STATEMENT OF CONSIDERATIONS

REQUEST BY INVENTOR FOR THE WAIVER OF DOMESTIC AND FOREIGN RIGHTS TO AN IDENTIFIED INVENTION ENTITLED "EXTERNAL HERMETIC SEALS" DEVELOPED UNDER DOE CONTRACT NO. DE-AC04-94AL8500; DOE INVENTION DISCLOSURE NO. S-107,606; DOE WAIVER NO. W(I) 2008-003.

The Petitioner, Randy A Normann (Inventor), has requested a waiver of the Government's domestic and foreign patent rights in a subject invention entitled "External Hermetic Seals" as well as a separate waiver for a related invention. Both inventions were conceived by the Inventor while an employee of the Sandia Corporation (Sandia). Sandia is the M&O contractor for the Sandia National Laboratories (SNL), a government-owned, contractor-operated (GOCO) facility, subject to DOE contract number DE-AC04-94AL8500 at the time the invention was made.

The subject invention relates to using a thin thermal spray of metal across exposed joints for materials used in high temperature geothermal wells. Thermal spraying will allow the tool pressure housing to be encapsulated from external well bore fluids. SNL, in writing, supports the Inventor's request for title of this invention. A Sandia co-inventor, Joseph Henfling, has waived his rights to this invention in writing.

This invention was developed under the High Temperature Electronics (EE2C) project of the SNL Geothermal Technologies Program. Federal funding was provided by the Office of Energy Efficiency and Renewable Energy (EERE). In 2005, the SNL High Temperature project received approximately \$700,000 of the \$2 million SNL received for the Geothermal Program. There was no federal funding of the SNL Geothermal Program in 2006 and 2007. For 2008, the SNL Geothermal Program has received reduced funding of \$300,000 for an unrelated High Temperature Seismic project. The Manager of the SNL Geothermal Research Dept. says that lack of funding for two years and the reduced funding for 2008 will not allow for the further development and commercialization of this invention as well as the related Invention Disclosure submitted by Petitioner to SNL. On the other hand, SNL views the waiver of patent rights to Petitioner as a positive step in the commercialization of both technologies, which would otherwise remain dormant due to lack of program funding. Petitioner shall spend his own funds to commercialize and further develop this invention should he be granted title. Petitioner will also expend such sums as may be required to obtain and maintain the necessary patent protection.

This technology is not export controlled. Furthermore, the technology does not apply to the Naval Nuclear Propulsion Program or to the nuclear weapons programs or other nuclear or atomic energy defense activities of DOE.

Petitioner has agreed to abide by 35 U.S.C. §§ 202, 203 and 204. Petitioner (Inventor), as part of this petition, has agreed to the provisions of the U.S. Competitiveness Clause, which reads as follows: "The Petitioner agrees that any product embodying any waived

invention or produced through the use of any waived invention will be manufactured substantially in the United States, unless Petitioner can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of Government investment, etc." Furthermore, Petitioner has agreed to make this condition binding on any assignee or licensee. Petitioner will also abide by the Export Control laws and will require its licensees, if any, to do the same.

Granting the waiver is the only way to promote prompt commercial utilization and development of this invention. The Petitioner, Randy A Norman, has requested Entrepreneurial Separation to Transfer Technology (ESTT), to develop and market this and other related technologies. The Petitioner has approximately 12 years of experience in the geothermal technology field, including numerous scientific papers. The Petitioner has been an employee of Sandia National Laboratories in the field of tool technology for the past 23 years. The Petitioner is in the process of incorporating a development company, Perma Tools, and has two potential development contracts under negotiation. The Petitioner's interest in obtaining title and actively seeking commercialization sufficiently satisfies DOE/NNSA's technology transfer mission without the need to expend additional DOE funds.

The geothermal tool field is a small but competitive market. Advances in this technological field are usually well received by the industry. The SNL Chief IP Counsel also believes that waiving this IP to Petitioner will have no negative impact on the SNL activities in the Geothermal Research Program, by virtue of the reserved Government license. Based on this, it is not foreseen that the grant of this specific waiver and the related waiver would in any way cause a decrease in competition, cause an undesirable market concentration, nor place Petitioner in a dominant market position.

As such, upon evaluation of the Waiver Petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.

Arthur N Trausch Patent Attorney, NNSA Based on the foregoing Statement of Considerations and the representations of the attached Waiver Petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above and, therefore, the waiver is granted.

CONCURRENCE:

Raymond Lasala

Manager Drilling and Energy Conversion

Technology (EE2C)

Energy Efficiency and Renewable Energy,

Geothermal Technologies Program,

Department of Energy

Date: 5/28/08

APPROVAL:

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Assistant General Counsel For Technology Transfer and

Intellectual Property (GC-62)

Date: 5-29-08