all progress stop to prevent anyone from ever losing a home or a farm?

I thank you in advance for taking the time to read and consider my comments.

Yours truly,

Carol P. Baker

Carol P. Baker

LETTER 545

Northeastern University

360 Huntington Avenue, Boston, Massachusetts, 02115

Department of Physics
Professor Stephen Reucroft
Tel. (617) 437 2979

September 26, 1988

Dr Wilmot Hess
Director of the SSC Site Selection Task Force
ER-65, GTN
U.S. Department of Energy
Washington, DC 20545
Dear Dr Hess,

I am writing to you in response to a request from Jim Cronin to support the Fermilab site as the location of the SSC. In fact I am strongly opposed to locating the new accelerator at any existing laboratory and I feel that my views and their rationale may be of interest to you since they are so contrary to those of Professor Cronin.

I have been associated with CERN for more than twenty years. I was a CERN Fellow from 1969 until 1972, a CERN Visiting Scientist from 1972 until 1978 and between the years 1978 and 1985 I was a CERN staff scientist. During the last 5 of those years I was in a rather unusual and rare position for a young physicist; I was a *new*, group leader in the Experimental Physics (EP) Division.

Based upon my own experiences and the experiences of many other young CERN physicists, I can assure you of the almost insurmountable frustrations faced by a young physicist trying to break into the rigid established senior scientist hierarchy. The situation was greatly exacerbated at CERN by taking a reasonably successful laboratory with a healthy research program, building the next accelerator there (the SPS) and then the next (LEP). Physicists who had established research programs at the PS were in a strong position to simply move their operation to the SPS, and they did. The approval of the LEP research program underlines the problem even more eloquently. Of the 4 approved LEP experiments, 3 have scientific spokesmen who are CERN staff members, CERN-EP group leaders and who were spokesmen of SPS experiments. Only 1 of the 4 spokesmen is a new face at CERN and his experiment was initially turned down by the LEP experiments committee. From the young physicist perspective it appeared that none of the new guys were given a chance.

A Nobel Laureate and member of the CERN Scientific Policy Committee has a unique view of European research. But, from the viewpoint of young European physicists with original ideas, I can assure you of the devastating effect on productivity, originality and morale that centralising a stream of major accelerators at CERN has had. Let's please not make the same mistake here in the United States.

Respectfully,

Steve Reucroft

Stephen Reucroft

LETTER 546

NTC
NORTH TEXAS COMMISSION
P.O. Box 610246
DFW Airport, Texas 75261-0246
214/621-0400 (Metro)

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* *Executive Committee*

September 30, 1988

SSC Draft EIS
SSC Site Task Force
ER-65, GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

Dear SSC Site Task Force Members:

Enclosed is our response to the invitation to comment on the Draft Environmental Impact Statement for the Superconducting Super Collider Project.

If you should have any questions, please do not hesitate to call.

Sincerely,

Robert K. Tener

Robert K. Tener, Ph.D., P.E.
Executive Vice President

RKT:kw

Enclosure

RESPONSE TO THE DRAFT EIS
BY THE NORTH TEXAS COMMISSION
SEPTEMBER 26, 1988

The North Texas Commission is a consortium of 450 private corporations, cities, and chambers of commerce, organized to provide regional economic development leadership in the nine-county Dallas/Fort Worth Metroplex. Through the work of Dr. Hylan Lyon and others, the North Texas Commission has been an active participant in developing the Superconducting Super Collider proposal for the Ellis County site since 1986.

The Draft EIS generally confirms our past conclusions that the Ellis County site is environmentally well suited for the SSC to be built and operated for its stated purposes.

Our comments today are directed generally to the socioeconomic impacts as stated in the DEIS, and specifically to the suitability of this region to host the SSC workforce. This statement responds to, among other sections, Volume IV, Appendix 14, as regards to labor force, worker output, and both construction- and operation-related newcomers.

For three years, analyses carried out by the North Texas Commission have characterized the makeup and trends of the technology-intensive sector of Metroplex industries and their comparison to other regions in the United States. Relevant to the SSC, and especially to the research productivity which the SSC environment must support are these facts:

1. The traditional bases for the prior economy in the Metroplex region -- oil and gas, agriculture, and real estate -- are being supplanted by dynamic growth in technology-intensive industries, especially the computer, electronics, biotechnical, and aerospace sectors.

1

2. The Dallas/Fort Worth Metroplex currently ranks, among major metropolitan regions in the U.S.:

   a. Fourth (after Greater Los Angeles, Silicon Valley, and Greater Boston) in industrial output from the high-tech sector. During 1976-1984, we passed the Chicago and Philadelphia regions on this indicator.

   b. Second nationally in employment and industrial output in the telecommunications sector.

   c. First nationally in the rate of growth of Federal R & D expenditures for basic research.

These facts better help us understand the nature of the resident regional workforce which would host the SSC and its staff.

In the Metroplex, we now find:

1. The third largest regional population of scientists and engineers (both by total number and per capita) of any region nationally, according to NSF findings.

2. The fastest growing rate of increase nationally of this population of scientists and engineers.

3. A regional employment center for the computer, tele-communications, and precision instrument sectors which rank among the top three regions nationally.

4. A highly productive workforce. The DEIS sector-specific regional worker productivity figures show that Texas ranks, among the seven states being considered, first in worker productivity in services, first in mining, and second (to Michigan) in manufacturing.

In sum, the people among whom the SSC scientists, engineers and technicians will find themselves in this region are a productive, technologically advanced host community.

We submit on the basis of these facts that the DEIS findings that SSC operation-related newcomers "... would find the region hospitable" understates the actual case considerably. We note that the projections of growth of this workforce will increasingly match the growth of the SSC employment to its peak in the year 2000.

Thirty years ago this month (September 12, 1958), a Texas Instruments engineer, Jack S. Kilby, launched the age of microelectronics in a T.I. lab in Dallas, when he demonstrated successfully the first germanium semiconductor. In the past three decades, regional engineers, scientists, and industry leaders have capitalized on technological innovation to transform this region into one fully cognizant of the essential roles of science, research, and technology in today's and tomorrow's society.

Today, our already fine teaching universities in the Dallas/Fort Worth region -- both public and private -- are successfully developing their research capabilities. Together with local industry, universities such as University of Texas - Arlington, University of Texas - Dallas, University of North Texas, Southern Methodist University, University of Dallas, and University of Texas Southwestern Medical Center are receiving new support and creating new research initiatives.

It is this environment of educated, skilled, energetic Texans -- young and technologically/progressive -- into which the SSC workforce can be assimilated, and within which the research productivity essential to successfully SSC construction and operation can reach its optimum.

Thank you for this opportunity to comment on the Superconducting Super Collider Draft Environmental Impact Statement.

LETTER S47

HQ- 653

TREE Properties, Inc.
2313 West Arkansas Lane • Suite 110
Arlington, Texas 76013
(817) 461-5121

September 28, 1988

Dr. Ed Temple
Director, SSC Site Task Force
ER-65, GTN
Office of Energy Research
U. S. Department of Energy
Washington, D. C. 20545

Dear Dr. Temple:

I regret that a business matter of extreme importance arose unexpectedly and required that I be elsewhere at the time I had been scheduled to speak at your committee's hearings in Waxahachie on Tuesday, September 27. The opportunity to submit written comments in lieu of a spoken presentation is greatly appreciated, and a copy of my intended remarks is enclosed.

1 A representative of our company who attended the hearing on Monday told me that the evidence of support for the project greatly exceeded the opposition presented. We know that the vast majority of residents in Ellis County, the surrounding area, and in fact the entire state of Texas are solidly behind the Ellis County site for the reasons stated in the attachment.

Thank you for your consideration of our position.

Enthusiastically,

Ted R. Ezzell, Jr., SMA
President

TRE:sp
Enclosure

COMMENTS FOR SUPERCONDUCTING SUPER COLLIDER HEARING
September 27, 1988

We have followed with great interest and anticipation the Department of Energy's process of selecting the best site for the Superconducting Super Collider, including the extremely comprehensive Draft Environmental Impact Study.

Although we have not studied the document in its entirety, we have reviewed many portions of it and have followed closely the media presentations about it. The small impact on the physical environment found as a result of the thorough, time-consuming review of every conceivable possibility is, frankly, surprising as well as encouraging.

Our company represents approximately 90 owners of 9 tracts of land in Ellis County, comprising in total approximately 680 acres. Much of this land is near the proposed path of the Super Collider tunnel. I and most of the other owners of this land live in either Ellis or surrounding counties, and we have a decided personal, as well as business interest in the location chosen.

Whatever impact there may be on the physical environment can be managed, and we are convinced that it is the commitment and intent of the Department of Energy to minimize any adverse effect upon the physical environment and to assure that the area population is protected from any significant radiation hazard.

2

The impact on the area's economic environment, while not specifically addressed as an element of the physical environment in the Draft EIS, is by far the greatest potential environmental effect of the project, and in our view one that is all for the good. Our region has been desperately coping with an economic depression of major proportions for about three years, and this project can be of enormous value.

We foresee very desirable benefits to the social, cultural, and educational climate of this entire region which can enhance the quality of life for all residents and visitors. These benefits cannot be quantified in advance as can the economic considerations, but they are nonetheless very real and are more reasons why the vast majority of residents of Ellis and surrounding counties are in favor of locating the facility here.

The Superconducting Super Collider is a vital project to assure America's continued pre-eminence in scientific research, and the entire nation will benefit unmeasurably, wherever the project is ultimately located. We are confident, however, that you will find more benefits and less problems with this site than any other, and that Texas will be your final choice to locate this "tool of the future".

Thank you for this opportunity to present our views.

Ted R. Ezzell, Jr., SRS

LETTER S48

Dr. Wilmot Hess
Chairman
SSC Site Task Force
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

The firm of Bahlman Sculters is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

We strongly support a Federal decision to locate the SSC in Ellis County, Texas. The positive economic impacts of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate.

1

Texans are rightfully known for our "can-do" spirit and work ethic. These qualities of our people and our businesses will insure not only timely, quality construction and operation of the SSC by the skill pools here in Texas, but also long-term public support for the SSC program for years to come.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

Henry R. Bahlman

LETTER 549

Dr. Wilmont Hess
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Dept. of Energy
Washington, D.C. 20545

Dear Dr. Hess:

1 There are too many unresolved questions about the Superconducting Super Collider being put in Michigan with regards to water tables, water purity, radiation, land use, land values, noise and community disruption. I cannot support a project that is this poorly planned out.

You will have to count me as being against the Superconducting Super Collider.

Sincerely,

NAME [illegible]
ADDRESS [illegible]
CITY, STATE [illegible] ZIP [illegible]
M.

LETTER SSO

Jimmy H. Ige
1315 Parker Pl.
Elk Grove Village, IL 60007
September 28, 1988

SSC DRAFT EIS COMMENTS
Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

Enclosed also with the enclosed form-letter is an article in the Sept. 27, 1988, CHICAGO SUN-TIMES that expressed the urgency of the reason Illinois should be the SSC site.

1 The SSC as you already know is the world's most powerful project that would not only raise our country's prestige among the world, which is much needed, but also to benefit mankind as never before (and there are crucial needs).

Our national deficit is in a precarious state, and we cannot jeopardize the United States of America further with unnecessary debt.

Because of the GREAT IMPORTANCE of the SSC and also for our national interest, it is imperative to build the SSC in Illinois.

Thank you.

Sincerely,

Jimmy H. Ige

Jimmy H. Ige

Encl.

LETTER 551

HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
6333 North Milwaukee Avenue Chicago, Illinois 60646

DATE	PREP. BY	CHKD. BY	SUBJECT	
			PROJECT	SHEET OF

Dear Dr Hess:

Please strongly consider Illinois as the state for locating the SSC.

Illinois has a uniform geology for tunnel construction as has been demonstrated by the numerous soil borings in the area and the previously constructed tunnels of the Metropolitan Sanitary District of Greater Chicago TARP project.

1 We have many colleges in the area for research and continued learning for the family members of those people who will be employed by the SSC project.

Illinois has a strong local infrastructure that will decrease initial startup and construction costs for the SSC.

Please strongly consider Illinois. Thank you.

Sincerely,

Donald G. Childress, E.I.T.
Rolling Meadows, Il

LETTER 552

Wallace E. Fusilier, Ph.D.
9200 Dexter Chelsea Road
Dexter, MI 48130
(313) 426-8972

Lake studies, sampling, environmental planning, laboratory analysis and water resource consulting

WATER QUALITY INVESTIGATORS

September 28, 1988

Dr. Wilmot Hess
SSC Site Task Force
KE65GTN
ATTN: SSC DRAFT EIS COMMENTS
Office of Engineering Research
U.S. Department of Energy
Washington, DC 20545

Dear Sir:

I would like to go on record opposing placement of the superconducting supercollider in Michigan for three reasons.

1 First, it would seriously alter, if not destroy, an attractive and intensive farming area.

2 Second, I feel the loss of natural wetlands which would result from the project if constructed, is unacceptable. We need more, not fewer wetlands. And man-made wetlands will not take the place of natural wetlands. This is because natural wetlands have a natural flow through them which prevents stagnation. Man-made wetlands I've observed don't generally have these natural flow-through conditions.

3 Third, I feel spending over 4 billion dollars on one project provides minimal benefit to citizens of the United States. Most of my colleagues feel as I do that the most productive research emanates from funding projects in the $30,000-$100,000 range. The urgency of the SSC, in my opinion, has a very low priority compared to the far more serious environmental problems we face such as ground water pollution, acid rain, or pollution of our surface waters. (My work, by the way, does not depend upon public funding.)

Sincerely yours,

Wallace E. Fusilier

Wallace E. Fusilier, Ph.D.

LETTER 553

Mrs. D. Eugene Wind
4380 North Sandstone Road
Parma, Michigan 49269
September 28, 1988

Dr. Wilmot Hess, Chairman
S.S.C. Site Task Force, ER-65/GTN
Office of Energy Research
Attention: S.S.C. D.E.I.S. Comments
U. S. Department of Energy
Washington, D. C. 20545

Dear Dr. Hess:

Our country home is near Stockbridge and we are quite apprehensive this Super Collider would endanger the quality of our life.

1 We do not feel threatened by the nature of the installation, only that a marked population growth in this area would create severe environmental problems.

The necessity for such an installation at a tremendous expenditure, with doubtful benefits, is questionable at this time when we are trying to balance a budget deficit.

Sincerely,

Doris Wind

D. Eugene Wind

LETTER 554

9/27/88

Dear Dr. Hess,

Illinois, the heartland of the U.S, is very eager to recieve the S.S.C. As a student, I am looking to my future and I hope I will have the honor of using the facilities surrounding the SSC. I hope you will find Illinois to be the best site for the SSC.

1

Thank you,

Amy Curtis

LETTER 555

TCOM

September 16, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

Texas College of Osteopathic Medicine is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

1 We strongly support a Federal decision to locate the SSC in Ellis County, Texas. The positive economic impacts of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate.

Texans are rightfully known for our "can-do" spirit and work ethic. These qualities of our people and our business will insure not only timely, quality construction and operation of the SSC by the skill pools here in Texas, but also long-term public support for the SSC program for years to come.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

DM Richards, DO

David M. Richards, D.O.
President

DMR:bc

Texas College of Osteopathic Medicine

Camp Bowie at Montgomery
Fort Worth, Texas 76107

817/735-2000
Metro 429-9120

Under the direction of the North Texas State University Board of Regents

LETTER 556

Dr. Wilmont Hess
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Dept. of Energy
Washington, D.C. 20545

Dear Mr. Hess:

There are too many unresolved questions about the Superconducting Super Collider being put in Michigan with regards to water tables, water purity, radiation, land use, land values, noise and community disruption. I can't support a project that is this poorly planned out. 1

You will have to count me as being against the Superconducting Super Collider.

Sincerely,

LETTER 557

Dr. Wilmont Hess
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Dept. of Energy
Washington, D.C. 20545

Dear Mr. Hess:

1 I am against the Superconducting Super Collider being placed in Michigan.

Sincerely,

LETTER 558

GNRC
GREATER NASHVILLE REGIONAL COUNCIL

September 26, 1988

Dr. Wilmont Hess
Environmental Protection Agency
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. DOE
Washington, D.C. 20545

Re: Superconducting Super Collider
GNRC #89-118

Dear Dr. Hess:

In accordance with the State and Local Project Review Process, and as the Regional Clearinghouse for federal programs, the Greater Nashville Regional Council, formerly known as Mid-Cumberland Council of Governments and Development District, has reviewed the above referenced project.

1 Our evaluation reveals no conflict with existing or proposed planning activities. We are notifying you that your proposal is deemed acceptable on the basis of information now available to this office.

We, or other reviewing agencies, may wish to comment further at a later time. This letter should be attached to your application. If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Maynard Pate
Executive Director

MP:bah

cc: Charles W. Brown, Director
State Clearinghouse
TSPO #89-0183

SEVENTH FLOOR ¶ STAHLMAN BUILDING ¶ 211 UNION ST. ¶ BOX 233 ¶ NASHVILLE, TN 37201 ¶ 615 259-5491
ROBERT A. RING, PRESIDENT ¶ DAVID SCHREINER, VICE PRESIDENT ¶ VERNON KNIGHT, TREASURER ¶ MAYNARD PATE, EXECUTIVE DIRECTOR

LETTER 559

FOR THOSE WISHING TO WRITE LETTERS TO THE DOE FOR WRITTEN COMMENTS CONCERNING THE SSC OR DRAFT EIS STATEMENTS

Address comments to:

Dr. Wilmot Hess, Chairman
SSC Site Task Force
Office of Energy Research, ER-65. GTN
Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

The firm of Pound Texas Trucking is pleased to reply to the Draft Environmental Impact Statement concerning the possible siting of the Superconducting Super Collider (SSC) in Ellis County, Texas.

We strongly support a federal decision to locate the SSC in Ellis County, Texas. The positive economic impacts of building and operating the SSC facility will benefit not only the region but Texas as a State. We look forward to being host State to the research and the scientific breakthroughs which the SSC will generate.

1 Texans are rightfully known for our "can-do" spirit and work ethic. These qualities of our people and our businesses will insure not only timely, quality construction and operation of the SSC by the skill pools here in Texas, but also long-term public support for the SSC program for years to come.

Please record our favorable response to the socioeconomic impact of the SSC being sited in Ellis County, Texas.

Sincerely,

ADDITIONAL POINTS WHICH CAN BE INCLUDED IN RESPONSES

* The predicted impacts of the SSC on the natural environment in Ellis County are minimal and can be mitigated without difficulty.

* The beneficial impacts of the scientific community which will grow with the SSC are important to the Metroplex region and to Texas. By affiliating Texas's universities and our private sector research capabilities with SSC programs, a mutual benefit both to SSC development as well as for our technology base will result.

* Texas is the best location nationally for the SSC because our right-to-work tradition, our young workforce, and our rapid growth as a high-tech (State) (region) will guarantee the Department of Energy the most productive, qualified staffing which could be found.

LETTER 560

Statement of

Senator William L. Armstrong

presented to
the United States Department of Energy

Public Hearing on the Super Conducting Super Collider
September 29, 1988
Fort Morgan, Colorado

I appreciate the opportunity to address the Department of Energy's SSC Site Selection Task Force final hearing concerning the Colorado SSC Site. I want to commend the Colorado SSC Project for its commitment to this important project. Their determination to clearly and distinctly highlight the unique benefits the State of Colorado has to offer this project has been outstanding. It was no small task to gather the vibrant spirit of our great state. Coloradans not only rallied around their work, but were also intrigued by the process and the project.

One of the most interesting and disturbing things we have learned is that the United States has fallen behind the rest of the world in basic science research. We are now all aware that as a percentage of the GNP, federal funding for basic science is about half of 1958 outlays. The United States is graduating half as many Ph.D.'s in the physical sciences as in the 1970's. Today 50% of those Ph.D.'s are foreign students, compared to 10% in the 1970's.

The key to unlock the secrets of the atom-- the basics of our world and universe-- may very well be the SSC. I am told that the SSC may be essential to ensure America's world leadership and competitiveness in science, technology and commerce into the 21st century. The State of Colorado would house such an instrument with pride.

Colorado is a proud State. We are proud of our "wild west" heritage, of the beauty of our mountains and plains, and of the

standard of living that our State has achieved. We have a pioneering spirit, one which brought us strong men and women who homesteaded and built boom mining towns. Their spirit tamed the West, and that fever for excitement still burns deep inside the Western soul. Unfortunately for our great State, spirit cannot be rated on an Environmental Impact Statement. The Department of Energy does not have the tools chart the positive impact that civic, community and state pride will have on a project like the SSC. But, Coloradans know. And, I believe they have shown the Department of Energy that Western hospitality is a strong force. One which I believe they would be foolish to pass up.

Experts will stand before you and discuss the technical merits of the Colorado site and the draft EIS. They will tell you that Colorado is home of several nationally renowned universities, and will soon construct a new international airport. Experts will tell you about the superb Colorado site from a geological, geographic and economic standpoint. They are the experts, and I can only agree when they state that the Colorado site is superior geologically and geographical. I can also attest to the spirit and pride which is embedded deep in the hearts and minds of Coloradans. I believe it is importance to keep in mind Colorado's life style and spirit. I know how strong it is, and the positive impact it can have on the SSC. I agree with those Colorado businesspeople, local and national scientists, and government officials who have come together to attract national attention to the Colorado site. Colorado has a lot to offer, and I hope the SSC will soon call Colorado home.

LETTER 561

TIMOTHY E. WIRTH
COLORADO

COMMITTEES
ARMED SERVICES
BANKING
BUDGET
ENERGY AND NATURAL RESOURCES

United States Senate

WASHINGTON, DC 20510

September 29, 1988

U.S. Department of Energy
SSC Site Selection Task Force
Fort Morgan, Colorado 80701

Welcome once again to Fort Morgan, Colorado. The selection of Colorado as one of the seven best qualified sites for the Superconducting Supercollider (SSC) has generated a great deal of excitement among the people of our state. I trust that the public comments you will hear later this afternoon will confirm that the community of Fort Morgan -- and Coloradans as a whole -- are very interested in supporting the Department of Energy's SSC program.

1 Colorado offers many unique advantages as the host state for this project. In addition to a stable and predictable geology, studies also show that Colorado offers an excellent location for the construction of the SSC -- with only minimal environmental impacts. Colorado is also strengthened by its role as a regional leader with resources that include more than 1200 companies involved in advanced technology, plans for a new International Airport that promises to be one of the world's busiest hubs, a strong university system that makes Colorado a leader in high technology, and an environment that blends the best of urban living with recreational opportunities that are simply unparalleled throughout the nation.

Most important of all, our state offers a highly educated work force and a community of people who look forward to working with the Department of Energy to ensure that Coloardo is the future home for the SSC.

As a member of the Senate Energy and Natural Resources Committee I was pleased to play a role in securing appropriations for the SSC. The SSC represents an important investment in the basic research our nation needs to ensure American leadership and competitiveness in science, education, technology and commerce into the 21st century. I will certainly continue to do what I can in Congress to fight for this important project.

Sincerely yours,

Tim Wirth

Timothy E. Wirth

1120 PENNSYLVANIA STREET
DENVER, CO 80203
303/866-1809

1020 MAIN STREET
GRAND JUNCTION, CO 81501
303/245-9844

530 N. TEJON ST.
SUITE 105
COLORADO SPRINGS, CO 80903
303/634-9823

UNITED BANK BUILDING
6TH AND MAIN ST.
SUITE 410
PUEBLO, CO 81003
303/543-0807

LETTER 562

TESTIMONY

of

The Honorable Don Ascent
State Representative - 65th District
Colorado General Assembly

to

The U. S. Department of Energy

Thursday, September 29, 1988
PUBLIC HEARING

Regarding the
Draft Environmental Impact Statement
for the
Superconducting Super Collider

State Representative
DON AMENT
29819 County Road 55
Iliff, Colorado 80736
Home: 522-8205
Capitol: 866-2948

COLORADO
HOUSE OF REPRESENTATIVES
STATE CAPITOL
DENVER
80203

Member:
Education Committee
Agriculture Committee

September 29, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/G304
Office of Energy Research
U. S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

I welcome this opportunity to comment on the Draft Environmental Impact Statement for the Superconducting Super Collider and to compliment you and your staff for a fine, if imposing, document. The Draft EIS has special importance to me as a native of northeastern Colorado and as a legislator who has worked to bring the SSC to Colorado. Overall, I'm pleased with the report's analysis of potential impacts of the Super Collider on community and natural resources in Colorado. The EIS confirms that the Department of Energy can construct the SSC here with minimum disruption and with mutual benefit to our communities and the laboratory. 1

As a farmer and as the state representative for thousands of people in this part of the state, I am concerned about some portions of the DEIS which seem to me to inaccurately characterize our region and this state. In the interest of time, I will focus on two points that especially concern me: water and local capacity to deal with SSC-related growth.

Water is an important issue in the West -- and one which is most often misunderstood by those familiar with the less complex appropriation laws of other regions. Although the sections in the Draft EIS which discuss water issues are generally accurate, there are some inconsistencies. The DEIS' treatment of Colorado's proposed plan to supply water to the laboratory, for example, is basically correct; but some references suggest that the authors are under the impression that our plan will deplete water from the Colorado and South Platte rivers (DEIS Vol I Ch 3: p. 3-28, p. 3-34, p. 3-62; Vol I Ch 4: p. 4-53, p. 4-55; Vol I Ch 5: pp. 5.1.2-26-27, p. 5.1.5-10). 2

Dr. Wilmot Hess
September 29, 1988
Page Two

I want to clarify and emphasize that our commitment is to provide a water supply to the SSC which does not entail any new depletions from either the Colorado or the South Platte. There are two main reasons for the state's ability to make this firm commitment: One, because water out here is bought and sold like any commodity, we will buy the commodity that does not interfere with streamflows. Two, Colorado has an impressive body of specialized laws that protects the interests of water right holders. State water law says that, if we acquire water out of a stream, our use of that water cannot result in a net loss to any downstream user.

3 The Final EIS should therefore consistently state that our water supply proposal will not result in Colorado or South Platte depletions.

Regarding the DEIS discussion of local capacity to deal with SSC-related impacts, I'm sure you're well aware by now that an overwhelming majority of our citizens will welcome the new era of growth and development that the SSC will bring to northeast Colorado. This part of the state is no stranger to economic growth cycles. Having successfully managed the oil boom of the 1950's and, more recently, rapid growth from
4 the construction of the Pawnee Power Plant, we know that in the long run such growth will be in the best interests of our communities and our families. Especially important, we recognize that SSC "boom," because of the facility's large operational workforce, will not be followed by the "bust" phenomenon associated with mineral/energy development. We want SSC-related growth in northeast Colorado, and we can handle it.

To illustrate our familiarity with and ability to deal with growth, I point specifically to three critical growth areas referenced in the Draft EIS: education, public services and housing.

Having served as a member of the Sterling school board, I can assure you that that
5 school system successfully managed an increase in student enrollment on the order of 10 percent per year during the oil boom. In the high school alone, enrollment went from 496 students in 1952 to 934 students in 1963 — increases which were significantly above baseline growth, amounting to about two new classrooms a year. And those new students were assimilated without lessening the quality of educational services to any student. The existing capacity in area schools and our proven record of accommodating new students without cost to educational quality make us confident that we can comfortably provide for the educational needs of the children of SSC personnel.

In the case of Pawnee, construction of the Generating Station created a peak job total of 2,239, yet the Brush Police Department had to add only one (1) additional full time officer, and the Fort Morgan Police Department none. Both departments report that, while they noticed an increased number of people around town — and a

few more barroom scuffles -- neither community experienced the kind of "boomtown" problems outlined in the EIS (DEIS Vol 1 Ch 5: p. 5.1.8-24). Given the SSC peak year construction job projection of 3,982, we do not anticipate unmanageable demands on public safety or other services. The Final EIS should reflect that, having learned and benefited from past "booms," our local governments have the capability and capacity to provide services in a growth environment.

The Draft EIS also expresses reservations about this area's ability to meet SSC-related housing demands, particularly in the cities of Fort Morgan and Brush (DEIS Vol 1 Ch 5: p. 5.1.8-17). At this time in Morgan County, however, there are 855 available single-family and multi-family housing units. In addition there are currently 603 vacant lots with utilities included, ready to build. And in Morgan County alone there are 24 homebuilders, a modular home manufacturer and numerous contractors, who -- to correct the EIS characterization of this local industry as "historically small-scale" (DEIS Vol IV App 14: p.78) -- not only do business statewide but also in other western states.

6 Although overlooked in the EIS, Logan County will also absorb SSC-related growth (again, based on our past experience in northeast Colorado). There are currently about 200 homes for sale in Logan County, in and around Sterling -- not including townhomes and condominium units -- as well as a large number of buildable sites. In comparing current housing availability with SSC peak year demand (DEIS Vol IV App 14: p. 77), I am challenged to understand the EIS conclusion that we would "unlikely . . . readily be able to meet such a growth in housing demand" (DEIS Vol IV App 14: p.78). The Final EIS should accurately reflect Morgan County's -- and the region's -- capacity. We are ready and able to accommodate SSC-related housing demands.

7 Finally I want emphasize that the State of Colorado, the legislative and executive jointly, are a full partner with local communities in this endeavor. As described fully in our proposal to DOE, we are committed to providing support and assistance where needed. As partners, the state and northeast Colorado have the expertise, the capacity, and the tested institutional tools to effectively manage rapid growth and large scale development.

8 Accordingly, I strongly encourage the DOE to re-evaluate statements in the Draft EIS which portray otherwise and to ensure that the Final EIS accurately reflects the capacity and capability of Morgan County and the northeast Colorado region.

Sincerely,

Don Ament

Don Ament
State Representative - 65th District

LETTER 563

STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH
4210 East 11th Avenue
Denver, Colorado 80220
Phone (303) 320-8333

Roy Romer
Governor

Thomas M. Vernon, M.D
Executive Director

September 28, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65, GTN
Office of Energy Research
U. S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

The Colorado Department of Health is pleased to participate in this public hearing on the draft environmental impact statement on the Superconducting Super Collider. As we have stated at previous occasions, the Department is most supportive of Colorado's bid to attract this project. We again express our willingness and commitment to work with the Department of Energy and its contractors in resolving any and all issues associated with the completion of the EIS process.

1 Our Department's environmental programs include air pollution control, water quality control, hazardous materials and waste management, and radiation control. Our programs are in the process of offering a number of comments on the draft EIS in conjunction with the coordinated state review. Many of our comments will be editorial or will offer more pertinent or current information for improving or strengthening the document. Several substantive comments or issues have been noted and are briefly discussed herein. I will concentrate primarily on waste materials and air and water quality as we are convinced that the radioactive emissions and materials associated with the project are not likely to pose any particular health or disposal problem.

2 We believe that the relatively small amounts of hazardous materials that may be generated through operation of the project can be readily disposed of at a licensed site consistent with our regulatory requirements. Significant amounts of waste rock and soils will need disposal during project construction. This material is not considered as solid wastes under our regulatory program and therefore would not fall within state regulatory requirements. However, suitable local sites exist with adequate capacity to dispose of these materials as indicated in the draft document. With proper compaction, grading and surface cover, these disposal sites can be stabilized to avoid problems with runoff or erosion. We are most willing to work with local governments and your representatives in defining specific design measures to minimize possible effects at these sites.

3 Our water quality program has not identified any significant water quality problems associated with either construction-related runoff or operation of wastewater facilities. This is particularly true if good construction management practices are followed and if wastewater facilities are designed and operated according to our design and discharge permit requirements or county septic tank regulations.

4 Our air pollution program has identified potential concerns associated with compliance with national ambient standards for airborne particulates during construction. The draft report projects possible violations of such particulate standards. Our regulatory program cannot provide for approval of permits that would allow for such violations. We don't believe, however, that this problem is peculiar to the Colorado site and are confident that these standards can be met. In that regard, we would like to work with your representatives on more detailed and site specific control measures before the EIS is finalized. In addition, the report needs to identify and analyze the secondary impacts of vehicular activity on air quality. We will offer a suggested approach based on data developed by the Department of Highways.

5 In summary, we believe that the draft environmental impacts statement, with some modest changes, will comprehensively identify the environmental effects of the proposed Colorado project. Further, we believe that with reasonable design and management measures, those effects will fully conform with our regulatory requirements and not significantly impact the natural environment or public health. We are eager to meet further with your representatives on refining the issues raised. We look forward to an effective working relationship as this project is developed.

Sincerely,

Thomas M. Vernon M.D.

Thomas M. Vernon, M.D.
Executive Director

TV/GGB/lg

0009k/31

LETTER 564

ELIZABETH S. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

IMPACT STATEMENT RESPONSE

CITY OF FORT MORGAN

SUPER CONDUCTING SUPER COLLIDER

RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT

Glenn W. Calvert
City Superintendent

September 29, 1988

ELIZABETH E. GILBERT
CITY CLERK

CITY OF FORT MORGAN COLORADO

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Greetings and Welcome to Fort Morgan

I am Glenn Calvert and will address the Utility infrastructure of the City of Fort Morgan.

E.I.S. Volume 4. Volume 5

Paragraph 4.9, 5.1.8, 5.2.12

1 Fort Morgan is an all service City supplying electricity, natural gas, water, sanitation, and solid waste collection inside and outside the corporative boundaries. The infrastructure is in excellent condition, serving the present population and prepared to serve any future growth that would occur from Colorado being selected as the site for the SSC project.

E.I.S. 4.9, 5.1.8, 5.2.12

2 Electric System: The distribution and transmission system is in excellent condition. Substation capacity to accommodate 37.5 M.W. Our present peak load is 22 M.W. Power supply is available from six (6) generator suppliers all with excess generation for sale at reasonable rates. Fort Morgan has the lowest electric rates in the State of Colorado.

E.I.S. 4.9, 5.1.8, 5.2.12

3 Natural Gas System: Fort Morgan is a gas distributor, purchasing natural gas from Colorado Interstate Gas. The distribution system is in excellent condition and serves gas inside and outside the corporate boundaries and could accommodate immediate growth and future growth without problems. Gas costs are competitive with other suppliers in the area.

E.I.S. 4.6.3, 5.1.11

4 Waste Water Treatment and Collection: Fort Morgan owns and operates the sewage treatment facilities and the collection system. Our W.W.T.P. has a capacity of 3.6 M.G.D. and the present loading is 2.4 M.G.D. We have met the N.P.D.E.S. permit requirements consistently as required by the permit and administrated by the State of Colorado Health Department. Fort Morgan's sewage fees are reasonable and generally less than comparable city charges.

E.I.S. 4.6.3, 5.1.11

5 Solid Waste: Fort Morgan operates and owns the equipment for solid waste collection, the fees being reasonable and generally less than comparable cities. The solid waste is delivered to the Morgan County Landfill which has a projected life of 25-50 years. Fort Morgan would have no problem with immediate or future growth.

E.I.S. Volume 4.2, 5.1.2.3

Water Supply and Quality: Fort Morgan has an ample supply of potable water for present population and future anticipated growth from the SSC proposed project and other growth we anticipate. The water has a hardness of 47 grains, is healthful for drinking, and suitable for household use.

6 The water system is in excellent condition due to an ongoing upgrade of groundwater wells, control system, hydrants and water mains, and standby power units in an effort to obtain an I.O.S. reduction in fire ratings for insurance purposes.

Fort Morgan has purchased 3606 units of Colorado Big Thompson water to begin upgrading the quality of water. This is enough water to supply the consumptive use for Fort Morgan's present and anticipated growth. We will also continue to purchase more units of C.B.T. or other water units for ample water reserves for future growth.

E.I.S. Volume 4, Appendix 14

Streets: Contrary to the statement made in this section (Colorado page 27), Fort Morgan's streets will not "decrease to unacceptable levels".

7 The City is in the 5th year of a 7 year major street rehabilitation program. The major rehabilitation is designed to handle future growth and impacts capable of accomodating a 25,000 population. Under no circumstances would the City allow the streets to fall apart, with or without the SSC.

LETTER 564

8 In closing, Fort Morgan has the staff, equipment, and financial ability to handle any growth, immediate or future, that would come with the siting of the SSC in Colorado.

COMMENTS: E.I.S. VOLUME 4 - 5

E.I.S. 4.2, 5.1, 2.3

WATER QUALITY. Fort Morgan has an ample supply of potable water for present population and future anticipated growth from the SSC proposed project and other growth we anticipate. The water has a hardness of 47 grains, is healthful for drinking, and suitable for household use.

9 The water system is in excellent condition due to an ongoing upgrade of groundwater wells, control system, hydrants and water mains, and standby power units in an effort to obtain an I.S.O. reduction in fire ratings for insurance purposes.

Fort Morgan has purchased 3806 units of Colorado Big Thompson water to begin upgrading the quality of water. This is enough water to supply the consumptive use for Fort Morgan's present consumptive use and anticipated growth. We will also continue to purchase more units of C.B.T. or other water units for ample water reserves for future growth.

E.I.S 4.6.3, 5.1.11

WASTE MANAGEMENT. A. Domestic Sewage, Solid Wastes, "Commercial Industrial":

Fort Morgan owns and operates a WasteWater Treatment Plant for treatment of commercial, industrial and domestic sewage for the corporate population. The WasteWater Treatment Plant has a design capacity of 3.6 M.G.D. Present loading is 2.4 M.G.D.

10 Fort Morgan operates under a N.P.D.E.S. permit with discharge to the South Platte River. We have consistently met the requirements of the permit which is administered by the State of Colorado Health Dept.

B. Fort Morgan has a solid waste collections system in operation for the commercial, residential, and industrial patrons of Fort Morgan. This system adequately handles the present need and could accommodate immediate and future growth.

Morgan County operates the land fill the City delivers to. The life of the landfill is anticipated to be 25-50 years. Morgan County and the municipals in Morgan County work closely together to support the landfill.

E.I.S. 4.9, 5.1.8, 5.2.12

SOCIOECONOMICS Growth - Fort Morgan's growth pattern has been very stable under normal economic conditions, (about 1 1/2% over a 10 year average). Several periods of "Boom Town" atmosphere have occurred,

11 discovery of oil, oil industry, and Pawnee Power Plant, the short term and long term effects were handled without great complication.

Housing is available for purchase, or rent and ample mobile home parks are in place. Zoning for land development, rules and regulations and simple annexation policies are in place. Fort Morgan has a master street plan and airport master plan on record with Morgan County. Fort Morgan has submitted a chapter into the Morgan County Comprehensive plan. Fort Morgan and Morgan County work together effectively on planning and land use.

E.I.S. 4.9.2.2, 5.1.8.7-9

12 UTILITIES: Fort Morgan is an all service community supplying Electricity, Natural Gas, Water, Sanitation, and Solid Waste Collection inside and outside the City Corporate boundaries. The infrastructure is in excellent condition and very capable of serving the present population, and any immediate growth that would occur from the SSC project, at very reasonable costs and immediate service.

E.I.S. 4.9.2.1, 5.1.8.6

13 TRANSPORTATION: Fort Morgan is serviced by I-76 Interstate Highway, Highway 34, Highway 52, Highway 144, Burlington Northern and Union Pacific Railroads, Greyhound and Arrow Bus Lines, and numerous truck lines. Taxi service and car rental service is available.

Streets within Fort Morgan are in good condition. Fort Morgan is in the 7th year of a complete renovation program of the streets system and will continue this program until completed. Fort Morgan maintains a street department capable of street rebuild, repair and maintenance.

SOCIOECONOMICS

4.9, 5.1.8, 5.2.12

The E.I.S. concerns itself in several sections with the impact on the local housing industry. This problem seems to be both short term and long term. The impact however should not be as great as perceived. At present there are approximately 175 single family units available for sale within the Fort Morgan community. Additional to this is the fact that Fort Morgan has four (4) fully serviced mobile home parks within the city limits. Spaces are available on a regular basis. These are short term concerns only.

14 In the long term impact it's something that Fort Morgan can handle. During the late 1970's a boom type atmosphere existed in all of Morgan County because of the construction of Pawnee Power Plant. Since Fort Morgan had annexation, subdividing and zoning regulations in place, additional housing was built without any strains on the City infrastructure. In fact, the fallout of the housing boom was a more readily available, affordable housing to the permanent citizens. Prior to the boom, housing had become slow and stagnant. The boom breathed new life into the old local industry creating a new youthful exuberance.

This type of impact is always welcome to any rural community.

The economic activity of the City of Fort Morgan has its basis in agriculture and energy production. Both have suffered a lull in recent history causing local businesses to suffer lower profits. The type of impact expected to be produced because of the SSC project is anticipated and welcomed with open arms by the local business community.

In light of the present economic lull in agriculture and energy production (oil & gas), the City of Fort Morgan has begun an aggressive Economic Development program. An Industrial Park has been purchased and all services are being put in place prior to putting the park on the market at $.30 a square foot. Further the City is an active member of the Morgan County Economic Development Association, whose sole

purpose is to promote the healthy Business/Industrial climate o. ..gan County.

The work force in the area is very mobile, in that commuting to and from the front range for jobs has become commonplace. Since the SSC is only 20 minutes from Fort Morgan both construction and fulltime SSC staff will not find any negative impact or undue hardships in transportation.

The City of Fort Morgan has developed a long range plan that identifies the needs of the City should it grow to a population of 25,000 in the next ten to fifteen years. We are very comfortable with those projections. We feel the quality of life in Fort Morgan would not be adversely affected in any manner.

Such cultural activities and entities such as our Recreation Programs and Library/Museum Complex are easily adaptable to a higher population base. Civic groups such as the Heritage Foundation and the Morgan County Arts Council would welcome additions to the community because a broader base of interest would be identified.

Public Health. E.I.S. 5.1, 6.2 - Volume 4. 12.2 - 12.3 - 12.4

Fort Morgan: Has an excellent, accredited community hospital of forty (40) beds, with complete diagnostic facilities, X-ray, laboratory, emergency room, and communication with ambulance services.

15 Fort Morgan is serviced by the Morgan County Ambulance Service which has six (6) ambulances available. These are backed up by Volunteer Fire Departments which have three (3) rescue units. All response units are manned by qualified, certified personnel.

Fort Morgan has ample doctors to respond to daily or emergency needs, including two (2) medical clinics fully staffed with doctors, trained nurses, and office staff.

Fort Morgan Community Hospital sponsors a specialty clinic with twenty-two (22) specialists visiting Fort Morgan on a regular appointment basis.

Helicopter Service is available for transport to Denver or Greeley Colorado Medical Facilities.

Fort Morgan is well supported by community fiscal contributions for building and equipment needs.

LETTER 565

STATE OF COLORADO

DEPARTMENT OF AGRICULTURE
1525 Sherman Street
Denver, Colorado 80203
(303) 866-2811

Roy Romer
Governor
Peter R. Decker
Commissioner
Steven W. Horn
Deputy Commissioner

Statement of Peter R. Decker, Commissioner,
Colorado Department of Agriculture
Before the Department Of Energy Site Team, September 29, 1988

My name is Peter R. Decker, Commissioner of Agriculture for the State of Colorado. I appreciate the opportunity to present a statement today in support of Colorado as the location for the U.S. Department of Energy's proposed Superconducting Supercollider (SSC) project.

I will address four aspects of the project pertinent to agriculture in Colorado -- the project's impacts on agricultural land, agricultural water, rural families, and rural economic development.

Impact on Agricultural Land

For the project site itself, approximately 15,500 acres of land are needed, nearly all of which is rangeland or cropland. We note favorably that approximately 7,500 acres of this land will be available for leaseback to agricultural producers in the area.

The Draft EIS estimates that approximately 2,000 acres of the 7,500 acres proposed for fee simple purchase at the project site is prime farmland. We dispute that estimate. The soils information provided by the Colorado SSC team to the U.S. Department of Energy, with the assistance of the U.S. Soil Conservation Service, shows only one acre of prime, irrigated land in the fee simple portion of the project site. The Draft EIS estimate of 2,000 acres of fee simple "prime" land assumes that these acres could be irrigated. Without irrigation, the land is simply not productive enough to be classified as prime. Again, according to the Soil Conservation Service, it is extremely unlikely that additional irrigation water will become available in the area. 1

Now, beyond the project site, 2,100 acres will be dedicated to construct 58 miles of new or enlarged roads. The U.S. Soil Conservation Service and the Colorado Department of Highways estimate that only 209 of these acres are prime, irrigated land. In considering the benefit that improved transportation in the area would have on agriculture and improved market access, the loss of these prime farmlands is justified. In addition, officials of the Colorado Department of Highways have assured me that they will work with affected landowners to ensure highway location and design will not hamper reasonable access to farmlands for livestock and machinery to accommodate agricultural operations.

I am aware that additional land impacts will result from the construction of a number of miles of power lines. I would expect the utilities involved to negotiate with the affected landowners in good faith and the landowners to be fairly compensated for the impacts.

Agricultural Water Impact

In the semi-arid West, any potential impacts on precious water supplies to agriculture, industry, municipalities, and the environment must be carefully considered. The State of Colorado has given serious consideration to this issue, and I am convinced Colorado's water resources can accommodate the water needs of the SSC project without discernable impacts to agriculture. 2

More than half of the 2,200 acre-feet of water needed annually for the project has been already secured, and the remainder will be purchased from existing sources. Some of the remaining water will possibly come from irrigation water sources. Supplies are adequate and readily available.

Given the magnitude of the SSC project, we do not believe the water demands are excessive.

Agricultural Families and Labor

Five families within the project site, four of whom are farm families, be relocated. In addition we understand other relocations may be necessary because of the new highways required. While relocation will be a hardship on the families affected, I expect they will be compensated adequately and other assistance will be provided to them. The site, in my opinion, was well chosen to minimize the relocation of families. 3

One of the most significant aspects of the project will be its influence on labor in the area. Agriculture, being the predominant industry, will naturally feel the labor effects. These impacts will be both positive and negative.

During construction, the project will increase labor costs for farmers and ranchers, as the SSC project will most likely pay higher wages than the prevailing agricultural wage. However, the project will also provide off-farm job opportunities for some agricultural families, enabling them to supplement farm income. 4

In my opinion, the benefits of increased rural job opportunities for agricultural families will more than offset the temporary drawbacks of higher labor costs.

Rural Economic Development

Colorado's agricultural industry and rural communities are intertwined. What affects one affects the other. Rural economic development is crucial for the future of agriculture in this state. 5

The SSC project will, undoubtedly, promote the redevelopment of the rural community in the area. By contributing to a more diverse and stronger infrastructure, the region will gain improved health care and educational facilities and services.

Summary

I am convinced the Colorado site is where the SSC should be located. The impacts on land and water will not be significant, the site will relocate very few families. The beneficial impacts on agriculture resulting from off-farm job opportunities will far exceed the drawbacks. The rural economy and the social fabric it supports will be strengthened and diversified by the project.

6

Once again, I appreciate the opportunity to appear before you today to offer my endorsement of the project based upon its impacts on agriculture.

LETTER 566

Women's Economic Development Council

September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Dr. Hess:

On behalf of the Women's Economic Development Council, a gubernatorially appointed council within the Office of Economic Development, we concur with the citation Volume I, Chapter 2, Section 2.2.1, Scientific Need: "There is a scientific need for such an understanding of nature. Much of the knowledge gained regarding physical phenomena in recent years has been achieved through the use of high energy accelerators". We believe that the United States must construct the Superconducting Super Collider and we support and endorse the Colorado SSC proposal. 1

The Women's Economic Development Council serves as an accountability committee to monitor, evaluate and advise the Colorado SSC Project staff on issues of gender equity. With a Colorado designation of "preferred site", the Council will actively participate to insure equity in staffing, construction contracts, procurement contracts and continued operation representation. We are pleased with specific inclusion the WBE statements within the Blueprint document.

We look forward to an active partnership in building the Colorado SSC.

Sincerely,

Martha Ezzard

Martha Ezzard, Chairman
Women's Economic Council

Council to the Colorado Women's Business Office, 1625 Broadway, Suite 1710, Denver, Colorado 80202 (303)892-3840

LETTER 567

COLORADO DEPARTMENT OF HIGHWAYS TESTIMONY
FROM A. RAY CHAMBERLAIN
EXECUTIVE DIRECTOR
COLORADO DEPARTMENT OF HIGHWAYS
SSC PUBLIC HEARING AT FORT MORGAN, COLORADO
9/29/88

The Colorado Department of Highways stands ready to construct the roadway system, described as necessary in the Draft Environmental Impact Statement for a Colorado Super Collider facility. The construction of the proposed highways, as well as the improvement of existing roadways will reflect extensive planning and sensitivity to the social, economic and environmental needs of the Region, State and Eastern Colorado. The Department of Highways
1 has reinforced its commitment to the Department of Energy by conducting comprehensive site surveys, research, and analysis of the affected environment and potential impacts. The results and findings of these supplemental studies are included in the Draft Environmental Impact Statement.

As these studies have shown, there will be no significant impacts associated with the roadway construction. The Department of Highways will employ all measures necessary to mitigate all impacts resulting from the construction.

2 A review of our studies has identified the presence of cultural resources which can be avoided or mitigated.

Wetlands are present within the proposed highway corridor. The potential wetland impacts identified are considered minimal; however, we are certain that the impacts can be reduced substantially further. For example, the surveys point out that the east\west parkway crosses a quality wetland north of Barr Lake. Adjustment of the alignment along with appropriate design
3 techniques will minimize impacts to the wetland complex.

We are exploring methods and have identified an alternative which may avoid wetland impacts at the Barr Lake location. While avoidance is the preferred wetland mitigation, the Department has had success with wetland creation and enhancement. Other measures to create, enhance or preserve existing wetlands will be employed should total avoidance not be possible.

Prior to conducting the on-site environmental surveys, permission to trespass was obtained from the property owners along the proposed east\west parkway corridor. Following this, agents of the Department of Highways were
4 sent out to make personal contact with the landowners to further explain the project and to obtain written permission to trespass. These contacts did not elicit any significant opposition to the SSC Project or the proposed highway construction. While it is always the case that, no one wants a highway project to take their

property, concerns about environment, social and economic impacts were not received through this process.

5 As stated in the Draft Environmental Impact Statement, approximately 94 miles of new roadway and approximately 91 miles of improvements to existing roadways, will need to be constructed. It is our considered opinion that since all of these new miles of roadway are to be two lane facilities initially, they will not spark new uncontrolled or unwanted development. All roadways will be planned and constructed with the cooperation of the local entities and their planning agencies. Measures to plan new access and to maintain existing access will proceed with full consideration of the local needs for transportation and their agricultural activity.

6 All proposed roadway construction will fall into areas comprised of open farmland and sparse development. Most of the ownerships to be intersected by proposed roadways are large parcels made up of several sections of land. For this reason, it appears that impacts to local residents and communities will be minor.

Our review of the Draft Environmental Impact Statement indicates that Colorado and the Department of Highways have provided considerably more detailed environmental survey and analysis than many of the other of the Best Qualified List of States. We are certain that the Department of Energy in recognition of this will reflect this in rendering their decision.

7 In summary, the Department of Highways has complete confidence that all of the roadways will be provided as needed for construction and operation of the Colorado Super Collider Project. Further, we have also determined that the resulting roadway system will provide a high level of service with minimal impacts on the surrounding communities for the life of the project. The Department of Highways will rely on its considerable technical and professional resources along with the efforts of Colorado's private engineering and construction industry to meet our commitments. All impacts potentially resulting from the highway construction will either be avoided or mitigated satisfactorily with the measures developed from our experience in cooperation with the appropriate federal, state and local agencies. Colorado is a recognized national leader in environmental preservation. Following the State's example the Department of Highways has long applied the full NEPA process to all state funded, as well as federally funded Colorado Highway Projects.

LETTER 568

Colorado
Superconducting
Super Collider Project

Roy Romer
Governor

1313 Sherman Street, Suite 420
Denver, Colorado 80203
303 866-6487

Testimony Before the
U.S. Department of Energy
Hearing on the
Draft Environmental Impact Statement
By
Roy Romer
Governor
State of Colorado
September 29, 1988
Fort Morgan

On behalf of the citizens of Colorado, I am delighted to welcome the U.S. Department of Energy (DOE) to Colorado. We want to commend the Department of Energy for producing a thorough study in a short period of time. The Final EIS should provide valuable support to the site selection process.

1 We believe that incorporation of our comments in the Final EIS will greatly enhance DOE's ability to reach a defensible site selection decision. On behalf of state government, I will submit detailed comments and recommendations prior to the deadline for written comments on October 17, 1988. Today, I would like to share some of our general concerns.

Colorado reaffirms its support for the need to build the SSC.

Consistent with our earlier position, we want to restate our support and the support of the people of Colorado for the Superconducting Super Collider. The benefits of building and operating this project in the United States are manifest. Not only will there be long-term technological spinoffs of virtually unimaginable utility, there will also be practical benefits to education, industry and science in the near future. The Draft EIS correctly asserts the need to build this facility for the nation.

Our review of the Draft EIS reconfirms our view that the SSC will have very low environmental and socio-economic impacts that can be easily and readily mitigated.

2 The Draft EIS begins to document the ease with which the project and its scientists and support staff can be brought to Colorado. Colorado's SSC Implementation Plan, the broad participation we have had in planning and evaluating the Colorado SSC, the preliminary mitigation plan and the lack of controversial environmental issues should all reassure DOE that a high degree of certainty will accompany its decision to locate the project in Colorado.

The Draft EIS should be revised to present a more balanced evaluation of the Colorado site. The SSC is compatable with the capacity of Northeast Colorado to handle growth while enhancing the quality of life in the region and the state.

3 Colorado's quality of life should be a significant inducement to any large enterprise considering whether to locate here. The Draft EIS appropriately does not dwell on this decision criterion. However, in our minds, the document does the reverse.

Page two

It overdramatizes the remoteness of the SSC site, denigrates the capability of our state and local governments to respond to the opportunities afforded by growth related to the SSC and ignores the strong ties between the site vicinity and the front range metropolitan area. While this appears in the document more as a flavor than as an overt conclusion, we will be pointing to specific parts of the text and tables which we think would be changed to display a more balanced evaluation of the Colorado site.

The Draft EIS provides a thorough inventory and analysis of all SSC siting requirements for Colorado.

It is clear from the document that the Colorado SSC proposal included a greater level of detail than did proposals from other states. In apparent contrast to other states, we worked hard to fully describe all the roads and infrastructure needs associated with the SSC in our September 1987 proposal. We intended that this full range of project detail be evaluated in the EIS in order to ensure consideration of all development necessary to successfully build and operate the SSC in Colorado. This also enabled us to realistically assume the cost for mitigating the environmental impacts due to low environmental disturbance at the site and in the vicinity of our infrastructure improvements to the site.

4

The Draft EIS acknowledges the full scope of Colorado's proposal by analyzing direct and indirect impacts over a broad geographic area. Unlike the minimal attention given to eventual road and infrastructure needs in other states, the Draft EIS provides a thorough inventory and analysis of all SSC siting requirements for Colorado. We feel that this strengthens the EIS process for Colorado and gives us an early start on the Supplemental EIS which will follow site selection.

The assessment of impacts, however, is sometimes confused by the consequent differences in project scope. The Colorado project incorporates ancillary development which extends the geographic scope of the analysis. A comparable scope of analysis is lacking for other states. In some instances this results in comparisons being drawn unequally between sites. For example, our proposal for access roads anticipates meeting future demand throughout the life of the SSC project. The DEIS reports that other states propose very little in the way of new road construction while their existing road networks are already inadequate. We cite other examples of this in our written comment. We strongly urge the DOE to refine its analysis to ensure that states are compared in a reasonable and balanced way.

5

Page three

Colorado has the capacity to ensure that all growth induced by the SSC will be accomodated without difficulty.

6 Local communities and state government have the commitment, expertise and resources to ensure that all growth induced by the SSC will be accomodated without difficulty. Private sector resources are also adequate to respond quickly to increasing demand for housing and other needs of a growing population. Our proposal and subsequent communications make very clear that we see growth in the project area as a tremendous opportunity and not a problem. Projected growth rates are not excessively high, particularly when compared with the growth we experienced on the West Slope of Colorado during the oil shale "boom." Fort Morgan and Brush have both responded to periods of rapid growth - during the 1950's when oil and gas activity peaked and during the early 1980's when the Pawnee Power Plant was built. Their experience and success in handling these spurts of growth underscore their confidence in handling SSC growth.

Once again I would like to reaffirm our support for the DOE efforts to develope the EIS. Colorado stands ready to provide information and technical support to your effort. We look forward to your decision on the preferred site.

LETTER 569

HEALTH CARE COMMITTEE

This refers to Volume IV, Appendix 14, page 85. Second paragraph needs to read:

1 Health care facilities in Morgan County are currently adequate for inpatient numbers (70 beds) with occupancy at 35% capacity. Outpatient services would need to be increased to accomodate on site medical services at SSC site.

The hospitals, one located in Brush, and the other in Fort Morgan, are general hospitals, well equipped and offer primary and secondary services with linkages for tertiary care.

On page 83 :

2 For tertiary care we have ambulance services with well trained EMTs and nurses to care for critical patients during transfer. Also air transportation currently is available by helicopter within 45 minutes of being called.

I have attached more detail on the medical services offered for your information.

Keith Meines

LETTER 569 (CONTINUED)

SSC ENVIRONMENTAL IMPACT STATEMENT

QUICK REVIEW FOR PROBLEMS

AGENCY Public Health

	EIS Section			
	Project Description	Existing Conditions	Impact Analysis	Impact Mitigation
1. Completeness. Does the EIS fully present all the relevant information submitted by Colorado?	Yes	Yes		
2. Correctness. Does the EIS correctly present the data we submitted to DOE?	Yes	Yes		
3. Equivalence. Does it appear that existing conditions at the Colorado site are described at a level of detail equivalent to that done for other sites?	Yes	Yes		
4. Consistency. Does the EIS present analyses and conclusions about Colorado's site that are consistent with those presented for other sites? Are we getting a fair shake?	Yes	Yes		
5. Adequacy. Does the EIS meet the needs of NEPA, particularly for the Colorado site?				
6. Are there other problems which might put Colorado at a competitive disadvantage?	5.2.8.3	in litigation presently	staff of SSC would prefer to not live or work in hazardous waste area	

KEY: Specific to respondent's discipline/resource area

N/A Not Applicable

Yes Everything looks okay (except for Question 6), no need to worry

No There is a problem. Problem is described and solution proposed on separate sheet.

? Uncertain. Need more time or more information. Explain on separate sheet. Be as specific as possible.

SSC
MEDICAL COMMITTEE
KEITH MESMER, CHAIRMAN

Morgan County has two hospitals, one located in Brush; the other in Fort Morgan. The two hospitals have a total of 70 beds: 8 CCU/ICU, 12 OB, 50 Med/Surg and Pediatric. The hospitals are well equipped and offer the following services:

OB - with modern delivery and birthing rooms.

4 OPERATING Room Suites - Equipped for General Surgery, Dental, Endoscopy, ENT, Chest, GYN, Hand Surgery, Orthopedics, Heart (Pacemakers), Urology, Vascular. We do Outpatient 1-day Surgery as well as Inpatient.

RADIOLOGY - TOMOGRAPHY - Does Radiology, Mammography, Jltrasound, Echocardiography, C-Arm, Cat Scanning, and Nuclear Medicine.

LAB - has a Corning 170 Blood Gas Machine, Coulter Cell Counter, TDX Analyzer, ACA Chemistry Analyzer 2 and 3, and are Full Service Labs.

OTHER MAJOR DIAGNOSTIC CAPABILITES - Include Echocardiography, Computerized Treadmill, EKG Machine, and Fetal Heart Monitoring.

REHABILITATION SERVICES - Including Occupational Therapy, Physical Inerapy, Speach Therapy, Cardiac Rehabilitation, Chemical Dependency, and Respiratory Therapy.

The CCU/ICU Departments are staffed with ACLS-Certified Personnel.

In Morgan County we have fifteen doctors on our active Medical Staff and twenty-four specialists who provide services here in the Community. See Attached Lists.

There are six ambulances serving Morgan County with thirty-five ambulance personnel, of which thirty are EMTs. The ambulances are equipped with emergency equipment to treat and monitor critically-ill patients while being transferred. Nurses who work in the Critical Care area are sent with these patient transfers.

Emergency helicopter service is available out of Denver (Children's Hospital, AMI *Presbyterian/St.Lukes) and Greeley (North Colorado Medical Center)*. The time involved is approximately 30-45 minutes.

The hospitals have linkages to insure that all stages of care are available from primary care, secondary care, and tertiary care. The linkages to provide tertiary care are with a cardiac network in Denver through AMI Presbyterian/St. Lukes of Denver, educational and trauma courses center through St. Josephs in Denver, and North Colorado Medical Center in Greeley. The tertiary centers are 1½ hours away by interstate highway and 30-45 minutes by air.

SSC
Medical Committee
Keith Mesmer, Chairman
Page Two

Morgan County has recruited five physicians to the County in the past two years, and plans are to recruit additional family practice and specialists: OB, Orthopedics, Urology, ENT, and others. This effort has been very successful and will continue to be a priority.

Other medical services that the County has access to include: Three large nursing homes, one specializing in Alzheimer's; Home Health Care, ample dentists, optometrists, podiatrists, and chiropractors. (See attached sheet on long term care).

There is emergency room physician coverage on weekends, and the local doctors cover the emergency room on week days and nights. We have excellent emergency communications between ambulances and hospitals enabling constant communications in the care of the critical or injured people enroute to the hospital.

The "Brush Cares" Committee has applied for a matching fund grant for $200,000 from the Robert Wood Johnson Foundation for the purpose of providing an even more "state of the art" ambulance service for the entire service area.

Should the SSC be located in our area we can provide whatever medical facilities are needed with our current resources and linkage to tertiary care centers. We have adequate hospital beds and our ancillary services have the capability for expansion as the need increases. Further, Colorado does not have laws (certificate of need) that prevent rapid expansion of a health care capacity to meet new needs.

ARA services **Inter-Office Memo**

ARA Living Centers

To: Keith Mesmer

From: Barbara Bradshaw

Subject: SSC Health Care Committee

Date: 6/30/88

Long term care is an issue that will be a concern for many families in the coming years.

Morgan county has a full spectrum of services for the aging population.

Three skilled nursing homes, totalling 323 available beds offer rehabilitation, as well as long term maintenance care. One of the first Alzheimer Care Units established in the United States is located in Brush.

Alternatives to nursing home care are readily available. The Brush facilities both offer a campus setting with a variety of services to meet existing and future needs.

Three home health agencies service the area and provide the full spectrum of home care and rehabilitative services including occupational, speech and physical therapies.

Two adult day care centers offer health care by the day. These centers are designed to assist the primary caregiver who needs to work, or would like some respit. These programs also help to maintain the frail elderly, living independently to maintain their lifestyle.

Lifeline, a personal emergency response program is provided as a community service. This portable help button installed in a home or apartment is used to summon emergency assistance. The alarm sounds in the response center and a trained operator tries to reach the subscriber by telephone and will summon a predetermined responder to go to the home. The responder signals the response center to show that help has arrived. Lifeline is also equipped with a timer that will signal the response center if not reset in 12 hours.

LETTER 569 (CONTINUED)

East Morgan County
Hospital
2400 West Edison
P.O. Box 585
Brush, Colorado 80723

EAST MORGAN COUNTY HOSPITAL - MEDICAL STAFF - ACTIVE MEMBERS

DR. SOHAN BHATIA - FAMILY PRACTICE
220 EDISON
BRUSH, CO 80723

DR. HAROLD CHAPEL - INTERNIST - Board Certified - American Board of Internal Medicine
242 CAMBRIDGE STREET
BRUSH, CO 80723

DR. JOHN COLLINS - GENERAL SURGEON - Board Certified American Board of Surgery. Fellow - American College of Surgeons
625 WEST PLATTE AVENUE
FORT MORGAN, CO 80701

DR. LYNN DILLEY - FAMILY PRACTICE
MEDICAL SERVICES BUILDING
2400 WEST EDISON, SUITE C
BRUSH, CO 80723

DR. EDWARD GOODMAN - FAMILY PRACTICE
MEDICAL SERVICES BUILDING
2400 WEST EDISON, SUITE A
BRUSH, CO 80723

DR. HILARY SEIBERT - FAMILY PRACTICE
MEDICAL SERVICES BUILDING
2400 WEST EDISON, SUITE D
BRUSH, CO 80723

DR. JOHN WOLZ - GENERAL SURGEON - Board Certified American Board of Surgery. Fellow - American College of Surgeons
625 WEST PLATTE AVENUE
FORT MORGAN, CO 80701

Leased by Lutheran Hospitals & Homes Society

Hospital
2400 West Edison
P.O. Box 865
Brush, Colorado 80723

VISITING SPECIALISTS

DR. JAMES BECKMAN
GREELEY, CO

CARDIOLOGY - FIRST TUESDAY EACH MONTH
(IF PATIENT LOAD WOULD INCREASE WOULD COME TWICE A MONTH)

DR. MARVIN BURNETT
DENVER, CO

ONCOLOGY - SECOND AND FOURTH TUESDAY EACH MONTH

DR. CHRISTOPHER SUREK
AURORA, CO

EAR, NOSE, & THROAT - ONCE A MONTH ON FRIDAY
SOMETIMES TWICE A MONTH

DWAYNE WILDHAGEN - AUDIOLOGIST - ACCOMPANIES DR. SUREK

DR. MICHAEL WOODS
GREELEY, CO

ORTHOPEDICS - THIRD THURSDAY EACH MONTH

STERLING EYE CLINIC
DRS. AWSCHALOM, BUCHANAN, & ELLIFF - ROTATE VISITS TO EMCH
STERLING, CO

OPHTHALMOLOGY - FOURTH TUESDAY EACH MONTH

Leased by Lutheran Hospitals & Homes Society

LETTER 569 (CONTINUED)

Ft Morgan Community Hospital

Advancing Family Health Care

FORT MORGAN COMMUNITY HOSPITAL - MEDICAL STAFF - ACTIVE MEMBERS

Dr. John A. Collins - General Surgery - Board Certified American Board of Surgery
625 West Platte Avenue — Fellow - American College of Surgeons
Fort Morgan, Colorado 80701

Denis L. Gibbs, D.O. - Radiologist
1000 Lincoln Street
Fort Morgan, Colorado 80701

Dr. Donald G. Kruglet - Family Practice - Board Certified American Board of Family Practice
102 West 9th Avenue
Fort Morgan, Colorado 80701

Dr. Kevin W. Lindell - Family Practice - Board Certified American Board of Family Practice
220 East Beaver Avenue
Fort Morgan, Colorado 80701

Dr. James A. Miller - Internal Medicine - Board Certified - American Board of Internal Medicine
419 East Ninth Avenue
Fort Morgan, Colorado 80701

Dr. Bruce R. Overturf - Family Practice - Board Certified American Board of Family Practice
102 West 9th Avenue
Fort Morgan, Colorado 80701

Dr. Margaret Palu - Family Practice - Board Certified - American Board of Family Practice
102 West 9th Avenue
Fort Morgan, Colorado 80701

Dr. Robert L. Solt - Family Practice - Board Certified - American Board of Family Practice
220 East Beaver Avenue
Fort Morgan, Colorado 80701

Dr. Patrick L. Thompson - Family Practice - Board Certified - American Board of Family Practice
220 East Beaver Avenue
Fort Morgan, Colorado 80701

Dr. John F. Wolz - General Surgery - Board Certified American Board of Surgery
625 West Platte Avenue — Fellow - American College of Surgeons
Fort Morgan, Colorado 80701

Dr. Paul E. Woodward - Family Practice - Member American Academy of Family Practice
220 East Beaver Avenue
Fort Morgan, Colorado 80701

Fort Morgan Community Hospital
1000 Lincoln Street
Fort Morgan, Colorado 80701
(303) 867-3301

FORT MORGAN COMMUNITY HOSPITAL
SPECIALTY CLINIC/COURTESY
PHYSICIANS' ADDRESSES

Dr. Gilbert Anderson
The Greeley Clinic
1900 16th Street
Greeley, Colorado 80631
ORTHOPEDICS 353-1551

Dr. Thomas J. Arganese - Board Certified - American Board of Plastic Surgery
1700 Marion Street
Denver, Colorado 80218
HAND SURGERY 839-5113

Dr. Donald Butterfield, FACP - Board Certified - American Board of Internal Medicine
Denver/Aurora Gastroenterologist Group
1721 E. 19th Avenue, Suite 260
Denver, Colorado 80218
GASTROENTEROLOGY 831-6257

Dr. Harold Chapel - Board Certified - American Board of Internal Medicine
P.O. Box 564
Brush, Colorado 80723
INTERNAL MEDICINE 842-5087

Dr. Ronald Clark
1630 17th Avenue
Greeley, Colorado 80631
NEUROSURGEON 356-4488

Terry Cummings, M.A.
Columbine Medical Building
108 Delmar Street
Sterling, Colorado 80751
AUDIOLOGY 522-8622

Dr. Yogoda Franotovic
Spalding Rehabilitation Hospital
1919 Ogden
Denver, Colorado 80218
REHABILITATION 861-0504

Dr. Howard T. Horsley, Jr. - Board Certified in Internal Medicine and Cardiovascular Disease
Dr. Joseph Snyder
Denver Cardiology Group
Denver, Colorado 80218
CARDIOLOGY 861-4674

Dr. Earl Hutchins - Board Certified in Psychiatry and Neurology
Neurology Clinic of Colorado
2000 16th Street
Greeley, Colorado 80631
NEUROLOGY 356-0260

Dr. Roswitha Moehring - Board Certified in Pediatrics and Allergy Immunology
The Denver Clinic
701 E. Colfax Avenue
Denver, Colorado 80203
ALLERGY/ASTHMA 831-7171

Dr. James Peterson
Dr. Keith Peterson
2528 16th Street
Greeley, Colorado 80631
EARS/NOSE/THROAT 356-4646

Dr. Martin J. Rubinowitz - Board Certified in Internal Medicine, Hemotology
The Denver Clinic
701 E. Colfax Ave.
Denver, Colorado 80203
HEMATOLOGY/ONCOLOGY/HEADACHES
831-7171

Dr. Douglas Schmidt
8859 Box Drive, Suite 200
Denver, Colorado 80221
PLASTIC SURGERY
429-7582

Dr. Patrick Sullivan - Board Certified
Dr. Bernard Wolach
Urology Clinic of Greeley
1601 25th Ave.
Greeley, Colorado 80631
UROLOGY 353-4085

Dr. Kent Christopher
Colorado Pulmonary Association
1721 E. 19th Avenue
Denver, Colorado 80218
RESPIRATORY 863-0300

Dr. Charles Durand - Board Certified
Greeley Medical Clinic
1900 16th Street
Greeley, Colorado 80631
RHEUMATOLOGY 352-8304

Dr. David Kerr
4545 E. 9th Avenue
Suite 470
Denver, Colorado 80220
DERMATOLOGY 320-2263

Dr. Richard Smith
Dr. Marc Treihaft
1633 Fillmore
Denver, Colorado 80206

LETTER 570

FORT MORGAN HERITAGE FOUNDATION
P.O. BOX 184—FORT MORGAN, COLORADO 80701-0184
TELEPHONE: 303-867-6331

September 29, 1988

S.S.C. Environmental Impact Committee

Dear Committee Persons

I am speaking for the Fort Morgan Heritage Foundation [a 501c3 Corporation] and the Fort Morgan Museum. I would like to address two areas of concern.

1 The first area pertains to the impact of the super collider on cultural and historic sites in the collider area. By federal statute an archaeological survey must be conducted before the project can be constructed. Although preliminary reports have shown a scant list of sites, it is without a doubt new discoveries will be made and will range from paleontological specimens, to evidence of Paleoindian and contemporary man. Confirmation of these possibilities can be found in the diverse collections of the Fort Morgan Museum which contains examples of pleistocene horse [12,000 BP], Clovis and other Native American lithic and cultural artifacts, to historic material culture. Some of these items come from the area being discussed.

2 The Fort Morgan Museum is able and willing to participate in the archaeological survey. The museum is especially suited to becoming the repository for the artifacts that will be found. The Fort Morgan Museum is accredited by the American Association of Museums one of 600 nationally out a total of 5000 museums and one of seven in the state of Colorado. What this means is that the Fort Morgan Museum exceeds the stringent standards of the AAM in collection care, management, exhibition and museum administration.

The Fort Morgan Museum has sponsored two archaeological excavations, the Koehler and the Friehauf sites located in Morgan County. The latter was co-sponsored with the University of Colorado, Department of Anthropology. We have also worked with the Colorado Archaeological Society and State Archaeologist.

Presently, the storage facilities of the Museum would suffice for the items found on initial investigations. If large amounts of artifacts were found additional space would have to be found. The Long Range Committee of the Fort Morgan Heritage Foundation has addressed the problem of additional storage in its Long Range Plan,

which could be implemented if the situation demands.

The second point of concern is impact of the Superconducting Super Collider on the operation of Fort Morgan Museum. We expect to see greater utilization by the public because of an increase in population and by demographic changes in the population. Initially the greatest impact will be on the educational programing done with the local schools because of increased enrollment. There would also be a need for further exhibition space as well as the before mentioned need for storage space. The Long Range plan drawn up by the Heritage Foundation has addressed these areas as well as an increase in paid professional staff. Capital improvements would have to be financed through public and private monies. It must be added that the Fort Morgan Heritage Foundation raised the funds to renovate and construct the present museum and collection facilities. 3

The expertise to handle the impact, brought on by the changes caused by S.S.C., which will effect the Fort Morgan Museum can be addressed by the staff of the museum, the Trustees of the Foundation, as well as expertise recruited from outside the area with in the state.

Marne K. Jurgemeyer, Director
FORT MORGAN MUSEUM

LETTER 571

Colorado
Superconducting
Super Collider Project

Roy Romer
Governor

1313 Sherman Street, Suite 420
Denver, Colorado 80203
303 866-6487

Testimony Before the
U.S. Department of Energy
Hearing on the
Draft Environmental Impact Statement

By

Tim Schultz
Executive Director
Department of Local Affairs

September 29, 1988
Fort Morgan

Under Governor Roy Romer, I have been assigned the responsibility of implementing Colorado's proposal to site the Superconducting Super Collider (SSC) in the State of Colorado. As the Governor's SSC Representative, I have supervised the Colorado review of the Draft Environmental Impact Statement by agencies and I have encouraged our local governments and citizens to advise the SSC project staff and the Department of Energy of our views and concerns to be officially registered during this process. I can assure the Department of Energy of two important points:

1

- o Colorado is united in its support of constructing the SSC by this nation to renew our commitment to science and technology.

- o Colorado is unanimous in support of bringing the SSC to the "Rocky Mountain High Plains" region of the nation.

Colorado will accomodate the socio-economic impacts from siting the SSC in Northeastern Colorado and will benefit from its construction and operation.

The Colorado SSC staff will prepare detailed comments, and recommend corrections to the Draft Environmental Impact Statement (DEIS). One of the major issues we will address is the misinterpretation within the socio-economic impact analysis incorrectly suggesting that significant impacts may occur similar to previous boom-bust cycles of the past. We propose that all references to this interpretation be eliminated, and that language in the text be revised to properly reflect that there will be much lower economic impacts in siting the SSC in Colorado.

2

We have no objection to the socio-economic impact methodology or the population and employment projections and distributions within the analysis. However, when the existing capacity of local communities near the site and in the region of influence are considered using these projections, only one conclusion follows: the impact of this project can be handled with existing resources, facilities, and services.

Page two

Even where variations in demographics or actual demand occur in Northeast Colorado, adjustments can be made quickly and effectively in supplying services and community facilities. This is precisely why we have assured the Department of Energy and local officials that the State of Colorado through the Department of Local Affairs will mitigate the environmental and socio-economic impacts of the project.

3 Before I became Executive Director of the Department of Agriculture and subsequently that of Local Affairs, I served as a County Commissioner on the western slope of Colorado where the energy boom of the 1970's occurred. I know first hand what boom-bust cycles mean. This project does not have the scope or magnitude of boom-bust. It is more typical of the construction of the Pawnee Power Plant here in Northeastern Colorado. This project had no significant impact and was effectively mitigated by local communities. Although the peak construction impact and operational workforce numbers will be greater, for SSC, current underutilization of public facilities assures us of the ability to absorb these impacts.

4 Colorado has designed a Land Acquisition Program for siting of the SSC that is flexible and recognizes the importance of preserving the existing economical use of the land and local lifestyle.

Colorado has designed a land acquisition package which transfers the necessary lands to the U.S. Department of Energy (DOE) for siting the SSC project according to DOE's land acquisition schedule. Colorado's plan grants DOE maximum flexibility in terms of siting opportunities for fine tuning the final position of the collider ring and SSC facilities. The plan not only gives DOE opportunities for avoiding natural and man-made features during initial siting, but also offers long-term land use controls and flexibility for a laboratory retro fit opportunities.

Colorado's plan is designed to accomodate the long-term operational needs of DOE and the SSC laboratory, but also recognizes the importance of the existing agricultural economy, current land use and local lifestyle. Colorado has offered 25-30% more land to DOE in its SSC proposal than is required within the DOE Invitation for Site Proposals (ISP), (April 1987) as an envelope of siting opportunity.

Page 3

Once DOE, the Central Design Group and DOE's contractors determine final lay-out of facilities, Colorado will transfer only the minimal amount of land required by DOE. For example, if DOE can suffice with having portions of the northern or southern acres transferred in stratified fee, rather than fee simple, Colorado will retain control of a surface land use activity in these areas. This arrangement would make DOE's actual fee simple taking less than the ISP required 15,880 acres and would allow Colorado an opportunity to lease back surface land to current land users with appropriate controls retained for laboratory operations.

Land use impacts

5 An inaccurate perception of Colorado SSC land use impacts was made within the Draft EIS. Colorado's conversion from agricultural production to the SSC laboratory represents a minor change from existing land use because less than 0.1% of prime agricultural land within the 3 county site area is affected. State economic development policies stress diversifying the economy, and lessening dependence on resource based or agricultural industries is seen as a positive land-use impact for Northern Colorado.

LETTER 572

Statement of

U.S. Congressman Hank Brown

to the

Department of Energy

Draft Environmental Impact Statement Hearing

for the

Superconducting Super Collider

Fort Morgan, Colorado, High School

Thursday, September 29, 1988

Dr. ~~Hess~~ Temple, members of the SSC Site Task Force, while legislative business in Washington prevents me from testifying personally today, I appreciate this opportunity to submit a written statement on the draft environmental impact report on Colorado's proposal for the Superconducting Super Collider.

1 As you know, if our state is selected, the SSC could become reality 30 feet under Colorado's eastern plains. This hearing is one of the final steps in that selection process. I commend Energy Secretary Herrington and the DOE staff for their leadership on this project and all the local officials and individuals for taking the time to appear here today.

The SSC is one of the biggest research tools ever imagined. A giant atom smasher, the SSC will be the world's most advanced

09/28/88 16:04

The Honorable Hank Brown

Page Two

particle accelerator, at least 20 times as powerful as anything now in operation. It will be to physics what a telescope is to astronomy and a microscope is to biology.

By virtue of its accessible central location, superb geologic conditions, and a technically superior proposal, complemented by first-rate scientific and academic communities, Colorado deserves to be selected as the SSC site.

The draft EIS makes it clear there is no reason not to do so. The report points out that Colorado's proposed site is rural in character and lacks some of the infrastructure of other sites. This is to our advantage. Colorado can offer DOE a custom design, without the problem of a mismatch with existing infrastructure. We can start from scratch and build it right.

How many existing structures would have to be moved to build the SSC? The draft EIS says in Colorado, four homes and one business would be displaced. Compare that with Illinois, for example, where the SSC would displace 160 homes and 59 businesses.

Some might argue that being 65 miles from Denver is a disadvantage for the Colorado site. Those that do, do not understand the West, where driving long distances across open country is not

unusual. In fact, you easily can commute 65 miles in Colorado in less time and with less stress than you can drive from the Capital Beltway to downtown Washington, D.C.

Few places can compete with Colorado for pure quality of life, a fact that has drawn companies and individuals to our state from throughout the nation. From any point of view, Colorado is the logical location for the SSC, and I strongly urge you to recommend it as the preferred site.

The SSC is essential to assuring America's world leadership and competitiveness in science, technology and commerce into the 21st century. Without it, the U.S. could well fall to third place, behind Europe and the Soviet Union, in high energy physics by the end of the next decade.

On behalf of the residents of the 4th Congressional District, I wish to thank the members of the SSC Site Task Force for coming to Fort Morgan today to conduct this hearing. I look forward to continuing to work with the Department of Energy to ensure the success of the SSC project.

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LETTER 573

Gentlemen:

My name is Bruce Bass; I am a County Commissioner in Morgan County.

I am pleased to welcome you back to Morgan County and to have this opportunity to provide comments on the EIS to you in person.

We disagree with the statement that Colorado communities of Brush and Fort Morgan and Morgan County, could experience population impacts to lead to boom town conditions. In the past, Morgan County
1 has been able to handle a large influx of population growth. We met the needs of the oil boom in the early 50's and again with the construction of Pawnee Power Plant in 1978 and 1979. We are certain we can meet the needs now for the SSC without any problems.

Let me state the reasons why we feel this way -

1. Morgan County Administrative Impact will be at a very minimum as
2 we know that Morgan County's population has been at a steady state in the past few years while our assessed value has risen from $201,961,400. in 1985 to $239,414,640. in 1988. Morgan County historically has not taken its legal, allowable statutory increase in budget.

Morgan County Planning budget has steadily increased since 1985. Morgan County's first ever Comprehensive Plan was completed and approved this last April, which provides an orderly, planned growth for the future of Morgan County, while preserving our rural life. We see the SSC project as being compatible to our plan.

2. In the education department, Morgan County has four (4) excellent School Districts and several Private Schools. Our schools can handle the projected increase of 700 students easily in their existing facilities and we totally concur with the statement in Volume 4, Appendix 5A. These communities are currently regional centers and could serve a much larger population if they experienced rapid growth with the development of the SSC. Public education levels of service provided by the four school districts within the county are better than those of national averages. Morgan County is also fortunate to be the home of Morgan Community College.

3. In the area of housing, Morgan County is fortunate because in our county we already have in operation, a modular home plant, and with our local builders, we estimate that they could produce five (5) housing units per day. For the early phase of the SSC, we have an excess of already platted lots for Regular housing as well as mobile home lots. We also have available numerous rural acreages approximately 40 acres or less so that people can enjoy our rural life style. We estimate that we have enough houses, plus the ability to produce housing, to accommodate the SSC families plus having enough housing available for the projected 1000 people to build Pawnee II at the very same time.

4. Public Safety has been a stated concern in several paragraphs. Since 1985, Morgan County has spent 5.7 million dollars of capitol funds for public safety with construction of a new Jail, Court System and a new State of the Arts Communication Center. Morgan County is unique in that the County does all of the dispatching for all the law enforcement agencies in the County, fire departments and all other emergency services in the county. Our County Communications has an annual budget of approximately $400,000.. We could, at this very moment, expand our communications service and emergency service to the SSC site thru an Intergovernmental Agreement with Adams County and Washington County.

5. Concerns of transportation in the EIS. Morgan County has already dealt with the road issue for the early stages of the SSC by utilizing existing County Roads 19 and F. Thru the Colorado Bridge Fund, Morgan County has plans to replace a 1.2 million dollar bridge across the Bijou on County Road F which leads to the SSC site. Also, the State of Colorado has committed to build County Road 20 as well as up grading other County Roads during the early stage of construction for future use to the site.

As for public transportation, Morgan County is a part of Northeast Colorado Transportation Authority and this bus system is for everyone who want to use it and not just for the elderly and handicapped.

There has been some concern that the State of Colorado doesn't have enough aggregate to build the SSC, the roads and possibly Pawnee II at the same time without going out of state for additional aggregate. As being the former Deputy County Assessor, let me explain briefly why there aren't more permitted acres of aggregate than there are - it is simply the Colorado property tax laws. Once a gravel pit is permitted, the owner is immediately taxed on the reserve within that permit.

Finally, Morgan County fully supports the State of Colorado's mitagation plan. So you see Gentlemen, if Colorado is chosen as the site of the SSC, Morgan County won't be in a boom town condition as portrayed in the EIS, but ready and willing, as well as capable, of accepting the challenge.

Thank you.

LETTER 574

Brush!

September 29, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington D.C. 20545

Reference: SSC Draft EIS Comments

Dear Dr. Hess:

I have reviewed the draft Environmental Impact Statement and I would like to clarify the following points:

1 14.1.3.2 (2nd paragraph) While this section notes a 60 mile distance to the Denver Metropolitan area, it should be added that the commuting time, which is the real issue, is approximately one hour and ten minutes.

2 14.1.3.2A1 (10th paragraph) This paragraph seems to be contradictory because it begins by saying the work force will commute from Denver and ends by saying it would stay in Morgan County. It should be noted that this area experienced a very similar temporary immigration with the Pawnee Power Plant and produced the needed hosuing at that time. Further, during the Pawnee project, many workers stayed in temporary housing during the week and commuted home on the weekends.

3 14.1.3.2A3 This section states that the majority of the consumers would go to the Denver Metro area for retail shopping because the Morgan County retailers would not respond to the increased demand. If, as the report notes, there will be a $56 million increase in worker earnings, certainly there will be an increase in retail supply for those workers. Further, the speed at which the local retailers would respond to the demand should not be underestimated.

FOOD AND ENERGY HUB OF THE HIGH PLAINS
City of Brush / Edison at Carson / Box 363
Brush, Colorado 80723 / Telephone 303: 842-5001

Office of The Mayor

Brush!

14.1.3.2B3 This section indicates a demand of 950 residential units for the year 1992 and 650 additional units by the year 2,000. At the present time there are 603 platted, total utility, lots available with an additional 543 platted lots that have utilities nearby. There are also platted, but not developed, mobile home parks. It should be noted that none of the County's municipalities have any restrictions to their growth. Therefore, as demand increases the corresponding supply could be made available quickly.

4 Brush, Ft. Morgan and the County governments have comprehensive plans in place which allow for well designed growth. Brush and Ft. Morgan currently have building codes in effect and one is proposed for the County. Intracounty cooperation is further indicated by a variety of intergovernmental agreements, including the operation of a County-wide emergency communications system.

14.1.3.2E The cities of Ft. Morgan and Brush have already experienced the effects of the "boom town" syndrome during the 60's oil boom and the 70's Pawnee Plant boom. The City of Brush is currently completing Phase I of a sewage treatment plant expansion and has already designed Phase II which would allow for a significant increase in demand. In addition, Brush has a relatively untapped water supply.

5 The ratio of boom to bust in terms of the number of temporary workers - permanent residents, is much less than that of the Pawnee Power plant. This area is unique in having gone through this process before and as a result, is prepared to do it again. Further, the lead time for development, which this project gives, is more than adequate.

The decision making mechanisms for growth are well established in the County and are more than equal to the task.

Should you have additional questions, please feel free to contact me.

Sincerely,

Lawrence J. Coughlin

Lawrence J. Coughlin
Mayor

LETTER 575

LOGAN COUNTY

and the

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

SUPERCONDUCTING

SUPER COLLIDER

September 29, 1988

Logan County, Colorado

James W. Read, Chairman

Elda M. Lousberg

Bernard R. McLavey

GARY DEBUS
Interim County Administrator

JENNIFER MILLER
Executive Secretary

COUNTY COMMISSIONERS
OF
LOGAN COUNTY
STERLING, COLORADO 80751
Phone (303) 522-0698

COMMISSIONERS
District 1
BERNARD R. McLAVEY
2645 Co. Rd. 58
Sterling, Colo. 80751
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District 2
ELDA M. LOUSBERG
13701 Co. Rd. 37
Sterling, Colo. 80751
Ph. 522-0686

District 3
JAMES W. READ
609 South 5th Ave.
Sterling, Colo. 80751
Ph. 522-4254

Dr. Hess and Committee Members:

Welcome to northeast Colorado and, we hope, the future site of the Superconducting Super Collider.

1 As a County Commissioner I represent the eighteen thousand eight hundred friendly, cooperative and industrious people who live in Logan County. I also represent a progressive community that is willing to look to the future potential of the Super Collider.

Logan County is concerned that the area's surrounding communities, such as the city of Sterling, have not been included in the Draft Environmental Impact Statement.
2 Sterling is just a pleasant, relaxing 40 - minute drive on Interstate 76 from Fort Morgan.

Logan County has the housing stock and infrastructure to accommodate both the peak construction and operational modes for the SSC. At the present more than 200 homes are on the market at very favorable prices and more than 100 building lots are ready for construction by a regional group of homebuilders.

The strength of Logan County rests in its people. They are well educated, industrious and hard working. Because of their farm and oil field backgrounds, they have a variety of skills that would be advantageous.

Our school system has the room to accommodate increased enrollment. In Sterling, a new $8 million dollar health care facility, the "Sterling Regional Med Center" is under construction and we are upgrading our airport. We have comprehensive land use and planning ordinances that insure quality growth. Our recreational facilities and recreational opportunities are excellent.

Northeastern Junior College, founded in 1941, is a comprehensive community college that enjoys a reputation of excellence in both academic and vocational programs. It has the capacity to provide educational opportunities for more than one thousand additional students.

We have read in the Draft Environmental Impact Statement that this region may not be able to accommodate the "boom town" conditions created by the SSC project. We would contend, however, that the SSC will provide stable jobs and public service levels which will not create "boom and doom" conditions, but would instead provide the positive and regulated growth which we are ready and willing to undertake. Thank you.

-H-

SUMMARY

The proposed Superconducting Super Collider (SSC), if located in Colorado, would provide a very positive impact to the regional economy. It is our understanding that the geology of Northeast Colorado is ideal for a project of this nature.

The emphasis of this report is not only to show what the SSC project could do for Northeast Colorado, but what Northeast Colorado has to offer to the SSC project and to any future residents this project would bring to Colorado.

A. Educational Resources

1. Excellent K-12, public and private, school systems with data to prove the same.

2. The current public school system is currently experiencing a decline in the number of students enrolled. The school districts are committed to doing whatever is necessary to handle additional students as they come into the community.

3. Northeastern Junior College, as detailed, is one of the finest junior colleges found anywhere, with extensive vocational and educational curricula. A four-year degree program is offered in cooperation with Regis College.

3

B. Parks and Recreation

1. Diversified recreation is available to both residents and non-residents. Activities include golfing, boating, water skiing, camping, softball, volleyball, tennis, bowling, soccer, hunting, fishing, and wildlife watching.

2. Excellent park facilities and a modern recreational center are located in the City of Sterling.

3. A state park designation is being considered for North Sterling Reservoir, 15 minutes from Sterling.

C. Real Estate

1. Over 200 residential, quality-built homes are presently for sale in and around Sterling.

2. Rental units are also available.

3. Commercial and industrial sites are available.

4. Developable sites are available for both residential purposes and commercial and industrial uses.

D. Cultural Activities

1. Local Art Councils sponsor theatre, music, art exhibits, dance, literature, children's theatre, and film series presentations.

2. A two-hour drive will allow for an evening in the Denver-Metro area, Boulder, Fort Collins, or Greeley.

E. Annual Community Events

County fairs and local events celebrate the history of the area.

F. Agriculture

This area is one of the state leaders in the production of livestock, grains and hay.

G. Economic Development

Striving to diversify the local economy, aggressive strategies are being utilized in offering incentive packages.

H. Historical and Scenic

1. Northeast Colorado is rich in history and played an instrumental role in developing the Wild West.

2. The high plains area is beautiful with diverse topography, climates and is yet untapped by the tourist industry.

3. The flora and fauna of the high plains region is one of the most diverse in all of North America.

I. Travel

1. Distances in rural Colorado should be measured in minutes and not miles. An excellent network of well-maintained local, state, and federal highways allows for commuting relatively large distances in short periods of time. For instance, a traveler can travel from the Fort Morgan, I-76 interchange to the Sterling Interchange in approximately 40 minutes. Located within Logan County are State Highways 14, 55, 61, 63 and 113; U. S. Highways 6 and 138; and Interstate 76.

3. Improvement plans for Sterling Municipal Airport (Crosson Field are under way to update and improve air service to Northeast Colorado.

4. Stapleton International Airport (Denver, Colorado), the University of Colorado at Boulder and Denver, Colorado State University, the Denver-Metro area, and the Colorado School of Mines in Golden are all accessible within a two-hour drive from Sterling via Interstate 76. The Front Range area of Colorado is a short trip away using the above-mentioned highway system. The Rocky Mountain region provides for excellent recreation (skiing, camping, hiking, etc.) and can be travelled to and from easily on a one-day trip.

The number of homes presently on the market in Logan County is approximately 200. There are 180 homes on multiple listing and approximately 20 homes for sale by the owner.

4

Sales Price	Number of Homes
$15,000 - $30,000	30
$30,000 - $50,000	63
$50,000 - $60,000	23
$60,000 - $70,000	17
$70,000 - $90,000	23
$90,000 +	24
	180

Apartment Rental Rates

Type	High	Low
One Bedroom	$275/month	$125/month
Two Bedroom	$350/month	$175/month
Duplex	$375/month	$150/month

The number of rental units presently available is 30.

A vacancy rate of 15% is applicable to rental units.

LETTER 575 (CONTINUED)

R - [illegible]
E - [illegible]
I - [illegible]

School District No. Re-1, Valley, County of Logan, Sterling, Colorado 80751

ADMINISTRATIVE OFFICE, 119 NORTH THIRD AVENUE, P.O. BOX 910, PHONE 522-0782 / ROGER D. BLAKE, Ed.D., SUPERINTENDENT

February 9, 1988

Chamber of Commerce
113 South Second Street
Sterling, Colorado 80751

To whom it may concern:

This letter is to announce our support for the Super Collider project for Colorado. Our school district, along with other community agencies, will do whatever is possible to cooperate in meeting whatever needs arise in connection with the project.

5 Our district had 4,400 students at one time. Our enrollment is now down to 2,800 due to a declining birth rate and changes in the economic climate in our region. Although we have closed some buildings, we will do whatever is necessary to take care of additional students as they come into our community.

Our district is considered an outstanding school district, achieving excellent results on various measures of achievement and course offerings.

We would also highly recommend our local junior college as a great institution of higher education and one which cooperates in all ways.

We are available to meet with anyone seeking information about our school system or community.

Sincerely,

Roger D. Blake

Roger D. Blake, Ed. D.
Superintendent of Schools

ROB/mm

LOGAN AREA DEVELOPMENT COMPANY
Box 1683 • Sterling, Colorado 80751 • (303) 522-5070

February 8, 1988

Dr. George Morgenthaler
Project Manager
Colorado SSC Project
Engineering Research Center Director
University of Colorado at Boulder
Campus Box 423
Boulder, Colorado 80209-0423

Sir:

The Logan Area Development Company is a group of business leaders in Northeast Colorado who are participating in efforts to bring economic and industrial development to our part of the state. We are very interested in seeing that Colorado is the state chosen for the Superconducting Super Collider and that it is located in our geographic area.

Sterling and Logan County have much to offer in the way of support for such a project.

1. Schools - Excellent facilities and highly qualified staff at both the elementary and higher education levels. Northeastern Junior College offers graduate degree through Regis College program.

6

2. Housing - Quality built homes on the market at this time for a wide range of income producers; rental units also available.

3. Hospital and Medical - Leading hospital complex within one hundred mile radius of Sterling, with well qualified physicians and specialists.

4. Shopping - We pride ourselves as the shopping hub of Northeast Colorado with numerous major chain as well as quality independent retail merchants to serve our shopping needs.

5. Convention Facilities - Over 400 motel/hotel rooms available along with banquet and meeting room facilities.

We support the Super Collider project and avail ourselves to you if called upon. Thank you.

Cordially,

LOGAN AREA DEVELOPMENT COMPANY

Thomas L. Thomas
President

TLT/afe

Affiliated with the Logan County Chamber of Commerce

LETTER 576

FORT MORGAN POLICE DEPARTMENT

PHONE 303/867-5678 • POLICE BUILDING • 901 EAST BEAVER AVENUE
FORT MORGAN, COLORADO 80701

HAROLD DAVISSON
CHIEF OF POLICE

SUPER CONDUCTING SUPER COLLIDER

RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT

Harold Davisson
Chief of Police

September 29, 1988

Good afternoon. Thank you for giving me the opportunity to testify. My name is Harold Davisson. I am the Chief of Police of the Fort Morgan Police Department. I started working for the police department in May of 1959.

In reviewing the draft of the Environmental Input Statements, I would like to expand upon 14.1.3.8, second paragraph, section B, DEIS VOLUME 14, APPENDIX IV. "At the local level, however, adverse impacts in some of the small communities close to the site could be exacerbated by the cumulative impacts of other projects. For example, if the proposed (but postponed) expansion of the Pawnee Power Plant between Fort Morgan and Brush were to occur during the construction of the SSC, these small towns would experience even greater difficulty absorbing the substantial impacts expected." During my employment with the police department, I have experienced several community impacts, including the Pawnee construction. We handled that impact without any major difficulty and did not add personnel. We realize that there will be an impact; but we feel that we can handle that impact.

The City of Fort Morgan and the police department are continuously planning for the future in growth and modernization. In March, 1986, the city completed a new police administration building at a cost of $1,015,000.00.

1 First of all, the City Council had very wisely set aside all money for capitol improvement and the building was paid for upon completion. There was a lot of planning and study done before construction to make sure the building would handle future needs for the department.

The building has approximately 16,654 square feet, 8,878 square feet is developed and in use, 7,654 square feet is in the unfinished basement for expansion. 46% of the building is unfinished for growth expansion. The building is designed to allow much growth without expanding into the unfinished area. It is so designed to give a lot of flexibility in expansion when needed.

The City of Fort Morgan became involved in formatting the Morgan County Communications Center which is a state of the art in communications. The system includes computerized dispatch and police management records.

Morgan Community College is a satellite for Colorado Law Enforcement Training Academy. This gives us the opportunity to get our officers trained and certified the mandatory 334 hours. Having this capability is a very strong asset, in the event we would need to train additional personnel. Inservice training could be expanded to handle additional training.

The International Association of Chiefs of Police also has available many programs, a continuous training program that we utilize and will continue to use more as the department grows.

The Colorado Association of Chiefs of Police has a technical Committee that is available to police departments in assisting agencies with any type of problem that occurs. The expertise that is available is tremendous.

The Fort Morgan Police Department has experienced growth over the years and continuously plans for future growth. The employees of the Fort Morgan Police Department are excited about the super collider and ready for the Superconducting Super Collider Project.

Thank you.

LETTER 577

TESTIMONY OF HAMLET J. BARRY
EXECUTIVE DIRECTOR, COLORADO DEPARTMENT OF NATURAL RESOURCES
AT THE SSC DRAFT EIS HEARING
SEPTEMBER 29, 1988

1 First, I want to congratulate the Department of Energy on completing a very challenging assignment in a thorough and competent manner. I am glad to see that the document affirms the environmental suitability of Colorado's site. There is nothing in the EIS to indicate that building and operating the SSC in Colorado will have any environmental impacts that cannot be readily mitigated by reasonable and tested mitigation measures.

That said, however, there are several areas of particular interest to the Department of Natural Resources which received uneven treatment in the Draft EIS. I want to address the most important of these and suggest how DOE can strengthen their coverage in the Final EIS.

2 Availability of Aggregate. The Draft EIS is incorrect to conclude that there are insufficient construction materials available from within the region. Sand and gravel are abundant throughout the Denver metro area and along the South Platte River. Adequate supplies of sand are available near Fort Morgan. They will be developed in response to demand associated with the SSC.

Coarser aggregate is readily available in the Greeley and Fort Collins area and along the western side of the metro area. Major quarries are located in Golden, Lyons and Morrison - all within 100 miles of the project site. The resulting haul distances are not prohibitive. Large quantities of aggregate can be hauled economically by truck or rail.

Our detailed written comments will provide ample evidence that these materials are all available in sufficient quality and quantity within the region to meet the needs of SSC construction. Even if other major projects are under construction at the same time, studies have shown and we believe that aggregate supplies will be adequate to meet the cumulative demand.

3 Threatened and Endangered Species. The Draft EIS exaggerates the potential impacts to threatened and endangered species, largely through its inconsistent consideration of Colorado's water supply proposal. The fact is that the water supply for the SSC will not cause new depletions in the Colorado or the South Platte Rivers. Colorado's commitment, and that of our water provider - Morgan County Quality Water District - is to use its existing water supplies or acquire additional supplies through conversion of existing senior water rights that do not affect flows in either river. Our written comments will offer evidence of this and suggest consistent language for use in the Final EIS.

The Colorado River fish species and the bird species dependent on the

South Platte River downstream from the SSC site should not be included in the EIS analysis. If our water supply plans change, then consideration will of course be given to these species. Regarding T&E species potentially found at the SSC site or along the access road corridors, we will conduct the appropriate surveys to determine their presence or absence. The Supplemental EIS will be the vehicle from making these demonstrations.

4 To the best of our knowledge there is no evidence to suggest that Colorado's proposal to extend State Highway 7 north of Barr Lake will disturb bald eagles nesting at or visiting the lake. The road corridor will be about two miles north of the previously used nesting site and about the same distance from the artificial nesting site presently being installed. The distance is simply too far to justify a conclusion that the bald eagles will be disturbed.

Loss of Wetlands, Floodplains, Water Wells and Oil & Gas Wells. The Draft EIS reports erroneous data regarding the acreage of wetlands lost, the width of floodplains and the number of water and oil & gas wells lost. While these are not significant errors, I feel it is my responsibility to set the record straight.

5 Wetlands lost or disturbed will account for closer to ten acres than to twenty. We will work closely with the Department of Energy, Highway Department and others to avoid or minimize wetland disturbance throughout the project area and especially in the vicinity of Barr Lake.

6 The widest floodplain is about 6000 feet, not 10,000, although there is a 10,000 foot floodplain at the confluence of two meandering streams* The Draft EIS correctly concludes that possible work in the floodplains would be limited in scope and would not be considered to cause significant impacts.

7 Several water and oil & gas wells may be displaced by the SSC project and ancillary development. It is not correct to say, however, that these impacts cannot be mitigated. Colorado has pledged to replace water supplies lost to SSC construction and to redrill oil & gas wells which may be displaced. Our records, by the way, show that only four oil & gas wells will be affected by the SSC. Tables in the EIS should be changed to show the correct number.

Details and documentation will follow in our written comments.

Thank you for the opportunity to comment. Agencies of the Department of Natural Resources continue to be very supportive of the SSC project and look forward to working closely with DOE and its contractors in the months ahead.

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* Beaver Ck and Buck Ck.

LETTER 578

Testimony Before the U.S. Department

of Energy on the

SSC Draft Environmental Impact Statement

By

George W. Morgenthaler

Colorado SSC Project Manager

September 29, 1988

Fort Morgan,

Colorado

Testimony on SSC Draft Environmental Impact Statement

George W. Morgenthaler

Colorado SSC Project Manager

INTRODUCTION

My name is George W. Morgenthaler and I am a Professor and Chair of the Aerospace Engineering Sciences Department at the University of Colorado, Boulder. From April 1, 1987 through July 15, 1988 I was Colorado's SSC Project Manager assigned by Governor Roy Romer to be responsible to supervise the preparation of Colorado's proposal to site the Superconducting Super Collider (SSC) in the State of Colorado. During that period of time, I also supervised the preparation of the materials that were available at the February 12 EIS scoping meeting in Fort Morgan, the submittals on March 15, 1988 of Appendix D and the submittals of Attachments 1, 2, and 3 on March 31, 1988. I was also responsible for the preparation of the material of the formal proposal presentations to the DOE site visit team during the week of July 11-15, 1988. Consequently, I am very thoroughly acquainted with the entire scope of Colorado's proposal and the technical and economic studies upon which it is based.

1 I have had an opportunity to review the Draft Environmental Impact Statement (DEIS) distributed in August by the U.S. Department of Energy and have compared the information presented there with the technical documents and the proposal documents for the Colorado site proposal. The purpose of this testimony is to stress additional information that is found in the papers that were submitted as part of Colorado's proposal effort and which perhaps were inadequately included in the DEIS. Moreover, there are certain errors, confusions, and omissions in the DEIS as it pertains to Colorado's site and Colorado's proposal. I would like to correct some of these in this testimony.

Colorado's Site and Colorado's Proposal Meet All ISP Environmental Requirements.

Colorado offered an outstanding geotechnical site in its proposal to DOE. There were no archeological treasures, unique scenery, undue disturbances of the land by means of cut-and-cover operations, no difficulties with getting rid of the tunnel spoils and no unusual hydrological or ground-water problems at Colorado's proposed site. Colorado's site is in the midst of grazing and dry-land wheat farming land with only a modest amount of irrigated crop farming in the Northeast portion of the SSC ring. Most of the agricultural operations will be undisturbed by the SSC site in Colorado, and, where there is a loss of farm acres, it is a very, very small part of the existing and agricultural base and will not have a profound effect on the agriculture economics or scenic beauty of the area.

Colorado's SSC site has excellent transportation at hand. Not only is interstate I-76 able to convey visitors from the SSC site quickly to Stapleton Airport, which is one of the busiest airports in the nation, but the new Denver airport that was recently voted upon by the citizens of Adams county will be ten miles closer to the SSC site for a net distance of approximately fifty miles. With the new access road that is promised by Colorado's proposal, the time to the new airport will be on the order of 55 minutes since it is a limited access, high-speed roadway.

Just at the north edge of Fort Morgan on Highway 52 there is the Fort Morgan airport with a 5,300 ft. runway. This airport can readily be expanded to approximately 9,000 ft., with improved GCA and other aircraft traffic control and safety features so that it will be able to accommodate executive jets, commuter aircraft, and small commercial jet aircraft, perhaps ultimately of the 727 size. Thus, infrastructure access and traffic features will be excellent for Colorado's site after the mid-1990's, when the SSC is completed.

The ISP called for a rail spur, and indeed, Colorado's site proposal offered a rail spur which utilized the existing rail spur at the Pawnee Power Plant #1, just above the northeast corner of the ring and then continued on down to the campus area. Several other possible rail spur locations also suggest themselves. However, it is possible that, since at the campus destination heavy equipment and loads must be off-loaded from rail cars onto trucks, and since the distance to the campus is so short, it may be preferable not to even have a rail spur and simply take heavy loads off of intercontinental trains at a rail siding in Fort Morgan or Brush and transport them by truck to the campus. Local roads are adequate for heavy traffic and can be readily upgraded.

The local infrastructure is excellent for a project of the magnitude of the SSC. The local school systems are excellent and several inventories indicate there is adequate room for additional children of construction workers as they arrive. Housing surveys and inventories have been carefully conducted and, there is a ten percent average unused housing inventory spread over quite a large number of communities within a 35-mile radius of the SSC ring. This, together with very available high-quality modular housing can readily handle the SSC load.

Water and other utilities are readily available. Health facilities are outstanding and are connected to major health centers in the Denver area. "Flight-for-life" is a helicopter medical service which is a key point affording immediate emergency treatment to local residences. Recreational facilities are excellent in the water areas surrounding the site SSC and the ready-access to the mountains poses an unusual advantage for the Colorado site in attracting highly professional scientific and support personnel who enjoy the out-of-doors. The safety systems and security systems are of high quality and can be readily expanded as the size of the local population increases.

The electric power system that is offered for the Colorado SSC site is outstanding in the high quality of the system in the fact that it is highly reliable due to the joint efforts of two major electric power suppliers, Public Service Company of Colorado and Tri-State Electric Transmission Company, and the excellent delivery service of the Morgan County REA. Four

individual high voltage transmission lines, two to each of two substations, with a tie between the substations, really provides excess future capacity for the area and high reliability such as is expected for a laboratory like the SSC. Information in the EIS Draft Impact Statement indicates that Colorado may have to have up to 99 miles of new power lines. This, in one sense, was viewed as a negative feature environmentally in the Draft EIS. However, the fact is that these lines, on the one-hand, could be buried. On the other hand, they pose no real environmental problems since such lines are in place to either side of the ring and will cause no unusual disturbance of flora or fauna. Cattle graze unhindered and unharmed among these power line easements.

The climatic features of the area are very exhilarating, with a warm, dry climate in the summer, and cold, crisp winter climate which warms up in the daytime to be very pleasant. Thus, climatic conditions, fresh-air conditions, and quality-of-life are at a high level in the area and, although local dust will be raised during the construction period, normal mitigation measures will certainly contain the effects to be below required norms.

The area would welcome and could easily adapt to a major project such as the SSC which gradually ramped up such as the SSC construction phase would do. As the SSC project finally was constructed and the SSC went into operation, the region would enjoy what now is going to become a requirement in many rural areas: agricultural activities during the growing season and hightech/manufacturing activities during the off-season. This is already a way of life in Europe, some family members working year-around in high-tech and the rest seasonally working at farming, where many communities with an agricultural heritage are only able to survive economically by having two economic activities available.

Outline of major concerns about the DOE's Draft EIS.

The DOE is to be commended for having accomplished a monumental task in publishing the draft EIS in its many volumes and distributing these as rapidly as it has to the BOL SSC teams and to the public. In general, the task is very well done. In a number of instances, however, there was a lack of understanding of some of the unique features of a western economy or culture. This is particularly true in some instances regarding water problems and land/farming problems.

2 The dry, High Plains of Colorado are quite different from the more humid, temperate farmlands of the midwest and the eastern seaboard. In the detailed testimony that follows, I have endeavored to identify a number of these issues and I suggest that the DOE environmental evaluation team return to some of the notes previously submitted by the State of Colorado for a sharpening of the distinctions between the advantages of the Colorado site compared with some of the problems that would be associated with the alternative competitive sites.

In my personal review of some of the features of some of the alternative site proposals, it became apparent that Colorado's proposal and the documents that Colorado submitted subsequent to the September 2, 1987 proposal submission date were far more detailed and far more thoroughly developed than those of some of the alternative sites. This allowed reviewers to take issue with, or to "pot-shot" at some of the details provided in Colorado's

proposal. They did not do this antagonistically, or unfairly, but it is easier to take issue with details that are provided than with generalities. It should also be noticed that in most instances, Colorado's proposal, in particular its environmental comments, were on a regional basis as opposed to being limited to the bare minimum that could or should be said about the immediate site area. Perhaps this thoroughness has caused Colorado's proposal in a few instances to receive undue criticism.

An example of this is the fact that Colorado very thoroughly documented that it had a prime and absolutely certain water supply in the Morgan County Quality Water District (MCQWD) contract, and it offered up to four alternative sources of water. This should have (and does) strengthen Colorado's proposal. We did indicate that these alternatives need not be used; MCQWD can deliver the SSC water all by itself. On the other hand, after some exploration, the four Colorado alternatives will perhaps offer the DOE the opportunity to gain lower cost water. In one instance, endangered species were listed in the Draft EIS because of an alternate Colorado Big Thompson water supply possibility that was not a required feature for implementing Colorado's SSC site. Moreover, the water is not new take, but existing take, mitigated years ago, and no new CBT water will be lost to the Colorado River basin because of the SSC. This seems unfair in that an operational cost advantage for DOE that does not newly affect species has been turned into an environmental disadvantage for Colorado. This is an example of the sort of thing that I hope will be dispelled by the testimony supplied below as well as by the related testimony heard from other experts at this Hearing today.

Specific examples of Colorado Draft EIS issues:

3 1. **Water supply (page 3-28).** Morgan County Quality Water District does not need new wells in order to serve the SSC other than the already permitted and/or constructed facilities that they have in place. The system as it presently stands, together with the existing wells and leases, is able to supply to the SSC the required 500 gallons per minute of potable water and the 1,500 gallons per minute of industrial cooling water.

4 2. **Loss of oil and gas wells. "Approximately thirty wells within one mile of the SSC ring: number affected - unknown." (page 3-51)** Only four wells are affected by the SSC ring. These wells might, in fact, be slant drilled or "whip-stocked," and perhaps no oil and gas wells will be lost. In any event, Colorado's proposal contained estimated oil and gas well dollar values enabling Colorado to buy out the existing well ownership interests so that the wells could be shut off, given to the DOE, and the SSC tunnel put into place. This also does not mean that the oil and gas in these wells is lost forever. Rather, at a later time, when the SSC is decommissioned, the oil and gas can then be retrieved. These are procedures which are administered by the Colorado Oil and Gas Commission allowing moving of oil and gas wells.

5 3. **Prime and important farmlands converted for SSC use. (464 acres, page 3-54)** To get marginal land out of production, the Agricultural Stabilization and Conservation Service (ASCS) has instituted a major

Congressionally-approved crop set-aside (diversion) program. This program is costing the nation many billions of dollars per year, in fact, more per year than the whole cost of the SSC. Most farmers in the Morgan County area join-in and take advantage of these ASCS programs.

In addition, there are ten-year Conservation Research Programs (CRPs). These CRP programs pay up to $50 per acre for ten years to let the land remain idle and return to prairie. All of Morgan County is currently considered "erodible" land by the Soil Conservation Service (SCS) of the USDA and is eligible for such CRPs. A brief check showed that several land owners near the Colorado SSC ring already have CRP crop agreements with CSC.

Thus ASCS policy is to retire productive land to alleviate current over-production. Later, after the SSC usage is completed, and the SSC is demcommissioned, the land can revert to farmland use, if needed.

6 This point should be stressed by the Draft Environmental Impact Statement because it currently implies that the removal of farmland is a negative factor whereas, in fact, it is a positive factor in today's economy and is in line with national farm policy.

5. **Housing: "Local housing markets will be impacted if the SSC site in Colorado is utilized because of the SSC construction and build-up". (page 3-65)** There is no mention made in the Draft EIS statement of a company called Century Homes. This company (currently called National Prebuilt Manufacturing Corporation-Century Division) is located between Fort Morgan and Brush. It currently produces 4,142 square feet of housing per shift. The DOE site visitation team visited Century Homes and was very pleased with the high-quality of the modular, pre-built homes that they saw. Many communities in the area have home sites with utilities already in, foundations in place, and are prepared to put such homes on these foundations. The Century Homes plant manager indicated that they would be very willing to go up to three shifts per week, thus staying well ahead of any initial SSC housing demands brought about by the SSC construction phase. This is over and above normal real estate and housing construction activities. 7

Moreover, local teams working with the Colorado SSC Project office made a number of housing surveys during the spring and summer of 1988, and all of these indicated a 12% surplus of housing that would be prevalent throughout most of the communities within 100 miles of the SSC ring. Thus, several hundred homes could be filled before new homes are needed, thereby giving time for the modular housing to go into place.

6. **Geologic hazards. "Some possibility of encountering small pockets of natural gas during construction in Colorado exist." (page 4-8)** This statement does not seem to be valid. Natural gas in the high plains of Colorado exists either at the 4,500 ft. level (Laramie formation) or at the 5,000-6,000 ft level (Dakota formation). The SSC tunnel in Colorado is between 50 ft and 300 ft below the surface in the Pierre shale. Thus, there should be no incidence of a gas nodule occurring during the drilling operation. If the danger that is spoken of in the DEIS refers to the possibility of hitting an old gas well pipe, we note that no more than four of them are expected to be in the SSC ring's footprint. Also, there are magnetic and ultrasonic detection techniques that could be employed to minimize any possibility of accidentally intercepting an old pipe and causing a leak into the SSC tunnel. 8

7. **Ground water use. "Ground water use locally exceeds recharge to the most heavily developed aquifers in Arizona, Colorado, etc.,——." (page 4-21)** The Colorado SSC site area does not have an aquifer in the technical sense of the word. An aquifer in the west normally means a contained basin of water which is "mined" for its water, more or less, except for ground percolation recharge. Colorado's SSC site is underlaid by tributary water which is run-off water from the drainage area of the Beaver Creek and the Badger Creek. None of the 18 groundwater wells listed in the DEIS are extracting water from closed basins, such as the Ogallala aquifer. Thus Colorado should not be classified with states whose ground water supply depends upon basins (aquifers) as is done in the DEIS. The wells in the SSC site area do not depend solely on local percolation recharge, but also on the total drainage in the area. 9

8. **Threatened and endangered species. (page 4-52 and Table 4-17)** The listing by the DOE of possible threatened and endangered species relating to the Colorado Big Thompson (CBT) usage for the SSC does not seem to be appropriate. In Colorado's site proposal, it was stated that CBT water is not needed to serve the SSC but would be an alternate possibility that could possibly lower the cost of required water supplies. As a matter of fact, the small amount of CBT water that would be used relative to the supplies available indicates that it is well under one percent level of that available, and is already accounted for in all activites pertaining to endangered species on the eastern or western slopes. The shares of CBT that might be used, were permitted many years ago and have been fully mitigated with respect to flora and fauna of the Colorado River basin. No new water will be taken. It is just a question of whether any of the old water brought to the Eastern slope will be used by the SSC. Colorado's water for the SSC project will be entirely supplied by Morgen County Colorado Water District unless another alternative is more desirable to the DOE, one that poses no additional or new environmental impact. 10

9. **Prime farmland inventory: "With reliable irrigation, these soils would be productive" (4,700 acres is estimated as a realistic** 11

estimate of the potential use and 2,000 acres as the actual use.) (pages 4-75, 4-76, 4-77, Table 4-23) This statement lacks a basic understanding of the local agriculture and irrigation picture, as noted earlier. It is true that the sandy alluvial soil will grow many types of crops, given fertilizer and water. But, no native water for irrigation is available. The drainage in the Badger Creek and Beaver Creek basins is not of itself adequate to recharge the tributary alluvium water to sustain more irrigation than is currently present. In fact, use in the past 20 years has lowered the alluvium/tributary supply. Recharge is too costly just for irrigation, according to available studies. The 2,000 gpm needed for the SSC is economically justifiable via pipeline from MCQWD.

Early attempts to use irrigation wells and sprinkler systems were for the most part unsuccessful and not cost-effective because the amount of water in the alluvium does not lend itself to the continued use of such forms of irrigation. Also, Colorado Law will not allow new irrigation wells to be drilled without complete augmentation. Such wells require permits and are controlled by the State Water Engineer and are adjudicated by a separate Water Court system in Greeley.

Finally, as also mentioned at an earlier item in this discussion, the establishment of new irrigation wells would be against the policies of the ASCS. The rules in Morgan County, for example, are that one cannot break fragile prairie sod to new crops without going through a County Commission especially established for this purpose. Thus, to surmise that up to 4,700 acres of prime farmland would be lost because "with reliable irrigation the soils would be productive" is to deny the reality that such irrigation water is simply economically not available in the SSC ring area. The 4,700 acres should be 0 additional acres of irrigation and just today's actual irrigated acreage. The 2,000 acres of actual should be counted from recorded usage, not guessed.

10. **"The potable water wells are located in the Hay Gulch aquifer" (page 5.1.2-27 and 5.1.2-28)** It is alledged that local ground water will decline due to dewatering when the SSC tunnel is constructed and because the SSC project uses ground water both in the construction phase and in the operating phase. The amount of water used in the construction phase is really rather minor, on the order of 108 million gallons or 351 acre feet, as reported in another area of the Draft Environmental Impact Statement. This is approximately the amount of water that one or two normal irrigation circular sprinklers would require in one year to raise corn crops. As one can see by looking at the many circular sprinklers in Morgan County, the amount of water that would be required for the SSC construction would thus be inconsequential.

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Summary

In summary, the above points of testimony are indicative of a number of detailed errors or misconceptions in the Draft Environmental Impact Statement. The unique aspects of Colorado's High Plains, atmospheric, geologic, and agricultural systems are not able to be directly compared with those of the dry desert lands of the southwest, or the more heavily drained and watered basins of the midwest and the eastern seaboard. Colorado's unique, stimulating, invigorating, and delightful climate in the High Plains is ideal for a project such as the SSC. The availability of electric power, of good infrastructure, and of an abundant supply of water in excellent communities that are ready for growth underlines that Colorado's SSC site is environmentally ready for the SSC, with only minor mitigations to avoid any undue impact. Thank you.

George W Morgenthaler
9/29/88

LETTER 579

COLORADO
HISTORICAL
SOCIETY

The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137

Superconducting Supercollider, Draft EIS Public Hearing
Testimony of Susan M. Collins, PH.D.
Acting State Archaeologist of Colorado
outline prepared 9/23/88

1. What has been done regarding cultural resources

a. File search revealed 38 recorded cultural resource properties within the region of influence. Two NRHP sites are in or near the town of Fort Morgan -- Fort Morgan Post Office and the Rainbow Arch Bridge over the South Platte River. The SSC will not affect these sites.

b. The Colorado Department of Highways has performed cultural resources survey of 63 miles of proposed access roads. A 20% sample survey for archaeological sites has identified 7 sites, 5 of which were determined to be ineligible for the NRHP and 2 of which required test excavation to determine eligibility. A 100% historical survey of the 63 miles of proposed access roads identified 10 historic sites, 4 of which were determined
1 ineligible and 6 of which were determined eligible for the NRHP.

c. The Colorado Historical Society has published a series of regional overview documents, of which the Plains Prehistoric Context and the Plains Historic Context are relevant to this project. To aid in our evaluation of sites which may be discovered by future project-related surveys, the Colorado Historical Society is planning to further develop a Plains Paleo-Indian context statement, which will specify research questions, site types, and criteria for site significance. This project is targeted for FFY89.

2. Where do we go next, assuming award

a. Development of Programmatic Agreement with DOE

b. Completion of surveys of areas of direct impact

c. Consideration of indirect impact

d. Development of mitigation plan

3. Colorado's organizational strengths for achieving cultural resource compliance

a. The SHPO and the State Archaeologist are located together, within the Colorado Historical Society, the organization which administers the Colorado History Museum. Compliance is centralized, with ready access to a range of preservation specialists.

b. A SHPO's representative has worked closely with staff of the Colorado Joint Review Process since the earliest stages of this project, and will continue to do so.

c. The State Archaeologist works closely with the Colorado Native American Heritage Council, an American Indian advocacy group. A reburial policy has been negotiated and procedures have been implemented.

d. Colorado has a very active statewide amateur archaeological society which advocates preservation and assists in the identification of sites. The Colorado Archaeological Society has chapters in Denver and Fort Morgan.

e. The State of Colorado has state preservation laws in place, including the Historical, Prehistorical, and Archaeological Resources Act and the State Register Act. These laws supplement and parallel federal legislation, making the state and federal compliance processes uniform.

LETTER 580

Colorado
Superconducting
Super Collider Project

Roy Romer
Governor

1313 Sherman Street, Suite 410
Denver, Colorado 80203
303 866-6487

Testimony Before the
U.S. Department of Energy
Hearing on the
Draft Environmental Impact Statement

By

Tony Hernandez
State Representative
District 2

September 29, 1988
Fort Morgan

Support to build the SSC for the country

As a member of the SSC Steering Committee and a member of the SSC Minority Advisory Committee, I fully support the need to build the Super Collider. Development of this project will be a significant first step toward creating new generations of science-oriented talent in the United States and will provide opportunities to restructure education using basic science as a focal point. This is particularly important, especially for Hispanics and Blacks who are under represented in sciences, mathmatics and engineering.

Social economic impacts viewed as an opportunity

Our review of the Draft EIS indicates that the analysis of the socio-economic impacts is a reasonable projection of the jobs and population distribution that will occur in Colorado if the SSC comes to our state. However, the description unfairly concludes that it is unlikely that the local area would be able to absorb and adjust to the SSC related impacts in housing, employment and education. The Draft EIS recognizes that regional resources are available to help build the SSC and support the construction and operating workforce. It does not recognize how close the site is
1 to the metropolitan area or the easy commute from Denver to the laboratory. The laboratory and the benefits it will generate will be easily accessed by the state's minority populations. More than that, Colorado has a broad plan to make those benefits available to ethnic minorities. (See attachment)

Minority Science Education Program: Catalyst for change, quality education and opportunity to attract ethnic minorities to the sciences

As part of the SSC project, Colorado proposes a National Resource Center for science education. The center will serve not only Colorado, but it will actively reach out to become an integral part of the multi-state region surrounding the state and act as a model and catalyst for improving science education throughout the nation.

One of the key characteristics of the proposed center will be a Minority Science Education Program focused on grades K-12. This choice of focus is based on research evidence which showed in order to attract more Black and Hispanic youth to science as a career and to train and develop a more scientifically-literate citizenry, science education must begin in the elementary and middle schools.

Page 2

Importance and benefit to SSC project and the nation

Programs in research, science projects and demonstrations, computer technology and instruction in the physics of the SSC laboratory will enrich the science background of minority students and provide them the unique opportunity to become exposed to and involved in unlimited quality science experiences.

It is imperative that education concentrate its efforts on preparing minority students to become competent in mathematics, science and computers, to qualify for high technology employment and research to keep the U.S. competitive and support the economy of our nation.

REPORT OF THE ADVISORY COMMITTEE
ON MINORITY PARTICIPATION IN THE COLORADO SSC PROJECT

September 29, 1988

The following recommendations were developed by the newly appointed Minority Representatives to the SSC Management and Steering Committee at a working session held Monday, August 8, 1988.

1) A special Advisory Committee on Minority Participation in the Colorado SSC Project was appointed by the Steering Committee to advise, evaluate and monitor all aspects of minority participation in the project. Members include Wilma Webb, Tony Hernandez, Gloria Tanner, Pete Mirelez, David Thompson and Tyrone Holt. Additional members can be added by the committee.

2) The SSC Steering Committee reaffirmed the goal of 17% financial participation in the SSC Project by ethnic minorities as added in Governor Romer's Executive Order. This goal has not been achieved in the proposal phase of the project. Budget and personnel decisions have been made to correct the situation in the proposal phase and in the implementation phase when Colorado is awarded the SSC project by the Department of Energy. Immediate attention was given to the lack of financial participation by Black Business and Personnel.

3) The Proposed Blueprint Phase II Project Request for Proposal is being expedited under supervision of the Special Advisory Committee on Minority Participation.

4) The Colorado SSC Project has established a Minority Internship Program and plan to broaden the program as a spin-off program impacting Colorado State Government.

5) The Colorado SSC Project is developing a Science Education and Minority Education Program as submitted to the Department of Energy on July 15, 1988.

6) The SSC Public Relations Program has been revised to include joint Black and Hispanic Chambers of Commerce program involvement which has broadened the communication/public information program to include minority businesses.

LETTER 581

Testimony at the EIS Hearing

by: William O'Sullivan, Chair of Physics, UCB

September 29, 1988

I want to cover three points which relate to the potential impact of the SSC on and from the Higher Education Environment in Colorado.

The Department of Physics at UCB Boulder, is entering a period of rapid recruiting for outstanding new faculty, with a goal, which we believe is practical, of attaining a position among the top five physics departments in public institutions within the next decade. We have strong programs now in atomic and optical physics, high energy physics, geophysics, condensed matter physics and nuclear physics. We have a large, and successful, graduate physics education and research program, with over 165 students working toward their doctorates, and these are students whose quality, based on their national test scores, places them on a par with those at schools such as Yale, and the University of Washington, and above those enrolled in graduate physics programs at any university in the Big Ten, for example. The high energy program in our department comprises 30 people, including 8 rostered faculty, a number which will rise to 9 with the arrival of a new theoretical particle physicist next fall. This program receives major funding from DOE, and its members participate in forefront research at both SLAC and Fermilab.

1 If the SSC is placed in Colorado, in addition to ten similar positions to be opened at CSU, the University of Colorado at Boulder will commit ten new positions for high energy physics faculty. These would be rostered in the Department of Physics, and clearly would have a profound impact on the direction and emphasis placed on research by us. I want to assure you of two things in particular. First, our faculty voted its unanimous support for the University's pledge to greatly expand the role of high energy physics within the Department. Second, the Department of Physics at UCB will work to ensure that to the extent they desire, staff scientists at the SSC site will have the opportunity to interact closely with our programs. Adjoint Professor positions will be opened, and opportunities to direct the thesis research of UCB doctoral students made readily available to them.

Next, I want to remind you of the commitment made by the state of Colorado, this state's research universities, along with the neighboring western states and their institutions of higher learning, to create a Western States High Energy Physics and Education Institute located at the SSC site. This will include funds for twenty endowed professorships, and a detector research and

development laboratory where state of the art R&D in detector instrumentation and high capacity data analysis would take place. But, in addition, the Institute will serve as a stimulus and source of educational enhancements for all the participating states. It will actively promote better science and math education among our region's public schools, colleges and university students and teachers. Repeat– this is a regional enterprise. Many of our neighboring states have expressed a high level of interest in joining this cooperative regional science and education institute.

Finally–I am sure that the case has been well made that Colorado's research universities, the four branches of the University of Colorado, Colorado State University and the Colorado School of Mines, are a primary resource which will benefit all aspects of the SSC, should it find its way to Colorado. Nevertheless, some of you may have formed a picture of the SSC-University interaction in Colorado which features a dependence on long commutes from the site to the Universities, and from the Universities to the site. However, if the DOE desires it, there is another option which we think can greatly facilitate information exchange between the SSC and the University of Colorado, in particular, enhancing that institution's value to the SSC Laboratory and its personnel.

The University of Colorado has completed a fiber optic network linking the media centers, telephone networks and data centers at each of its four campuses. This system enables the University to transmit two-way commercial-quality video and audio from any campus to any or all of the other campuses. Access to the system is 24-hour-per-day, seven-days-per-week, 365 days-per-year. When fully operational, this system will give all four campuses of the University the ability to utilize cable, microwave, and satellite communications for instruction, professional development, teleconferencing, high speed data exchange and other purposes such as the ability to create a supplemental telephone network connecting the four campuses. Specifically, any campus can broadcast two-way audio and video to any of its counterparts within the University so as to share:

* Any portion of the academic curricula [including the professor]
* Media libraries
* Guest speakers or lecturers
* Special Events

If the Colorado site is eventually selected, the University's fiber optic communication network can be extended to include the SSC Laboratory. This would provide facilities for teleconferencing between University and SSC personnel. It would enable SSC staff and their families to enroll at the University, and to take undergraduate and graduate courses on *site* from a broad selection of those given across the entire University of Colorado system. SSC staff and their families would be able to view special events, and lectures given on any of the University campuses. Data and other non video information of value could be exchanged

readily between the SSC site and the four campuses. Interactive video and audio exchange would be carried out routinely between researchers on site and their colleagues elsewhere in the University of Colorado system. We mention this as an option to be considered by the Department of Energy which would promote exchange of information between the SSC Laboratory, the institutes associated with it, the University of Colorado, and the associated regional research universities, and would enable the University of Colorado system to better serve the entire SSC community as an educational resource.

LETTER 582

Administration
W.T. Weatherill
Superintendent
Ron Van Donselaar
Asst. Superintendent
Dorothy Tucker
Business Manager
Board of Education:
Mee Ruggles
President
John Crosthwait
Vice President
Larry Glauque
Jerry Hult
Ken Hutchison
Chris Pribble
Don Quintin

BPS
BRUSH PUBLIC SCHOOLS
— Re 2 (J) —
527 Industrial Park Road
P.O. Box 586
Brush, Colorado 80723
Telephone (303) 842-5176

TO: The Department of Energy
Environmental Protection Agency

FROM: W. T. Weatherill
Superintendent
Brush Public Schools

SUBJECT: Testimony Offered on 9/29/88 Regarding Colorado's Bid on the Super Conducting/Super Collider Project

On behalf of the Board of Directors of Brush Public Schools, our staff, students and the entire Brush community, may we express our most sincere gratitude for the opportunity to appear before you this afternoon and express our thanks for allowing the Colorado story to be told.

Those of us in the Brush school system made up of the communities of Snyder, Hillrose, Gary and Brush are extremely proud and appreciative of the opportunity we have in working in such a fine school system and with such a progressive and open community. From our enterprising city councils to our forward looking fire departments and hospital district, our community is comprised of genuine western hospitality and spirited with the attitude of "doers and goers".

1 This attitude and environment has allowed the Brush Public School District Re-2(J) to be heralded as one of Colorado's premier small districts and has afforded our youth the opportunity to highly compete in a complex world. With a diverse, comprehensive and well-rounded curriculum; Brush annually scores at or above the national and state norms in all nationally recognized student assessments, with particular emphasis stressed in mathematics and science. The future of our community will be in the hands of our graduates where traditionally fifty (50) to sixty (60) percent move on to higher education.

It is with this thought of the future that we offer testimony this afternoon in strong support of the Super Conducting/Super Collider for making Colorado it's home. Brush Public Schools embraces a K-12 student body of 1256 students who are housed in two (2) elementaries, a middle school and one senior high school. It employs a staff of 87 teachers, 7 administrators and 59 full or part-time classified employees. The 1256 students are the lowest number the district has experienced since re-organization in the early 1970's.

Lighting the lamp for a lifetime of learning

In the draft of the environmental impact statement it is projected that 700 people ages 5-17, will choose to, with their families, live in Morgan County if the SCC locates in Colorado. Approximately 35% of the students attending public elementary and secondary schools in Morgan County have chosen

Brush to further their education. If the 35% figure is consistent, and we feel that it is, then the SCC project would impact the Brush district with 245 additional students, pushing our enrollment to 1501 students.

In Volume IV: Appendix 14, 14.1.3.2, Colorado, page 58, it states: "the need for provision of expanded local public services during the construction and operational phases would substantially impact existing services within the communities neighboring the proposed SCC site." Gentlemen, we strongly feel that the SCC Project would not substantially impact the Brush School District. In 1972, the district housed 1628 students in approximately 25,000 less square footage of classroom space than the 1256 housed today. As you can see, it would be fairly creditable to say we can accommodate an additional 245 students with only reasonable difficulty. We do not feel as stated in Volume IV. Appendix 14-14.1.3.2., Colorado, page 58, "It is unlikely that this predominantly rural county would be able to absorb such growth without a substantial, focused effort". In Brush Public Schools, we always focus on kids, however, it would not take a substantial effort to accommodate the SCC project.

2

I can assure you, we in the Eastern sector of Morgan County are elated with the thought and sincerely welcome the opportunity of the SCC coming to our community. We in Colorado, if afforded the occasion can and will produce. We in the Brush Public School system are very similar to the Union Pacific railroad when we are approached on the impact of the SCC, "We can handle it"!

Thank you, once again, for the opportunity to appear before you.

LETTER 583

Sept 29, 1988

RTK –

1 I have been reading Chapter 5.1.5.2 Part c. Illinois in the DEIS Volume I Chapter 5. The section refers to Table 4.7.2, however, Table 4.7.2 does not seem to be included. Please check this for errors.

Sincerely-
Linda P. Freeman
Linda P. Freeman
Environmental Engineer
U.S. DOE / Chicago

LETTER 584

Colorado
Community College &
Occupational Education System

1391 North Speer Boulevard, Suite 600
Denver, Colorado 80204-2554
(303) 620-4000

Testimony
of
JEROME F. WARTGOW, PRESIDENT

Colorado Community College and Occupational Education System

September 29, 1988

Re: Environmental Impact of the Superconducting Super Collider

My name is Jerome F. Wartgow, and I serve as President of the Colorado Community College and Occupational Education System. As System President I am directly responsible for the eleven community colleges in the state system and have general responsibility for program approval and state funding for the four local district community colleges as well as local district vocational technical schools and secondary vocational education.

1 The Environmental Impact Statement gave general consideration to education in the State of Colorado, but did not focus on the specific impact upon higher education. Higher education, the community college system, and more specifically Morgan Community College, would be directly impacted by the selection of the Brush/Fort Morgan area as the site for the Superconducting Super Collider.

Morgan Community College is an integral part of the Colorado Community College and Occupational Education System and will serve as the lead institution in higher education efforts to meet the needs resulting from the Superconducting Super Collider Project. However, the instructional programs of the entire Community College and Occupational Education System will be drawn upon for needed technical training during the construction and operational phases of the Superconducting Super Collider. The entire system will, therefore, assist in meeting these training needs to alleviate severe impacts upon any single community college campus.

Morgan Community College is also prepared to assist four year colleges and universities in delivering upper division classes and specific programs to employees of the Superconducting Super Collider and their dependents. Morgan Community College has already implemented distance learning programs through existing technology and would be expecting to continue development of such delivery methods.

The impact upon higher education from the construction and operation of the Superconducting Super Collider in Colorado will be considerable. Colorado is in a good position to meet the challenges. Through a statewide community college delivery system under a single governing board, resources and expertise can be shared to efficiently and effectively meet the instructional needs for this project.

2 The State Board for Community Colleges and Occupational Education and the state system staff is supportive of this project and will make every effort to assist Morgan Community College in assuring delivery of appropriate, quality programs needed for the Superconducting Super Collider in Colorado.

LETTER 585

COMMENTS BY ELDA LOUSBERG REGARDING THE SUPER COLLIDER PROJECT

LOGAN COUNTY COMMISSIONER, STERLING, COLORADO

MEMBERS OF THE PANEL, IT IS INDEED A PLEASURE AS PRESIDENT OF COLORADO COUNTIES, INCORPORATED TO BE A PART OF THIS GATHERING TODAY, IN SUPPORT OF COLORADO'S EFFORTS TO LOCATE THE SUPERCONDUCTING SUPER COLLIDER PROJECT IN THIS STATE.

FROM THE START OF THIS LONG AND INTENSIVE EFFORT, CCI HAS BEEN A PARTICIPANT, SUPPORTING THE STATE AND LOCAL GOVERNMENTS EFFORTS TO PUT TOGETHER A SUCCESSFUL SUBMITTAL THAT ULTIMATELY WILL INSURE THAT THE SSC PROJECT WILL BE LOCATED IN COLORADO.

COUNTIES THROUGHOUT THE STATE RECOGNIZE THE IMPORTANCE PLACING THE SUPER COLLIDER ON THE PLAINS OF COLORADO. WE REALIZE
1 THAT AS THE PREEMINENT FACILITY FOR HIGH ENERGY PHYSICS RESEARCH, COLORADO HAS THE POTENTIAL TO BECOME A SIGNIFICANT SCIENCE CENTER FOR BOTH THE NATION AND THE WORLD. THIS IS IMPORTANT TO COLORADO IN TERMS OF BOTH ECONOMIC DEVELOPMENT AND THE OPPORTUNITY FOR EDUCATIONAL EXCELLENCE AT OUR COLLEGES AND UNIVERSITIES.

WE AGREE WITH GOVERNOR ROMER, THAT THIS PROJECT IS AN ESSENTIAL INGREDIENT TO BUILDING A SOLID INTERNATIONAL REPUTATION IN THE FIELD OF SCIENCE -- WHOSE BENEFITS TO THE STATE WILL BE GREAT.

IN SUPPORT OF THE PROJECT, COLORADO COUNTIES, INC. SUBMITTED A LETTER OF ENDORSEMENT WHICH IS A PART OF THE GOVERNOR'S SUPPORT

PACKAGE SENT TO THE DEPARTMENT OF ENERGY. IN ADDITION, CCI LENT STAFF TIME TO WORK WITH COUNTIES AT THE PROPOSED SITE, TO INSURE "FAIL SAFE" INTERGOVERNMENTAL AGREEMENTS WITH THE STATE FOR DELIVERING ALL NEEDED STATE AND LOCAL PERMITS, APPROVALS AND OTHER AUTHORIZING ACTIONS NEEDED FOR THE SSC. THE BOTTOM LINE IS, THAT WE WANT THIS EFFORT TO SUCCEED.

DUE TO GEOGRAPHY, ENVIRONMENT, AND THE RURAL NATURE OF THE PROPOSED SITE, THERE ARE NO MAJOR, COSTLY, ENVIRONMENT IMPACTS. THE LACK OF NEGATIVE ENVIRONMENTAL IMPACTS IS ONE OF COLORADO'S PROPOSALS STRONGEST ASSETS. THIS SITE IS LOCATED IN AN AREA OF RURAL, MID AMERICA COMMUNITIES WHO HAVE A HISTORY OF COOPERATION AND COMMUNITY SUPPORT.

THE EXPERIENCE AND CAPACITY OF NORTHEAST COLORADO COMMUNITIES MAKE THEM ABLE TO HANDLE ECONOMIC GROWTH CYCLES AND AS A RESULT THEY CAN HANDLE THE GROWTH IMPACT. ACCORDINGLY, I DISAGREE WITH THE ENVIRONMENTAL IMPACT STATEMENT'S ASSESSMENT THAT THE BRUSH AND FORT MORGAN COMMUNITIES COULDN'T HANDLE GROWTH AND BOOMTOWN CONDITIONS WOULD RESULT.

WHATEVER IS THE NEXT STEP, COUNT ON THE ASSISTANCE OF COLORADO COUNTIES, INCORPORATED AS AN ACTIVE PARTNER. WE LOOK FORWARD TO THE DAY THE ANNOUNCEMENT IS MADE BY THE DEPARTMENT OF ENERGY THAT COLORADO IS THE SITE SELECTED FOR THE SUPERCONDUCTING SUPER COLLIDER. WE APPLAUD THE EFFORTS OF THE STATE, MORGAN, ADAMS AND WASHINGTON COUNTIES AND PRIVATE CITIZENS WHO HAVE WORKED SO HARD AND CONTINUE TO DO SO, TO ACHIEVE OUR COMMON GOAL.

LETTER 586

SUPER CONDUCTING SUPER COLLIDER

RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT

Ken McCloud
Director Parks-Recreation, Leisure

September 29, 1988

(Three (3) copies enclosed)

IIA.1. 896

LETTER 586 (CONTINUED)

ELIZABETH S. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Thank you for this opportunity. My name is Ken McCloud. I work for the City of Fort Morgan as Parks, Recreation, & Leisure Director. I wish to address the impact of the SSC on the quality of life in Fort Morgan. Section 5.2.11.1 of Volume 4, Appendix 5a concerns itself with Fort Morgan's capabilities to handle a large population. We feel it necessary to support this statement especially as it relates to the cultural and recreational climate in Fort Morgan, Morgan County, and Colorado.

1 Fort Morgan should show no adverse effect from the construction and operation of the Super Conducting Super Collider. In fact, any impact, from our view, will be of a positive nature, adding to the quality of life not detracting from it.

Fort Morgan has always provided cultural events to its citizens thru either its Recreation programs or Library/Museum Functions. We provide, on a local level, such summer recreational activities as Adult Softball, a Top Notch Municipal Golf Course, Square Dancing, Aerobics, Tennis, and Volleyball. For the youth such events are Boy's Baseball (both competitive and recreational), Girls Softball, Red Cross Swimming Lessons, Tumbling, Archery, Soccer, Tennis Lessons, Golf Lessons, and so on. More importantly the City provides four (4) fullservice parks with picnic and playground facilities. We have two (2) swimming pools open to the general public. At present there is no charge for the use of this Recreation Facility. The City operates and maintains eight (8)

Baseball/Softball Fields. These also are available for public use when scheduled events are not taking place.

The only weakness in the Fort Morgan Recreation Program at the present time is a lack of winter facilities, primarily gymnasium space. The City works very closely with School District RE-3 to make full use of available facilities but we do fall short of the space that could be used for community activities. A remedy to this problem does exist however and has been under consideration prior to any mention of the SSC siting in Northeast Colorado. An impact by the SSC on our Winter program is viewed as an aid to build the Winter/Indoor Recreation Facility needed because it should provide the additional population base to make such a project practical.

The City also has a first rate Library. It provides some 40,000 volumes of reading and reference materials. A number of youth and adult programs to encourage its usage are implemented each year.

The City Museum is operated in conjunction with the Fort Morgan Heritage Foundation. It provides to the public an insight to the local history of the area and updated exhibits to keep the community abreast of the rest of the world.

Local functions occur on an annual basis that add to our community pride. Two (2) functions are the Festival-in-the-Park (a community arts & crafts fair) and the Annual Blue Grass Festival. The former is a total community involvement volunteer program while the latter is sponsored by the Morgan County Arts Council.

All of the programs and facilities I have just mentioned are in place at present. They are designed to accomodate today's citizens but also with an eye to the future. Expansion or greater utilization of any item has been anticipated long before the SSC became a consideration.

An important point to keep in mind here is that while Fort Morgan provides very well for itself, the Public wishes certainly go beyond our local programs. Fort Morgan is a gateway to the Rocky Mountains. Because Colorado is so wide open we don't think in terms of numbers of miles to areas, but rather the time frame. Within 30 minutes the local citizens can use any of several major reservoirs for both summer and winter recreation. 45 minutes puts the resident at the new Denver Airport Site from there the entire world will be available. 70 minutes will place people in the Metro Denver area with all its resources. For those people wishing symphony or theatre it's available within the hour, both in the Denver Metro Area, as well as the Union Colony Civic Center in Greeley. Professional sports are at our finger tips with the Denver Broncos and Nuggets. Retail and wholesale shopping is provided with little effort in commuting time. 90 - 120 minutes puts people in the heart of the most outstanding ski slopes in the United States.

My last point concerning the SSC Impact is to stress its positive effect on the children of Fort Morgan. The present economic base of Fort Morgan and Morgan County is agriculture and oil exploration. When the SSC is built a scientific community will establish itself offering new opportunities to the youths of the area, broadening career fields that at present are not available on the local level.

As you can see, any impact placed on our community by the SSC is more positive than negative. As Section 5.2.11.1 states, "These communities (Fort Morgan and Brush) are currently regional centers and could serve a much larger population if they experienced rapid growth with the development of the SSC." We wholeheartedly support this statement.

Thank you for your time and interest. I will gladly answer any questions you may have.

LETTER 587

TESTIMONY

of

Mr. John Hamlin
Fort Morgan, Colorado

to

The U. S. Department of Energy

Thursday, September 29, 1988
PUBLIC HEARING

Regarding the
Draft Environmental Impact Statement
for the
Superconducting Super Collider

815 Diana Street
Fort Morgan, Colorado 80701
September 29, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/G304
Office of Energy Research
U. S. Department of Energy
Washington, D.C. 20545

Dear Dr. Hess:

As a local businessman and resident of Morgan County for nearly 40 years, and as a former state legislator representing northeastern Colorado, I value this opportunity to comment on the Draft Environmental Impact Statement for the Superconducting Super Collider. Simply in terms of the detail it provides about potential effects of the Super Collider on the human and natural resources at the best qualified sites, the EIS is impressive. I commend you and your staff for the overall quality of this draft document.

1

I am generally pleased with the Draft EIS' analysis of impacts in Colorado, and I certainly concur with the overall assessment that the SSC can be built here with minimal negative impacts on our communities and the natural environment. The focus of my comments, however, is to correct what I find to be a substantial error in conclusions drawn from the socioeconomic assessment regarding this area's ability to handle SSC-related growth. Specifically:

> [L]local area housing markets mostly would not experience sizeable impacts caused by the SSC . . . . Noteworthy exceptions would be housing markets of Fort Morgan and Brush . . . where the SSC-related housing demand would be large compared to baseline housing requirements. (DEIS Vol I p. 5.1.8-16-17)

2

> Small towns, particularly the Colorado communities of Brush and Fort Morgan . . . , could experience SSC-related population impacts large enough to lead to 'boomtown' conditions. [E.g.,] Disruption of social networks and institutions, higher crime rates, escalating rents and other prices, deterioration of public services and facilities, and road congestion . . . . (DEIS Vol I p. 5.1.8-24)

Dr. Wilmot Hess
September 29, 1988
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> The proposed SSC location is in a rural setting more than 60 mi *from the Denver metropolitan area. This relative isolation is* very likely to lead to adverse socioeconomic impacts in some of the smaller communities close to the site, particularly Fort Morgan and Brush. . . . Public service impacts would be . . . of some consequence to both Morgan and Washington counties. (DEIS Vol IV App 14 p. 58)
>
> *Direct workers would have to commute longer distances than the* average regional commuter to reside in the Denver area, but a shortage of intervening residential opportunities probably would convince most workers to do so. (DEIS Vol IV App 14 p. 66)
>
> It is unlikely that [Morgan County] would be able to absorb such growth without a substantial, focused effort. (DEIS Vol IV App 14 p. 72)
>
> As a result of population growth Morgan County would experience increased demands for year-round housing . . . . Such increased demands would likely place a heavy burden on Morgan County to respond. . . . It is anticipated that . . . the historically small-scale county construction industry would be hard-pressed to provide an adequate number of new units for either 1992 or 2000 . . . . [It is unlikely that Morgan County would readily be able to meet such a growth in housing demand. (DEIS Vol IV App 14 p. 78)
>
> SSC workers commuting daily from the Denver area would spend more than two hours each day in transit to and from their jobs. *Depending on the length of particular jobs during this construction phase,* such daily commuting could become stressful . . . . (DEIS Vol IV App 14 p. 94)

To correct the record, I offer the following evidence that Morgan County and northeast Colorado have the ability and the capacity to accommodate SSC-related population growth with little difficulty:

1. ***This area has experience and a proven successful track record in dealing with* the effects of rapid population growth.**

   In the 1950's our area "boomed" because of oil development, which brought over 500 families into this area within two years. In the early 1970's our meat packing industry brought in 100 new employees within a six-month period. During 1978-79, construction of the Pawnee Power Plant (Pawnee Generating *Station) resulted in about 1500 new residents. Also in the 70's the modular* housing industry brought at least 150 employees to Fort Morgan in less than one year.

Dr. Wilmot Hess
September 29, 1988
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Even at those rates, new residents were smoothly assimilated into our communities, and many became permanent residents. We easily accommodated the rapid growth and accompanying pressures on services and infrastructure with minimal disruption.

The Final EIS should consider our local governments' past well managed experience with rapid growth in its conclusions about communities' ability to deal with SSC-related growth.

2. In part as a result of past "booms," there is abundant capacity in Morgan County communities to meet SSC-related housing and public services needs.

The Draft EIS measures ability to meet growth in housing demand by vacancy rates and the previous seven years' building permit activity. Neither of these is a good measure of Morgan County's ability to respond to SSC-related housing needs. Vacancy rates are based on the behavior of property owners -- that is, they are dependent upon the owner's listing the property with a realtor. In this area, "listings" are often handled more informally, with "for sale by owner" and word-of-mouth being common practice. Building permits are strictly a measure of demand, not capacity; and demand in the county has diminished since the economic downturn beginning in the early 1980's.

The EIS description of local builders and contractors as the "historical small-scale county construction industry" is similarly inaccurate. First, the "county construction industry" doesn't limit its business only to Morgan County but bids jobs throughout the northeast Colorado region, the Front Range, and in Arizona, New Mexico and other western states. Second, contractors from other communities in northeast Colorado, Denver, and other states, including California, bid for jobs in the county. The courthouse expansion, for example, was awarded to a Greeley contractor and the new judicial center to a Sterling builder. I assure you that constructors up and down the Front Range are ready to jump if Colorado wins this project.

In terms of temporary housing, we have a business, a national corporation, right here in Fort Morgan that can put up a modular village in 30 to 60 days -- with proven experience on the West Slope during the 70's energy boom. Century Homebuilders, which builds top-of-the-line modular housing, could also provide permanent housing for SSC-related workers.

The Final EIS should apply criteria that accurately measure capacity and which therefore reflect that we can provide adequate housing for those who are interested in living in this area.

Dr. Wilmot Hess
September 29, 1988
Page Four

3. **This past experience has also taught us that the effects of "boom" tend to disperse throughout the region.**

To understand this fact -- which apparently was not considered in the model applied by the analysts who performed the EIS' socioeconomic assessment -- one must acknowledge some very basic differences between the West and other parts of the country.

One difference is that, rather than being "relatively isolated" jurisdictions, we are part of a interactive regional network. Many residents live in one community, work in another and shop in several. We may have a home in Fort Morgan, a job in Sterling, a dentist in Greeley and a doctor in Brush. The Draft EIS portrays Brush and Fort Morgan as the two communities that will take the brunt of SSC-growth. But we know from past experience that people will choose to live in Sterling, Hillrose, Greeley, Yuma and other communities in the region.

Secondly, we are a highly mobile group of people and, as such, we know that what counts out here in the West is not how far? but how long?. People who live in this area drive, as a normal, everyday practice, 40-60 miles to work. As a man who spent much of the last 13 years commuting between Fort Morgan and Denver, I can tell you that it takes at most half as much time to cover the same distance out here as it does in some urban areas. From my home to Stapleton, for example, a distance of about 65 miles, it takes 90 minutes door-to-door. But from Fermilab to O'Hare, a distance of only 22 miles, it takes 60 minutes in rush hour and 30-40 minutes otherwise.

Third, and equally important, commuting 65 miles on the open road is not "stressful." "Stressful" daily commuting is covering 22 miles in big city traffic.

To equivalently assess the seven sites in this regard (referring, for example, to Table 4-29, DEIS Vol I Ch 4 p. 4-86, "Distance from campus to the closest major airport"), the Final EIS should report these distances in average driving time rather than miles. Further, the Final EIS should use measurable terms in characterizing our communities, as opposed to subjective terms such as "relatively isolated" and "remote." And the Final EIS should base its analysis on the reality of our communities and our region, rather than on theory of a "small town" in the model.

To summarize, I find that the Draft EIS inaccurately portrays communities in this area as "remote" and "isolated" "small towns" which lack the capability and the capacity to deal with SSC-related growth. I argue that we are part of a web of communities which extends to the metro area; that there is an interdependency of infrastructure and services in the region; and that we have both the capacity and

a proven track record to manage SSC-related growth with minimum disruption to our communities or to SSC personnel. And I ask simply that the Final EIS set the record straight.

Thank you.

Sincerely,

John Hamlin

John Hamlin

LETTER 588

MORGAN COMMUNITY COLLEGE

President's office

Telephone (303) 867-3081
17800 Rd. 20
FORT MORGAN, COLORADO 80701

My name is Harold Deselms and I serve as President of Morgan Community College in Fort Morgan, Colorado.

The construction and operation of the proposed Superconducting Super Collider in eastern Colorado would have a significant impact upon Morgan Community College's enrollments and programs. I would expect that the college would be called upon to provide training during the construction phase and help to provide for the educational needs of SSC employees and their dependents during the operational phases.

1 Although Morgan Community College is a small college, it is a part of the Colorado Community College and Occupational Education System and, therefore, can call upon the expertise and educational resources of the entire system which serves over 51,000 students in credit programs. In working cooperatively with the other community colleges in the state where needed, Morgan Community College can answer high tech training needs for the SSC.

Morgan Community College has transfer agreements with most four year colleges and universities in the state and a common core curriculum is in place. Transfer programs, the agreements with Regis College to offer upper division courses to lead to a bachelor's degree, and telecommunications capabilities would all be beneficial to SSC personnel and their families.

Those of us at Morgan Community College look forward to the challenges of the SSC locating in eastern Colorado. We can quickly adjust to the impact created by such a project.

LETTER 589

SUPER CONDUCTING SUPER COLLIDER

RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT

Ronald V. Edwards
Mayor, City of Fort Morgan

September 29, 1988

ELIZABETH E. GALASSI
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Welcome Dr. Hess and Panel!

I am Ron Edwards, Mayor of Fort Morgan. I wish to address two points of concern identified by the Super Conducting Super Collider Impact Statement. They are (1) Industrial Development Capabilities and (2) Housing.

Section 5.2.12.2 of the E.I.S. suggests that these two items, along with other Socioeconomic factors, may suffer greatly, due to the impact of the Super Conducting Super Collider construction. I wish to address those concerns in the following statement.

1 The Citizens of Fort Morgan feel that our desire to grow industrially has prepared us for any impacts created by the Super Conducting Super Collidar. The recognition of our own desires for growth have allowed us to identify those problems addressed in the "E.I.S." with respect to the Socioeconomic fiber of Fort Morgan.

The City of Fort Morgan has been preparing for major industrial impact for several years, prior to the Super Conducting Super Collider Project proposed siting in Northeastern Colorado. Since the economy has been in a downward spiral due to the fall of the Agriculture and Oil exploration industries, the City has been looking to broaden its industrial base. We realized early-on that in order to attract industry more than just "well paved streets" would be needed. The economic climate needed a push to get off the ground so Fort Morgan, Brush, and the rest of the county governments formed the Morgan County

Economic Development Association. Fort Morgan not only funded this organization to the greatest extent of any municipality, it also provided the office space and secretarial staff to handle the work generated by the Economic Development Director. Also, as pointed out earlier, our City has been continually improving our entire utility and infrastructure to meet any form of sudden impact that may result from possible sudden growth and impact.

In 1986 the City decided that, in the best interest of Planning and Zoning and Economic Development, an Industrial Park should be purchased and developed. 1987 saw that purchase materialize and 1988 will see its complete development. All utilities and infrastructure will be in place, ready for prospective clients.

This enthusiastic effort has also been turned toward the rest of the city services. A long range plan projecting population growth to 25,000 is in place. Copies of this plan were presented to the DOE at the Scoping hearings and again are being submitted as evidence here today. This document not only recognizes the utilitarian needs of a community of that size, but also the cultural requirements of the same city. This plan identifies the needs and gives us the roadmap to ensure their implementation.

The second concern is housing. At present the City has approximately 175 homes on the market in the Fort Morgan Area. Rental units are somewhat less. We realize that should the Super Conducting SuperCollider choose Northeastern Colorado as the site a tremendous number of people would move to this area. This would range from short term construction people to the longer term operational staff. The City has in place annexation, subdivision, and zoning laws to promote a

quality growth. They require little time to follow and allow building lots to become readily available. We also have filed with Morgan County a Master Street Plan and a Master Airport Plan. Both documents allow for an orderly growth as the boundaries of Fort Morgan expand further into the county.

The Master Street Plan recognizes major traffic patterns. It clearly defines arterial and collector streets as they leave the City Limits. Further it reserves these rights-of-way for the future growth of the City while not yet part of the corporate boundaries.

The Master Airport Plan addresses both proposed expansion of the airport service and the surrounding land use. This document allows Fort Morgan to ensure to the City and County residents that a quality airport facility will always be available.

Lastly, we are very fortunate in Fort Morgan to have a highly skilled group of construction craftsmen capable and willing to answer housing needs as they arise. Further, National Pre Built Mfg. Corporation's, Century Division, is located in the Fort Morgan Industrial Park. This "Factory Built" housing firm can manufacture every type of home from mobile homes to custom built houses in a very short time. The result is always a high quality product.

Thank you for your time today. Copies of this statement, as well as our long term Planning Document will be made available to you in hopes of clarifying any points left unclear.

LETTER 590

Colorado
Superconducting
Super Collider Project

Roy Romer
Governor

One United Bank Center
1700 Lincoln Street, Suite 3720
Denver, Colorado 80203
303 839-3960

Testimony Before the
U.S. Department of Energy
Hearing on the
Draft Environmental Impact Statement

By

David Thompson
Vice President
Rocky Mountain Industrial Supply, Inc.
Denver, Colorado

September 29, 1988
Fort Morgan

Ensuring that the Colorado SSC Project will economically benefit minorities

The Draft EIS Economic Impact analysis makes clear that the project will generate economic benefits to all of the seven Best Qualified Sites. What is not clear is how minorities will be included in the process and the benefits of building and operating the laboratory.

As Representative Hernandez testified earlier, Colorado has developed a "Blueprint Outline for Minority Participation" integrating ethnic minorities and women into the planning and decision-making process. Attached is a copy of the outline.

In addition, the SSC Project will develop an implementation plan for the Blueprint. It will specifically address ethnic minority participation in the SSC under the direction of the SSC Minority Advisory Committee. The plan will include goals, implementation
1 proposals and programs, a management and financial plan and a schedule for implementation. This plan will be completed in November.

Special emphasis on minority business development

As part of the Colorado SSC effort, we will emphasize the promotion of business development opportunities for minority businesses. Using innovative business development initiatives, we hope to join with groups like the Black and Hispanic Chambers, the Colorado Black Roundtable, and other ethnic minority business leaders and associations to make sure this project helps build the economic base of the minority communities of the state and nation.

A model for the nation

We see the SSC as a true symbol of national competitiveness. Colorado's ethnic minorities hope to move forward in making the social and economic benefits of the SSC a sound foundation for economic growth for all segments of the community and the economy. We hope all seven BQL sites will demonstrate this same level of leadership, commitment and participation.

PRESENTED TO:

Colorado SSC Project
1700 Lincoln Street
Suite 3720
Denver, CO 80203

SSC
MINORITY PARTICIPATION
"Blueprint Outline"

July 8, 1988

Submitted by:
CSI, JOINT VENTURE

Complexity Simplified, Inc.
1617 So. Fillmore Street
Denver, Colorado 80210

Patricia Killian, PhD & Associates
7220 West Jefferson Ave.
Suite #219
Denver, CO 80235

Geotrans Engineering & Construction
19029 E. Plaza Drive
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PBR & Associates, Inc
1667 Cole Blvd.
Suite #400
Golden, CO 80401

Concept Development Corporation
1400 Simms
Suite #200
Lakewood, CO 80215

A. INTRODUCTION

This is the "Blueprint Outline" for minority involvement and support of SSC, that includes the methods, processes, services and institutional arrangements for -- 1) minority involvement in the SSC proposal, 2) minority participation, support and benefits from SSC, and 3) training and education of the minorities to participate in and support the SSC - - "smarter suppliers in the 90's". This document addresses a step-by-step process outline that will be used in the development of the detailed work plan. The CSI/JV team, which is made up of ethnic minorities who network within the minority community, prepared this outline with the support of the SSC staff.

"Smarter Suppliers in the 90's" is a proactive model developed by Complexity Simplified, Inc. in conjunction with Front Range Community College to determine Corporate Colorado's secondary source needs, set up college courses to teach MBE's to meet those needs, and administer through the Small Business Development Centers.

Model for Integrating SSC Ethnic Minorities and Women - This flow chart depicts the critical interfacing and integration of the minority community with the SSC project.

The process for minority community involvement , support and the winning of the SSC project is outlined as follows:

First, obtain the pertinent federal and state regulations to review, summarize and translate to enable minority participation in the SSC project.

Second, review State of Colorado established minority goals and coordinate with SSC minority goals.

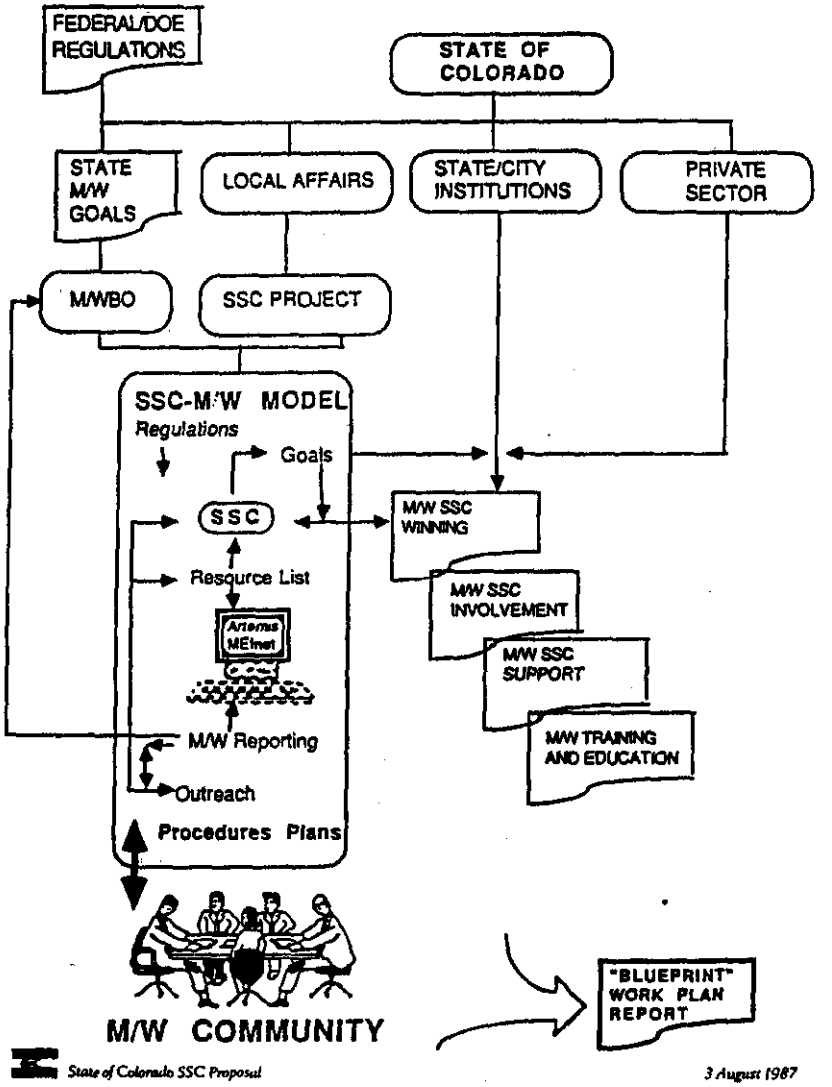
Third, conduct a statewide outreach program to the minority community to present SSC briefings and to obtain support and involvement from the minority community, including resource list/databases for integration with SSC.

Fourth, coordinate SSC implementation skills, business and educational opportunities with available minorities.

Fifth, the Blueprint Outline" report will define a step-by-step work plan regarding the methods; processes, procedures, services, support and involvement by minorities for SSC.

CSI, Joint Venture "SSC Minority Participation Blueprint Outline"

INTEGRATING SSC , ETHNIC MINORITIES , AND WOMEN



State of Colorado SSC Proposal 3 August 1987

B. MINORITY INVOLVEMENT IN WINNING SSC

Minority and women involvement in winning the SSC proposal will be incorporated into the effort at several levels, including direct and indirect methods.

Direct involvement includes participation in a very visible meaningful manner in the process of updating the proposal. This will involve contributing to the development of the Minority Participation "Blueprint Outline" which when completed will delineate how minorities will be involved and support the SSC, as well as training and education. The SSC Project will continue group meetings, public relations engagements and other activities to encourage and motivate minority participation.

Indirect involvement includes providing support in the following ways: At a personal level through mailings from individuals, letters of support, signatures. At an organizational level through letters of endorsement from minority chambers and other organizations, including such campaigns as full-page ads by these organizations in local and national newspapers. At the political level through letters of endorsement from minority politicians at the Federal, State and Local levels.

1. Inputs

   - List of active minority groups
   - Schedule of meetings
   - Contact persons

2. Resources

   - CSI Joint Venture
   - SSC Project Office

3. Process

   a. Search out active minority organizations

   b. Determine key SSC issues and prepare to meet and discuss SSC minority/women strategy for involvement and support.

   c. Schedule meetings with minority organizations, brief on SSC and identify needed support by respective organizations

   d. Follow-up with minority organizations and SSC Project Office to incorporate feedback from minority community.

C. MINORITY SSC INVOLVEMENT

This portion of the "Blueprint Outline" outlines a process to seek out minorities who can participate in and benefit from SSC. A review of Colorado minority resources will be conducted to determine the type of minority hi tech/labor skills that are available for involvement in SSC. These resources will then be matched against the required SSC resources, followed by documentation which will be used in the planning for minority involvement in SSC. Vol IV Section 4.4, Industrial and Construction Resources, describes the requirements and availability which will be employed as a guide to search out the minorities to be involved in SSC.

1. Inputs

   - Required SSC implementation skills
   - State universities' and colleges' minority faculty/student databases
   - Location of Corporate Colorado minority hi tech/labor resources
   - Location of other minority community databases

2. Resources

   - Required SSC skills
   - State universities' and colleges' minority faculty/student databases
   - Corporate Colorado hi tech/labor EEO databases
   - Other minority community labor force databases
   - Computer resource capability database
   - "SSC minority participation" consultant
   - SSC Project Office
   - County Commissioners

3. Process

   a. Hi tech resource databases will be located and accessed through colleges, universities, corporations and institutions for minority identification

   b. Community minority databases will be located throughout the respective chambers and community organizations to identify hi tech/labor minorities

   c. The databases will be synthesized to clearly identify statewide minorities for possible SSC involvement.

d. Synthesized minority requirements for SSC will be determined by comparing SSC needs with the minority database.

e. Coordinate involvement of minority communities with SSC project .

f. Review minority involvement with SSC and the minority community to establish a plan for participation and benefits.

g. Publish and promote minority involvement in the SSC Project through the Outreach Program.

D. MINORITY SUPPORT

This portion of the outline structures a process to determine the available minorities to support the SSC Project. The benefits to the minority community will also be identified, while covering a step-by-step process to ensure that minorities support and meet the SSC minority goal. It will be structured to include the plans and procedures for the management and implementation of minority support.

An algorithm will be developed to be used as a guide in reviewing specifications and engineering and construction projects to ensure that the SSC minority goals are met. A statewide minority resource computer communication network will be employed to manage, disseminate and resource the SSC project packages. such as design, architect, concrete work, landscaping, etc. The Outline includes a statewide survey of MBE/WBE's to determine skill areas and expertise available and to determine what skills must be developed. A dissemination and reporting system to enhance minority participation in the SSC will also be developed. Incentive programs such as outstanding business performance and leadership awards through the local Chambers to encourage minority participation in the SSC will be developed and implemented. Vol IV Section 4.4, Industrial and Construction Resources, Table 4.4-1 which list the firms capable of supplying all or part of the state requirements will be employed as a guide to search out MBE/WBE's for SSC support.

1. Inputs

- Listing of required SSC implementation skills
- Listing of State universities'/colleges' minority databases
- Listing of location of Corporate Colorado minority hi tech/labor resources
- Community minority databases

2. Resources

- State universities' and colleges' minority databases
- Corporate Colorado minority hi tech/labor, professional and EEO personnel
- Other minority labor force databases
- Computer resource capability database
- SSC Minority Participation Consultant
- SSC Project Office

3. Process

a. Minority labor resource databases will be located within the community through colleges/universities, corporations, and community organizations to identify minorities to support the SSC project.

b. Minority support to SSC will be documented for review and development with the SSC project.

c. SSC support needs will be reviewed with the SSC Project and documented

d. Review Minority support with SSC to develop detailed SSC minority support plan.

e. Coordinate involvement of Minorities which can support the SSC Project.

f. Publish and promote minority support of the SSC Project through the SSC Outreach Program.

IV MINORITY TRAINING AND EDUCATION

This portion of the "Blueprint Outline" will also consider the necessary training and education to: 1) upgrade (state-of-the-art training) hi tech resources/labor skills 2) to cross-train hi tech resources, 3) to upgrade labor skills, 4) to cross train labor skills, and 5) to retrain. Training programs will also be established to train SSC development procurement personnel on how to do business with minority entrepreneurs. As the program progresses, MBEs/WBE's will be informed and trained on upcoming jobs.

The training and education program requirements will first address training requirements development by comparing available resources to SSC required resources. Training courses will then be developed and taught by community colleges. Implementation of the training for MBE/WBE's will be through the Front Range Small Business Development Centers. As the SSC Project develops this process will be repeated to maintain the required skills, services and support. The updated Colorado education system described in Vol IV Section 4.8, Education and Culture Resources , also includes minority training and education requirements.

1. Inputs

   - Listing of required SSC implementation skills
   - Listing of State universities'/colleges' minority faculty/student databases
   - Listing of location of Corporate Colorado minority hi tech/labor resources
   - Community minority databases

2. Resources

   - State universities' and colleges' minority faculty/student databases
   - Corporate Colorado minority hi tech/labor, professional and EEO personnel
   - Other minority labor force databases
   - Computer resource capability database
   - SSC Minority Participation Consultant
   - Wider Opportunity for Women (WOW)
   - Colorado Women Education and Employment (CWEE)
   - SSC Project Office
   - IMAGE
   - League of United Latin American Citizens (LULAC)

3. Process

   a. Survey and assessment of Training Programs

      1) Determine entrepreneurs' business development training needs for the entrepreneurs and their potential employees.

      2) Survey training programs and program capabilities available at community colleges that meet the needs of entrepreneurs.

         Survey includes current as well as potential program capabilities.

Community colleges that meet the needs of entrepreneurs for educational and technical training:

- Aurora Community College
- Front Range Community College
- Job Training Program
- *Morgan Community College
- Northeastern Junior College
- Red Rocks Community College
- Warren Occupational Technical Center

*Site of proposed SSC laboratory

3) Other community resources:

- Small Business Development Centers
- Colorado Directory of Higher Education

b. Training and Education Programs: Scope/Population:

- Elementary grades, K-12 or 6-12, gifted and talented students
- Undergraduate
- Graduate
- Post-graduate
- Disabled
- People on public assistance
- Colorado Women's Employment and Education (CWEE)

c. Training Program development

1) Recruitment of minorities in entrepreneur and training programs through:

- Minority programs in the public schools
- Minority community organizations
- Minority chambers of commerce
- General public for minorities

2) High technology skills and basic education skills program designed by designated community colleges based on needs assessment.

- Skills acquired will apply to the maintenance, support and services needed by entrepreneurs and their employees
- *Updating and cross-training of skills provided to entrepreneurs and their employees by designated programs and SSC Laboratory

*Especially critical for minorities

3) Entrepreneur Training acquired through Community Colleges and offices of Small Business Development Centers

Topics:

- Needs assessment and surveys ... vendor and public
- The bidding process
- Contracts
- Negotiation skills
- Startup process of an entrepreneurial venture
- Database of entrepreneurs
- Acquisition of support services
  - Accountant
  - Lawyer
  - Computer training
  - Marketing

4) On-site Services

- Counseling
- Video presentations

LETTER 591

NARRATIVE SUBMITTED BY

GLENN W. CALVERT

ELIZABETH E. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

SCSC COMMITTEE

Fort Morgan is a strong Home Rule City, serving the citizens of Fort Morgan and surrounding urban areas with reasonable, dependable services and utilities, "Electric, Gas, Water, Sewer, and Solid Waste pickup."

The City is adequately staffed and equipped to handle moderate growth in these areas. The City also employs consultants and private contractors for whatever needs the City staff cannot accomplish.

1

The projections in this booklet are long range, using a growth scenario of > Growth to 25,000 people. As is evident, financial needs of the City would have to be aided by Grants, Bonds, and Private Funds, with developers paying adequate development costs. Use fees and utility rates would have to reflect a sound return for investment costs. All infrastructure would have to be upgraded at a very rapid pace. We recognize the needs and feel the City would accomplish this task.

LETTER 591 (CONTINUED)

ADMINISTRATION

ELIZABETH E. GILBERT
CITY CLERK

RONALD V. SPIVARNE
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Upgrade Administration & Facilities

1. Present Facilities Condition
   - A. City Hall/Utility Complex
     - 1. 7500 sq. ft. est.
     - 2. Houses all Administration Personnel
     - 3. Serves as Utility Billing Complex
     - 4. Parking serves this complex & Senior Citizens Center
   - B. Senior Citizen Center
     - 1.2400 sq. ft. est.
     - 2. Remodeled grain elevator office
       - A. Handles est. 150 people
2. Present Administrative Staff
   - A. City Superintendent of Public Works (1)
     - 1. Administrative Assistant (1)
     - 2. Building and Engineering (1)
   - B. City Clerk (1)
   - C. City Treasurer (1)
   - D. City Engineer (1 parttime)
   - E. City Attorney (1 parttime)

3. Long Range Facility Development (25,000 population)

   A. New City Hall Facility seperate from Utility Billing Complex: $2,000,000.

      1. Remodel present City Hall for singular usage as billing complex $100,000.

4. Long Range Administrative Personnel Additions (25,000 population)

A.	City Manager	(1)	$ 45,000.
	1. Administrative Assistant	(1)	35,000.
	2. Office Manager	(1)	30,000.
B.	*Director of Public Works	(1)	35,000.
	1. Building Inspector	(3)	25,000.
	2. *Planner	(1)	27,500.
C.	*Director of Utilities	(1)	35,000.
D.	*City Attorney	(1)	40,000.
	1. *Paralegal	(1)	25,000.
E.	*City Engineer	(1)	40,000.
	1. *Draftsman	(1)	20,000.
	2. *Survey Crew	(2)	20,000.
F.	City Clerk	(1)	35,000.
	*City Clerk Assistant	(1)	25,000.
G.	City Treasurer	(1)	35,000.
	*City Treasurer Assistant	(1)	25,000.

Average monthly Total $497,500.

* Indicates new position to be created

LETTER 591 (CONTINUED)

POLICE DEPARTMENT

FORT MORGAN POLICE DEPARTMENT

PHONE 303/867-6578 • POLICE BUILDING • 801 EAST BEAVER AVENUE
FORT MORGAN, COLORADO 80701

HAROLD DAVISSON
CHIEF OF POLICE

TO: Glenn Calvert, City Superintendant

FROM: Harold Davisson, Chief of Police

DATE: January 29, 1988

SUBJECT: Police Department Proposed Expenditures on calculation of City of Fort Morgan 25,000 population

City of Fort Morgan currently has a population of 8,700, according to Colorado Municipal League 1985 Statistics; employs 19 commissioned officers, 6 civilian full time and one half time. Based on a population increase of 25,000 would basically triple the current population.

Using those figures, Attachment A reflects the 1988 current budget and proposed budget tripling the size of the department and 2.1% national average department.

Attachment B shows purposed cost in addition to Attachment A to increase the size of the department on triple and 2.1% national average status.

Currently, we operate on patrol with 2 officers assigned to a car. Command staff, one per car. This has been working well and is a savings in car repair, etc. The current, and a trend, in law enforcement, is a cost saving on long term expenses to go a ratio of one officer per car and that figure is included in the proposal under Attachment A.

Attachment A reflects the costs for one officer per patrol car. The cost of vehicles include the total cost for our current program of 2 on 1 and a 1 on 1 basis. Once this is acheived, then replacement vehicles would be done approximately on a 4 to 5 year period.

HD/jm

Attachments

Attachment A		1988 Current Budget	Proposed Budget @ triple/57 ofc & 16 civilians	Proposed Budget @2.1% natl avg 53 ofc/15 civilians
142130101	Administrative Salaries	$ 560,470	$1,604,540	$1,494,640
142130202	Crime Control MS	500	3,000	3,000
142130212	Criminal Investigation	3,000	25,000	25,000
142130262	Custody of Prisoners	1,500	3,000	3,000
142130273	Warrant Enforcement C	800		
142130402	Misc Travel & Training	10,900	45,000	45,000
142130403	Misc Travel & Training	-0-		
142130512	Telephone & Teletype Comp MS	-0-	7,000	7,000
142130513	Telephone & Teletype Comp CS	7,000		
142130522	Radio Maintenance MS	-0-	7,000 *	7,000(2on1)
142130523	Radio Maintenance CS	3,000		
142130531	Vehicle Maintenance L	5,500	29,000 *	26,769* *
142130532	Vehicle Maintenance MS	9,000		
142130642	Gasoline & Oil MS	16,000	48,000	48,630 *
142130603	Medicare CS	400	1,168	1,088
142130613	Retirement W&R CS	30,000	87,600	81,600
142130623	Health & Life CS	52,500	153,300	142,800
142130633	Workmens Comp Ins CS	26,000	75,920	70,720
142130643	Equipment Allowance C	14,000	53,789	50,105
142130653	Retirement FPPA CS	38,500	115,500	107,395
142130663	Retirement PERA CS	9,000	24,000	22,500
142130712	Heating & Lighting MS	10,500	10,500	10,500
142130721	Building Maintenance L	1,000	1,000	1,000
141130722	Building Maintenance M	10,000	10,500	10,500
142130731	Dog Pound Maintenance L	500	1,000	1,000
142130732	Dog Pound Maintenance MS	6,000	15,000	15,000
142130742	Office Supplies & Expense	9,000	25,200	25,000
142130753	Property & Casualty Ins.	10,500	15,000	15,000
142130783	Jury Trials & Court Expense	500	2,000	2,000
142130793	Unemployment Insurance	1,400	3,936	3,662
142130801	DUP Grant Expense L	-0-		
	Totals for Function	$ 838,770		
Capitol Expense				
142140812	2 patrol cars (replacement)	23,400	55,000 -(5 vehicles)-	55,000
142140822	Emergency Switch Device	600	-0-	-0-
142140832	2 typewriters	1,000	4,000	4,000
	Totals for Function	863,770	2,426,748	2,275,109
142130522	Radio Maintenance MS			
142130523	Radio Maintenance CS		16,662	15,492(1on'
142130531	Vehicle Maintenance L			
142130532	Vehicle Maintenance MS		63,577	59,115 *
Capitol Expense				
142140842	Patrol Vehicles		122,000(11 vehicles)	122,000
	Totals for Department		2,537,187	2,419,286

LETTER 591 (CONTINUED)

Attachment B

		PROPOSED TRIPLE		PROPOSED AVERAGE (2.1)	PROPOSED COSTS
SALARIES		($1,255,467.00)		($1,127,212.00)	
Officers	38 @	832,656.00	34 @	745,000.00	
Civilian	8 @	148,000.00	8 @	148,000.00	
Benefits	46 @	214,864.00	45 @	195,580.00	
Municipal Clerks	3 @	52,416.00	2 @	34,944.00	
Benefits	3 @	11,581.00	2 @	7,688.00	
BUILDING					($340,000.00)
Remodel					150,000.00
Computer					125,000.00
Lab/Darkroom					15,000.00/yr
Office Supplies					50,000.00/yr
VEHICLES		($ 431,670.00)		($ 399,200.00)	($ 35,000.00)
2 person each	26 @	286,000.00	24 @	264,000.00	
Radios	26 @	78,000.00	24 @	72,000.00	
Emergency Equipment	26 @	46,000.00	24 @	43,200.00	
Additional Equipment	26 @	21,670.00	24 @	20,000.00	
Maintenance					35,000.00/yr
ANIMAL POUND					($225,000.00)
New Building					200,000.00
Supplies					25,000.00/yr
UNIFORMS & EQUIPMENT		($ 102,000.00		($ 91,000.00)	
Uniforms & Equipment	38 @	57,000.00	34 @	51,000.00	
Training		45,000.00		40,000.00	
TOTAL		$1,789,137.00		$1,617,412.00	$600,000.00
GRAND TOTAL				$4,006,549.00	
VEHICLES		($ 632,070.00)		($ 565,550.00)	($ 50,000.00)
1 Person each	38 @	418,000.00	34 @	374,000.00	
Radios		114,000.00		102,000.00	
Emergency Equipment		68,400.00		61,200.00	
Additional Equipment		31,670.00		28,350.00	
Maintenance					$ 50,000.00
TOTAL		$1,989,537.00		$1,783,762.00	$615,000.00
GRAND TOTAL				$4,388,299.00	

LETTER 591 (CONTINUED)

AIRPORT

ELIZABETH G. GILBERT
CITY CLERK

CITY OF FORT MORGAN COLORADO

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

UPGRADE FFM AIRPORT

1. Present Condition
   A. Primary Runway (14/32)
      - Instrument approach
      - 5300 foot concrete, 60' wide
      - 30,000 lbs single, FAA approved
      - Medium intensity, pilot controlled lighting
      - Fuel (jet fuel included)

   B. Crosswinds Runways (07/25; 17/35)
      - Dirt strip, 75' wide
      - 07/25; 2600 lf; 17/35, 5000 lf

2. Long Range Development
   (737 type aircraft traffic)
   - Two 10,000lf x 150'w runways
   - Taxiways, apron area, A/C parking
   - Fuel farm
   - Nav-aids
   - Facilities
   - Colo. Hwy 52

   $18 to $20 million

3. Short to Medium Range Development
   - Add 1000lf to existing 14/32
   - Build new 8000 lf x 150 crosswind
   - Taxiway
   - Partial fuel farm
   - Add to existing taxiway, apron, parking
   - Upgrade existing nav-aids
   - Upgrade existing facilities

   $9 million

GAS DEPARTMENT

ELIZABETH E. GILSON
CITY CLERK

DONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

UPGRADE FORT MORGAN GAS SYSTEM

1. Existing System

   110 miles of pipe in a 3.1 square mile area

   3651 active gas meters serving 10,000 population

   3 delivery points from Colorado Interstate Gas Co.

   Gas Contract Colorado Interstate Gas Co.

   (10 MCF maximum daily (SGI contract))

   Plant worth $1,286,414.

2. Long Range Development

   Piping for approximately 8 sq. mile area

   10,000 gas meters serving 25,000 population

   1 or 2 new delivery points

   Re-negotiate new gas contracts

   Additional personnel and equipment

   Larger facilities

   $4,000,000.

3. Start of Development

   Re-vamp existing system where necessary

   Additional personnel and equipment

   Legal consultation

   PUC & DOT - submit request for gas line installation

   $2,000,000.

LETTER 591 (CONTINUED)

ELECTRIC DEPARTMENT

ELIZABETH S. GILBERT
CITY CLERK

GLENN CALVERT
CITY SUPERINTENDENT

DONALD F. EDWARDS
MAYOR

The Electric Department and its' capabilities in relation to the Super Collider. This report is to help provide information to the governing body of the City of Fort Morgan.

The Electric Department, at the present time, services 48.47 miles of distribution line, 3 substations with 37.8 megawatts of total capacity, and 4.5 miles of transmission. With the possibility of added population comes added load. These loads show 52 additional megawatts of capacity (using todays figures). With this added load growth, additional substation transformers will be needed to upgrade existing substations.

As expansion and annexation occurs possiblity of 2 acre sites will need to be purchased for new substations, transmissions, and distribution lines. Along with load growth more equipment and personnel will be needed.

Cost estimates for these facilities along with cost estimates are as follows:

A.	Complete substation	1.7 million
B.	Transmission line	$35,000 per mile
C.	Distribution	2.5 million capital expense
D.	25 more employees	
E.	Minimum wage $35,000 (Payroll 13.4 mill year)	
F.	Equipment $750,000 (digger, trencher etc.)	
G.	60 x 150' storage building $100,000.	

These estimates are based on present day cost.

UTILITY BILLING

ELIZABETH E. GILBERT
CITY CLERK

GLENN CALVERT
CITY SUPERINTENDENT

DONALD V. EDWARDS
MAYOR

PROJECTIONS FOR INFLUX OF 25,000

Effect:

UTILITIES:	Projected Estimates
Cycle Billing:	
Salary & Benefits:	
One Additional Office Manager	$25,000.00
Three Additional Cycle Billing Mgrs.	63,000.00
Eighteen Additional Billing Clerks	89,700.00
Four Employees Floating as:	
Mail Processing	
Communications (Phone)	
Word Processing & Secreterial	72,000.00
Training of New Employees & new equipment	10,000.00
BILLING EXPENSE:	
Regular Expenses	18,000.00
Office Supplies	282,800.00
New Office Equipment	18,987.00
Accounting & Collecting	475,800.00
Meter "Cycle" Reading	95,950.00
Readers Validators(Computers)	8,000.00
Change Meter Supplies to cycle	12,000.00
Billing 6 more terminals units	5,124.00
Second Printer System/36, Mod 2 Printer	
With Additional memory	36,850.00
COMMUNICATION CENTER	
All phone calls would double plus	
our present syestem start with a	
60 unit intake	30,000.00
Office Equipment & Supplies	2,500.00
Employees: Above the "Floating employees	
will also work communications.	

ELIZABETH E. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

P-2

PROJECTIONS FOR INFLUX OF 25,000

MAIL CENTER	PROJECTED ESTIMATES
Employees "Floating" from page will work mail room twice a day. Mail volume three times what it is to day will need the following: 60 pocket area a large letter opening system. A Dumping, opening and reading, sorting area for incoming mail.	12,500.00
Present scale and postage machine could be later replace with the second or larger units.	
WORD PROCESSING CENTER	
A type of seceterial pool: They would work with Judy for correspondence, and do word processing for the other Administrators. Employees: would be drawn from the "Floating" employees to keep them busy.	
Additional Terminal system in Reception area	854.00
Second system in Processing Center	854.00
Word Processing office equipment	4,000.00
Large Equipment Billing	
Six Cash Registers that would post revenues into the computer	30,000.00
Drive Up Windows	
Two additional windows for a total of three area windows.	50,000.00

ELIZABETH E. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Projected Estimates

City Clerks Office

Deputy City Clerk	
Salary & Benefits	23,000.00
City Clerk	25,000.00
To handle the additional Public Relations and personal contact with the projected public. Additional: Licensing: New Plumbers, Electricians, General Contractors, and Liquor establishments Licensing, hearings and additional amusement devices, Auctioneers, Theatre, Bowling Alleys. Additional Word Processer for Deputy and computer programs for: Cemetery Golf Course	9,000.00
Office equipment: Calculators, File Cabnets, storage, Dest and Chairs and accessories	8,500.00
Legal Publication and Notices With the Ordinances, Liquor, annixations, and growth.	90,000.00
Special Elections required	7,500.00
Office supplies on page one.	
Data Processing	36,000.00
Legal and professional advisors for the Clerks Office, & Utility Department	45,000.00

ELIZABETH E. GILBERT
CITY CLERK

DONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

	Projected Estimates
Vault	
A second vault will be needed or a vault twice the present size. Where Clerks could balance revenue out of public view.	_____
Vehicle	
To be used between the Utility Department Heads who would do the banking for the department.	
Mail Room employees to go to Post Office twice a day.	
Clerk and staff and any Administrator who needed a vehicle.	_____
Microfilm Equipment	
With this additional volume of record we would need to microfilm records to save storage and preserve the history of the City.	_____
Estimated with all cost that could occur with installations and possible needed materials, supplies and contingency the total package for immediate projected growth for Communication, Utility and City Clerks Office	$2,000,000.00

WATER DISTRIBUTION AND SEWER COLLECTION

ELIZABETH E. GILBERT
CITY CLERK

RONALD V EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

January 1988

RE: Impact of SSC Project on Fort Morgans Water Distribution System and Sewer Collection System.

The City of Fort Morgan water system serves app. 9000 people through app. 42 miles of main lines. These mains are supplied by thirteen wells pumping directly into the piping system.

The City is in the process of buying Big Thompson water in the hopes of possibly transporting this water to Fort Morgan to supply the residents with a better quality of water. The cost of this water is over 3 million. The cost to deliver this water will be app. 30 million.

Land developers would pay for water and sewer main and service lines, but the City would be responsible for all additional wells necessary to meet the usage demand.

The number of wells needed for the expected growth would depend on the amount of increased demand. If most of the growth was residential, with some small businesses we would need about four (4) additional wells. If some major industrial users were to locate here we could see as many as fifteen (15) wells needed. The cost to add these wells to the system would be app. $70,000. for each well site.

This expected growth would bring the need for additional manpower and equipment for the Water Department. We lack enough manpower now to properly maintain the Sewer Collection lines. This increase in the amount of lines to maintain would require three (3) additional full time employees. The Water Distribution system would need two (2) additional employees to maintain the increased size of the distribution system.

There would be a need for another backhoe and two pickups. Also there would be the need of more storage garage space to keep these vehicles. The cost of these would be app. $150,000.

The increased maintenance and labor costs would mean an app. $400,000. increase in the budget annually.

John Dalrymple

Water Superintendent

LETTER 591 (CONTINUED)

WASTEWATER TREATMENT

ELIZABETH E. GLENNY
CITY CLERK

RONALD V. SINGMANS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

UPGRADE FOR FORT MORGAN WASTEWATER TREATMENT SYSTEM

1. Existing System

   -Approximately 40 mile of piping

   (limited capacity due to slope 0.2%)

   -Existing WWTP 14,000 lbs BOD/day.

   has approximately 2 mgd and 2000 lbs BOD/day remaining capacity

2. Long Range Development

   -Collection system to add major large diameter truck mains

   -Expand lift stations

   -Move WWTP east (?) to new location & evaluate other processes

   $15 million

3. Short to medium range development

   -Expand collection system; install one major large diameter trunk main and plan/design for additional

   -Redesign/rebuild existing lift station; plan/design for additional

   -Evaluate existing WWTP for upgrade

   -Plan/design for new WWTP at new location

   $6 million

FIRE PROTECTION

ELIZABETH S. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Fire Protection for Population on 30,000

Present Station & Equipment

1.	Building	$304,000.
2.	Fire Fighting Equipment	395,000.
3.	Equipment	54,000.
4.	Communications	18,500.
5.	Annual O & M	206,330.
6.	Capital Expense	8,500.
		$986,330.

Short Term

1.	Building	$500,000.
2.	Fire Fighting Equipment	700,000.
3.	Hose	50,000.
4.	Miscellaneous Equipment	250,000.
5.	Annual O & M	250,000.
		$1,750,000.

Long Term

1.	Additional station with additional equipment	$1,750,000. Total
		$3,500,000. S & L Term Total

STREETS AND SANITATION

ELIZABETH S. CALVERT
CITY CLERK

DONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

UPGRADE FOR STREET & SANITATION DEPARTMENT

1. Long Range Development

-Larger storage and maintenance facility

*with business office, dispatch center, & inventory control

*shop w/speciality repair tools/equipment

*covered shelter for equipment

*wash bays

-Plan/design a solid waste disposal facility

-Vehicles and equipment

*Trash trucks and containers

*Dump trucks; 5cy & 10cy capacity

*Street sweepers

*Front end loaders

*Maintainers

*Rollers; steel wheel & rubber tire

*Laydown machine and tar kettle

*Various size pick-up trucks & utility vehicles

-Personnel; trained & general labor

$ 6 million

2. Short to medium range development

-Land acquisition for new shop facility

-Plan/design and start phased construction of shop facility

-Equipment plan/purchase

-Personnel hiring and training

-Landfill handling costs

$3.5 million

3. Streets, curb, gutter, storm drainage

-Phased

-Cost shared w/developer

-City maintained

$40 million

-At Present Sanitation

-Use of County Landfill

-3 trash trucks & 1 backup trash truck

-Approx. 1500 containers

-5 employees

-At Present Street Department

-Small shop capable of minor repairs only

-1 maintainer

-1 front end loader

-1 each steel & rubber tire roller

-1 snow blower

-2 sweepers

-6 5yd dump trucks

-1 street sander-small lay down machine

LETTER 591 (CONTINUED)

PARKS

ELIZABETH S. [illegible]
CITY CLERK

DONALD R. [illegible]
MAYOR

GLENN CALVIN
CITY SUPERINTENDENT

OBJECTIVE

Compare and contrast the Parks Department for the City of Fort Morgan, Colorado as it stands today and plan for future growth in population to 25,000 in relation to new and upgraded facilities, staff and costs.

At the present time the Fort Morgan Parks Department is operating with nine full time employees and five seasonal staff. The Parks Department is responsible for maintaining approximately forty-five acres of turf which is spread throughout the city in parks, ballfields and administrative buildings. Other facilities include a multi-pool complex, two tennis facilities, four playgrounds, two basketball courts, outdoor volleyball courts, a multipurpose outdoor ice ring, horse shoe courts, a fitness course, eight ballfields and a small campground area.

The operating and maintenance budget for the present facilities is approximately $ 383,000 per year. This figure includes other operations carried out by the Parks Department, such as tree pruning, spraying and snow removal. However, this figure does not reflect any capital improvement cost or major repairs which might occur.

While the park facilities are adequate for the present population of 10,000, there are some areas that become quite crowded. The pool facilities are very close to capacity at

certain times during the year. The softball and little league programs fluctuate. One of the present problems that is affecting the main park is lack of space on weekends during the summer months.

To try and meet the needs of an increased population up to 25,000 we have looked at the approximate cost involved in increasing the Parks Department facilities to meet the new demand. Involved in these estimates are variables which cannot be controlled or accurately predicted such as land acquisition, drainage and contractor costs. With this consideration some facilities will be doubled and some receive improvements.

The first area to be looked at will be the actual acreage of park land to be constructed. By looking at the present overcrowding condition it is felt that approximately another forty acres of land should be developed for park facilities. This land would be developed as one large park area and three or four smaller community parks. A cost estimate for park construction is $ 30,000/per acre, which would include curb and gutter, sidewalks, irrigation, sod and other construction costs. Other costs would include restroom facilities, at approximately $ 15,000 per facility and other specielty equipment installed. The total construction cost for development of the forty acres of park land with six restroom facilities is approximately $1,290,000.00.

In order to handle increased demand on the ballfield facilities two different approaches will be used; adding lights to the five little league fields and scheduling more than one game per field. This should handle the extra need. The estimated cost to install lights on a ballfield is $ 40,000 per field. With the estimated number of new softball players that a 25,000 population would generate, a new softball complex would be needed in addition to the two fields the City of Fort Morgan presently uses.

A softball complex would consist of three lighted softball fields with a multi-use building in the center of the three fields. This building would handle concessions, restrooms and other operational facilities. Estimated construction cost include the main building at $ 250,000 - $ 300,000, approximately $ 100,000 per field to include irrigation, lighting and fencing. The total cost for a softball complex will run at approximately $ 600,000, and addition of lights to the little league fields at approximately $ 200,000. The total cost of upgrading the ball field facilities will be approximately $ 800,000.

By doubling the number of tennis courts the City of Fort Morgan presently has to sixteen courts should provide adequately for the new demand. Construction of two new four court facilities in different areas of the city will be considered. At the present time, tennis court construction is estimated at

approximately $ 22,000 per court, with this cost decreasing slightly with more courts built at the same site. A total cost of adding eight new tennis court is approximately $ 176,000.

Other facilities will also need to be looked at as the growth develops. The present pools are older and near capacity. The addition of another outdoor pool is not being looked at presently, renovation of the old pools might be necessary in the near future. A new indoor pool is being considered in the recreation center. Other areas such as volleyball, horseshoes, bike paths, and nature trails are all facilities that would be developed as the city's population increases. These needs are hard to predict, an added cost of $ 500,000 - $ 1,000,000 will be added to the final estimate of growth cost to cover these areas.

With the growth of the parks facilities throughout the city a new centrally located maintenance facility would be needed. At the present time the Parks Department is working out of the north end of the city and must travel into the city to maintain many areas. If the city was to grow to the south more travel time would be added making a less cost efficient operation. With the addition of recreation facilities more staff and equipment will be required to maintain th facilities, demanding more workable floor space than is available in the present maintenance facility. A maintenance complex which would include storage, office space, work areas for equipment and materials would require approximately 7,000 square feet, with a construction cost

estimate of $ 30/per square foot. The total building cost would be approximately $ 210,000, which would not include any additional cost of employee parking facilities.

The result of the increased park facilities along with the additional administrative maintenance areas (police dept., fire dept., city hall and other non park associated landscape areas) will cause a doubling effect on staff and equipment projections. The administrative areas will need a small staff just to handle landscaping maintenance. The tree trimming which is now shared between the Parks Department staff part time, and a contractor, would become the responsibility of a full time forestry staff in the Parks Department. These areas along with the added areas in the parks will require more staff with specialization skills to help run an efficient department. By comparing other Colorado cities with populations around 25,000 it appears that it would require between twenty to twenty-five full time employees and five to seven seasonal employees to maintain the City of Fort Morgan's park facilities.

Along with the increased staff budget the operation and maintenance will also grow on a larger than double scale. With all of the factors previously stated, the cost of fertilizers, repairs to equipment, transportation time, heating and lighting and all of the other factors must be taken into account. In order to provide quality facilities and maintain these facilities

the estimated operating and maintenance budget for a Parks Department to service a population of 25,000 would be approximately $ 1,000,000 per year.

Another cost figure which must be looked into is the additional equipment which would be required for the upkeep of these facilities. The list that follows includes items which would be major expenditures with items such as chainsaws, edgers and other miscellaneous tools and equipment lumped in the miscellaneous category.

NUMBER OF UNITS	TYPE UNIT	EST. COST
1	350 D Mower	$ 35,000.
2	72 Mowers w/sweepers	$ 30,000.
5	Push mowers	$ 2,500.
3	Weedeaters	$ 1,200.
2	Utility Carts	$ 20,000.
1	Sweepster	$ 14,500.
1	Tractor	$ 20,000.
1	Aerator (pull behind)	$ 7,000.
7	Pickup trucks 1/2 Ton	$ 63,000.
1	Pickup Truck 3/4 Ton 4x4 with plow	$ 20,000.
1	Loader	$ 45,000.
1	Dump Truck	$ 35,000.
1	Trencher with backhoe	$ 50,000.
2	Trailers	$ 5,000.
	Miscellaneous	$ 25,000.
	TOTAL	$373,200.00

The total estimated cost for required equipment is $ 373,200.00 to be added to the present Parks Department equipment inventory.

CONCLUSION:

This information will show where the Parks Department is today and where the department will need to go to accommodate an increased population of 25,000. The information provided in this report is based on projected needs with projected cost figures. It is difficult to predict some variables which can occur in construction costs such as land cost, materials, soil problems and other factors. However, I feel this material is an accurately fair estimate of the effect a sudden rise in population to 25,000 would cause. The facility and equipment costs are summarized as follows:

FACILITY & EQUIPMENT COST SUMMARY

Construction Costs Development - 40 Acres	$ 1,290,000.00
Ballfield Facilities	$ 800,000.00
Tennis Court Costruction	$ 176,000.00
Volleyball/Horseshoe/ Bikepaths, etc..	$ 750,000.00
Maintenance Building	$ 210,000.00
Equipment	$ 373,200.00
TOTAL	**$ 3,599,200.00**

The cost to bring the Parks Department facilities and equipment up to meet the demand of an estimated 25,000 population is approximately $ 3,599,200.00. This figure does not include the cost and maintenance of a recreation center. To operate and maintain these facilities after construction will cost the City of Fort Morgan approximately $ 1,000,000 per year.

Respectfully submitted,

Robert P. McGann
Parks Superintendent

RECREATION

ELIZABETH E. GILBERT
CITY CLERK

RONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

Upgrade City Recreation Program

(Facility needs such as ballfields, tennis courts etc. will be addressed in the Parks Department Upgrade)

The Recreation Department consists of a group of summer programs, with an emphasis on child participation. Winter recreation is severely limited due to available space.

The staff for the present Recreation Department is one (1) parttime director and volunteers. The Senior Citizens is served by a parttime coordinator.

Any long range development plan must include the following major items: Program costs and subordinate personnel expenses would be added to the costs below.

1. Facilities : Estimated cost
   - A. Community Center: This would have a Senior Citizens Center,Recreation Center, and some amount of cultural center for conventions, theatre, and music.
     Est. cost $6,000,000.
   - B. Purchase and remodel of the "Armory Building":
     Est. cost $500,000.
2. Fulltime Staff (figures represent annual salary)
   - A. Recreation Director $35,000.
   - B. Assistant Director 22,000.
   - C. Senior Center Coordinator 22,000.

     $79,000. annually

GOLF COURSE

LETTER 591 (CONTINUED)

ELIZABETH E. GARRETT
CITY CLERK

GLENN CALVERT
CITY SUPERINTENDENT

FORT MORGAN MUNICIPAL GOLF COURSE

PRESENT STAFF:

Maintenance
1 Golf Course Superintendent
1 Fulltime Mechanic
3 Fulltime Laborers
4 Part Time Laborers

Pro Staff
1 Golf Pro
2 Assistants

18 Holes - Public
Driving Range & Practice Green
Pro Shop
Snack Bar

The Fort Morgan Municipal Golf Course was given to the City of Fort Morgan, by the Country Club, in 1946.
Front nine rebuilt...1946 - 1949
Opened for play in June 1949
Back nine rebuilt....1963 - 1965
Opened for play in June 1965
The greens were not built to the U.S.G.A. standards

The estimated cost of rebuilding to accommodate the expected increase in play would be ..... 1.8 million

This figure includes the redesigning and construction of the areas listed below:

Greens Tees Fairways Driving Range Practice Green Parking
Service Roads Etc.

Also the addition of the following:

Lakes & Streams (also to be used for the irrigation)
Sand Bunkers - fairway and green
Etc.

We would also be interested in the construction of a new 9 hole regulation golf course, at an estimated cost of ..... 1.3 million .

LETTER 591 (CONTINUED)

CEMETERY

ELIZABETH C. PALMERT
CITY CLERK

RONALD E. TOMLANOVICH
MAYOR

GLENN CAMPBELL
CITY SUPERINTENDENT

FORT MORGAN CEMETERY - Projected Cost for Future Development

Acquisition of 12 acres of land at $2000/acre

$24,000.

Cost for land development

A.	ground preparation	$ 20,000.
B.	sprinkler system	120,000.
C.	roadways	60,000.
D.	sidewalks	10,000.
E.	lighting	30,000.
F.	seed & labor	3,000.
G.	lot preparation	7,000.
		$250,000.

Present maintenance equipment on hand

A. 1 dump truck

B. 1 pickup

C. 1 backhoe/loader

D. 1 cement mixer

Additional maintenance equipment needed

A.	Shop addition	$ 45,000.
B.	1 dump truck	15,000.
C.	1 pickup truck	10,000.
D.	1 backhoe/loader	30,000.
E.	1 cement mixer	3,000.
		$103,000.

Turf care equipment on hand

A. 62" toro mower
B. 52" toro mower for trade
C. turf vac
D. Walker trim mower
E. 36" snowblower

Additional turf care equipment needed

A.	72" mower	$ 10,000.
B.	utility cart	9,000.
C.	turf sweeper	9,000.
D.	Walker trimmer	5,000.
E.	spray/aerator	3,000.
F.	snowblower attachment	5,000.
		$ 41,000.

Yearly maintenance increases

A.	short term develop.	$ 4,000.
B.	miscellaneous	2,000.
C.	garage & tools	1,000.
D.	general maint. account	20,000.
E.	maint. labor account	2,000.
F.	foundation materials	1,000.
		$ 30,000.

Funeral equipment on hand

A. 1 lowering device
B. 1 tent & chairs

Additional funeral equipment needed

A. 2nd lowering device

B. 2nd tent & chairs

C. frost cover

Office expansion

A.	computer	$ 5,000.
B.	files & cabinets	1,000.
C.	office addition for customers	20,000.
		$ 26,000.

Salaries, personnel

A.	addition of 1 full time employee-at present we have 4	$ 10,800.
B.	2 additional seasonal employees-at present we hire 5 in the summer	$ 20,800.

LETTER 591 (CONTINUED)

LIBRARY

ELIZABETH E. GILBERT
CITY CLERK

DONALD V. EDWARDS
MAYOR

GLENN CALVERT
CITY SUPERINTENDENT

FORT MORGAN PUBLIC LIBRARY

Broad Plan for Expansion in View of Super Collider

1. *Additional Space Cost $500,000.*

   (Present space - 14,000 sq. ft. in Library-Museum complex)

   A. Museum

   B. Basement

   C. Lobby for circulation area

   D. Added square footage on south side of building

   E. Expanded parking (perhaps east side)

   F. Larger conference room

2. Additional Furniture and Equipment Cost $500,000.

   A. Stacks

   B. Study carrels

   C. Elevator

   D. Computers and terminals

   E. Typewriters

   F. Modems

   G. Telephones

   H. Printers

   I. Telefacsimile machine

   J. Desks, chairs, tables

3. Additional Staff Cost $170,000.

   (Present staff - 7 full-time; 2 part-time)

   A. Two subject specialists (reference and ILL)

   B. Young adult librarian

   C. Assistant for children's librarian

   D. Public relations/grant specialist

   E. Clerical and/or support staff (2)

   F. Janitor

4. Security System Cost $10,000.

   (No security system at present)

5. Automation Cost $300,000.

   (Present - manual check-out system with card catalog)

   A. Public access terminals

   B. Automated circulation system

   C. Phone lines

   D. Rewiring

   E. Supplies (bar code labels, retrocon, light pens, etc.)

6. Programming Cost $5,000.

   A. Adult programs

   B. Children's programs

   C. Young adult programs

7. Expanded Collection Cost $30,000.

   (Present - approximately 44,000 volumes)

   A. More in-depth books in science, reference

   B. General non-fiction

   C. Fiction

   D. Magazines

8. AV Collection Cost $10,000.

   (Present - 500 records, cassettes, talking books; no videos; no compact disks; no software)

   A. Videos

   B. Compact disks

   C. Compact disk players

   D. Video camera

   E. Talking books, cassettes, records

   F. Computer software

9. Additional Hours Cost - expense of utilities

   (Present - 68 hours winter; 64 hours summer)

   A. Open one more hour at night

   B. Friday evenings

LETTER 592

September 26, 1988

Wilmot Hess, Officer of Energy Research
Task Force for the Super Collider
ER-65
Department of Energy
Washington, D.C. 20545

Dear Mr. Hess:

After reviewing the Draft Environmental Impact Statement for the Superconducting Super Collider, several questions and comments have developed and need clarification. They are as follows:

1 1. The Fermilab in Illinois is used as a basis for determining waste generation, dose assessments, air emissions, soil and groundwater contamination for the Colorado proposal. Please submit the Annual Environmental Monitoring Data from the Fermilab for the community to review.

2 2. The potential for a "full beam loss" of ionizing radiation with the possibility of airborne radioactivity, soil and groundwater activation, muon penetration downstream from the beam absorbers is discussed in your proposal,and you state that the Fermilab never experienced this. Describe the scenario in detail if this occurs. Where is this beam lost to? A description and analysis of the beam loss to well water is mentioned but no data for airborne radioactivity, and soil activation. Does groundwater act as the shield, thereby contaminating it with tritium and Sodium 22? Please discuss Figure 12.2.3-5 depicting migration of radioactivity to wells. Will there be wells specifically designed to capture the beam and is this what you describe as "plug-flow"? Is there a difference between "full beam loss" and "beam loss"? DEIS Volume IV Appendix 12 page 85

3 3. Your reference to the National Commission for Radiation Protection's data for average background radiation being 360 mrem for the U.S. needs your closer attention. According to an Annual Monitoring report by Rockwell International for the Department of Energy, your data is incorrect nationwide. Colorado may experience the exposure you report of 360 mrem, since we factor twice the national average for background radiation. Please submit the NCRP's data for background radiation. Also, please explain a quote from the D.O.E guide entitled *A Guide to Reducing Radiation Exposure to As Low As Reasonably Achievable (ALARA)"Radiation-induced mutations and diseases have not been discovered in populations that are or have been exposed to doses of 100 mreme/yr or less. Hence, it is reasonable to suggest that no health effects will be discerned if a population is exposed to an additional 1 percent of the level: i.e. 1 mrem/yr. An annual dose of 1 mrem should be regarded as a level which is clearly deminimis."

4 4. Neutron Skyshine (radiation doses outside at ground level and at some distance from the source) was vague in your description, not explaining whether it was penetrating to

material or not (gamma, beta, alpha etc.) and "the effects to the public were to be determined after site selection" is not a reasonable position for the public's review. Please explain. Appendix 10 DEIS p. 24

5 5. Ventilation is being considered every 5 miles of the tunnel utilizing exhaust fans. Radioactive particles will be vented as a result of this project; what monitoring devices will be in place to measure the noxious gases being generated, and why is there no mention of H.E.P.A. filters to reduce air dispersion of the radioactive particles? Appendix 10 DEIS p.30

6 6. Why is the tunnel closed without ventilation for an extended period of time and then ventilated prior to entry by maintenance personnel? p.36

7 7. The DEIS states that loss of beam can activate (contaminate) the soil and groundwater surrounding the collider tunnel with various radionuclides. What are the nearest groundwater wells in the community, and the surface waters from the radioactive leachate will be affecting what water sources nearby?

8 8. Why is it assumed that the Low-Level Radioactive Waste will be shipped to Richland, Washington until a designated state site is chosen? Could this be indefinite? Montrose Colorado has been selected as a proposed site in Colorado, and recently the County Planning commission passed a resolution for disapproval of the low-level nuclear waste facility in their county.

9 9. Interaction halls are below ground, or in the case of Arizona and Colorado provided with 30ft of shielding. The interaction hall in Colorado is above ground but a minium cover of 30 ft. has been proposed. Please explain why Colorado is being proposed for above ground?

10 10. No data has been reported for an accident scenario for this project. Dose calculation was submitted, but actual releases to the air, water and soil should be determined and addressed.

11 11. "The radionuclides of significant quantity released from exhaust fans of the tunnel and interaction region include H-3, Be-7, C-11, N-13, P-15, Cl-39, Ar-41, and Rn-222 and is decay products. Pb-214 and Bi-214 are the only two Rn-222 decay products released in significant quantity and are addressed. Most of these radionuclides are in gaseous form, except Be-7, Pb-214, and Bi-214 which are particulates suspended in air. Health risks to people from radiation exposure are determined not only by the release rate of radionuclides but also by the environmental concentrations and intake rate by ingestion and inhalation."

Please explain the toxicity of these radionuclides reported in this section? Your tables on DEIS Volume IV appendix 10 p.86 indicate that curies of some of these radionuclides will be released annually.

12 In this same section you state "particulates and reactive or soluble gases deposit on ground or water surfaces through dry deposition and scavenging. A fraction of the radionuclides may enter the food chain through vegetation, milk, and beef, and be ingested by people. The agricultural use of

land around the proposed sites was estimated based on the observations during the site visit. The default values used in the assessment are listed in Tale 12.2.3-2 Please define scavenging, and what default values are.

12. "RADRISK.BCD is a file containing dose-risk conversion factors for 502 radionuclides for the use of DARTAB" The data used includes dose-risk factors for both 50-year and 70-year internal disposition" Please explain the file being used to determine
13 safe doses to the public, who compiled this data (D.O.E., E.P.A.?) and explain the 50 year/ vs. 70 year exposure to the public. You mention that Cl-39 is not in this list, but compare and estimate its health risk to a similar radionuclide (Br-84). What is the reason for this? DEIS Volume IV appendix 12 p.14

13. "Based on the experimental activities at Fermilab and CERN, it is anticipated that detectors built for SSC experiments could include the use of flammable/toxic gases and possibly other hazardous materials, such as depleted uranium. Information obtained from Fermilab indicates that flammable gases are commonly used in experimental areas. Hence, the threat of fire is a constant hazard since high voltage is an intrinsic part of the physics experiments and can provide a "ready" spark source if there is any fault in equipment design, installation, or
14 operation. " DEIS Volume IV appendix 10p.108 "Possible sources of fire in the SSC tunnel during normal operation are power and signal cables, transformers, and the electric transporter cars. Design information indicates that very little of the material in the collider components will support combustion. Therefore, only a small chance exists that a fire will break out during normal operation." No information is reported in the E.I.S. of "ALL" radionuclides, chemicals/hazardous materials that will be used as well as quantities determined. Why would depleted uranium be used and why is there an obvious contradiction for the potential for fire?

This Environmental Impact Statement was written very poorly. Most areas were vague and difficult to interpret for community impact. I have reviewed many E.I.S. reports that clearly defined the purpose and process and I am disappointed in this D.O.E. documentation. Aside from my personal comments, I look forward to responses to a few of my inquiries. Thank you.

Sincerely,

Joan Seeman

Joan Seeman
Committee Against Radiotoxic Pollution
613 Larkbunting Dr.
Ft. Collins, Colorado 80526
303-226-4658

c/c
Governor Roy Romer
Rep. David Skaggs
Rep. Hank Brown
Senator Tim Wirth

LETTER 592 (CONTINUED)

Senator Bill Armstrong
Rep. Pat Schroeder
Rep. David Bath
Kim Grice, CARP
P.Eleison-Gardiner, Concerned Health Technicians for a Cleaner Colorado
Sue Hurst, Networking Colorado
Adrienne Anderson, National Toxics Campaign
Mark Collier, Sierra Club, Rocky Mt. Chapter Chair
Lewis McCool, Sierra Club, Conservation Chair
Dr. Harvey Nichols, Lauren Swain, Haz Waste Committee
Pam Wheldon, Concerned Citizens of Eastern Colorado
Dr. Tom Vernon, CDH
James Scherer, E.P.A.

LETTER 593

September 29, 1988.

TESTIMONY AT THE COLORADO EIS HEARING

by: Uriel Nauenberg Uriel Nauenberg

We are meeting here to continue the dialogue between the DOE, the local community, and the state about the possibility of locating the Superconducting Super Collider laboratory (the SSC) in this region of the United States. The construction and operation of this laboratory is such a vast undertaking that it is hard to visualize the process by which this will be accomplished. In addition, the consequences of this laboratory for the region in which it is located are major. Hence, it is important that this dialogue be thorough and no issues be left out.

The development of the field of research known as " High Energy Physics" in the last forty years has been staggering. The information that we have gathered about the most elementary particles in our universe and how they interact has been so comprehensive as to dwarf any previous period in history which we would recognize as furthering any form of knowledge. This present period of development with the concommitant construction of ever better and larger accelerators has occurred under the leadership of the various agencies of the federal government which, after many changes in name, are presently known as the Department of Energy and The National Science Foundation. They are to be commended for their succesfull leadership and guidance in this effort.

We are at the threshold of the government's approval of the construction of the SSC, an accelerator which will increase the energy of particles to such high values that their collisions should produce the new states of matter whose existance we surmise but must prove. We must do this in order to further our understanding of how the universe developed in the very early stages of its formation. The undertaking of the proposal to construct this laboratory under the direction of the DOE, has created a great deal of national attention because of

IIA.1- 979

its scientific goals, implications of world scientific leadership, and, not surprising, because of the large federal expenditures that this project would require. As a result, you, the DOE, have carried out a very extensive series of reviews and discussions with the states in which this laboratory may be located in order to insure the success of every aspect of this project. I want to congratulate the DOE team on how well this process has been progressing. Nevertheless, I must quickly reassure our DOE colleagues present here that I am here not only to congratulate them but to also point out to them, if I am may be so bold, the incorrectness of some of their concerns relative to the Colorado site as expressed in their EIS report and to bring out some other points which I and some of my colleagues in this field of research feel are extremely important and relevant to the successful construction and operation of the SSC laboratory. These new points have not been widely discussed as far as we know, in spite of our prodding, and I want to use this opportunity to bring them to your attention.

The state of Colorado chose to begin the study of the location of a site extremely early in the process, about six years ago. As a result, we had enough time to carefully weigh all the issues that should affect such a site. Our choice of the present site, among the many studied, was carefully chosen to maximize the success of the construction and operation of the SSC in this region. The reasons for this assertion follow and I ennumerate them:

2 1)It is not accidental that we chose a site, and we worked hard on its detail location and tunnel orientation, so that the detector halls are as close to the surface as possible. The latest design , not presented in the original proposal but discussed in our latter documentation to the DOE, shows that we can have the beam tunnel height at 50 ft. below the surface in the region of the collider halls. The importance of having the detectors located near the surface seems not to have received sufficient attention in the evaluation of all the final sites. Many of my research colleagues and I, during the 1988 Snowmass meeting, came to the conclusion that having the detectors near the surface is very important for the following reasons:

1. Access to the floor of the detector hall is much simpler and, therefore, faster. For example, it can be accomplished by a simple graded road.

2. Bringing in and putting together the various elements of the detectors should be much simpler and, hence, cheaper. We must remember that the estimated cost of construction of all the detectors is about $ 1 billion. Reducing this cost would be a benefit to all.

3. Although it is not a pleasant topic to bring up, the possibility of the usual type of accidents that occur in the construction of large structures can not be dismissed. We cannot eliminate the possibility of accidents but we can entirely reduce the consequences of such. A shallow location of the detector halls reduces the access time of properly trained personnel and appropriate equipment. Hence, it not only minimizes the risk to the workers in the area, but also reduces the magnitude of damage to the expensive detectors as well.

4. At the risk of being repetitious, the safety aspects of the personnel working in the detector halls can not be minimised!! There is no doubt that their safety is far better if they have a direct exit to the outside through doors or short stair spans when compared to the problem they face if they are located 200, 300 or more feet below the surface.

All the issues mentioned above lead to the essential point that it is far better to have the detector halls near the surface than deep. I hope that you, the members of the DOE team, will make your colleagues aware of these concerns. We hope that the DOE, during their deliberations that will decide where to locate the site, will give this issue appropriate attention.

3 II)The geology of the Colorado site is superb. This should make the construction of the tunnel simpler, faster and, therefore, cheaper. Let's face it, in a time of budget constraints, anything we can do to make the construction cheaper is very worthwhile. Also, we, the older generation, are not getting any younger and would like to see this lab up and running before the younger generation makes

us sit on rocking chairs. In any case, the quality of the geology of this site has been recognized by everybody in the scientific, and geologic community. Hence, I will not belavor this point.

iii)The EIS report indicates some flooding concern about the presence of Badger creek near the various booster accelerators which are within about thirty feet of the surface and near the campus. This concern clearly does not reflect the realistic conditions in the area. First, let me point that the last time there was a major flood in the Badger creek area was in 1935. Second, the magnitude of that flood was such that the water covered a width of at most one thousand feet at a depth of at most four feet. Third, such a flood occurred because there were no flood mitigating structures in the area. In our proposal, we discussed the design and construction of a large reservoir upstream of the location where the Badger creek approaches the campus. In addition, the flood occurs because of the water collection characteristics of the area far south of the site. Hence, the construction of a few water retaining ponds or levies strategically located would make the chance of a flood negligible and, in fact, enhance the natural characteristics of the region. Therefore, we feel that we have addressed this issue with more that an appropriate solution and the EIS report should point that out. 4

iv)We have heard a great deal about the importance of locating the laboratory near large habitats to minimize the social impact of the laboratory on the community. Although I agree that this is an important issue, there is another critical aspect of location that seems to have received little attention and that I would like to bring out. We have heard continuously for the last decade that the technological and economic development in our country is lagging behind that of the Pacific basin. The importance of the SSC to the technological and economic development of the United States and the area in which it is located is well recognized. This issue is of utmost importance. We believe that the location of this laboratory in Colorado, near one of the most beautiful scenic areas of this country, near a new major international airport, near a triving major educational and technological community, and with enough space available to allow for a healthy 5

and orderly growth, is such as to maximize this development from the mountain range to the eastern planes. I urge the DOE to include such an important issue as a crucial parameter in its deliberations.

v)Finally, let me present you my view of the Akron, Brush, and Fort Morgan communities. I have had the priviledge to interact with them for quite a few years in this project. A great number of their members have supported and worked hard on behalf of the state to bring this project to their neighborhood. This is a remarkable indication of their farsightness, acceptance of new ideas, and hope for their future. This support, which I can assure the DOE will continue, comes because of their recognition that this laboratory will enhance their environment, their educational efforts on behalf of the younger members of their community, and their technologically based industry. I was pleasantly surprised by many of their questions inquiring about the research that is going on in this field of work. Clearly, education is crucial to these communities. This is reflected by the quality of their schools (with strong national SAT scores), and the Fort Morgan and Northern community colleges. As you are well aware both the University of Colorado in Boulder and the State University in Fort Collins have strong collaborative efforts with these schools. At the same time the state will actively support the location of a high energy institute with the dual task of becoming a center for education and detector development. I should also point out that these communities are concerned that they not loose the pastoral surroundings that they cherish and will so plan to control the local development. All these issues have been thoroughly discussed and I feel that we can assure the DOE of the utmost support from the local community and the State if the laboratory is located in this region.

6

There is only left for me to express our gratitude for the many hours that you, members of the DOE SSC Task Force, have spent with us, and we hope that our hospitality made your work with us enjoyable. We hope that you find the issues brought up here important and that you will consider them in your decision process.

LETTER 594

STATEMENTS PRESENTED AT
THE DOE COMMITTEE HEARING ON SEPTEMBER 29, 1988
BY: DR. JACK GECKLER, SUPT. OF SCHOOL DISTRICT RE-3
FORT MORGAN, COLORADO

References regarding the impact of the SSC Project on public services such as the public schools in Vol. 4, Appendix 14 of the EIS are overstated. Terms such as "boomtown" effect, "substantial" impact, and "unlikely to absorb" cast unsubstantiated doubt on the ability of area school districts to comfortably accommodate the projected increase in enrollments.

The EIS projects a peak increase of 704 persons in the 5-17 year old age range in 1992. The school districts that will be most directly impacted by the SSC have previously accommodated much larger numbers than that with existing facilities.

1 Peak enrollment in the Ft. Morgan School District was approximately 3400 students in the 1970's. Enrollments as of September, 1988, were 2730. That is a difference of 670 students--far greater than the increase of 420 students projected for the Ft. Morgan School District in 1992.

Core facilities, such as libraries, cafeterias, and auditoriums will be more than adequate to accommodate the projected increase. Current plans also call for the renovation of one elementary school and construction of new library/media centers at three elementary schools during the summer of 1989. I want to assure you that we can comfortably accommodate the new students.

In addition to good facilities, we have a comprehensive curriculum. Our instructional staff is prepared to offer an academic program that will challenge the children of the scientists and technicians who will be working at the SSC site. We are also exploring the use of satellite networks and an early admission program with Morgan Community College to expand course options for students.

We feel we are a good school district. But, more important, we want to get better. Our staff development program is one of the best in the State.

We are excited about having the SSC located in N. E. Colorado. If the DOE Committee is looking for a community that provides quality education for kids, Ft. Morgan is the place to live and the best site for the SSC.

LETTER 595

Oct. 11-88

Dear Dr. Hess,

I am a resident of Kenville, Fl. I do not want the SSC to be built in Fl. I think you should be very
1 careful in your decision of where the SSC should be built.

First of all the impact of the SSC on the people of Fl. will be tremendous, according to the chart listed in the
2 EIS Volume 1 - Chapter 3-31. The total of relocation of residences are 160 residences versus 4 residences in Arizona. That is a very large difference.

Second of all the impact of the SSC on the prime farmlands of Fl. will also
3 be tremendous, according to the statement and chart listed in the EIS Volume 1 Chapter 4-76 + 77. In reference to the Oct. 8-88 article in the Chicago Tribune (newspaper). This is the 1st. year in history Fl. will produce less grain than it will consume. Right now our farming neighbors in Kenville are averaging

40 bushels of soybeans to the acre. They are also averaging 100-150 bushels of corn to the acre. It has just ended a near drought growing season. The SSC will be affecting from 6,500 - 5,200 prime farm land. In Arizona the actual prime farmland affected is less than 500.

People are important and food is one of the important factor for survival. If there did not exist you would not need the SSC.

If the SSC is all that important and has to be built then there should have never been any contest in the first place, Arizona should have been chosen in the very beginning.

4

I hope & pray you will make the right choice. (I will be praying for you)

Thank you for taking the time to read this.

Sincerely A. Larson
Danville, Il.

LETTER 596

TESTIMONY - DEPARTMENT OF ENERGY

SEPTEMBER 29, 1988

ADEQUACY OF FINANCIAL RESOURCES TO ACCOMODATE THE HOUSING NEEDS RESULTING FROM THE CONSTRUCTION AND OPERATION OF THE SSC PROJECT

MY NAME IS MIKE BERRYHILL. I'M PRESIDENT OF MORGAN COUNTY FEDERAL SAVINGS AND LOAN IN FORT MORGAN. I WOULD LIKE TO REVIEW THE ANTICIPATED HOUSING REQUIREMENTS WHICH WILL BE DIRECTLY ATTRIBUTABLE TO THE SSC PROJECT. THEN I WILL DISCUSS THE AVAILABILITY AND ADEQUACY OF THE FINANCIAL RESOURCES WITHIN MORGAN COUNTY TO ACCOMMODATE THOSE HOUSING REQUIREMENTS.

ACCORDING TO THE ENVIRONMENTAL IMPACT STUDY, THE SSC PROJECT IS EXPECTED TO GENERATE AN AVERAGE OF 3,500 DIRECT CONSTRUCTION JOBS DURING ITS ESTIMATED EIGHT-YEAR CONSTRUCTION PERIOD, WITH A PEAK OF 4,000 JOBS IN 1992. THIS IS APPROXIMATELY DOUBLE THE PEAK NUMBER OF CONSTRUCTION
1 WORKERS EMPLOYED DURING THE CONSTRUCTION OF THE PAWNEE I POWER PLANT IN BRUSH ABOUT A DECADE AGO.

THE ENVIRONMENTAL IMPACT STUDY PROJECTS THAT OF THE 3,500 to 4,000 JOBS CREATED, 900 WILL BE HELD BY BASELINE RESIDENTS WHILE NEARLY 1,200 WILL BE HELD BY IN-MIGRANT RESIDENTS DURING THE 1992 PEAK YEAR. THUS, 900 LOCAL RESIDENTS WILL BECOME A PART OF THAT WORKFORCE, AND 1,200 WORKERS WILL MOVE INTO OUR COMMUNITY ON A PERMANENT BASIS, AT LEAST DURING THE LIFE OF THE CONSTRUCTION PROJECT. THIS FURTHER TRANSLATES INTO THE ARRIVAL OF ABOUT 800 NEW FAMILIES AND 400 SINGLE WORKERS. THE STUDY ALSO ESTIMATES THAT SOME 950 HOUSING UNITS WILL BE NEEDED TO ACCOMMODATE THOSE 1,200 WORKERS AND THEIR FAMILIES, EITHER IN THE CAPACITY OF RENTERS OR HOMEBUYERS.

ASSUMING THE SSC WORKFORCE WILL POSSESS SOCIO-ECONOMIC CHARACTERISTICS SIMILAR TO THE PAWNEE PROJECT, THE MAJORITY OF THE NON-RESIDENT WORKFORCE, NUMBERING ABOUT 2,000 DURING THE PEAK PERIOD, CAN BE EXPECTED TO BE VERY TRANSITORY. WE WOULD EXPECT OVER 80 PERCENT TO COMMUTE ON A DAILY BASIS, AND THE REMAINING 20 PERCENT TO COMMUTE ON A WEEKLY BASIS. THE WEEKLY COMMUTER WILL, OF COURSE, IMPACT THE VARIOUS FORMS OF RENTAL HOUSING.

FROM THESE PROJECTIONS, WE HAVE CONCLUDED THAT THE NUMBER OF CONSTRUCTION WORKERS EXPECTED TO RELOCATE TO MORGAN COUNTY ON A PERMANENT BASIS, AND THOSE COMMUTERS WHO WILL BE IN NEED OF RENTAL HOUSING ON A TEMPORARY BASIS, WILL PRODUCE A VERY SIGNIFICANT, BUT NOT OVERWHELMING IMPACT ON HOUSING DEMAND IN OUR COUNTY. WE BELIEVE THAT PRESENT AND FUTURE INVENTORY OF HOUSING UNITS FOR SALE AND FOR RENT, TOGETHER WITH A GENEROUS INVENTORY OF NEARLY 1,200 DEVELOPED AND/OR PLATTED BUILDING SITES, MOST OF WHICH ARE LOCATED IN FORT MORGAN AND BRUSH, WILL BE MORE THAN ADEQUATE TO ALLOW FOR A REASONABLE, ORDERLY AND TIMELY ABSORBTION OF THE NEW POPULATION.

MORGAN COUNTY'S FINANCIAL RESOURCES ARE ASSUREDLY MORE THAN ADEQUATE TO MEET ANY POTENTIAL INCREASE IN HOUSING DEMAND RESULTING FROM THE SSC PROJECT. THE COUNTY HAS THREE LOCAL SAVINGS AND LOAN ASSOCIATIONS AND SIX COMMERCIAL BANKS WITH COMBINED ASSETS OF $368 MILLION. THE PRIMARY COMMERCIAL BANKS ARE EXPERIENCED IN LAND ACQUISITION AND DEVELOPMENT FINANCING, PROVIDING THE CAPABILITY OF HANDLING MAJOR NEW SUBDIVISION DEVELOPMENT AND EXPANSION. THE BANKS ARE ALSO EXPERIENCED IN CONSTRUCTION LENDING, WITH SOME BANKS ALSO ACTIVELY PROVIDING PERMANENT HOME FINANCING.

LETTER 596

THE SAVINGS AND LOAN INSTITUTIONS ARE ESSENTIALLY SPECIALISTS IN HOME FINANCE AND PROVIDE AN ASSORTMENT OF HOME MORTGAGE PRODUCTS IN THE FORM OF CONVENTIONAL AND FHA LOANS FOR SINGLE-FAMILY DWELLINGS, CONDOMINIUMS, TOWNHOMES, AND MULTI-FAMILY DWELLINGS. AND, MORTGAGE BANKING FIRMS FROM THE FRONT RANGE CAN ALSO BE EXPECTED TO CONTINUE THEIR PRESENCE IN THIS MARKETPLACE, COMPETING WITH LOCAL LENDERS FOR A SHARE OF THE NEW MARKET. LOAN PRODUCTS WILL INCLUDE A VARIETY OF FIXED-RATE AND VARIABLE-RATE LOANS. LOCAL LENDERS HAVE ACTIVELY PARTICIPATED IN VARIOUS HOUSING REVENUE BOND PROGRAMS, ESPECIALLY WITH THE COLORADO HOUSING AND FINANCE AUTHORITY, IN PROVIDING SPECIALIZED, BELOW-MARKET FINANCING FOR FIRST-TIME HOMEBUYERS.

THE MORGAN COUNTY FINANCIAL COMMUNITY WELCOMES THE VERY MEANINGFUL ECONOMIC IMPACT THAT WILL RESULT FROM THE SSC PROJECT, AND IT LOOKS FORWARD TO MEETING THE CHALLENGE OF ACCOMMODATING THE RELATED HOUSING NEEDS.

IF THE DEPARTMENT OF ENERGY WOULD LIKE ANY ADDITIONAL INFORMATION TO FURTHER SUBSTANTIATE THE COUNTY'S ABILITY TO MEET THIS CHALLENGE, WE WILL CERTAINLY BE AVAILABLE TO PROVIDE THE NECESSARY ASSISTANCE.

THANK YOU.

LETTER 597

Adams County
Colorado

WE
HAVE A
VISION

Planning and
Development
Services
4955 East 74th Ave.
Commerce City, CO
80022-1538
(303) 287-5249

Board of County
Commissioners

Lee M. Younger
District 1

Steven E. Cramer
District 2

Harold E. Kho
District 3

September 29, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Department of Energy
Washington, DC 20545

Attn: SSC DEIS Comments

Dear Dr. Hess:

The Adams County, Colorado Department of Planning and Development Services has reviewed the Draft Environmental Impact Statement for the Superconducting Super Collider Project and has the following comments:

1 1) The socioeconomic impact of the SSC and related development has been portrayed as negative upon Adams County. On page 58 of Volume IV Appendix 14, the DEIS states that the SSC would "lead to adverse socioeconomic impacts." In Table 14.1.3.2-15, on page 90 of that same volume, it is shown that Adams County will suffer a negative economic impact in the first four years of the project. Although the County reaps a financial benefit of $1,600,000 in 1992, the impacts generally decrease in the ensuing years of the project.

The information in this table and the conclusions reached from an analysis of this information are misleading for two reasons. First, it is assumed that the County will be negatively impacted financially because of the cost of constructing "infrastructure improvements required to accommodate SSC-related growth." (p. 89) Though it is true that infrastructure needs to be constructed to accommodate this induced development secondary to the development of the SSC itself, the County would not bear these costs. Development is required to "pay its own way"; it would be the developer who would make the vast majority of the road and utility improvements.

Second, the table shows no personal and real property tax income for Adams County after the SSC is turned over to the Federal government in 1996. This is inconsistent, for if there are infrastructure costs associated with the SSC-related development, then there should also be tax revenues generated by this development. For these two reasons, the public finance impact of the SSC project on Adams County should be reevaluated.

2 2) On page 5.2.1 of Volume 1, the DEIS states that "aggregate resources in the Denver area are not abundant." A few pages later, the DEIS continues this discussion, "An impact of the SSC project on natural resources in Colorado will be on the local supply of aggregate. The SSC will consume 0.64% of all currently permitted aggregate reserves in the area." (p.5.6-8) These statements are not referenced, and consequently, the validity of the source cannot be checked. Nonetheless, it is incorrect to infer that the currently permitted mining operations represent the entire supply of aggregate resources in the area. Locations of additional aggregate materials have been identified by the Colorado Geological Survey.

3 3) On page 5.2.10 of Volume 1, the DEIS refers to a construction schedule for the Two Forks water supply project beginning between 1990 and 1995. That schedule is highly unlikely and therefore, any human and aggregate resources previously allocated for the Two Forks project would be available for the SSC.

4 4) On page 73 of Volume IV, Appendix 14, Table 14.1.3.2-6 forecasts the projected increase in population due to the SSC project for a number of counties near or around the SSC site. These forecasts tend to place a very heavy emphasis on workers locating in Morgan County. Many more workers than projected in this table may choose to reside in the proximate portions of the Denver Metropolitan Area, where the school facilities and a sufficient housing supply already exist, and commute to the SSC site. If this is true, the negative impacts on the Morgan County area assumed in the DEIS (shortage of housing and educational facilities for example) could be significantly less than anticipated.

5 5) On page 87 of Volume IV, Appendix 5A, it states, "The Adams County Comprehensive Plan calls for the SSC project area to continue under an "Agriculture-Production" use where neither urbanization nor rural subdivisions will be permitted. Although the Adams County Comprehensive Plan recognizes the current agricultural status of the area, the County understands that certain changes will occur as the SSC is constructed. This is why Adams, Morgan, and Washington Counties entered into an intergovernmental agreement to provide current and long range planning for the SSC area. This cooperative planning effort, formalized by intergovernmental contract, will allow for and anticipate development while at the same time work to retain the greatest possible amount of productive agricultural land.

6 6) The life of the SSC project is projected to be 25 to 30 years. At that time, the decommission plan (Appendix 3) proposes that the facility be closed down and all the constructed facilities be removed. It would be prudent to investigate alternative uses for the buildings and other facilities after the SSC project is completed. It is recommended that over the life of the SSC, future uses for the SSC campus should be studied.

7) The remaining comments concern corrections to the text of the document:

7 - The Strasburg and Byers wastewater treatment facilities should be included in Table 5.2.8-1, Volume IV, Appendix 5a.

8 - The Tower Landfill located at 88th Avenue and Tower Road in Adams County should be included in Figure 5.2.8-1, Volume IV, Appendix 5a.

9 - In section 5.2.10.1, Volume IV, Appendix 5a, the county elected officials are referred to as the "Board of Supervisors." The correct reference is Board of Commissioners.

10 - The hazardous waste facility located near Last Chance, Colorado is within Adams County not Washington County (section 5.2.10.1 F.).

The Department appreciates the opportunity to review this important document and hopes these comments prove useful in the completion of the Final EIS.

Sincerely,

Robert D. Coney, Director
Department of Planning and Development Services

cc: Board of County Commissioners
County Administrator
Morgan and Washington County Boards of Commissioners
State of Colorado SSC Office

LETTER 598

Graff Home Builders

P.O. Box 1426
Corner of Platte & Linda
FORT MORGAN, COLORADO 80701
Phone: 867-5362 or 867-3500

CO-039

September 29, 1988

I. I am Dave Graff of 810 Nancy, Fort Morgan, CO. I have been in the house building and land development business for the past 32 years.here in Morgan County. I have completed 270 custom homes. In 1970 I built a 190 unit mobile home park which is Landmark Mobile Home Park. I have also developed a 185 unit moible subdivision in Green Meadows area in Log Lane Village.

II. I want to talk with you about the impact of housing and our ability to handle the influx of construction people and the long-term permanent employees of the plant. In the past we have had four (4) different population increases with many of these people becoming permanent
1 residents of Morgan County.

III. (A) In 1952 the Oil Boom came with about 500 workers. After the drilling started then came the Production people. Fort Morgan has become a major hub from Oklahoma to Montana for the oil industry and still is.

(B) In the late 1960's our Beef Packing Plant came. This started out with 200 employees and now employees 1,100 workers plus the trucking and other support people that work for that industry.

(C) In 1970 Century Housing built their plant here and has had as high as 275 employees can produce four (4) houses in an 8 hour day.

LETTER 598 (CONTINUED)

CO-039

III. (D) In the late 1970's Public Service built the Pawnee I, a 500 Megawatt Electric Power Plant. The work force got as high as 2,500 employees during the construction period according to Ebasco, the prime contractor of this job.

IV. (A) Then in the early 1980's our construction slowed as the economy slowed. The hardest hit by this economy slowdown was the oil industry. Century Housing, the Beef Plant and Pawnee I are still going strong.

(B) During the 1970's there was a great deal of residental land development going on which accounts for the 1200 platted lots in the area. Six hundred (600) of these lots are ready to have houses put on now. The other six hundred (600) could be finished within four (4) months of good working weather.

In Conclusion, we feel that the historical evidence of Morgan County's ability to handle rapid increase in population with good, safe, housing speaks for itself.

We hope this information helps the Department of Energy choose a final site for the SSC and we hope that site will be Morgan County, Colorado.

Sincerely Dave Duff
9-29-88

LETTER 599

TELEPHONE (303) 522-9700
CITY OF STERLING
CENTENNIAL SQUARE
STERLING, COLORADO 80751

September 29, 1988

On behalf of the City Council and the citizens of Sterling, Colorado, I would like to thank the Department of Energy for the opportunity to appear at this hearing concerning the site selections for the Super Conducting Super Collider. The City of Sterling enthusiastically endorses the selection of the Colorado site for the Super Collider. I would like to make a few comments as to why this selection would favorably impact the City of Sterling and how we as neighbors and residents of the area can assist with the Super Conducting Super Collider project.

Sterling is a regional hub for Northeast Colorado as it is the largest city in a six county region. We are also located a reasonably short distance -- approximately 40 minutes -- from the proposed site in Morgan County. It is our opinion that our location would be helpful in handling the anticipated growth that such a project would bring and that we could be of assistance in minimizing some of the problems associated with that growth.

The City of Sterling is actively seeking growth and would see this as an opportunity to gain secondary businesses and industries. We are presently working on a new Planning and Zoning Ordinance which would assist us in helping to manage and control the impact that growth from a project such as this might have for our area.

1 There are numerous housing opportunities available in our City for use by potential construction employees and for future permanent employees of the project. Because we are located within 40 minutes of the proposed site, we would be a viable source of housing and other facilities for the temporary construction workers, other employees and their families. There are currently many vacant houses, and we have numerous vacant lots for those desiring to become permanent residents and wishing to construct housing in or near our city.

Sterling, as a regional business location for Northeast Colorado, offers a wide variety of businesses. We have national retail outlets such as Sears, J. C. Penney's, Wal-Mart, and K Mart.

We are proud of an excellent public school system--K through 12-- plus one private church related elementary school. Northeastern Junior College, established in Sterling in 1941, is a comprehensive junior college offering an outstanding and widely recognized transfer curriculum as well as a broad variety of vocational programs. The Sterling Regional MedCenter is presently constructing a new hospital to replace an older facility; and upon completion it will become a very modern medical care facility. The medical community is constantly striving to keep its force of doctors complete from general family practitioners to specialists.

POLICE 522-3512 | FIRE 522-3823 | RECREATION CENTER 522-7882 | LIBRARY 522-2023

I believe that Sterling and Logan County would be a viable source for some of the local work force which will be needed during the construction phase and for staffing the facility after construction is completed.

The City of Sterling is a modern, progressive, full-service city. It cares about its citizens and would welcome the opportunity to help share in and meet the challenge of growth that this project would undoubtedly bring to Northeast Colorado. Our location, available housing supply, retail businesses, eating establishments, educational facilities, medical facilities, churches, cultural activities, and a variety of recreational facilities and activities all would help us to assist those cities in Morgan and Washington County who are in closer proximity to the project location.

Thank you again for this opportunity to speak. We encourage you to select the Colorado site as the best location for the Super Conducting Super Collider project.

Mayor Edith M. Evans
Sterling, Colorado

LETTER 600

Colorado's Proven Opportunity

GREELEY/WELD

September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington D.C. 20545

Attn: SSC DEIS Comments

Dr. Hess:

As the Executive Director for the Greeley-Weld Economic Development Action Partnership I have had the opportunity to discuss locational criteria with any number of prospective business developments interested in Colorado as a potential site to establish a work site. I know how important it is for the
1 success of that new business to find the location which provides a "best fit" for the long term future of the operation.

The information contained in the Draft Environmental Impact Statement (DEIS) for the Department of Energy's proposed action to site the Superconducting Super Collider is quite comprehensive. However, relative to the proposed Colorado site I would like to submit information I believe is pertinent to your consideration of this site but which is not contained in the DEIS.

The Greeley-Weld County area provides a number of service amenities which compliment and support those found on a more limited basis in Morgan and Washington counties. One graphic
2 example of this is medical services. In both counties physician specialists from North Colorado Medical Center (NCMC) provide clinics on at least a monthly and often weekly basis to serve patients in these rural areas. Both counties also contract with North Colorado Medical Center for "Bio-Med", which provides maintenance and upkeep of their high tech hospital equipment,

GREELEY/WELD
ECONOMIC DEVELOPMENT
P.O. Box CC
1407 8th Avenue
Greeley, Colorado 80632
303/352-3566

and with "North Care" which provides a network of health care providers to meet patient needs under one insurance umbrella. Through the hospital's Residency Program emergency room and weekend coverage is provided to these counties and the Residents also perform a month's rotation in their training program in concert with the rural physicians. As an example of the Greeley impact in service delivery for the proposed Colorado SSC site it is interesting to note that in 1987, of the people who left Morgan County to receive medical treatment 60% (655 patients) came to Greeley while 37% went to Denver. Of the patients who left Washington County to receive medical services 49% (96) came to Greeley and a like percentage went to Denver.

Retail goods sold in Greeley to our eastern county neighbors is significant enough that the Chamber of Commerce Retail Council devotes at least one major campaign annually to Eastern Colorado. Among major retail anchors in Greeley it has been reported that as much as 48% of their charge customers come from eastern Colorado communities. 3

While the Greeley-Weld area lies northwesterly of the proposed Colorado site for the SSC it plays an important regional support role for service delivery to eastern Colorado.

I urge you to consider these comments with your review of the Colorado site.

Sincerely,

James M. Kadlecek

James M. Kadlecek, Executive Director
Greeley-Weld Economic Development Action Partnership

JK/cs

xc: Governor Roy Romer

LETTER 601

TOWN OF LOG LANE VILLAGE

P.O. BOX 920 • FT. MORGAN, CO 80701 • 303-867-8027

September 29, 1988

Dr. Wilmot Hess
Chairman, SSC Site Task Force
Office of Energy Research
U.S. Department of Energy
ER-65/GTN
Washington, D. C. 20545

Reference: DOE - EIS
Colorado Project

Dear Dr. Hess:

Please find attached a copy of my comments to be delivered at the Superconductor Supercollidor Hearing at Fort Morgan, Colorado, High School on September 29, 1988, at 8:35 P.M.

1 Log Lane Village wishes to express full support for the construction of the Superconducting Supercollidor in the State of Colorado.

As a small self-governed community we stand ready and able to "carry our share of the load" in meeting the multiple needs of this project.

Sincerely,

Thomas A. Smith

Thomas A. Smith
Mayor

Enclosure

sb

SUPERCONDUCTING SUPER-COLLIDER MEETING

September 29, 1988

Fort Morgan High School

Fort Morgan, Colorado

THANK YOU!

ACKNOWLEDGEMENTS:

FEDERAL - DR. WILMOT HESS
ALL MEMBERS OF SSC TASK FORCE

STATE - GOVERNOR ROMER OF STATE OF COLORADO

COUNTY - COMMISSIONERS
OTHER PERSONNEL

CITY - OFFICIALS OF FORT MORGAN, BRUSH, WIGGINS
AND ALL CITIES ADJACENT TO THE PROPOSED
SUPERCONDUCTING SUPERCOLLIDOR SITE

CONCERNED CITIZENS

MY NAME IS THOMAS A. SMITH - I AM THE MAYOR OF LOG LANE VILLAGE, A SMALL TOWN WHICH IS LOCATED 1-1/2 MILES WEST OF FORT MORGAN.

2 ACCESS TO OUR COMMUNITY IS BY STATE HIGHWAY 144, WHICH HAD JUST RECENTLY BEEN REPAVED BY THE STATE, AND INTERSTATE 76, WHICH IS THE MAIN EAST AND WEST ARTERY IN NORTHEASTERN COLORADO.

LOG LANE VILLAGE IS PRESENTLY A COMMUNITY OF 736 RESIDENTS, SELF-GOVERNED AND FAMILY-ORIENTED.

I WOULD LIKE TO ADDRESS THE HOUSING IMPACT ON MORGAN

COUNTY AS NOTED IN THE ENVIRONMENTAL IMPACT STATEMENT, VOLUME 4, APPENDIX 14, PAGES 38 THROUGH 90.

* *

LOG LANE VILLAGE HAS CURRENTLY 90 TO 100 RENTAL PROPERTIES WHICH CARRY A 10 TO 15% VACANCY RATE.

ALSO AVAILABLE ARE 114 LOTS FULLY DEVELOPED, INCLUDING UTILITIES WITH STREETS IN PLACE. RV PARKING COULD BE AVAILABLE ON 40 OF THESE LOTS.

THE TOWN ALSO HAS AVAILABLE IMMEDIATELY 6-1/2 ACRES OF LAND THAT IS ZONED LIGHT COMMERCIAL.

ADJACENT TO LOG LANE VILLAGE IS AN ADDITIONAL 9 ACRES WHICH HAS 32 LOTS ALREADY PRE-PLATTED.

* *

THE TOWN'S UTILITIES NOW CONSIST OF:

ELECTRICITY AND GAS	-	UNDER CURRENT CONTRACT WITH PUBLIC SERVICE CO. OF COLORADO
TELEPHONE	-	SERVICE BY U.S. WEST COMMUNIDATIONS
WATER SYSTEM	-	TOWN-OWNED AND TOWN-OPERATED IS STATE-TESTED POTABLE WATER, WHICH COULD ACCOMODATE 100 TO 150 ADDITIONAL HOUSEHOLDS.
	-	LOG LANE VILLAGE HAS MADE RECENT APPLICATION FOR AN IMPACT

ASSISTANCE GRANT TO UPDATE OUR PRESENT WATER SYSTEM FOR ANTICIPATED FUTURE GROWTH AND INSURE ADEQUATE WATER SUPPLY TO ALL RESIDENTS.

SANITATION SYSTEM - WAS INCREASED BY 33.33% IN 1987 AND AGAIN COULD ACCOMODATE 100 TO 150 ADDITIONAL HOUSEHOLDS.

PUBLIC SAFETY - IS HANDLED BY 1 FULL-TIME AND 1 PART-TIME POLICE OFFICER. A VALE GRANT THRU THE STATE IS NOW BEING PURSUED FOR AN ADDITIONAL FULL-TIME OFFICER.

SCHOOLING - IS PROVIDED BY DISTRICT RE-3 IN FORT MORGAN, BUSSING IS PROVIDED FOR KINDERGARDEN THRU 12TH GRADE, INCLUDING HANDICAPPED.

FIRE PROTECTION - IS PROVIDED TO LOG LANE VILLAGE BY FORT MORGAN FIRE DEPARTMENT WITH A 5 TO 7 MINUTE RESPONSE TIME.

MEDICAL FACILITIES - ARE AVAILABLE THRU THE FORT MORGAN COMMUNITY HOSPITAL, THE EAST MORGAN COMMUNITY HOSPITAL,

WITH EASY ACCESS TO EITHER DENVER OR GREELEY BY AMBULANCE OR FLIGHT FOR LIFE HELICOPTER SERVICE.

TELEVISION SERVICE - PROVIDED BY TCI WITH 26 BASIC CHANNELS AND 4 PREMIUM CHANNELS.

TRASH COLLECTION - PROVIDED THROUGH MORGAN COUNTY AND PRIVATE TRASH COLLECTORS.

* *

IN CLOSING, THE TOWN OF LOG LANE VILLAGE RECOGNIZES THE IMPACT OF A "BOOM-TOWN" TYPE SITUATION, HOWEVER, WE ARE WILLING AND ABLE TO ACCEPT THE CHALLENGE TO NOT ONLY SERVE AND PROTECT THE CITIZENS ALREADY LIVING IN LOG LANE VILLAGE, BUT ALSO ANY FUTURE CITIZENS WE MAY ACQUIRE.

WE ALSO WANT IT TO BE KNOWN THAT WE ARE READY TO COOPERATE WITH AND WORK WITH ALL PUBLIC AND PRIVATE ENTITIES INVOLVED TO ACCOMPLISH THE NEEDS OF THE SUPERCONDUCTING SUPERCOLLIDOR.

THANK YOU FOR YOUR ATTENTION.

LETTER 602

OFFICE OF THE CITY MANAGER

1000 10TH STREET, GREELEY, COLORADO 80631 (303) 350-9779

September 27, 1988

Dr. Wilmot Hess, Chairman
SSC Site Task Force
ER-65 GTN
Office of Energy Research
U.S. Department of Energy
Washington D.C. 20545

Attn: SSC DEIS Comments

Dr. Hess:

The City of Greeley, Colorado has taken the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Department of Energy's proposed action to site the Superconducting Super Collider (SSC) and offers the following comments concerning the proposed Colorado site.

First, Greeley's interest in the DEIS stems from the City's close proximity to the proposed Colorado site. Much like our neighboring communities to the east Greeley's history and a good part of its current base is agricultural. As such Greeley has a long tradition in serving the northeastern portion of the state as an important base for obtaining goods and services ranging from commercial and industrial outlets to cultural; educational and entertainment centers. We were somewhat surprised that there was no mention of Greeley as a service center to the proposed Colorado site for the SSC.

1 One of the apparent assumptions in the DEIS is that there is a travel distance threshold that dictates the support service boundary for the proposed Colorado site. While physical proximity to a site is, in fact, one method of ascertaining area resources it should not be the controlling factor. It is typical in Western states for population and service centers to be quite dispersed and, as such, the acceptable travel "norm" may be much higher than a standard distance. Given this factor it would appear appropriate for the DEIS, particularly within the Socioeconomic Assessment (Volume IV, Appendix 14, Pages 83 and 92) to fully recognize the ability of the Greeley area to provide

Dr. Wilmot Hess
Page 2
September 27, 1988

for support development such as housing, hotels, recreation areas, higher education facilities, convention and visitor opportunities, cultural outlets, medical services and other related functions to help address the demand which would be experienced at the proposed Colorado site.

2 The DEIS also noted in the review of Affected Environments at Site Alternatives (Volume IV, Appendix 5, Page 127) that air access is provided principally through Stapleton International Airport with general aviation fields also available through Ft. Morgan Municipal and Brush Municipal Airports. Though not referenced in the DEIS the Greeley-Weld County Airport also provides important area air access. In fact, Greeley-Weld is an all weather airport facility and, since it is outside the Denver Terminal Control Area, aircraft using this facility are not subject to the air traffic control delays that are possible within a larger metropolitan facility. The accessibility of the Greeley-Weld facility to the corporate aircraft in operation today makes it a significant support operation to the proposed Colorado site for the SSC.

3 The City of Greeley population is approximately 60,000. Our community enjoys an extensive public and social service network, excellent medical care facilities, an ample supply of housing types, a progressive and broad educational system and a full range of recreational and cultural opportunities all available to help accommodate SSC newcomers to the area. One outstanding example of this is the City's recent completion of the Union Colony Civic Center, a 1,700 seat auditorium and 230 seat small theatre facility which compares favorably with centers located in larger metropolitan areas. Home to the Greeley Philharmonic, the oldest symphony west of the Mississippi, Greeley draws facility users from not only northern Colorado but the Denver metro area as well. The Civic Center is only one of several exceptional public facilities which flavor the quality of life standard in this regional area. On behalf of the City of Greeley I encourage you to consider our proximity to the proposed Colorado site as a further factor in the environment assessment of this area as a potential site for the SSC.

Thank you for the opportunity to comment on this matter.

Sincerely,

Sam Sasaki
City Manager

xc: Governor Roy Romer

LETTER 603

Dr. Wilmont Hess
SSC Site Task Force
ER-65/GTN
Office of Energy Research
U.S. Dept. of Energy
Washington, D.C. 20545

Dear Mr. Hess:

1 I have been made aware of what a negligent landlord the Department of Energy has been in New Haven, Conn. and Ellenton, S.C. and elsewhere. How it has polluted the environment, covered up its errors and resisted efforts to clean up after itself.

Don't bring your mess to Michigan. Count me against the Superconducting Super Collider.

Sincerely,

Leigh H Lyon
1068 TUTTLE RD.
MASON MICH. 48854

Agatha M. Lyon
1068 Tuttle Rd.
Mason Mich. 48854

IIA.1- 1005

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