DEVELOPMENT OF NEW BUSINESS OPPORTUNITIES
FOR MINORITIES
IN NUCLEAR ENERGY

Final Report

December 15, 1980

Prepared for

Office of Minority Economic Impact
Department of Energy
Washington, DC 20585

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ABSTRACT

In Part I of this report the basis for the optimal development of new business opportunities for minorities in nuclear energy programs is defined within the successful completion of all contract tasks. The basis presented consists of an identification of a set of qualified minority owned small businesses, a defined reservoir of highly trained minorities with applicable expertise, a policy context for the development of opportunities, and a proposed networking structure for information transfer/professional development. In Part II of this report is presented a contractor focused analysis of the structure of the nuclear industry, a breakdown of the DOE nuclear program by region and functional area, and a directory of minority owned small businesses by region.
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1.0 INTRODUCTION

The significant expansion of nuclear power operations and capacity and nuclear waste management activities now projected for the 1980's will foster many new and expanding business opportunities. There are a number of minority owned small businesses (MOSBs) which qualify as subcontractors for part of the work under these procurements. The dominant impression, however, seems to be that minority owned firms (1) lack the expertise to perform in advanced technology areas and/or (2) are capable of performing only the small and relatively unimportant tasks. Thus, a detailed analysis of new business opportunities in the nuclear program (NE) areas must both identify and document the capability of MOSBs to contribute to the achievement of program priorities.

To take advantage of these identified opportunities, a comprehensive marketing approach involving many minority institutions and organizations is needed. The following entities are the focus of the approach:

- Minority Educational Institutions, such as the historically black universities.

- Minority Professional Associations, such as the national Technical Associations, such as the national Technical Association (NTA), and the American Association of Black in Energy (AABE).

- Minority Owned Small Business (MOSBs)

This three-pronged approach is required because historically, the development of technology in the United States has required interaction between industry, professional associations, educational institutions and government. The interchange of highly trained personnel between industry, universities, associations and government facilitated the rapid development of technology in this century. In the minority community most of the technical people with the scientific and engineering knowledge necessary to compete for contracts in the nuclear energy field are presently employed by majority sector businesses, minority and majority educational institutions, and government. This was true and to some extent is still true of the majority sector of the population as well. The flow and interchange of personnel among universities, Government laboratories and private industry contractors in the nuclear industry has been demonstrated to be beneficial in strengthening the capabilities of each and of the nuclear community as a whole. Therefore, any approach to develop the needed expertise in minority businesses must encourage and facilitate the movement of the required talent from the three areas of the majority sector mentioned above (which currently are the repositories of knowledge and expertise) to the minority economic area (which is the MOSB). In addition to the movement of personnel, interaction through joint ventures, subcontracting, and consulting involving MOSBs and educational institutions must be explored.
Towards that end the Office of Minority Economic Impact (OMEI) and the Office of the Assistant Secretary for Nuclear Energy (ASNE) has contracted AMAF Industries, Inc. to execute by December 15, 1980 the tasks specified in the following "Statement of Work":

2.0 STATEMENT OF WORK

TASK A: Develop a typology of MOSBs corresponding to the characteristics of MOSBs that have the capability to handle the identifiable business opportunities within the Nuclear Programs of DOE. This listing will also be functional, organized according to subcontracting categories and cross-referenced in terms of other relevant information.

TASK B: Develop an in-depth list of all areas in DOE including program people who could provide contracting opportunities for MBEs. This listing would also identify the level of funding as well as the type of opportunity in the following areas:

(a) Converter Reactor Systems
(b) Breeder Reactor Systems
(c) Special Nuclear Systems
(d) Advanced Isotope Separation
(e) Commercial Nuclear Fuel
(f) Spent Nuclear Fuel
(g) Uranium Resource Assessment

TASK C: Create a data base of minority scientists and engineers located in industry, universities, and government in fields related to nuclear energy.

TASK D: Develop a network which will facilitate the interaction of MBEs, knowledgeable scientists and engineers, professional associations, and black educational institutions in the fields related to nuclear energy.
3.0 REPORT ON TASK A

3.1 METHODOLOGY

Nuclear energy program contracting opportunities are highly knowledge intensive, focusing many areas of science, engineering and technology. Thus, while many skills are relevant in nuclear program contracting, in order for a would-be contractor to be competitive in bidding contract work, it must be capable of demonstrating the requisite technical depth and performance quality assurance (QA). The SBA with assistance from the DOE has developed the Procurement Automated Source System (PASS) which has been operational for almost two years. It was designed, using a keyword system, to quickly identify and furnish a company profile computer printout of small/disadvantage business (S/DB) enterprises for a particular procurement. Notwithstanding the fact that there are now more than 4,000 minority-owned businesses in that data bank, it is widely felt that PASS is of only greatly limited utility in nuclear program (NE) procurements targeting MOSB involvement. There also exists now a separate SBA developed listing: "Firms in the 8(a) Business Development Program (March 1980)" which contains more than 2,000 MOSBs. The principal problem of both of these sources is their lack of specificity with respect to NE program contracting requirements.

In order to provide a listing/directory of MOSBs which is functional for NE program procurements, a multi-stage effort was undertaken. Its goals were to define a functional MOSB typology and to investigate MOSBs for inclusion. The PASS/SBA listing in that effort served only as points of departure.

In Stage I of our identification of relevant MOSBs, we selected for further consideration only those firms capable of contracting in one or more of the following areas:

- RD&E/A&E consulting studies
- Component/materials manufacturing
- Construction

In Stage II, RD&E/A&E consulting firms were further delimited by including only those who satisfied one or more of the following criteria:

- Professes (by self-description) to be nuclear RD&E/A&E capable.
- Evidences nuclear RD&E/A&E experience through appropriate capability statements (by 254, 255 Forms, for example)
- Shows company/corporation staff with generic nuclear/nuclear-related training (e.g., nuclear sciences, nuclear engineering, health physics)
Relevant component/materials manufacturing firms were typed in Stage II by use of the appropriate Standard Industrial Classification (SIC) codes. They are as follows:

- 2819 Industrial Inorganic Chemicals
- 2869 Industrial Organic Chemicals
- 3443 Fabricated Plate Work (Boiler Shops)
- 3559 Special Industrial Machinery
- 3674 Semiconductors and Related Devices
- 3822 Automatic Controls
- 3823 Industrial Instruments for Measurement, Display and Control of Process Variables; and Related Products
- 3829 Measuring and Controlling Devices

Construction firms were included in Stage II which evidence capability in major construction requiring use of reinforced concrete and/or pre-stressed concrete elements.

In Stage III (Refinement), all MOSBs ultimately retained were contacted by telephone and/or site-visited by AMAF staff to ensure accuracy of our typing of them as relevant to and capable of NE contract activity. That effort resulted in a list/typology of MOSBs which has built into it a much higher relevance and confidence level than has heretofore been available.
3.2 FORMAT OF PRESENTATION

The directory/typology is presented (in Appendix A) in two parts:

1. an alphabetical listing of firms, and

2. a capability matrix of these firms.

The alphabetical listing of firms contains the firm's name, address, presiding (or contacting) officer, phone number, minority ownership code, year established, 8(a) status, and a brief description of the firm's type of work.

The capability matrix is also arranged in alphabetical order, showing firms's name, city, and state, and alongside each firm, an 'X' under the appropriate capability category.

<table>
<thead>
<tr>
<th>Minority Ownership Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Black</td>
</tr>
<tr>
<td>1 = Puerto Rican</td>
</tr>
<tr>
<td>2 = American Indian</td>
</tr>
<tr>
<td>3 = Spanish American</td>
</tr>
<tr>
<td>4 = Asian</td>
</tr>
<tr>
<td>5 = Eskimo</td>
</tr>
<tr>
<td>6 = Undetermined</td>
</tr>
<tr>
<td>7 = Others, including White and Female</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8(a) Status Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y = Yes</td>
</tr>
<tr>
<td>N = No</td>
</tr>
<tr>
<td>P = Pending</td>
</tr>
<tr>
<td>U = Undetermined</td>
</tr>
</tbody>
</table>

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3.3 **RECOMMENDATIONS**

3.31. The current directory/typology generated in execution of Task A is by no means exhaustive. We are continuing to receive brochures and capability statements which will allow for further refinement and expansion beyond the current 66 MOSBs now included. Thus, we recommend that OMEI/NE-DOE provide funds for the maintenance of this directory/typology.

3.32. Many more MOSBs could have been listed if we had rather than a strict criterion of current capability one of interest in developing capability, to participate in NE contracting. We recommend careful review be given to the growth potential of NE programs in the 1980's to determine the extent to which currently identified MOSBs are adequate to meet the demand for contractors. NE in conjunction with OMEI should develop information materials and programs suited to supporting MOSB contractor development in the NE program areas.
4.0 REPORT ON TASK B: OPPORTUNITIES

4.1 METHODOLOGY

Considerable evidence supports the projection that the nuclear program, both nuclear fission and waste management, will expand significantly in the 1980's. There is certain to be within that climate a substantial growth in contracting opportunities for capable MOSBs. In order to better specify such opportunities the following persons/DOE organizations were contacted with reference to this task for steerage and information.

1. Our OMEI - Project Manager (B. Haley)
2. Our NE - Project Manager (R. Rosselli)
3. The Office of Small & Disadvantaged Business Utilization, DOE (L. Miranda)
4. NE program managers (R. Dowling, H. Rome, J. Ford)

4.2 FY81 NUCLEAR PROGRAM APPROPRIATIONS

The Office of the Assistant Secretary for Nuclear Energy (ASNE) is responsible for nuclear research and development and for conducting subcommercial demonstrations of new nuclear energy technologies.

It supervises the nuclear fission program and the nuclear waste management (NEW) program (commercial and defense). The FY 81 Budget for the Office of the Assistant Secretary can be detailed as follows (in millions):

<table>
<thead>
<tr>
<th>Program</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Nuclear Waste</td>
<td>$245.6</td>
</tr>
<tr>
<td>Defense Nuclear Waste</td>
<td>300.2</td>
</tr>
<tr>
<td>Naval Reactors</td>
<td>303.4</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>22.5</td>
</tr>
<tr>
<td>Advanced Isotope Separation Technology</td>
<td>80.2</td>
</tr>
<tr>
<td>System</td>
<td>Amount ($)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Conventional Reactor Systems</td>
<td>105.5</td>
</tr>
<tr>
<td>Breeder Reactor Systems *</td>
<td>469.3</td>
</tr>
<tr>
<td>Advanced Nuclear Systems</td>
<td>42.0</td>
</tr>
<tr>
<td><strong>Total ASNE</strong></td>
<td><strong>$1,568.7</strong></td>
</tr>
</tbody>
</table>

* Does not include the Clinch River Breeder

**4.3 MOSB PROCUREMENT GOALS (re: R. Rosselli)**

A scale for the magnitude of FY81 nuclear procurement opportunities for MOSBs can be obtained from the recently defined ASNE goal:

- **Procurement Base:** $1,500 million
- **(%) MOSB Goal FY81:** 1%
- **($) MOSB Goal FY81:** $15 million

This goal, though quite modest, does afford significant MOSB procurement opportunities for FY81 if applied appropriately to generic R&D, nuclear manufacturing and nuclear construction areas. It is important to observe that the 1% MOSB procurement goal is not defined against the eight disaggregated NE program areas previously listed but against the aggregate NE budget as a realistic target level for total MOSB procurement.

**4.4 COMMENTS**

Even though extensive information gathering contacts were effected in performing on Task B, little specific opportunities in the generic nuclear areas were identified. Indeed, it appears that:

1. the trend-line data is simply not available to establish an historical pattern for nuclear **generic** (as contrasted with nuclear program **allocated**) MOSB procurements
2. little precedence is available in many NE program areas for the use of MOSBs
3. there is, however, a willingness at the program manager levels to at least consider a MOSB if candidates could be identified in a timely and efficient manner
4. NE opportunities will surface only within new program level understandings of both the existence of and structure of the universe of relevant MOSB contractors
4.5 RECOMMENDATIONS

4.5.1 NE Program Opportunity Notices (PON's) and Program Research and Development Announcements (PRDA's) should be sent to all MOSBs identified in Task A on a regular basis.

4.5.2 A detailed analysis should be undertaken, through the Office of ASNE in conjunction with OMEI, of the level of nuclear generic procurement activity with MOSBs out of total NE procurements. This would provide a basis for defining trends and for highlighting both areas of opportunity and those requiring special attention.

4.5.3 We consider the SB/DB Subcontracting Plan developed at Argonne National Laboratory (W. Massey, W. Spicer) to be enlightened — an exemplar for other DOE laboratories and facilities. It defines a level of commitment through FY 85, a process for implementation, and targeted products/services for subcontracting.

Although their choice (elimination) of some DB areas for subcontracting could be questioned, the overall tone of the plan merits wide emulation.

4.5.4 We urge the Assistant Secretary for Nuclear Energy to define specific goals for each major program area of NE so as to realize an overall level of 2% MOSB procurements in FY81 for NE. This level of nuclear generic procurement would be in keeping with the significant new insights brought forward by this Final Report as to the extent that MOSBs are presently capable of such contracting.
5.0 REPORT ON TASK C: INDIVIDUALS

5.1 METHODOLOGY

It is typical for even minorities with nuclear generic training to underestimate the trained minority pool size. Many dated and uncorrelated rosters existed from which an extensive identification effort was initiated. Our current roster contains 35 names of highly trained minorities for which we have nearly complete data. The roster grows daily as those already contacted refer others to us. The roster will easily grow to 70 should this effort continue and will most probably saturate (show effort marginality) near 100 should the current wisdom prevail. In almost every case a name included has been verified by a direct telephone contact.

5.2 FORMAT OF PRESENTATION (Appendix B)

The directory was prepared with the following format:

LAST NAME, First Name, Initials.

a. Highest relevant degree, University, year
b. Area(s) of relevant expertise
c. Current title/responsibility within organization
d. Organization where employed
e. Address of Organization

Only individuals with nuclear energy related expertise (e.g., nuclear physics, nuclear engineering, health physics) are included.

5.3 RECOMMENDATIONS

5.3.1 Almost every minority contacted expressed willingness to aid the expansion of the roster if they could receive a copy of it in its current stage. We recommend that OMEI/NE provide support for the continued expansion of this roster by making possible both its wide (though selective) distribution and appropriate follow-up responses to leads as they develop.

5.3.2 A sizable majority of those contacted expressed enthusiastic interest in possibly participating in minority professional/MB development support activities that would increase nuclear program opportunities for minorities. Whereas many of these nuclear trained minorities are currently in influential positions in the public and private sectors, we recommend that well focussed mechanisms be devised to tap their collective potential of enhancing minority economic impacts of NE programs.
6.0 REPORT ON TASK D

6.1 PHASE II - CAPACITY BUILDING

Completion of Tasks A, B, and C has demonstrated that there are MOSBs and highly trained minority individuals ready and eager to take advantage of nuclear program opportunities that heretofore have been latent. The missing element has been the catalytic center to actualize the developmental capacities in the public and private sectors towards enhanced minority participation. The overall process can be viewed as taking place in two stages or phases: Phase I and Phase II.

Phase I (the essentials of which have been accomplished under Tasks A, B, and C) was defined by "opportunity identification" activities. The climate of opportunity has been defined by P.L. 95-507, in the Supreme Court decision to uphold the "set-aside" provisions in the Public Works Employment Act of 1977 (Fullilove v. Klutznick, Secretary of Commerce), in recent procurement goal positions taken by the Secretary of Energy and in the clear commitment to such goals evidenced by the actions of the Assistant Secretary of Nuclear Energy.

The next step then is "capacity building" - Phase II. No phrase better captures the essential developmental character of opportunity actualization than "capacity building." The important idea being recognized here is that the actualization of opportunity requires the construction of organizational configurations - functional systems - which can participate in end-focused activities. The "capacity building" program would be structured to deliver necessary technical manpower resources and knowledge bases for the purpose of strengthening the existing corporate capabilities of MOSBs. In "capacity building" firms would be given access to the most recent R&D results, technological innovations, performance standards and industry/governmental regulatory requirements. Thus, the nuclear contracting capabilities developed by the participating minority businesses would be consistent with the performance standards established by government and industry guidelines. In this way the opportunity for MOSBs to contribute to the advancement of the technology would be assured.

6.2 THE NETWORK PROPOSAL

The working hypothesis of "capacity building" is that opportunities can be actualized by the assembly of the correct "ingredients" in the presence of a "catalytic core." The operative ingredients are easily identified as

- DOE
- MOSBs (MBEs)
- Minority Academic Institutions
- Major Nuclear Industries
- Minority Professional/Nuclear Trade Associations
The primary contributions made by each "ingredient" would be as follows:

DOE: Contracting opportunities  
MOSBs: Potential resources  
Minority Academic Institutions: Technical manpower resources  
Major Nuclear Industries: Contracting opportunities  
Minority/Trade Associations: Technology/innovations transfers

The requisite "catalytic core" would be provided in a cost-effective and expedient manner by AMAF Industries through its wholly owned Institute for Research, Development and Engineering in Nuclear Energy (IRDEN).

The network concept is conveyed diagrammatically in Figure 1. IRDEN is shown at the core acting, through its direct interfaces, to hold in interaction those elements whose relationships would be insufficient alone for capacity building. Thus, IRDEN, we argue is essential for realization of capacity building in NE program areas.

The specific goals of IRDEN, as a DOE supported Institute, are immediately relevant to capacity building:

- Foster greater minority business participation in the nuclear field  
- Increase participation of minority scientists and engineers in nuclear energy programs  
- Strengthen the manpower resource pool capable of contributing to nuclear technology development

Two points argue persuasive for the optimal involvement of AMAF/IRDEN as the core element in the networking of capacity building.

1. IRDEN is a viable, currently functioning structure (an Overview and Organizational Structure is provided in Appendix C)  
2. AMAF is a 7J "call contractor" (as defined by P.L. 95-507) and is currently providing support services to other 8(a) firms on a contract task ordered basis by the SBA.
NETWORKING
NUCLEAR PROGRAM OPPORTUNITIES

FIGURE 1
We therefore propose to make a significant modification in the current organizational structure of IRDEN. The current structure provides for three (3) activity offices: the Office of Health and Environmental Impact, the Office of Research, Development and Engineering, and the Office of Socioeconomic Impact. Each of these offices has a chief administrative person (an Associate Director) and technical staff support. We propose to implement the concept of MOSB capacity building through an Office of Minority Business Opportunity Development. Thus the IRDEN organizational structure would appear as in Figure 2.

The function of the MB Opportunity Development Office would be to foster greater minority business participation in the nuclear field. Its goals would be to:

- Provide coupling of the capabilities of minority owned small businesses with nuclear energy program needs.
- Assist the development of competitive contract proposals and responses to RFPs.
- Inform minority owned small businesses of the current development priorities and technical requirements within the nuclear program areas.
- Facilitate the involvement of minority owned small businesses by provision of other technical and managerial services.

6.3 CONTACTS MADE TOWARDS THE NETWORK

Preliminary organizational contacts which establish the desirability and the viability of a MOSB "networking" model (though no specific model has been universally endorsed) include the following:

- American Association of Blacks in Energy (AABE)
  Mr. Rufus McKinney (Chairman)

- American Consulting Engineers Council
  Mr. Edward Lisee (Project Manager)

- American Nuclear Society
  NEED Committee
  Dr. Warren Miller (Chairman)

- American Society for Engineering Education
  Mr. Tim Bradley (Director, Special and Federal Projects)

- Atomic Industrial Forum
  Mr. Les Ransy (Education Services Manager)

- Health Physics Society
  Affirmative Action Committee
  Ms. Hattie Carwell (former Chairperson)
IRDEN
ORGANIZATIONAL
STRUCTURE
(PROPOSED MODIFICATION)

BOARD OF DIRECTORS

ASSISTANT TO THE DIRECTOR

DIRECTOR OF THE INSTITUTE

DEPUTY DIRECTOR OF THE INSTITUTE

ASSOCIATE DIRECTOR FOR HEALTH AND ENVIRONMENTAL IMPACT

ASSOCIATE DIRECTOR FOR RESEARCH, DEVELOPMENT AND ENGINEERING

ASSOCIATE DIRECTOR FOR SOCIOECONOMIC IMPACT

ASSOCIATE DIRECTOR FOR MINORITY BUSINESS OPPORTUNITY DEVELOPMENT

FIGURE 2
6.4 **RECOMMENDATIONS**

6.4.1 The DOE-NE should enter sole source negotiations with AMAF Industries of an appropriate contract work statement to implement Phase II - Capacity Building.

6.4.2 The Office of the Assistant Secretary, after careful review of this Final Report and its recommendations, should endorse the Network Model proposed herein as best expressing the best interests of DOE-NE and implementing their MOSB procurement goals.
7.0 SUMMARY

The actualization by minority owned small businesses of the enhanced opportunities in the nuclear program areas expected to arise in the 1980's will require deliberate and immediate action. The Office of Nuclear Energy, DOE and OMEI must set a policy and funding climate sufficient to support a national program of "capacity building" for minority owned small businesses. This report shows that both the "ingredients" and the "catalytic core" currently exist and can be mobilized. Now is the time to begin this work.
APPENDIX A

DIRECTORY OF MINORITY OWNED SMALL BUSINESSES
CAPABLE OF NUCLEAR ENERGY CONTRACTING
DIRECTORY OF MINORITY OWNED BUSINESSES

This directory is in two parts:

1. An alphabetical listing of firms, and
2. a capability matrix of these firms.

The alphabetical listing of firms contains the firm's name, address, presiding (or contacting) officer, phone number, minority ownership code, year established, 8(a) status, and a brief description of the firm's type of work.

The capability matrix is also arranged in alphabetical order, showing firm's name, city, and state, and alongside each firm, an 'X' under the appropriate capability category.

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<tr>
<td>0 = Black</td>
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<tr>
<td>1 = Puerto Rican</td>
</tr>
<tr>
<td>2 = American Indian</td>
</tr>
<tr>
<td>3 = Spanish American</td>
</tr>
<tr>
<td>4 = Asian</td>
</tr>
<tr>
<td>5 = Eskimo</td>
</tr>
<tr>
<td>6 = Undetermined</td>
</tr>
<tr>
<td>7 = Other, including White and Female</td>
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<th>8(a) Status Code</th>
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<tbody>
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<td>N = No</td>
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<tr>
<td>P = Pending</td>
</tr>
<tr>
<td>U = Undetermined</td>
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</table>

A-1
AGUIRRE ENGINEERING, INC.
14 Inverness Dr. E., Unit 8H
Englewood, CO 80112

Mr. Vukoslav E. Aguirre
303-771-4446
Min. Code: 3; Est.: 1977; 8a: Y
Geotechnical Engineering

ALCO TOOL & MFG. CO.
364 Castroville Road
San Antonio, TX 78207

Mr. Albert Lee
512-434-6376
Min. Code: 4; Est.: 1962; 8a: Y
Component Manufacturing

AMAF INDUSTRIES, INC.
103 Sterrett Building
Columbia, MD 21044

Mr. Robert L. Jones
301-596-5336
Min. Code: 0; Est.: 1976; 8a: Y
Research, Development, & Engineering

AMERICAN CONSOLIDATED TECHNOLOGY, INC.
800 Charcot Ave.
San Jose, CA 95131

Mr. Hernando G. Caampued
408-946-7811
Min. Code: 3; Est.: ?; 8a: U
Architecture and Engineering

AMERICAN DEVELOPMENT CORP.
2339 Air Park Road
Charleston, SC 29405

Mr. W. Melvin Brown
Min. Code: 0; Est.: 1972; 8a: Y
Component Manufacturing

ASHANTI NUCLEAR CORPORATION
152 W. 34th Street
New York, NY 10001

Mr. K. Ashanti
212-695-5398
Min. Code: 4; Est.: ?; 8a: U
Research and Development

AUTOMATED MANAGEMENT SYSTEMS, INC.
9301 Annapolis Road, #305
Lanham, MD 20801

Mr. Carlton H. Joseph
301-459-4088
Min. Code: 0; Est.: ?; 8a: Y
Architecture and Engineering

B & M TECHNOLOGICAL SERVICES, INC.
520 Commonwealth Ave.
Boston, MA 02115

Mr. William V. Benjamin
617-247-1040
Min. Code: 0; Est.: 1978; 8a: Y
Research, Development, & Engineering

BAR-PAT MANUFACTURING CO., INC.
437 Howard St.
Bridgeport, CT 06601

Mr. George Bellinger
203-335-2193
Min. Code: 0; Est.: 1970; 8a: Y
Component Manufacturing

BERNERT INTERNATIONAL ENGINEERS
6060 Sunrise Vista Drive, #111
Citrus Heights, CA 95610

Mr. S. F. Lewinski
916-726-0450
Min. Code: 6; Est.: ?; 8a: U
Engineering & Design
Alphabetical Listing of Firms (continued)

COR, INC.
105 N. Virginia Ave.
Falls Church, VA 22046
Mr. Harjit Chopra
703-534-0012
Min. Code: 4; Est.: ?; 8a: Y
Architecture and Engineering

CASDE CORPORATION
2707 Toledo St., #604
Torrence, CA 90503
Mr. R. Saucedo
213-533-6888
Min. Code: 3; Est.: ?; 8a: Y
Engineering Services

CATARACT ENGINEERING & CONSTRUCTION
19700 Fairchild St., #370
Irvine, CA 92715
Mr. Tom Teischman
714-851-1877
Min. Code: 2; Est.: 1977; 8a: N
Engineering, Construction & Testing Services

CENTER FOR RESEARCH & MANAGEMENT, INC.
1629 K Street, N.W., #500
Washington, DC 20006
Mr. Elgin W. Watkins
202-296-0033
Min. Code: 0; Est.: ?; 8a: U
Occupational Health & Safety

CHAVIS TOOL & MFG. CO., INC.
P.O. Box 746
Florence, SC 29501
Mr. Earl Chavis
803-346-3221
Min. Code: 2; Est.: 1976; 8a: Y
Component Manufacturing

CHRONOMETRICS
13221 Rippling Brook Drive
Silver Spring, MD 20906
Mr. Homer Guerra
301-460-3700
Min. Code: 3; Est.: ?; 8a: Y
Component Manufacturing

CONTRONICS, INC.
835 Busch Ct.
Columbus, OH 43229
Mr. Clifford Rose
614-846-5930
Min. Code: 0; Est.: 1953; 8a: Y
Component Manufacturing

CUSTOM CONTROL PANELS
8333 Chetle Avenue
Santa Fe Springs, CA 90670
Contact:
213-685-3084
Min. Code: 6; Est.: 1966; 8a: U
Component Manufacturing

DAGON DIVERS, INC.
5918 Genoa St.
Oakland, CA 94608
Mr. Roger White
415-428-1982
Min. Code: 6; Est.: 1975; 8a: U
Diving Services/Undersea Construction

DELTA TECHNOLOGIES, INC.
725 Market St.
Wilmington, DE 19801
Mr. William D. King
302-654-6383
Min. Code: 0; Est.: ?; 8a: Y
Research, Development, & Engineering
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<th>Firm Name</th>
<th>Contact Name</th>
<th>Phone Number</th>
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<td>DUGGALS UNITED INTERNATIONAL, INC.</td>
<td>Mr. D. Paul Duggal</td>
<td>301-656-8610</td>
<td>1976</td>
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<td>5914 Wisconsin Avenue, Chevy Chase, MD 20015</td>
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<td>EC CORPORATION</td>
<td>Dr. Orlindo C. Baldonado</td>
<td>615-482-3681</td>
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<td>575 Oak Ridge Turnpike, #200, Oak Ridge, TN 37830</td>
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<td>ENERGY SYSTEMS ENGINEERING, INC.</td>
<td>Mr. Jose A. Reig</td>
<td>301-942-2427</td>
<td>1979</td>
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<td>11212 Grandview Ave., Wheaton, MD 20902</td>
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<td>ENGINEERING ANALYSIS &amp; TEST CO., INC.</td>
<td>Mr. Raymond Perez</td>
<td>213-822-0931</td>
<td>1976</td>
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<td>4676 Admiralty Way, Marina Del Ray, CA 90291</td>
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<td>ENVIRONMENTAL MANAGEMENT &amp; RESEARCH, INC.</td>
<td>Mr. Arthur H. Moriguchi</td>
<td>415-883-7734</td>
<td>1974</td>
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<td>30 Pamaron Way, #D, Ignacio, CA 94947</td>
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<td>EUREKA LABORATORIES, INC.</td>
<td>Mr. Steve K. Leung</td>
<td>916-443-3932</td>
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<td>215 26th St., Sacramento, CA 95816</td>
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<td>FITZ CONSULTANTS, INC.</td>
<td>Ms. Leslie Fitz</td>
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<td>555 Veterans Blvd., Suite 105, Redwood City, CA 94063</td>
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<td>GENCO TOOL &amp; ENGINEERING COMPANY</td>
<td>Mr. George Uzzell</td>
<td>301-587-1841</td>
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<td>2412 Linden Lane, Silver Spring, MD 20910</td>
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<td>GEO-RESOURCE CONSULTANTS, INC.</td>
<td>Mr. Alvin Joe</td>
<td>415-433-3177</td>
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<td>1620 Montgomery St., San Francisco, CA 94111</td>
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<td>GLOBETROTTERS ENGINEERING CORP.</td>
<td>Mr. Niranjan S. Shah</td>
<td>312-922-6400</td>
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<td>1020 S. Wabash Ave., #802, Chicago, IL 60605</td>
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Alphabetical Listing of Firms (continued)

HANSEN/MURAKAMI/ESHIMA
424 2nd Street
Oakland, CA  94607
Mr. Jens H. Hansen
415-444-7959
Min. Code: 4; Est.: 1978; 8a: U
Architectural/Civil Engineering

H.F. HENDERSON INDUSTRIES
45 Fairfield Place
West Caldwell, NJ  07006
Mr. Henry F. Henderson
201-227-9250
Min. Code: 0; Est.: 1953; 8a: Y
Component Manufacturing

INTERTECHNOLOGY CORPORATION
2603 Artie St., #11
Huntsville, AL  35805
Mr. Hanson Howard
205-533-9171
Min. Code: 6; Est.: ?; 8a: U
Research and Development

JAMES ENGINEERING COMPANY
6329 Fairmont Avenue
El Corrito, CA  94530
Mrs. Beverly James
415-525-7350
Min. Code: 7; Est.: ?; 8a: U
Civil & Electrical Engineering

JORDAN/AVENT & ASSOCIATES
111 New Montgomery St.
San Francisco, CA  94105
Mr. Frederick E. Jordan
415-989-1025
Min. Code: 6; Est.: ?; 8a: U
Planning & Engineering

KIRAN ENGINEERS, INC.
6 Hummingbird Lane
Enfield, Ct.  06082
Mr. Kiran Majmudar
203-749-6888
Min. Code: 4; Est.: ?; 8a: U
Consulting Engineering

KYLE MACHINE WORKS, INC.
1913 N. Zaragosa
El Paso, TX  79907
Mr. Fred Kyle
915-859-2010
Min. Code: 3; Est.: 1960; 8a: Y
Component Manufacturing

T.Y. LIN INTERNATIONAL
315 Bay St.
San Francisco, CA  94133
Mr. T.Y. Lin
415-982-1050
Min. Code: 4; Est.: 1954; 8a: U
Civil Engineering

DAVID K. LOW & ASSOCIATES, INC.
47 Lafayette St.
San Francisco, CA  94103
Mr. David K. Low
415-864-2450
Min. Code: 4; Est.: 1966; 8a: U
Consulting Engineering

McWANE & ASSOCIATES
P.O. Box 5175
San Jose, CA  95150
Mr. Odell McWane
408-293-2325
Min. Code: 0; Est.: 1978; 8a: N
Consulting Engineering
Alphabetical Listing of Firms (continued)

OCCUPATIONAL & ENVIRONMENTAL HEALTH ANALYSTS, INC.
P.O. Box 164
Upton, NY 11973
Mr. Otto White, Jr.
516-331-1651
Min. Code: 3; Est.: 1979; 8a: U
Occupational & Health Safety Studies

ODEP ENGINEERING, INC.
550 Seco Road, Bldg. No. 3
Monroeville, PA 15146
Mr. Oscar De Pineres
412-373-7470
Min. Code: 3; Est.: 1980; 8a: P
Geotechnical/Civil Engineering

PACIFIC RELAYS, INC.
2929 Exposition
Los Angeles, CA 90018
Mr. William Jankans
213-734-1719
Min. Code: 0; Est.: 1953; 8a: Y
Component Manufacturing

PAN AMERICAN STEEL CORPORATION
3116 Adeline St.
Oakland, CA 94608
Mr. Gerald Gray
415-654-1489
Min. Code: 0; Est.: 1955; 8a: Y
Component Manufacturing

PARAMETRIC, INC.
1800 K St., N.W., #718
Washington, DC 20006
Mr. Marshall Isler
202-467-5533
Min. Code: 0; Est.: 1971; 8a: Y
Engineering & Construction

PATEL ENTERPRISES, INC.
3400 Blue Springs Road, N.W., #B-3
Huntsville, AL 35810
Mr. Manu Patel
205-859-5000
Min. Code: 4; Est.: ?; 8a: U
Architectural/Geotechnical Engineering

PEMBROKE MACHINE CO., INC.
P.O. Box 625
Pembroke, NC 28372
Mr. Ray Lowery
919-521-3411
Min. Code: 2; Est.: 1970; 8a: U
Component Manufacturing

POWER DESIGN SERVICES
2200 S. Main St., #A
Lombard, IL 60148
Mr. Ken Yoshitami
312-495-9100
Min. Code: 4; Est.: ?; 8a: U
Consulting Engineering

PROGRESSIVE ENGINEERING CONSULTANTS
15583 Peach Walker Drive
Bowie, MD 20716
Mr. Peter A. Labarta
301-249-1222
Min. Code: 3; Est.: 1979; 8a: P
Consulting Engineers

REI PYRAMID INTERNATIONAL
430 Franklin Turnpike
Ridgewood, NJ 07450
Mr. Envar Odar
201-444-6220
Min. Code: 4; Est.: 1976; 8a: P
Civil/Structural Engineering
Alphabetical Listing of Firms (continued)

SAM'S ELECTRONIC ASSEMBLY, INC.
105 W. 35th St., Suite M
National City, CA 92050

Ms. Edith V. Wegman
714-426-3401
Min. Code: 2; Est.: 1972; 8a: Y
Component Manufacturing

SCIENCE SYSTEMS & APPLICATIONS, INC.
10210 Greenbelt Road
Seabrook, MD 20810

Mr. Sarasuati Bahethi
301-794-6633
Min. Code: 4; Est.: 1977; 8a: Y
Research and Development

SCIENTIFIC SYSTEMS, INC.
54 Rindge Ave. Extension
Cambridge, MA 02140

Dr. Raman K. Mehra
617-661-6364
Min. Code: 4; Est.: 1976; 8a: Y
Research and Development

SHELADIA ASSOCIATES, INC.
3833 34th St.
Mt. Rainier, MD 20822

Mr. Pravine Sheladia
301-779-4313
Min. Code: 4; Est.: 1974; 8a: Y
Engineering Services

S. HOUSTON PRECISION MACHINING SERVICE
1214 VA
S. Houston, TX 77587

Mr. Arturo Gomez
713-946-7595
Min. Code: 3; Est.: 1968; 8a: U
Component Manufacturing

SOUTHEAST MACHINE COMPANY
416 Rotary St.
Hampton, VA 23661

Mr. Luis Cantu
804-838-6155
Min. Code: 3; Est.: ?; 8a: Y
Research and Development

STANDARD ENGINEERING CORPORATION
44800 Industrial Drive
Fremont, CA 94538

Mr. Don Little
415-657-7555
Min. Code: 7; Est.: 1974; 8a: U
Component Manufacturing

STERLING SYSTEMS, INCORPORATED
1749 Old Meadow Road
McLean, VA 22102

Mr. Robert Quinichett
703-827-9000
Min. Code: 0; Est.: 1977; 8a: Y
Consultants

MARION THOMAS ASSOCIATES
914 Silver Spring Ave., #20
Silver Spring, MD 20910

Mr. Marion Thomas
301-588-6403
Min. Code: 0; Est.: ?; 8a: Y
Architectural Engineering

UNIVOX CALIFORNIA, INC.
4505 W. Jefferson Blvd.
Los Angeles, CA 90016

Mr. John Grayson
213-327-7000
Min. Code: 0; Est.: 1970; 8a: Y
Component Manufacturing
Alphabetical Listing of Firms (continued)

VAL-TRONICS, INC.
1 West St.
Fall River, MA 02720

VIKING ENERGY CORPORATION
4709 Baum Blvd.
Pittsburgh, PA 15213

WCH INDUSTRIES, INC.
24 Crescent Street
Waltham, MA 02154

WEST ELECTRONICS, INC.
200 C Street, Box 577
Poplar, MT 59255

WILSON & ASSOCIATES, INC.
4439 Reading Road
Cincinnati, OH 45229

WOODWARD-CLYDE CONSULTANTS
600 Montgomery St., 30th Floor
San Francisco, CA 94111

Mr. Gerald Vallee
617-675-7366
Min. Code: 2; Est.: 1970; S: Y
Component Manufacturing

Dr. Jagdish Saluja
412-683-6440
Min. Code: 4; Est.: 1977; S: Y
Consulting Engineers

Mr. William C. Harrison
617-894-7022
Min. Code: 0; Est.: 1979; S: Y
Technical Consultants

Mr. Charles Candela
406-765-3471
Min. Code: 2; Est.: 1971; S: Y
Component Manufacturing

Mr. Henry Wilson
513-641-2006
Min. Code: 0; Est.: ?; S: Y
Architecture & Engineering

Contact:
415-434-1955
Min. Code: 6; Est.: 1950; S: U
Consulting Engineering
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Woodward-Clyde Consultants
San Francisco, CA
APPENDIX B

DIRECTORY OF MINORITY INDIVIDUALS WITH NUCLEAR ENERGY RELATED EXPERTISE
DIRECTORY OF MINORITY INDIVIDUALS

This directory is presented with the following format:

LAST NAME, First Name, Initials
a. Highest relevant degree, University, year
b. Area(s) of relevant expertise
c. Current title/responsibility within organization
d. Organization where employed
e. Address of organization

Only individuals with nuclear energy related expertise (e.g., nuclear physics, nuclear engineering, health physics) are included.

Where information was not available a "?" has been inserted.
ADDAY, Dr. Andrew K.
   a. PhD,
   b. Reactor Physics/Nuclear Engineering
   c. Professor of Nuclear Engineering
   d. Howard University
   e. Washington, DC 20059

BLEDSOE, Dr. Horace W. L.
   a. PhD, U. of Texas, 1971
   b. Low Energy Nuclear Physics
   c. Professor of Physics
   d. U. of Texas at Odessa
   e. Odessa, Texas 70762

CANO, Dr. Gilbert
   a. PhD, New Mexico State U., 1964
   b. Nuclear Physics
   c. 
   d. Sandia Laboratories
   e. Albuquerque, New Mexico 87115

COLLINS, Dr. Warren E.
   a. PhD, Vanderbuilt U., 1972
   b. Nuclear Physics
   c. Chairman, Dept. of Physics
   d. Southern University
   e. P. O. Box 10554
   f. Baton Rouge, Louisiana 70813
Cortez, Dr. Jose L. M.
  a. PhD, U. of Michigan, 1967
  b. Nuclear Physics/Atomic Physics
  c. Director of Technical Programs, CS-DOE
     International Program, CS
  d. 600 E Street, N.W.
  e. Mail Stop 400
     Washington, DC 20585

Davis, Owen
  a. MS, U. of Pittsburgh, 1969
  b. Radiation Health, Nuclear Engineering
  c. Director of Federal Agency Relations
  d. Pacific Gas & Electric
  e. 1050 17th Street, NW, Suite 1180
  f. Washington, DC

Dixon, Dr. Robert
  a. PhD, U. of Maryland, 1977
  b. Theoretical Nuclear Physics
  c. Director of the Institute
  d. Suite 500, The Grant Building
  e. 44 Broad Street
  f. Atlanta, Georgia 30303

Earls, Dr. Julian
  a. PhD, U. of Michigan, 1966
  b. Health Physics
  c. Chief of Environmental Health
  d. NASA Lewis
  e. 21000 Brookpark Road
  f. Cleveland, Ohio
FERGUSON, Dr. George
a. PhD, Catholic U., 1965
b. Low Energy Nuclear Physics
c. Professor & Director, Nuclear Engineering
d. Howard U.
e. Washington, DC 20059

GALLEGOS, Dr. Tony F.
b. Radioecology
c.
d. Department of Biology
e. New Mexico Highland U.
f. Las Vegas, New Mexico

GREENHOUSE, Nathaniel A., Jr.
a. MS, U. of Rochester, 1966
b. Health Physics
c. Vice President, Occupational & Environmental Health Analysts, Inc.
d. P. O. Box 164
e. Upton, New York 11973

HARRISON, Dennis L.
a. MS, Howard U., 1974
b. Nuclear Engineering
c. Mechanical Engineer
d. Maritime Administration
e. Office of Ship Construction
f. Dept. of Commerce
   Washington, DC 20230
HOLT, Brenda J.
   a. MS, UCLA, 1973
   b. Health Physics
   c. Engineering Physicist, Radiation Physics Group
   d. Fermi National Laboratory
   e. Mail Stop 119
   f. P. O. Box 500
      Batavia, Illinois 60510

JONES, Kenneth A.
   a. MS, Carnegie-Mellon, 197
   b. · Nuclear Engineer
   c. Manager of Reactor Protection
   d. Engineering Department, Nuclear Technology Div.
   e. Westinghouse Electric Corp.
   f. Pittsburg, Penn.

JUPITER, Clyde
   a. MS, U. of Notre Dame, 1951
   b. Nuclear Power/Environmental Science
   c. Program Manager, Waste Management Research
   d. Office of Nuclear Regulatory Research
   e. Nuclear Regulator Commission
   f. 7915 Eastern Avenue
   g. Silver Spring, Maryland

KNOX, Wayne H.
   a. MS, Georgia Tech, 1973
   b. Nuclear Engineer/ Health Physics
   c. Project Manager
   d. Institute for Nuclear Power Operations
   e. 1820 Water Place
   f. Atlanta, Georgia 30339
LARKINS, Dr. John T.
a. PhD,
b.  
c. Chief, Program Coordination Branch
d. Office Nuclear Regulatory Research
e. Nuclear Regulatory Commission
f. 7915 Eastern Avenue
g. Silver Spring, Maryland

MCGUIRE, Dr. Stephen C.
a. PhD, Cornell U., 1976
b. Experimental Nuclear Physics
c. Nuclear Physicist
d. 
e. Oak Ridge National Laboratory
f. Oak Ridge, Tennessee

MILLER, Vandy
a. MS, U. of Rochester, 1962
b. Radiobiology/Health Physics
c. Chief, Materials Licensing Branch
d. Nuclear Regulatory Commission
e. 7915 Eastern Avenue
f. Silver Spring, Maryland

MILLER, Dr. Warren
a. PhD, Northwestern U.,
b. Nuclear Engineer/Technical Management
c. Deputy Associate Director for Nuclear Programs
d. Los Alamos Scientific Laboratory
e. Los Alamos, New Mexico 87545
MORALES, Dr. Reynaldo
a. PhD, U. of Texas, 1967
b. Nuclear Physics
c. LASL, Mail Stop 632
d. Los Alamos, New Mexico 87544

PETTIJOHN, Samuel
a. 
b. Health Physics
c. AEOD
d. Nuclear Regulatory Commission
e. Washington, DC 20555

PEREZ, Raymond
a. MS, UCLA, 1974
b. Nuclear Engineer
c. President, Engineering Analysis and Test Co., Inc.
d. 4676 Admiralty Way
e. Marina Del Rey, California 90291

PERRY, Dr. Benjamin
a. PhD, U. of Michigan, 1962
b. Nuclear Astrophysics
c. Professor of Physics
d. Dept. of Physics
e. Howard University
f. Washington, DC 20059
POE, Robert
  a. MS, Vanderbilt, 1969
  b. Physics/Health Physics
  c. Standards Specialist
  d. Office of Environmental Compliance & Overview
  e. Mail Stop EV-132, Dept. of Energy
  f. Washington, DC 20545

REED, Cordell
  a. BS, U. of Illinois, 19
  b. Mechanical Engineer
  c. Assistant Vice President, Manager of Nuclear Operations
  d. Commonwealth Edison Co.
  e. P. O. Box 767
  f. Chicago, Illinois 60690

RIOS, Dr. Miguel, Jr.
  a. PhD, U. of Maryland, 1972
  b. Experimental Nuclear Physics
  c. Sandia Laboratories
  d. Albuquerque, N. M. 87115

SHACKLEFORD, William G.
  a. MS, Georgia Tech, 1974
  b. Nuclear Engineering/Health Physics
  c. Director, Dual Degree Engineering
  d. Atlanta University Center, Inc.
  e. Atlanta, Georgia 30314
SHEPARD, Dr. Robert
a. PhD,
b. Nuclear/Chem Engineer
c. Operations Research Analyst
d. Office of Nuclear Regulatory Research
e. Nuclear Regulatory Commission
f. Washington, DC 20555

SIMMONS, Earl
a. MS, Howard U.
b. Nuclear Engineering
c. Mechanical Engineer
d. Maritime Administration
e. Office Ship Construction
f. Department of Commerce
  Washington, DC 20230

SLAUGHTER, Dr. Milton
a. PhD, U. of New Orleans, 1974
b. Nuclear/Particle Physics
c. LASL Group T-DO
d. MS 210
e. P. O. Box 1663
f. Los Alamos, New Mexico 87545

VIGIL, Dr. John Carlos
a. PhD,
b. Reactor Physics
c.
d. Los Alamos Scientific Laboratory
e. Los Alamos, New Mexico 87545
WILKINS, Dr. J. Ernest, Jr.
  a. PhD, U. of Chicago, 1942
  b. Reactor Theory
  c. Nuclear Physicist
  d. Associate General Manager
  e. EG&G Idaho, Inc.
  f. P. O. Box 1625
  g. Idaho Falls, Idaho 83401

WATKINS, Elgin W.
  a. MPH, Yale U., 1967
  b. Health Physics
  c. President, Center for Research & Management, Inc.
  d. 1629 K Street, N.W., Suite 500
  e. Washington, DC 20006

WATKINS, Goldie
  a. 
  b. Health Physics
  c. Deputy Commissioner of Health
  d. New York State Department of Health
  e. 4918 Two World Trade Center
  f. New York, New York 10047
APPENDIX C

OVERVIEW OF IRDEN AND THE CURRENT ORGANIZATIONAL STRUCTURE
Overview

The Institute for Research, Development and Engineering in Nuclear Energy (IRDEN) seeks to enhance the participation of minority institutions in the nuclear energy programs of the Department of Energy. IRDEN, located in Atlanta, Georgia, the home of six historically black institutions of higher education, is a wholly-owned subsidiary of AMAF Industries, Inc. of Columbia, Maryland. The Institute addresses its purpose through the involvement of minority scientists, engineers and students in nuclear technology related research. The focus of IRDEN's program is in the area of nuclear waste management, an area that is vital to the development and use of the nuclear energy alternative.

The Institute promotes and develops research activities in nuclear energy programs through the involvement of minority businesses and academic institutions with the major nuclear energy laboratories. IRDEN provides minority institutions with an information base, technical services and the necessary infrastructure to achieve greater participation in nuclear energy programs. IRDEN recognizes the compelling necessity of utilizing fully the talent pool of the Nation in seeking solutions to nuclear energy problems. Significantly this philosophical underpinning of IRDEN is a foremost element in the Nation's current approach to nuclear waste management, which advocates broad participation by the public and the technical community. The Institute seeks to insure this expanded participation by providing a diverse set of opportunities in engineering and in the biological, physical and social sciences for minority-institution involvement. Particular attention is focused on the historically black academic institutions, which comprise a valuable National resource. These colleges and universities, many with well over a century of service, possess a significant concentration of the Nation's minority scientists and engineers. IRDEN matches elements of this talent pool with viable research opportunities.

The specific goals of the Institute are to:

- Foster greater minority business participation in the nuclear field.
- Increase participation of minority scientists and engineers in nuclear energy programs.
- Strengthen the manpower resource pool capable of contributing to nuclear technology development.

IRDEN's pursuit of these goals is realized through an organized and concerted effort to operate within the framework established by the following functions:

- Provide coupling of capability of minority institutions and nuclear energy program needs.
- Assist development of competitive contract proposals.
- Provide management of program tasks at minority institutions.
- Inform minority institutions of strategies, plans and technical developments of sponsoring organizations.
- Facilitate involvement of institutions by provision of other technical and managerial services.

These functions reflect the approach of the Institute to enhance minority participation in the nuclear field.
STATEMENT OF WORK

Development of New Business Opportunities for Minorities in Nuclear Energy

I. INTRODUCTION

The Nuclear Program Division of the Department of Energy expects nuclear power's share of electricity generation to increase to over 30 percent by the year 2000, both due to new construction and completion of projects already underway. According to a recent report, nuclear power in the United States currently is produced by seventy-two reactors supplying some 13 percent of the nation's electricity. The Department's budget authority in the nuclear program is as follows: $1.2 billion in 1979, $1.18 billion in 1980, and $925 million in 1981. The thrust of the advanced nuclear technology in the form of the fission breeder reactor offers an approach to meeting the nation's long-term energy objective to make available renewable and essentially inexhaustible sources of energy.

This expansion of nuclear power capability will foster many business opportunities. There are a number of minority owned small businesses (MOSB) which qualify as subcontractors for part of the work under these procurements. However, the impression seems to be, where advanced technology is called for, that minority owned small firms (1) lack the expertise to perform and/or (2) capable of performing only the small and relatively unimportant tasks.

The Office of Minority Economic Impact (OMEI) as part of its mandate serves as the advocate for minorities who seek to do business with DOE. Therefore, OMEI is quite interested in seeing that this problem is eliminated. To accomplish this goal, we plan to assist those program and/or project managers who have indicated that they would be willing to utilize minority firms if they could only find one.

II. OBJECTIVES AND SCOPE

In order to assist the Department in achieving Secretary Duncan's procurement goals and to help ensure that Public Law 95-507 is achieved, OMEI plans to issue an 8(a) contract to analyze the nature of the subcontract market within the nuclear area to (1) identify and find opportunities for new business for minority owned small businesses; and (2) prepare a list of qualified MOSBs who can then be matched with the contracting opportunities uncovered.
III. WORK TO BE ACCOMPLISHED

To take advantage of these opportunities, a comprehensive marketing approach involving many minority institutions and organizations is needed. Also, an analysis of the subcontract market. This analysis will yield information about current and future business opportunities for MOSBs by categories broad enough to permanence of the information while being significantly specific in terms of location, value of business, and time framework to ensure usability. The areas of subcontracting to be determined must therefore be functional.

TASK A: Develop a typology of MOSBs corresponding to the characteristics of MOSBs that have the capability to handle the identifiable business opportunities within the Nuclear Programs of DOE. This listing will also be functional, organized according to subcontracting categories and cross-referenced in terms of other relevant information.

TASK B: Develop an in-depth list of all areas in DOE including program people who could provide contracting opportunities for MBEs. This listing would also identify the level of funding as well as the type of opportunity in the following areas:
(a) Converter Reactor Systems
(b) Breeder Reactor Systems
(c) Special Nuclear Systems
(d) Advanced Isotope Separation
(e) Commercial Nuclear Waste
(f) Spent Nuclear Fuel
(g) Uranium Resource Assessment

TASK C: Create a data base of minority scientists and engineers located in industry, universities, and government in fields related to nuclear energy.

TASK D: Develop a network which will facilitate the interaction of MBEs, knowledgeable scientists and engineers, professional associations, and black educational institutions in the fields related to nuclear energy.

IV. SPECIAL INFORMATION AND INSTRUCTIONS

In order to accomplish the above tasks, the contractor will need to (1) meet with key personnel within the Office of the Assistant Secretary for Nuclear Programs to clarify the nature and intent of the project; (2) be provided support in approaching suggested prime contractors; (3) be provided with a list of sites to visit and personnel contacts at those sites, as well as Regional Offices corresponding to the areas to be visited; and (4) be provided with appropriate "sanitized" documents.
PART II

MOSB CONTRACTOR'S GUIDE TO OPPORTUNITY
1.0 THE STRUCTURE OF THE NUCLEAR INDUSTRY

It is important that would-be minority business contractors understand the structure of the industry and the relationship of the DOE Nuclear Energy Office to that industry. Each major sector of the industry represents multi-billions of dollars of activity of a highly varied nature. Each must support other sectors so as to ensure an overall viable industry. Typically an established set of highly specialized small business suppliers of components and services is closely interfaced with a small set of major nuclear industries who essentially dominate the industry. A functional breakdown of the industry is presented in Figure 3.

In Table 1 is presented a matrix of the major industrial participants and their sectors of principal activity. It is typical for significant though minor fractions of their business to involve small business enterprises as subcontractors or suppliers. These relationships have been established over many years (decades) and have given rise to a fully elaborated network of standards and markets for techniques, components, and services which is quite difficult to penetrate for outside contractors. The early developmental history of the industry was strongly influenced and dependent upon government subsidy and the obvious safety and health implications of its operation surrounds it with a tight regulatory climate. The high costs, in capital and/or human welfare, of a component or system failure further closes the activity arena to all but the well established firms.

2.0 FUNCTIONAL BREAKDOWN OF NE PROGRAMS

The Office of the Assistant Secretary for Nuclear Energy of DOE has primary responsibility for nuclear research and development and for conducting subcommercial demonstrations of new nuclear technologies. A good introduction to the major activities within its coordination responsibility can be obtained from the DOE "Gold" books:

a. Fission Energy Program of the USDOE (FY 81), DOE/NE-0006

b. Nuclear Waste Management Program Summary Document (FY 81), DOE/NE-0008

Both of the program analyses can be obtained from the National Technical Information Service (NTIS).
STRUCTURE OF THE NUCLEAR INDUSTRY

URANIUM MINING INDUSTRIES → FUEL-CYCLE INDUSTRIES: FRONT-END → ELECTRICITY SUPPLY INDUSTRIES → FUEL-CYCLE INDUSTRIES: BACK-END

→ FUEL-CYCLE EQUIPMENT SUPPLY INDUSTRIES
→ REACTOR INDUSTRIES
→ FUEL-CYCLE EQUIPMENT SUPPLY INDUSTRIES

DOE NUCLEAR PROGRAMS → NUCLEAR R&D INDUSTRIES

FIGURE 3
<table>
<thead>
<tr>
<th>Company</th>
<th>Uranium Production</th>
<th>Refining</th>
<th>Fuel Fabrication</th>
<th>Reactor Manufacture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Chemical Corp.</td>
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<tr>
<td>Allis Chalmers Corp.</td>
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<tr>
<td>Anaconda Co.</td>
<td></td>
<td>X</td>
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<tr>
<td>Babcock &amp; Wilcox Co.</td>
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<tr>
<td>Beker Industries Corp.</td>
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<tr>
<td>Combustion-Engineering, Inc.</td>
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<tr>
<td>Continental Oil Co.</td>
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<tr>
<td>Exxon Corp.</td>
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<td>X</td>
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<tr>
<td>Federal-American Partners</td>
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<tr>
<td>General Atomic Co.</td>
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<tr>
<td>General Electric Co.</td>
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<td>X</td>
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<tr>
<td>Getty Oil Co.</td>
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<tr>
<td>(including Skelly Oil Co.)</td>
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<tr>
<td>Gulf Oil Corp.</td>
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<tr>
<td>Kerr-McGee Corp.</td>
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<td>X</td>
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<tr>
<td>Mobile Oil Corp.</td>
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<tr>
<td>Phelps Dodge Corp</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>(Western Nuclear Inc.)</td>
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<tr>
<td>Pioneer Corp.</td>
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<tr>
<td>Union Carbide Corp.</td>
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<td>X</td>
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<tr>
<td>Union Pacific Corp.</td>
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<td></td>
<td>X</td>
<td></td>
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<tr>
<td>United Nuclear Corp.</td>
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<tr>
<td>Utah International, Inc.</td>
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<tr>
<td>Westinghouse Electric Corp.</td>
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<td></td>
<td>X</td>
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<tr>
<td>(Wyoming Minerals Corp.)</td>
<td></td>
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<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Source: Federal Trade Commission, Bureau of Economics
The DOE nuclear energy program has the following (budget category) breakdown:

Commercial Nuclear Waste

Terminal Isolation Research and Development
Waste Systems Evaluation and Public Interaction
Waste Treatment Technology
Remedial Action Program

Defense Nuclear Waste

Decontamination and Decommissioning
Interim Waste Operations
Long-Term Waste Management Technology
Terminal Storage
Transportation Research and Development

Spent Nuclear Fuel

Domestic Spent Fuel Storage
International Spent Fuel Storage

Advanced Isotope Separation Technology

Uranium Enrichment
Applications and Assessments of Advanced Technologies

Conventional Reactor Systems

Light Water Reactor Technology
Three Mile Island Examination Activity
Breeder Reactor Systems

Liquid Metal Fast Breeder Reactor
Water Cooled Breeder
Proof-of-Breeding Analytical Support

Advanced Nuclear Systems

Systems Evaluations
Space and Terrestrial Applications

Naval Reactors
The associated budgets for the major categories for FY 81 are as follows:

<table>
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<th>Category</th>
<th>Budget</th>
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<tbody>
<tr>
<td>Commercial Nuclear Waste</td>
<td>$245.6</td>
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<tr>
<td>Defense Nuclear Waste</td>
<td>300.2</td>
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<tr>
<td>Spent Nuclear Fuel</td>
<td>22.5</td>
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<tr>
<td>Advanced Isotope Separation Technology</td>
<td>80.2</td>
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<tr>
<td>Conventional Reactor Systems</td>
<td>105.2</td>
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<tr>
<td>Breeder Reactor Systems</td>
<td>469.3</td>
</tr>
<tr>
<td>Advanced Nuclear Systems</td>
<td>42.0</td>
</tr>
<tr>
<td>Naval Reactors</td>
<td>303.4</td>
</tr>
<tr>
<td><strong>Total ASNE</strong></td>
<td><strong>$1,568.7</strong></td>
</tr>
</tbody>
</table>

3.0 BARRIERS TO EXPLOITATION OF OPPORTUNITIES

The nuclear industry is a very difficult marketing arena for entry by a minority owned small business. Some of the problems any MOSB faces are:

a. The growth climate for the industry is strongly influenced by political and extra-technical issues (environmental, safety, psychological). Thus, there is a high degree of inherent risk in business planning and projection with regards to allocation of investment capital and personnel resources.

b. The contractors and suppliers are well established and mutually beneficial networks have been set up in such a way as to exclude the need for or interest in new participants.

c. The DOE nuclear programs are highly decentralized to field and project offices and the program people in those offices typically have come to rely on a small set of business as viable and qualified. There is little benefit and considerable risk for a program manager in involving new contractors.

d. The intensive regulatory climate in which the industry and program operates dictates very high quality assurance standards which must be met by prospective (MOSB and other) suppliers.
e. The data keeping in DOE field and project offices makes it extremely difficult to get an accurate fix on past office performance with respect to MOSB nuclear related procurements. Thus, it is difficult to estimate the past and current commitments to such procurements.

Though problematic, the market is not impossible. Passive approaches to participation simply will not work, however. An effective approach to marketing this arena for MOSBs requires participation in the "capacity building" and "networking" activities proposed in Part I of this report.

4.0 REGIONAL ANALYSIS OF OPPORTUNITIES

This section presents an analysis of the DOE nuclear program opportunities by region. A map defining each geographic region (I – X) is presented in Figure 4. For each region there is given a matrix table presentation of the lead DOE field and project offices and their program responsibilities. The appropriate procurement office and small business/disadvantage business (SB/DB) specialist contacts are provided for each office. A data sheet is provided for each identified minority owned small business. These sheets are grouped according to DOE regions to facilitate contact between DOE and the businesses, and between the businesses themselves.
DEFINITIONS OF DOE FACILITY ACTIVITY ABBREVIATIONS

LWR - Light Water Reactor
AIS - Advanced Isotope Separation
HTR - High Temperature Gas Cooled Reactor
LMFBR - Liquid Metal Fast Breeder Reactor
WCB - Water Cooled Breeder
GCBR - Gas Cooled Breeder Reactor

Space & Terr. Appl. - Space & Terrestrial Systems Applications
Region 1; Boston, Mass.
Contains: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

|-----|-----|-----|-------|-----|------|-----------|---------------------|---------------|------------------|

No major DOE facilities or labs listed
<table>
<thead>
<tr>
<th>DOE Office</th>
<th>Procurement Office</th>
<th>SB/DB Specialist</th>
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</thead>
<tbody>
<tr>
<td>Harold J. Keohane</td>
<td>Diana Salemy</td>
<td>Same</td>
</tr>
<tr>
<td>Regional Representative of</td>
<td>Director of Management</td>
<td></td>
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<tr>
<td>the Secretary, Region 1</td>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>Department of Energy</td>
<td>(617) 223-2444</td>
<td></td>
</tr>
<tr>
<td>150 Causeway Street, Rm 700</td>
<td>(FTS 223-2444)</td>
<td></td>
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<tr>
<td>Boston, MA 02114</td>
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<tr>
<td>(617) 223-3701</td>
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<tr>
<td>(FTS 223-3701)</td>
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</tr>
</tbody>
</table>
NAME OF FIRM Bar-Pat Manufacturing Co.

MAILING ADDRESS 437 Howard Street

                  Bridgeport, CT 06601

CONTACT George Ballinger  TITLE President

PHONE (203) 335-2193  EST.: 1970  8(a): Yes

TYPE OF SERVICE OFFERED manufacturing; electronix mfg., testing equipment usable in nuclear plants

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS MIL-Spec certified; test equipment for ORNL
NAME OF FIRM  Kiran Engineers, Inc.

MAILING ADDRESS  6 Hummingbird Lane

                      Enfield, CT 06082

CONTACT  Kiran Majmudar  TITLE

PHONE  (203) 749 - 6888  EST.:  8(a):

TYPE OF SERVICE OFFERED  consulting engineers

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

work by company personnel on piping and structure. Also, analysis of
reactor and containment.

FIRM MINORITY CODE  4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

piping and structural analysis; civil and mechanical engineering.
NAME OF FIRM: B & M Technological Services, Inc.

MAILING ADDRESS: 520 Commonwealth Avenue

Boston, MA 02115

CONTACT: William V. Benjamin

TITLE

PHONE: (617) 247-1040 EST.: 1978

8(a): Yes

TYPE OF SERVICE OFFERED: research, development, engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS: individuals with nuclear experience

FIRM MINORITY CODE: 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS: civil, mechanical, electrical engineering, math modeling
NAME OF FIRM: Scientific Systems, Inc.

MAILING ADDRESS: 54 Rindge Avenue Wxtension
Cambridge, MA 02140

CONTACT: Dr. Raman K. Mehra TITLE: President

PHONE: (617) 661-6364 EST.: 1976 8(a): yes

TYPE OF SERVICE OFFERED:

SPECIAL CAPABILITIES: research and development

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT.

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:

analytical studies in modern system theories, math modeling, survey control theories, mostly computer related to nuclear, attempted to get core analysis project, nuclear science, rad waste management.
NAME OF FIRM: Val-Tronics, Inc.

MAILING ADDRESS: One West Street
                  Fall River, MA 02720

CONTACT: Gerald Vallee  TITLE: President

PHONE: (617) 675-7366  EST.: 1970  8(a): Yes

TYPE OF SERVICE OFFERED:
  electronic devices manufacturer

SPECIAL CAPABILITIES:
  test communication system equipment for FAA

PERSONNEL WITH SPECIAL QUALIFICATIONS:
  None. Personnel has been involved in a radiation monitoring system for the
  Titan II Missile Program and other Radiac detection instruments.

FIRM MINORITY CODE: 2

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
  able to manufacture panel control meter (radioactive meter), MIL spec
  certified (MIL-STD-810) & (MIL-I-45208A)
NAME OF FIRM: WCH Industries, Inc.

MAILING ADDRESS: 24 Crescent Street
Waltham, MA 02154

CONTACT: William C. Harrison TITLE: President

PHONE: (617) 894-7022 EST.: 1979 Yes

TYPE OF SERVICE OFFERED:
technical consultants

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:
President is retired U.S. Lt. Colonel in Army Chemical Corps working with nuclear environmental areas, company personnel with Storm & Webster, have access to machine shop with nuclear QA trained personnel

FIRM MINORITY CODE: 0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT.

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
nuclear science, radiological studies, geotechnical studies, radiac waste management, safety & risk, system engineering, ME, reactor engineer, reactor physicists
Region 2; New York, New York

Contains: New Jersey, New York, Puerto Rico, Virgin Islands

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<td>New York</td>
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<tr>
<td>Brookhaven Natl. Lab.</td>
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<td>Knolls Atomic Power Lab.</td>
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<td>Schenectady</td>
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</table>
## DEPARTMENT OF ENERGY OFFICES & FACILITIES,
GOVERNMENT OWNED/COMPANY OPERATED OFFICES
& FACILITIES, & SMALL/DISADVANTAGED
BUSINESSES LOCATED WITHIN DOE REGION 2

<table>
<thead>
<tr>
<th>DOE Office</th>
<th>Procurement Office</th>
<th>SB/DB Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert A. Low</td>
<td>William V. Wood</td>
<td>Same</td>
</tr>
<tr>
<td>Regional Representative of the Secretary, Region 2</td>
<td>Contracting Officer (212) 264-1021</td>
<td>Contact Through:</td>
</tr>
<tr>
<td>Department of Energy</td>
<td></td>
<td>John Herring 557-5567</td>
</tr>
<tr>
<td>26 Federal Plaza, Rm 3206</td>
<td></td>
<td>Mary Ann Petricca</td>
</tr>
<tr>
<td>New York, NY 10007</td>
<td></td>
<td>Contract Specialist</td>
</tr>
<tr>
<td>(212) 264-1021</td>
<td></td>
<td>(518) 393-6611, x4446</td>
</tr>
<tr>
<td>(FTS 264-1021)</td>
<td></td>
<td>(FTS 563-4446)</td>
</tr>
<tr>
<td>Barry M. Erickson, Manager</td>
<td>Peter F. Emmi, Director</td>
<td>Gregory J. Ageka</td>
</tr>
<tr>
<td>Schenectady Naval Reactors Office</td>
<td>Contracts Division (518) 393-6611, x4231</td>
<td>Senior Contract Specialist</td>
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<tr>
<td>Through: Division of Naval Reactors</td>
<td>(FTS 563-4231)</td>
<td>(516) 345-3436</td>
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<td>Department of Energy</td>
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<td>(FTS 666-3436)</td>
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<tr>
<td>P.O. Box 1069</td>
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<td>(FTS 666-3439)</td>
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<tr>
<td>Schenectady, NY 12301</td>
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<tr>
<td>(518) 393-6611, x4441</td>
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<tr>
<td>(FTS 563-4441)</td>
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<tr>
<td>David Schweller, Manager</td>
<td>Joseph F. Frino, Chief</td>
<td>Jonathan Ford</td>
</tr>
<tr>
<td>Brookhaven Area Office</td>
<td>Administrative Branch (516) 345-3436</td>
<td>(212) 620-3607</td>
</tr>
<tr>
<td>Department of Energy</td>
<td>(FTS 666-3436)</td>
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<tr>
<td>Upton, NY 11973</td>
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<tr>
<td>(516) 345-3424</td>
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<tr>
<td>H.L. Volchok, Director</td>
<td>Jonathan P. Ford</td>
<td>Jerry Faul</td>
</tr>
<tr>
<td>Environmental Measurements Laboratory</td>
<td>Administrative Branch Chief (212) 620-3607</td>
<td>SB/MB Program</td>
</tr>
<tr>
<td>376 Hudson Street</td>
<td>(FTS 660-3607)</td>
<td>(609) 683-3706</td>
</tr>
<tr>
<td>New York, NY 10014</td>
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<tr>
<td>(212) 620-3616</td>
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<tr>
<td>(FTS 660-3616)</td>
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<tr>
<td>Dr. J. Nelson Grace, Director</td>
<td>John Hart</td>
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<tr>
<td>Princeton Area Office</td>
<td>Administrative Branch (609) 683-3709</td>
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<td>Department of Energy</td>
<td>(FTS 340-3709)</td>
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<tr>
<td>P.O. Box 102</td>
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<tr>
<td>Princeton, NJ 08540</td>
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<td>(609) 683-3700</td>
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<tr>
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<td>SB/DB Specialist</td>
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<tr>
<td>The Lummus Company</td>
<td>S.E. Carson, Manager</td>
<td>Benjamin P. Holmes</td>
</tr>
<tr>
<td>1515 Broad Street</td>
<td>(201) 893-3888 (FTS 341-3000)</td>
<td>Contracts Administrator</td>
</tr>
<tr>
<td>Bloomfield, NJ 07007</td>
<td></td>
<td>(201) 893-3888 (FTS 341-3000)</td>
</tr>
<tr>
<td>Princeton Plasma Physics Laboratory</td>
<td>M.B. Gottlieb, Director</td>
<td>John King</td>
</tr>
<tr>
<td>Princeton University</td>
<td>(609) 683-5600 (FTS 340-5600)</td>
<td>Purchasing Manager</td>
</tr>
<tr>
<td>P.O. Box 451</td>
<td></td>
<td>(609) 683-2069 (FTS 340-2069)</td>
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<tr>
<td>Princeton, NJ 08540</td>
<td></td>
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</tr>
<tr>
<td>Brookhaven National Laboratory</td>
<td>George H. Vineyard</td>
<td>Joseph D. Haeg</td>
</tr>
<tr>
<td>Associated Universities, Inc.</td>
<td>Director (516) 345-3335 (FTS 666-4787)</td>
<td>Special Procurement Administrator</td>
</tr>
<tr>
<td>Upton, NY 11973</td>
<td></td>
<td>(516) 345-3161 (FTS 666-3161)</td>
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<tr>
<td></td>
<td>Alfred P. Lewis</td>
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<tr>
<td></td>
<td>Director, Contracts and Procurement</td>
<td>(516) 345-3140 (FTS 666-3145)</td>
</tr>
</tbody>
</table>

2-3
NAME OF FIRM: H. F. Henderson Industries

MAILING ADDRESS: 45 Fairfield Place
West Caldwell, NJ 07006

CONTACT: Henry F. Henderson
TITLE: President

PHONE: (201) 227-9250
EST.: 1953
8(a): yes

TYPE OF SERVICE OFFERED: manufacturing

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE: 0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT.  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

presently constructing rad waste and decontamination stations for Korean nuclear plants. Also conveyor systems and control panels.
NAME OF FIRM: REI Pyramid International

MAILING ADDRESS: 430 Franklin Turnpike
Ridgewood, NJ 07450

CONTACT: Envar Odar

TITLE

PHONE: (201) 444-6220
EST.: 1976

8(a): P

TYPE OF SERVICE OFFERED:
civil and structural engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS:
3 men - 7 years in nuclear field, structural engineers, procurement of nuclear construction materials, structural analysis (Gibson Hill, Ebasco, Burns & Roe)

FIRM MINORITY CODE: 4

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT.
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

CE, ME
NAME OF FIRM  Ashanti Nuclear Corporation

MAILING ADDRESS  152 W. 34th Street
                    New York, NY 10001

CONTACT  K. Ashanti  TITLE

PHONE  (212) 695 - 5398  EST.:  8(a):

TYPE OF SERVICE OFFERED  research, development, engineering.

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS  systems engineering, reactor
  engineering and physics, Monte Carlo Techniques, math modeling and analysis;
  environmental studies, radiation engineering, waste studies and mgmt.;
  risk analysis.
NAME OF FIRM: Occupational and Environmental Health Analysts, Inc.

MAILING ADDRESS: P.O. Box 164
Upton, NY 11973

CONTACT: Otto White, Jr.
TITLE: President
PHONE: (516) 331-1651
EST.: 1979

TYPE OF SERVICE OFFERED:
- Environmental sciences, occupational safety and health

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
- Safety and risk analysis; health physics, radiological studies;
- Geotechnical studies; waste management
Region 3; Philadelphia, PA

Contains: Delaware, Maryland, Pennsylvania, Virginia, Washington, DC, West Virginia

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PENNSYLVANIA
Bettis Atomic Power Lab.
West Mifflin
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<tr>
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<th><strong>Procurement Office</strong></th>
<th><strong>SB/DB Specialist</strong></th>
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<tbody>
<tr>
<td>Obra S. Kernodle</td>
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<tr>
<td>Regional Representative of the Secretary, Region 3</td>
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<tr>
<td>Department of Energy</td>
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<td>1421 Cherry Street, Rm 1001</td>
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<tr>
<td>Philadelphia, PA 19102</td>
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<tr>
<td>(215) 597-3890</td>
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<td>(FTS 597-3890)</td>
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<tr>
<td>Carl K. Gaddis, Manager</td>
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<tr>
<td>Pittsburgh Naval Reactors Office</td>
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<tr>
<td>West Mifflin, PA 15122</td>
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<td>(412) 462-5000, x0240</td>
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<tr>
<td>Richard Scottoline</td>
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<tr>
<td>Support Services Manager</td>
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<tr>
<td>(215) 597-9067</td>
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<td>George B. Strasbaugh</td>
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<tr>
<td>Director, Contracts Division</td>
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<tr>
<td>(412) 462-5000, x0246</td>
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<td>Contact Through:</td>
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<tr>
<td>John Herring 557-5567</td>
<td></td>
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<tr>
<td>Debra E. Ball</td>
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<tr>
<td>Contract Administrator</td>
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<td>(412) 462-5000, x0246</td>
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<td>Office</td>
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<tr>
<td>General Electric/MATSCO</td>
<td>L.D. DeDominicis</td>
<td>Same</td>
</tr>
<tr>
<td>P.O. Box 8555</td>
<td>Manager, PETC Program</td>
<td></td>
</tr>
<tr>
<td>Room 9104</td>
<td>(215) 962-1339</td>
<td></td>
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<tr>
<td>Philadelphia, PA 19101</td>
<td>(FTS 726-2781)</td>
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<td>Bettis Atomic Power</td>
<td>A.C. Davis</td>
<td>SB</td>
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<tr>
<td>Laboratory</td>
<td>General Manager</td>
<td>James A. Spangler</td>
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<tr>
<td>Westinghouse Electric Corp.</td>
<td>(412) 462-5000, x0200</td>
<td>Manager</td>
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<tr>
<td>P.O. Box 79</td>
<td>(FTS 721-0200)</td>
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<td>West Mifflin, PA 15122</td>
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<td>Emerson Dietrich, Buyer</td>
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<td>(412) 462-5000, x6920</td>
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</table>
NAME OF FIRM  Delta Technologies, Inc.

MAILING ADDRESS  725 Market Street

                  Wilmington, DE 19801

CONTACT  William D. King

TITLE

PHONE  (302)  654-6383  EST.:  8(a): yes

TYPE OF SERVICE OFFERED  research, development, engineering

SPECIAL CAPABILITIES  nuclear personnel; reactor engineering, nuclear

physics, access to consultants

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

  major contract with Westinghouse; BWI - Hunt Valley (strictly nuclear), other
  energy related work. Math modeling, reactor engineering and physics, nuclear
  sciences.
NAME OF FIRM: Automated Management Systems, Inc.

MAILING ADDRESS: 9301 Annapolis Road, Suite 305
Lanham, MD 20801

CONTACT: Carlton H. Joseph

PHONE: (301) 459-4088

EST.: 8(a): Yes

TYPE OF SERVICE OFFERED: Architecture, engineering, software

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS: various nuclear personnel

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS: design studies, mechanical engineering, studies, operations analysis, civil engineering, electrical engineering, systems engineering, math modeling, geotechnical engineering
NAME OF FIRM: AMAF Industries, Inc.

MAILING ADDRESS: 103 Sterrett Building
Columbia, MD 21044

CONTACT: Robert L. Jones, Jr. TITLE: President
PHONE: (301) 995-1919 EST: 1976

TYPE OF SERVICE OFFERED: research, development, engineering

SPECIAL CAPABILITIES: light manufacturing capability

PERSONNEL WITH SPECIAL QUALIFICATIONS: various personnel with nuclear or advanced physics backgrounds

FIRM MINORITY CODE: 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS: fusion, math modeling, mechanical engineering, health physics, nuclear sciences, operations analysis, radiological studies, Rad. Waste Mgmt & Analysis, reactor engineering, reactor physics, safety and risk analysis, systems engineering.
NAME OF FIRM: Chronometrics  
MAILING ADDRESS: 13221 Rippling Brook Drive  
                  Silver Spring, MD 20906  
CONTACT: Homer Guerra  
TITLE:  
PHONE: (301) 460-3700  
EST.:  
8(a): Yes  
TYPE OF SERVICE OFFERED: mfg.  
SPECIAL CAPABILITIES:  
PERSONNEL WITH SPECIAL QUALIFICATIONS:  
access to nuclear capable consultants  
FIRM MINORITY CODE: 3  
0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED  
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE  
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT  
FEMALE OWNED/OPERATED:  
OTHER COMMENTS OR QUALIFICATIONS:  
have manufactured timing and related components for NASA and radiological  
diagnostic devices for NIH (Neuro-PET, other electronic systems)
NAME OF FIRM Duggal United International, Inc.

MAILING ADDRESS 5914 Wisconsin Avenue

                     Chevy Chase, MD 20015

CONTACT D. Paul Duggal

TITLE

PHONE (301) 656-8610

EST.: 1976

8(a): Yes

TYPE OF SERVICE OFFERED engineering and construction

SPECIAL CAPABILITIES construction, steel and concrete work, civil

and mechanical engineering

PERSONNEL WITH SPECIAL QUALIFICATIONS

architect formerly with Bechtel, civil engineers at Duke Power and Light of

Charlotte, NC

FIRM MINORITY CODE 4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

Piping and stress analysis to Bechtel and NUS
NAME OF FIRM     Energy Systems Engineering, Inc.

MAILING ADDRESS     11212 Grandview Avenue
                     Wheaton, MD 20902

CONTACT         Jose A. Reig        TITLE       President

PHONE (301) 942-2427 EST.: 1979 8(a): pending

TYPE OF SERVICE OFFERED research and development

SPECIAL CAPABILITIES various energy systems engineering

PERSONNEL WITH SPECIAL QUALIFICATIONS

President performed various assignments in PWR's for Babcock and Wilcox,
other personnel to perform core analysis

FIRM MINORITY CODE 3

0 - BLACK  3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

core analysis capability, reactor engineering, civil, mechanical engineering
NAME OF FIRM  GENCO Tool and Engineering Co.

MAILING ADDRESS  2412 Linden Lane

Silver Spring, MD 20910

CONTACT  George Uzzell  TITLE

PHONE  (301) 587-1841  EST.:

8(a): yes

TYPE OF SERVICE OFFERED  mfg. and precision machine shop

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

MIL-Spec certified; USN certified for manufacture of nuclear parts, electronic
instrument components, missile and ordnance parts.
NAME OF FIRM Marion Thomas Associates

MAILING ADDRESS 914 Silver Spring Avenue, Suite 20
Silver Spring, MD 20910

CONTACT Marion Thomas TITLE President

PHONE (301) 588-6403 EST. ______ 8(a): Y

TYPE OF SERVICE OFFERED
architecture engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS
mechanical and electrical engineers working on energy savings, some personnel with structural background in nuclear power plants.

FIRM MINORITY CODE 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
have done work for Bechtel on nuclear waste deposits (disposal site), heat recovery system, GE, ME, radioactive waste
NAME OF FIRM ___________________ Progressive Engineering Consultants

MAILING ADDRESS ___________________ 15583 Peach Walker Drive

____________________________________ Bowie, MD 20716

CONTACT ____________________________ Peter A. Labarta

____________________________________ TITLE ____________________________ President

____________________________________ PHONE ____________________________ (301) 249-1222

____________________________________ EST.: _______ 1979

____________________________________ 8(a): _______ P

TYPE OF SERVICE OFFERED _______ consultant engineering

SPECIAL CAPABILITIES ____________________________

PERSONNEL WITH SPECIAL QUALIFICATIONS ____________________________

one structural engineer worked with Bechtel Power Corp. before, familiar with nuclear powerplant construction, worked on SNUPPS (Standard Nuclear Utility Power Plants System) - assistant civil group supervisor

FIRM MINORITY CODE _______ 3

0 - BLACK _______ 1 - PUERTO RICAN _______ 2 - AMERICAN INDIAN _______ 3 - SPANISH AMERICAN _______ 4 - ASIAN _______ 5 - ESKIMO AND ALEUT _______ 6 - UNDETERMINED _______ 7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED ____________________________

OTHER COMMENTS OR QUALIFICATIONS ____________________________

very small and new, mostly C.E. structural work in power plants (nuclear too)

and transmission system, bridge work, 5 story building, CE, geotechnical studies.
NAME OF FIRM Science Systems & Applications, Inc.

MAILING ADDRESS 10210 Greenbelt Road

Seabrook, MD 20810

CONTACT Dr. Sarasuati Bahethi TITLE

PHONE (301) 974-6633 EST.: 1977 8(a): Y

TYPE OF SERVICE OFFERED research and development

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

Ph.D's in nuclear physics, reactor physics, shielding, neutron scattering, consultants available for piping stress analysis and building codes

Monte Carlo technique; cross-section in fusion

FIRM MINORITY CODE 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

nuclear engineer, CE, NP, math modeling, radiological studies

3-13
NAME OF FIRM: Sheladia & Associates, Inc.

MAILING ADDRESS: 3833 34th Street
Mt. Rainier, MD 20822

CONTACT: Pravine Sheladia
TITLE: President
PHONE: (301) 779-4313
EST.: 1974
8(a): Y

TYPE OF SERVICE OFFERED: engineering services

SPECIAL CAPABILITIES: 

PERSONNEL WITH SPECIAL QUALIFICATIONS: structural engineer worked on containment building

FIRM MINORITY CODE: 4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT - WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:

all engineering services; CE types, transportation, geotechnical studies
and engineering, EE, ME, power development, safety analysis, plant siting,
Math modeling & analysis.
NAME OF FIRM: ODeP Engineering, Inc.

MAILING ADDRESS: 550 Seco Road, Building No. 3
Monroeville, PA 15146

CONTACT: Oscar DePineres
TITLE: Owner, General Manager

PHONE: (412) 373-7470
EST.: 1980
8(a): P

TYPE OF SERVICE OFFERED:
civil, structural, subsoil, geology, seismic, environmental

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS:
7 years with Westinghouse (nuclear systems, CE) waste studies

FIRM MINORITY CODE: 3

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
geotechnical studies; CE; radioactive waste studies; math modeling;
structural analysis
NAME OF FIRM  Viking Energy Corporation

MAILING ADDRESS  4709 Baum Boulevard

                                    Pittsburgh, PA 15213

CONTACT  Dr. Jagdish (Jack) Saluja  TITLE  President

PHONE (412) 683-6440  EST.: 1977  8(a): Yes

TYPE OF SERVICE OFFERED  
consulting engineering (nuclear)

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

President involved in nuclear field for 24 years (has very extensive nuclear experience)

FIRM MINORITY CODE  4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

Reactor engineers, reactor physicists, safety & risk, operational, math modeling, systems engineers, geotechnical studies, radiological studies, CE, ME fusion, nuclear science, health physicist.
NAME OF FIRM: C.O.R. Inc.

MAILING ADDRESS: 105 N. Virginia Avenue
Falls Church, VA 22046

CONTACT: Mr. Harjit Chopra
TITLE: 

PHONE: (703) 534-0012
EST.: 
8(a): Yes

TYPE OF SERVICE OFFERED: architecture and engineering firm

SPECIAL CAPABILITIES: 

PERSONNEL WITH SPECIAL QUALIFICATIONS: 
former NRC GS-15 involved with safety and risk analysis experience

FIRM MINORITY CODE: 4
0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED: 

OTHER COMMENTS OR QUALIFICATIONS: 
safety studies, radiological studies, geotechnical studies
NAME OF FIRM  Southeast Machine Co.

MAILING ADDRESS  416 Rotary Street
                    Hampton, VA 23661

CONTACT  Lewis Cantu  TITLE

PHONE  (804) 838-6155  EST.:  8(a):  Y

TYPE OF SERVICE OFFERED
research and development; manufacturing

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS
nuclear personnel (President is health physicist)
other personnel have worked with PEPCO, VEPCO - Surrey Plant

FIRM MINORITY CODE  3

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<tr>
<td>2</td>
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</table>

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
limited R&D work. fiber glass sheet, component manufacturing, some nuclear work, prototype work for Westinghouse, CE, Health physicist, reactor engineer, doing some classified R&D work
NAME OF FIRM  Sterling Systems, Inc.

MAILING ADDRESS  1749 Old Meadow Road
                    McLean, VA 22102

CONTACT  Robert L. Quinichett  TITLE  President

PHONE  (703) 827-9000  EST.: 1977  8(a): Y

TYPE OF SERVICE OFFERED  consultants

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

nuclear personnel (masters and Ph.Ds)

FIRM MINORITY CODE  0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT.  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

DOE contracts but not nuclear

System analysis work, operational analysis, math modeling

3-19
NAME OF FIRM: Center for Research & Management Inc.

MAILING ADDRESS: 1629 K Street, NW, Suite 500

Washington, DC 20006

CONTACT: Elgin W. Watkins

TITLE:

PHONE: (202) 296-0033

EST.: 8(a):

TYPE OF SERVICE OFFERED: occupational health & safety

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:
	nuclear sciences, health and radiological studies
NAME OF FIRM: Parametric, Inc.

MAILING ADDRESS: 1800 K. Street, NW, Suite 718
Washington, DC 20006

CONTACT: Marshall Isler

PHONE: (202) 467-5533

EST.: 1971

8(a): Y

TYPE OF SERVICE OFFERED: Engineering, construction management

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:

- Engineer with piping experience in powerplant; engineer worked with PEPCO;
- Access to Howard University Nuclear energy department on consulting basis

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:

- Operations analysis, safety and risk analysis, EE, CE, ME
Region 4; Atlanta, GA

Contains: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee,
          Panama Canal

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<td>Regional Representative of the Secretary, Region 4 Department of Energy</td>
<td>Director, Management Division</td>
<td>Same</td>
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<tr>
<td>1655 Peachtree Street, N.E. Eighth Floor Atlanta, GA 30309</td>
<td>(404) 881-2887</td>
<td>(404) 881-2837</td>
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<td>P.M. Ramey, Manager</td>
<td>Robert A. McFeely</td>
<td>SB</td>
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<td>Pinellas Area Office</td>
<td>Director, Contracts &amp; Services Division</td>
<td>Neil Farfour</td>
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<td>Department of Energy</td>
<td>(803) 725-2841</td>
<td>Senior Contract Specialist</td>
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<td>P.O. Box 11500 St. Petersburg, FL 33733</td>
<td>(803) 725-2841</td>
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<td>(813) 541-8196</td>
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<td>Robert J. Hart, Manager</td>
<td>John D. Wagoner</td>
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<td>Oak Ridge Operations Office</td>
<td>Director, Proc &amp; Contracts Division</td>
<td>Grady Copeland</td>
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<tr>
<td>Department of Energy</td>
<td>(615) 576-0795</td>
<td>(803) 725-2638</td>
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4-2
DEPARTMENT OF ENERGY OFFICES & FACILITIES,  
GOVERNMENT OWNED/COMPANY OPERATED OFFICES  
& FACILITIES, & SMALL/DISADVANTAGED  
BUSINESSES LOCATED WITHIN DOE REGION 4

<table>
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<tr>
<th>DOE Office</th>
<th>Procurement Office</th>
<th>SB/DB Specialist</th>
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</thead>
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<tr>
<td>L.W. Caffey, Director</td>
<td>George C. Grisaffe</td>
<td>Norman J. Howard</td>
</tr>
<tr>
<td>Clinch River Breeder Reactor</td>
<td>Assistant Director for Procurement</td>
<td>Contract Administrator</td>
</tr>
<tr>
<td>Plant Project Office</td>
<td>(615) 576-6070</td>
<td>(615) 576-6076</td>
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<td>Department of Energy</td>
<td>(FTS 626-6070)</td>
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<td>SB/DB Specialist</td>
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<tr>
<td>General Electric Company</td>
<td>S.N. Suciu</td>
<td>Mrs. J. Birice Packer</td>
</tr>
<tr>
<td>Neutron Devices Dept.</td>
<td>General Manager</td>
<td>SB, DB, LSA Program</td>
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<tr>
<td>P.O. Box 11508</td>
<td>(813) 541-8173</td>
<td>Liaison Officer</td>
</tr>
<tr>
<td>St. Petersburg, FL 33733</td>
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<td>Union Carbide Corporation</td>
<td>H.H. Osborne</td>
<td>W.D. Joyner, Manager</td>
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<tr>
<td>Nuclear Division</td>
<td>Manager, Purchasing</td>
<td>Small &amp; Minority Business Programs</td>
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<tr>
<td>P.O. Box M</td>
<td>(615) 576-1512</td>
<td>(615) 576-2090</td>
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<td>Rust Engineering Company</td>
<td>R.C. Stuck</td>
<td>Allen J. Stack</td>
</tr>
<tr>
<td>P.O. Box 587</td>
<td>Project Manager</td>
<td>(615) 574-3019</td>
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<tr>
<td>Oak Ridge, TN 37830</td>
<td>(615) 574-3052</td>
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<tr>
<td>Oak Ridge Associated Universities</td>
<td>P.L. Johnson</td>
<td>Clifford W. Flegal, Jr.</td>
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<tr>
<td>P.O. Box 117</td>
<td>Executive Director</td>
<td>(615) 576-3049</td>
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<tr>
<td>Oak Ridge, TN 37830</td>
<td>(615) 576-3300</td>
<td>(FTS 626-3049)</td>
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</tbody>
</table>
NAME OF FIRM  Patel Enterprises, Inc.

MAILING ADDRESS  3400 Blue Springs Road, NW, Suite B-3

                               Huntsville, AL 35810

CONTACT  Manu Patel       TITLE  President

PHONE (205) 859 - 5000  EST.  8(a): U

TYPE OF SERVICE OFFERED
architectural, geotechnical engineering, engineering services

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS
nuclear weapons effect

FIRM MINORITY CODE  4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
nuclear science; CE; Math Modeling; Architecture; Geotechnical Studies; Management
and implementation of science qualifications programs for nuclear plants;
seismic and blast effect for structure; design architecture for nuclear
equipment enclosure.
NAME OF FIRM  Intertechnology Corp.

MAILING ADDRESS  2603 Artic Street, Suite 11

                  Huntsville, AL 35805

CONTACT  Hanson Howard  TITLE

PHONE  (205) 533-9171  EST.: 8(a):

TYPE OF SERVICE OFFERED

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

  fusion, nuclear sciences, nuclear hardening and blast effects.
NAME OF FIRM  Pembrooke Machine Co, Inc.

MAILING ADDRESS  P.O. Box 625

                                      Pembroke, NC 28372

CONTACT  Ray Lowery  TITLE  President

PHONE  (919) 521-3411  EST.: 1971  8(a): Y

TYPE OF SERVICE OFFERED

machine shop parts, 55 percent military work

SPECIAL CAPABILITIES

have manufactured parts for nuclear plants in their facility

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  2

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT.  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

manufacturing machine parts for Westinghouse used in nuclear powerplant

(Westinghouse Nuclear Program); MIL specification
NAME OF FIRM American Development Corporation

MAILING ADDRESS 2339 Air Park Road
Charleston, SC 29405

CONTACT W. Melvin Brown
TITLE President

PHONE (803) 744-4241

EST.: 1972
8(a): Yes

TYPE OF SERVICE OFFERED component mfg; mfg test equipment for D.O.D.

SPECIAL CAPABILITIES no

PERSONNEL WITH SPECIAL QUALIFICATIONS none

FIRM MINORITY CODE 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS $130 million sales, principally communications equipment, also Equip-Vans for Army
NAME OF FIRM: Chavis Tool & Mfg. Co., Inc.

MAILING ADDRESS: P.O. Box 746
Florence, SC 29501

CONTACT: Earl Chavis
TITLE: President
PHONE: (803) 346-3221
EST.: 1976
8(a): Yes

TYPE OF SERVICE OFFERED: manufacturing

SPECIAL CAPABILITIES: high technology mfg, automotive and automated industrial components

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 2

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:

aluminum rings in reactors; mfr parts for Westinghouse Columbia plant
NAME OF FIRM E.C. Corporation

MAILING ADDRESS 575 Oak Ridge Turnpike, Suite 200
Oak Ridge, TN 37830

CONTACT Dr. Orlanda C. Baldonado TITLE

PHONE (615) 482-3681 EST. 8(a): 

TYPE OF SERVICE OFFERED research, development, and engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS numerous personnel with nuclear related degrees

FIRM MINORITY CODE 3

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS uranium enrichment (gaseous diff, & centrifuge), nuclear plant design, LMFBR, nuclear sciences, fusion, reactor engineering and physics, systems engineering
Region 5; Chicago, IL
Contains: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, Samoa, Guam, Pacific Isles

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NAME OF FIRM: Power Design Services

MAILING ADDRESS: 2200 S. Main Street, Building A
Lombard, IL 60148

CONTACT: Ken Yoshitami

PHONE: (312) 495-9100

TYPE OF SERVICE OFFERED: Consulting engineering

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:
6 or more personnel, nuclear trained, worked on various plants, one operation expertise

FIRM MINORITY CODE: 4

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:
Quad Cities Nuclear Station, operation analysis, geotechnical studies, CE, nuclear engineering, seismic resistriants on piping.
NAME OF FIRM: Globetrotters Engineering Corporation

MAILING ADDRESS: 1020 S. Wabash Avenue, Room 802
Chicago, IL 60605

CONTACT: Niranjan S. Shah

PHONE: (312) 922-6400

TYPE OF SERVICE OFFERED: geotechnical and civil and engineering

SPECIAL CAPABILITIES: 

PERSONNEL WITH SPECIAL QUALIFICATIONS:
civil and structural E's performed work on Fossil and nuclear plants

FIRM MINORITY CODE: 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
structural, civil and mechanical engineers, geotechnical engineering,
piping and stress analysis.
NAME OF FIRM: Contronics, Inc.

MAILING ADDRESS: 835 Busch Court
Columbus, OH 43229

CONTACT: Clifford Rose
TITLE: President

PHONE: (614) 846-5930
EST. 1953
8(a): yes

TYPE OF SERVICE OFFERED: electronic manufacturing

SPECIAL CAPABILITIES: control panels for nuclear plants

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE: 0

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
control panels, security work. Have performed work for Westinghouse; 10-15 people
NAME OF FIRM Wilson & Associates, Inc.

MAILING ADDRESS 4439 Reading Road
Cincinnati, OH 45229

CONTACT Henry Wilson TITLE President

PHONE (513) 641-2006 EST.: ____________ 8(a): Y

TYPE OF SERVICE OFFERED
architecture engineering.

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
CE: radiological studies, certified by Union Carbide Division-ORNL, for buildings &
sites pertaining to nuclear facilities & wastewater, have designed buildings
with criteria accelerator
Region 6: Dallas, Texas

Contains: Arkansas, Louisiana, New Mexico, Oklahoma, Texas

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<td>Secretary, Region 6</td>
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<td>Mason &amp; Hanger - Silas Mason Co., Inc. P.O. Box 30020 Amarillo, TX 79177</td>
<td>C.R. Poole Plant Manager, Plantex Plant (806) 335-1581, x2111 (FTS 572-2111)</td>
<td>Jim Schulte (806) 335-1581, x2219 (FTS 572-2219)</td>
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<td>Sandia Laboratories P.O. Box 5800 Albuquerque, NM 87185</td>
<td>Dr. Morgan Sparks President (505) 844-7261 (FTS 844-7261)</td>
<td>Jay H. Hughes S &amp; MB Liaison Officer (505) 844-3970 (FTS 844-3970)</td>
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<td>Inhalation Toxicology Research Institute P.O. Box 5890 Albuquerque, NM 87115</td>
<td>Dr. R.O. McClellan Director (505) 844-6835 (FTS 844-6835)</td>
<td>Gene A. Allen (505) 844-8295 (FTS 844-8295)</td>
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<td>Los Alamos National Scientific Laboratory University of California P.O. Box 1663 Los Alamos, NM 87545</td>
<td>Donald M. Kerr, Jr. Director (505) 667-5101 (FTS 843-5101)</td>
<td>Epifanio H. Trujillo SB/MBE Liaison Officer P.O. Box 990, M.S. 274 (505) 667-6696 (FTS 843-6696)</td>
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<td>The Zia Company Los Alamos, NM 87544</td>
<td>Thomas J. Cook Manager (505) 667-2302 (FTS 843-2302)</td>
<td>Rose Lujan (505) 667-7223 (FTS 843-7223)</td>
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NAME OF FIRM Alco Tool & Mfg. Co.

MAILING ADDRESS 364 Castroville Rd.
San Antonio, TX 78207

CONTACT Albert Lee
TITLE President

PHONE (512) 434-6376 EST.: 1962 8(a): yes

TYPE OF SERVICE OFFERED component mfg; machine shop jobbing and repair; government contract work (military); Cert. MIL-Spec 45208

SPECIAL CAPABILITIES none

PERSONNEL WITH SPECIAL QUALIFICATIONS none

FIRM MINORITY CODE 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS 20 people, military work, hydraulic platform, machine work
NAME OF FIRM Kyle Machine Works, Inc.

MAILING ADDRESS 1913 N. Zaragosa

El Paso, TX 79907

CONTACT Fred Kyle TITLE President

PHONE (915) 859-2010 EST. 1960 8(a): yes

TYPE OF SERVICE OFFERED manufacturing

SPECIAL CAPABILITIES welding, manufacturing, aerospace tooling design for commercial industry and military

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 3

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

45 people; work performed for many nuclear labs; fuel storage elevators and containment doors.
NAME OF FIRM South Houston Precision Machining Service

MAILING ADDRESS 1214 Virginia

S. Houston, TX 77587

CONTACT Arturo Gomez TITe President

PHONE (713) 946-7595 EST: 1968 8(a): U

TYPE OF SERVICE OFFERED machine jobbing, mainly machine work only, no manufacturing

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS none

FIRM MINORITY CODE 3

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1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS MIL spec certified, have done some machine work for Westinghouse in nuclear area.

6-6
Region 7; Kansas City, MO

Contains: Iowa, Kansas, Missouri, Nebraska

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IOWA
Ames Laboratory
Ames
DEPARTMENT OF ENERGY OFFICES & FACILITIES, GOVERNMENT OWNED/COMPANY OPERATED OFFICES & FACILITIES, & SMALL/DISADVANTAGED BUSINESSES LOCATED WITHIN DOE REGION 7

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<td>Mary O'Halloran</td>
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<td>Regional Representative of the Secretary, Region 7</td>
<td>Director, Office Management &amp; Support</td>
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<tr>
<td>Department of Energy</td>
<td>(816) 374-5182</td>
<td>F. Gilbert Lagergren</td>
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<td>324 East 11th Street</td>
<td>(FTS 758-5182)</td>
<td>Chief, Support Services Branch</td>
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<tr>
<td>Kansas City, MO 64106</td>
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<td>(816) 374-5184</td>
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<td>James R. Nicks, Manager</td>
<td>Dallas Mayfield, Chief</td>
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The Bendix Corporation
P.O. Box 1159
Kansas City, MO 64141

V.L. Ritter
Vice President & General Manager
Kansas City Division
(816) 997-3212
(FTS 926-3212)

William O. Turner
(816) 997-4289
(FTS 926-4289)
Region 8; Denver, CO

Contains: Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

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COLORADO Rocky Flats Golden X X
# DEPARTMENT OF ENERGY OFFICES & FACILITIES,
GOVERNMENT OWNED/COMPANY OPERATED OFFICES
& FACILITIES, & SMALL/DISADVANTAGED
BUSINESSES LOCATED WITHIN DOE REGION 8

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<th>DOE Office</th>
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<td>Charles F. Metzger, Regional Representative of the Secretary, Region 8 Department of Energy P.O. Box 26247 - Belmar Branch Lakewood, CO 80226 (303) 234-2420 (FTS 234-2420)</td>
<td>Epifanio Vallejo, Director, Management Division (303) 234-2480 (FTS 234-2480)</td>
<td>J. Gilbert Leyba, Admin Svcs Officer (303) 234-2480 (FTS 234-2480)</td>
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<tr>
<td>David C. Rardin, Manager, SERI Site Office Department of Energy 1617 Cole Boulevard Golden, CO 80401 (303) 327-1378 (FTS 327-1378)</td>
<td>Charles M. Skinner, Contract Specialist (303) 327-1360 (FTS 327-1360)</td>
<td>Same (303) 327-1360 (FTS 327-1360)</td>
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<tr>
<td>Donald L. Everhart, Manager, Grand Junction Office Department of Energy P.O. Box 2567 Grand Junction, CO 81501 (303) 242-8621, x203 (FTS 322-9203)</td>
<td>William F. Archbold, Director, Procurement &amp; Services Office (303) 242-8621, x226 (FTS 322-9226)</td>
<td>Harold R. Frederickson, Jr., Contract Specialist (303) 242-8621, x228 (FTS 322-9228)</td>
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<td>A Division of Rockwell</td>
<td>Vice President &amp; General Manager</td>
<td>(303) 497-7000, x2983</td>
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<td>International Corp.</td>
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<td>Bendix Field Engineering Corporation</td>
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<td>Contracts Specialist</td>
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<tr>
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<td>Kaiser Engineers</td>
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<td>Chuck Maxon</td>
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<tr>
<td>P.O. Box 768</td>
<td>Project Manager</td>
<td>(406) 494-2433</td>
</tr>
<tr>
<td>Butte, MT 59701</td>
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<tr>
<td>MERDI, Inc.</td>
<td>Dr. Jerry Plunkett</td>
<td>John Bishop</td>
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<tr>
<td>P.O. Box 3809</td>
<td>Managing Director</td>
<td>(406) 494-6100, x6250</td>
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<tr>
<td>Butte, MT 59701</td>
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NAME OF FIRM
Aguirre Engineering, Inc.

MAILING ADDRESS
14 Inverness Drive-E, Unit 8H
Englewood, CO 80112

CONTACT
Vukoslav E. Aguirre

PHONE
(303) 771-4446-

EST.: 1977
8(a): yes

TYPE OF SERVICE OFFERED
Geotechnical and Material Studies

SPECIAL CAPABILITIES
All geotechnical studies related to 12 or more nuclear plants (with Low Engineering & Testing Co.).

PERSONNEL WITH SPECIAL QUALIFICATIONS
Aguirre; P.E. & consultants

FIRM MINORITY CODE
3

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
geotechnical studies and engineering
concrete and asphalt analysis
NAME OF FIRM: West Electronics, Inc.

MAILING ADDRESS: 200 C Street, Box 577

Ojokar, MT 59255

CONTACT: Charles Candela

TITLE

PHONE: (406) 768 -3471  EST.: 1971  8(a): Yes

TYPE OF SERVICE OFFERED

SPECIAL CAPABILITIES:
military contracts

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE: 2

0 - BLACK  1 - PUERTO RICAN  2 - AMERICAN INDIAN
3 - SPANISH AMERICAN  4 - ASIAN  5 - ESKIMO AND ALEUT
6 - UNDETERMINED  7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:

MIL spec certified
Region 9; San Francisco, CA

Contains: Arizona, California, Nevada

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# DEPARTMENT OF ENERGY OFFICES & FACILITIES,
GOVERNMENT OWNED/COMPANY OPERATED OFFICES
& FACILITIES, & SMALL/DISADVANTAGED
BUSINESSES LOCATED WITHIN DOE REGION 9

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<td>Martin Domagala</td>
<td>Ernie Rios</td>
<td>John T. Morgan</td>
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<td>Acting Regional Representative of the Secretary, Region 9</td>
<td>Contracting Officer</td>
<td>Director, Management Division</td>
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<tr>
<td>Department of Energy</td>
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<td>(415) 764-7003</td>
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<tr>
<td>333 Market Street</td>
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<tr>
<td>San Francisco, CA 94105</td>
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<tr>
<td>(415) 764-7014</td>
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<tr>
<td>Joe LaGrone, Manager</td>
<td>Susan R. Brechbill</td>
<td>Maurice Carcamo</td>
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<td>San Francisco Operations Office</td>
<td>Director</td>
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<tr>
<td>Department of Energy</td>
<td>Procurement Division</td>
<td>(415) 273-6031</td>
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<tr>
<td>1333 Broadway, Wells Fargo Bldg.</td>
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<tr>
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<td>Mahlon E. Gates, Manager</td>
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<td>Bradley Bourn</td>
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<td>Nevada Operations Office</td>
<td>Director, Contracts &amp; Procurement Division</td>
<td>(702) 734-3206</td>
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<td>Energy Systems Group</td>
<td>Samuel Iacobellis (213) 341-1000</td>
<td>M.A. Julian</td>
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<td>A Division of Rockwell International</td>
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<td>Larry Boysen</td>
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<tr>
<td>P.O. Box 309 Canagoa Park, CA 91304</td>
<td>W.W. Finely, Jr. (714) 455-2080</td>
<td>Jim Key, Director Procurement (408) 297-3000</td>
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<td>General Atomic Company</td>
<td>Dr. Roy H. Beaton (408) 925-5581</td>
<td>M.L. Glaze</td>
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<tr>
<td>P.O. Box 81608 San Diego, CA 92138</td>
<td>T.B. Cook, Jr. (415) 422-2211 (FTS 532-2211)</td>
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<tr>
<td>General Electric Company</td>
<td>R.L. Hammon (702) 739-0281 (FTS 598-0281)</td>
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<tr>
<td>175 Curtner Avenue San Jose, CA 95125</td>
<td>EG&amp;G Las Vegas Area Operations &amp; EG&amp;G DOE Contract Group</td>
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<td>Sandia National Laboratories</td>
<td>Augustine E. Gurrola (702) 734-3411 (FTS 598-3411)</td>
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<tr>
<td>P.O. Box 969 Livermore, CA 94550</td>
<td>R.H. Ashlock (702) 734-3481 (FTS 598-3481)</td>
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<tr>
<td>P.O. Box 15408 Las Vegas, NV 89114</td>
<td>Augustine E. Gurrola General Manager, OCTD (702) 734-3411 (FTS 598-3411)</td>
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<td>Reynolds Electrical &amp; Engineering Co., Inc. Manager Procurement (702) 734-3355 (FTS 598-3355)</td>
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Region 10; Seattle, WA

Contains: Alaska, Hawaii, Idaho, Oregon, Washington

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<td>Richland Operations Office</td>
<td>Director, Procurement Division</td>
<td>Assistant to Director</td>
</tr>
<tr>
<td>Department of Energy</td>
<td></td>
<td>Proc. Division</td>
</tr>
<tr>
<td>P.O. Box 550</td>
<td></td>
<td>(509) 376-7271</td>
</tr>
<tr>
<td>Richland, WA 99352</td>
<td></td>
<td>(FTS 444-7271)</td>
</tr>
<tr>
<td>(509) 376-7395</td>
<td></td>
<td></td>
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<tr>
<td>(FTS 444-7395)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charles E. Williams, Manager</td>
<td>Nell W. Fraser</td>
<td>Joe Price</td>
</tr>
<tr>
<td>Idaho Operations Office</td>
<td>Director, Contracts Management Div.</td>
<td>SB/DB Specialist</td>
</tr>
<tr>
<td>Department of Energy</td>
<td></td>
<td>(208) 526-1347</td>
</tr>
<tr>
<td>550 Second Street</td>
<td></td>
<td>(FTS 583-0642)</td>
</tr>
<tr>
<td>Idaho Falls, ID 83401</td>
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<tr>
<td>(208) 526-1322</td>
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<td>(FTS 583-1322)</td>
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</tr>
<tr>
<td>Office</td>
<td>Office Head</td>
<td>SB/DB Specialist</td>
</tr>
<tr>
<td>--------------------------------------------</td>
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</tr>
<tr>
<td>Battelle - Pacific Northwest Laboratories</td>
<td>Douglas E. Olesen</td>
<td>Mendel Gragg</td>
</tr>
<tr>
<td>P.O. Box 999, Richland, WA 99352</td>
<td>Director</td>
<td>Procurement Support</td>
</tr>
<tr>
<td></td>
<td>(509) 375-2201</td>
<td>Services Manager</td>
</tr>
<tr>
<td></td>
<td>(FTS 444-7511, x375-2201)</td>
<td>(509) 376-0240</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(FTS 444-0240)</td>
</tr>
<tr>
<td>J.A. Jones Construction Services Company</td>
<td>L.B. Leonard, Jr.</td>
<td>Ray Edler</td>
</tr>
<tr>
<td>801 First Street, Richland, WA 99352</td>
<td>President</td>
<td>SB Liaison Officer</td>
</tr>
<tr>
<td></td>
<td>(509) 376-6707</td>
<td>(509) 376-6260</td>
</tr>
<tr>
<td></td>
<td>(FTS 444-6707)</td>
<td>(FTS 444-6260)</td>
</tr>
<tr>
<td>Rockwell Hanford Operations P.O. Box 800</td>
<td>D.J. Cockeram</td>
<td>Sandra M. Rowley</td>
</tr>
<tr>
<td>Richland, WA 99352</td>
<td>VP/Genral Manager</td>
<td>S &amp; DB Representative</td>
</tr>
<tr>
<td></td>
<td>(509) 373-1277</td>
<td>(509) 376-8521</td>
</tr>
<tr>
<td></td>
<td>(FTS 444-1277)</td>
<td>(FTS 444-8521)</td>
</tr>
<tr>
<td>UNC Nuclear Industries, Inc. P.O. Box 490</td>
<td>R.E. Dunn</td>
<td>O.T. Boness</td>
</tr>
<tr>
<td>Richland, WA 99352</td>
<td>President</td>
<td>Senior Buyer</td>
</tr>
<tr>
<td></td>
<td>(509) 376-6248</td>
<td>(509) 376-6225</td>
</tr>
<tr>
<td></td>
<td>(FTS 444-6248)</td>
<td>(FTS 444-6225)</td>
</tr>
<tr>
<td>M-K National Corporation P.O. Box 1745</td>
<td>Peter Miller</td>
<td>B.B. Schroeder</td>
</tr>
<tr>
<td>Idaho Falls, ID 83401</td>
<td>Project Manager</td>
<td>(208) 526-2474</td>
</tr>
<tr>
<td></td>
<td>(208) 526-3471</td>
<td>(FTS 583-2474)</td>
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<tr>
<td></td>
<td>(FTS 583-3471)</td>
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</tr>
<tr>
<td>EG&amp;G Idaho, Inc. P.O. Box 1625</td>
<td>R.W. Kiehn</td>
<td>SB</td>
</tr>
<tr>
<td>Idaho Falls, ID 83415</td>
<td>General Manager</td>
<td>Larry H. Kent, Manager</td>
</tr>
<tr>
<td></td>
<td>(208) 526-1905</td>
<td>Subcontract Administration</td>
</tr>
<tr>
<td></td>
<td>(FTS 583-1905)</td>
<td>(208) 526-1304</td>
</tr>
<tr>
<td></td>
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<td>(FTS 583-1304)</td>
</tr>
<tr>
<td>Exxon Idaho Nuclear, Inc. 550 Second Street</td>
<td>R.W. McCullugh</td>
<td>DB</td>
</tr>
<tr>
<td>Idaho Falls, ID 83401</td>
<td>President</td>
<td>Errol D. Covington</td>
</tr>
<tr>
<td></td>
<td>(208) 526-0679</td>
<td>Manager, Procurement</td>
</tr>
<tr>
<td></td>
<td>(FTS 583-0679)</td>
<td>Support Branch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(208) 526-1362</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(FTS 583-1362)</td>
</tr>
<tr>
<td>Catalytic, Inc. P.O. Box 3000</td>
<td>R. Mandler</td>
<td>None</td>
</tr>
<tr>
<td>Idaho Falls, ID 83401</td>
<td>Project Manager</td>
<td>(208) 526-1192</td>
</tr>
<tr>
<td></td>
<td>(208) 526-1190</td>
<td>(FTS 583-1192)</td>
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<tr>
<td>Office:</td>
<td>Office Head:</td>
<td>CB/DR Specialist:</td>
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</tr>
<tr>
<td>Jones/Boecon</td>
<td>Robert Hambright</td>
<td>Tom Pearce</td>
</tr>
<tr>
<td>P.O. Box 2591</td>
<td>(208) 526-3612</td>
<td>Procurement Manager</td>
</tr>
<tr>
<td>Idaho Falls, ID 83401</td>
<td>(FTS 583-3612)</td>
<td>(208) 526-3745</td>
</tr>
<tr>
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<td>(FTS 583-3745)</td>
</tr>
</tbody>
</table>
NAME OF FIRM: American Consolidated Technology Inc.

MAILING ADDRESS: 800 Charcot Avenue
San Jose, CA 95131

CONTACT: Hernando G. Campued

PHONE: (408) 946-7811

EST.: 8(a): Yes

TYPE OF SERVICE OFFERED: architecture and engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE: 3

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS: architecture, civil, mechanical, engineering, electrical engineering, construction, geotechnical engineering, operations analysis.
NAME OF FIRM: Bernert International Engineers

MAILING ADDRESS: 6060 Sunrise Vista Drive, Suite 111
Citrus Hgts, CA 95610

CONTACT: S. F. Lewinski
TITLE: V.P.

PHONE: (916) 726-0450
EST.: 

TYPE OF SERVICE OFFERED: engineering and design

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 6

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:
civil, mechanical, electrical engineering, math modeling
NAME OF FIRM Casde Corporation

MAILING ADDRESS 2707 Toledo Street, Suite 604
Torrence, CA 90503

CONTACT Mr. R. Saucedo  TITLE President

PHONE (213) 533-6888  EST.: 8(a): yes

TYPE OF SERVICE OFFERED engineering services

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS
President is PhD in NE; several NE's and CE's

FIRM MINORITY CODE 3

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
civil/structural engineering, structural dynamics, control systems, steam
generators, control rods, performance diagnostics, seismologic studies;
civil-mechanical, electrical-engineering, reactor engineering, geotechnical studies
NAME OF FIRM Cataract Engineering & Construction

MAILING ADDRESS 19700 Fairchild Street, Suite 370
Irvine, CA 92715

CONTACT Tom Teischman TITLE

PHONE (714) 851-1877 EST.: 8(a): no

TYPE OF SERVICE OFFERED engineering, construction, testing services

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 2

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS reactor start-up (+ General power plant start-up), managing or have managed reactor site construction, reactor plant procedures, reactor engineering, operations analysis, civil engineering, architecture.
NAME OF FIRM: Custom Control Panels

MAILING ADDRESS: 8333 Chetle Avenue
Santa Fe Springs, CA 90670

CONTACT: 
TITLE: 
PHONE: (213) 685-3084 
EST.: 
8(a): 

TYPE OF SERVICE OFFERED: manufacture of control panels

SPECIAL CAPABILITIES: 

PERSONNEL WITH SPECIAL QUALIFICATIONS: 

FIRM MINORITY CODE: 6

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED: 

OTHER COMMENTS OR QUALIFICATIONS: 
small and large industrial process control panels mfg.
NAME OF FIRM: Dagon Divers, Inc.

MAILING ADDRESS: 5918 Genoa Street
Oakland, CA 94608

CONTACT: Roger White  TITLE: President
PHONE: (415) 428-1982  EST.: 1975

TYPE OF SERVICE OFFERED: diving services and undersea construction

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:
divers experienced with underwater construction related to nuclear and fossil power plants; access to civil and structural energy consultants

FIRM MINORITY CODE: 6

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:
civil engineering, construction
NAME OF FIRM  Engineering Analysis & Test Co., Inc.

MAILING ADDRESS  4676 Admiralty Way
                     Marina Del Ray, CA 90291

CONTACT  Raymond Perez  TITLE

PHONE  (213) 822-0931  EST.: 1976  8(a): yes

TYPE OF SERVICE OFFERED  engineering and analysis

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE  3

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
  nuclear engineering, rad waste management, safety and risk analysis, civil
  and mechanical engineering, math modeling, geotechnical engineering
NAME OF FIRM Environmental Management and Research, Inc.

MAILING ADDRESS 30 Pamaron Way, Suite D

                      Ignacio, CA 94947

CONTACT Arthur H. Moriguchi TITLE President

PHONE (415) 883-7734 EST.: 1974 8(a): yes

TYPE OF SERVICE OFFERED geotechnical and civil engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

geotechnical studies, civil, mechanical engineering, construction
NAME OF FIRM: Eureka Laboratories, Inc.

MAILING ADDRESS: 215 26th Street
Sacramento, CA 95816

CONTACT: Steve K. Leung
TITLE: 
PHONE: (916) 443 - 3932
EST.: 
8(a): yes

TYPE OF SERVICE OFFERED: geotechnical/civil engineering firm

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:
nuclear personnel, engineers, mechanical engineers

FIRM MINORITY CODE: 4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:
civil, mechanical engineering, geotechnical studies, rad waste studies,
risk analysis

10-13
NAME OF FIRM  Fitz Consultants, Inc.

MAILING ADDRESS  555 Veterans Blvd., Suite 105

                           Redwood, CA 94063

CONTACT  Mr. Leslie Fitz  TITLE  

PHONE  (415) 367-8395  EST. 8(a):  

TYPE OF SERVICE OFFERED  consulting engineers  

SPECIAL CAPABILITIES  

PERSONNEL WITH SPECIAL QUALIFICATIONS  L. Fitz (NE & ME)  

FIRM MINORITY CODE  6  

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED  

OTHER COMMENTS OR QUALIFICATIONS  

Consulting engineers to nuclear industry; TMI accident analysis, fuel cycle, start-up operating procedures, contamination control, ventilation of nuclear buildings.
NAME OF FIRM: Geo-Resource Consultants, Inc.

MAILING ADDRESS: 1620 Montgomery Street
San Francisco, CA 94111

CONTACT: Alvin Joe
TITLE: 
PHONE (415) 433-3177

TYPE OF SERVICE OFFERED: geotechnical engineering

SPECIAL CAPABILITIES: 

PERSONNEL WITH SPECIAL QUALIFICATIONS: 

FIRM MINORITY CODE: 4

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING WHITE
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT

FEMALE OWNED/OPERATED: 

OTHER COMMENTS OR QUALIFICATIONS: geotechnical studies/engineering, reactor plant siting, rad waste studies.

10-15
NAME OF FIRM: Hansen/Murakami/Eshima

MAILING ADDRESS: 424 2nd Street
Oakland, CA 94607

CONTACT: Jens H. Hansen

PHONE: (415) 444-7959

TYPE OF SERVICE OFFERED: architecture and engineering

EST.: 1978

8(a): 

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE: 4

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

architecture, structural and civil engineering, containment.

10-16
NAME OF FIRM: James Engineering Co.

MAILING ADDRESS: 6329 Fairmont Avenue
El Corrito, CA 94530

CONTACT: Ms. Beverly James

PHONE: (415) 525-7350

EST.: ________________

TYPE OF SERVICE OFFERED: civil and electrical engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS: 1 NE and 1 EE

FIRM MINORITY CODE: 7

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

nuclear fuel cycle economics, fuel storage, sanitary and waste water work.
nuclear sciences and math modeling

10-17
NAME OF FIRM          Jordan/Avent & Associates

MAILING ADDRESS      111 New Montgomery Street
                      San Francisco, CA 94105

CONTACT              Frederick E. Jordan

PHONE (415) 989-1025

TYPE OF SERVICE OFFERED planning and engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 6

0 - BLACK            3 - SPANISH AMERICAN   6 - UNDETERMINED
1 - PUERTO RICAN    4 - ASIAN             7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

geotechnical studies, architecture, civil engineering
NAME OF FIRM T. Y. Lin International

MAILING ADDRESS 315 Bay Street
San Francisco, CA 94133

CONTACT T. Y. Lin TITLe

PHONE (415) 982-1050 EST.: 1954 8(a):

TYPE OF SERVICE OFFERED civil and structural engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 4
0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
civil and structural engineering (containment buildings for Bechtel)
NAME OF FIRM: David K. Low & Associates, Inc.

MAILING ADDRESS: 47 Lafayette Street
San Francisco, CA 94103

CONTACT: David K. Low
TITLE: President
PHONE: (415) 864-2480
EST.: 1966

TYPE OF SERVICE OFFERED: consultant engineering

SPECIAL CAPABILITIES:

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 4

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT.  WHITE

FEMALE OWNED/OPERATED:

OTHER COMMENTS OR QUALIFICATIONS:

CE, EE, ME; engineering services; design, atomic energy installation.

10-20
NAME OF FIRM McWane & Associates

MAILING ADDRESS P.O. Box 5175
San Jose, CA 95150

CONTACT Odell McWane TITLE President

PHONE (408) 293 2325 EST: 1978 8(a): No

TYPE OF SERVICE OFFERED

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

basic welding, engineering, QA for nuclear engineering ME

10-21
NAME OF FIRM Pacific Relays, Inc.

MAILING ADDRESS 2929 Exposition

Los Angeles, CA 90018

CONTACT William Jankans

TITLE President

PHONE (213) 734 - 1719 EST.: 1953

TYPE OF SERVICE OFFERED design/fabricate relays, manufacture

relays up to 15A; circuit board; missile, aircraft, ground support

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

2 consultant engineers

FIRM MINORITY CODE 0

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED
1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING
2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT. WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS

no nuclear work before
NAME OF FIRM: Pan American Steel Corp.

MAILING ADDRESS: 3116 Adeline Street
Oakland, CA 94608

CONTACT: Gerald Gray
TITLE: President
PHONE: (415) 654-4489
EST.: 1955
8(a): Y

TYPE OF SERVICE OFFERED:
steel fabrication & erectors, steel frame buildings, platform, structure
steel fabrication

SPECIAL CAPABILITIES:
machine quality control

PERSONNEL WITH SPECIAL QUALIFICATIONS:

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:

have not been involved in any nuclear work before, but is capable of doing this kind of work
NAME OF FIRM: Sam's Electronic Assembly, Inc.

MAILING ADDRESS: 105 West 35th Street, Suite M
National City, CA 92050

CONTACT: Ms. Edith V. Wagman
TITLE: President
PHONE: (714) 426 - 3401
EST.: 1972

8(a): Yes

TYPE OF SERVICE OFFERED:
manufacturing electronic components, assembly circuit board, government work,
computer parts, cables

PERSONNEL WITH SPECIAL QUALIFICATIONS:
none

FIRM MINORITY CODE: 2

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED: Yes

OTHER COMMENTS OR QUALIFICATIONS:
no nuclear work before qualified MIL 45208
NAME OF FIRM ____________________ Standard Engineering Corporation

MAILING ADDRESS ____________________ 44800 Industrial Drive

__________________________________________ Fremont, CA 94538

CONTACT ____________________ Don Little

TITLE ____________________ President

PHONE (415) 657-7555 EST.: 1974 8(a): U

TYPE OF SERVICE OFFERED ____________________ component manufacturing

SPECIAL CAPABILITIES ____________________ customers included Argonne Lab, Los Alamos Scientific Lab, Lawrence Livermore Lab;

Princeton U. Physics Dept. (fusion), large number of universities.

PERSONNEL WITH SPECIAL QUALIFICATIONS ____________________ nuclear physics, nuclear chemistry

FIRM MINORITY CODE ____________________ 7

0 - BLACK 3 - SPANISH AMERICAN 6 - UNDETERMINED

1 - PUERTO RICAN 4 - ASIAN 7 - OTHER INCLUDING

2 - AMERICAN INDIAN 5 - ESKIMO AND ALEUT WHITE

FEMALE OWNED/OPERATED ____________________

OTHER COMMENTS OR QUALIFICATIONS ____________________ manufacturing modules to CAMAC standard (ANSI IEEE 583) used in nuclear high energy physics. Laser fusion, particle research, data acquisition (very quick response)

10-25
NAME OF FIRM: Univox California, Inc.

MAILING ADDRESS: 4505 W. Jefferson Blvd.
Los Angeles, CA 90016

CONTACT: John Grayson
TITLE: President

PHONE: (213) 327-7000
EST: 1970
8(a): Yes

TYPE OF SERVICE OFFERED:
- Electronic components manufacturing. Power supply for Marine Corp, DC
- Switching supply

SPECIAL CAPABILITIES:
- High technology equipment, electric products to FAA, cathode ray tube for FAA, airport tower equipment, cable assembly for DC-9, DC-8, Boeing, Douglas, General Dynamics, handbook manual.

PERSONNEL WITH SPECIAL QUALIFICATIONS:
- Engineering capability to customers
- Personnel from TRW, with aerospace associates

FIRM MINORITY CODE: 0

0 - BLACK
1 - PUERTO RICAN
2 - AMERICAN INDIAN
3 - SPANISH AMERICAN
4 - ASIAN
5 - ESKIMO AND ALEUT.
6 - UNDETERMINED
7 - OTHER INCLUDING WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS:
- Electronic capability can be modified, with government contracts (this is an aerospace company)
NAME OF FIRM    Woodward-Clyde Consultants

MAILING ADDRESS    600 Montgomery Street, 30/F
                     San Francisco, CA 94111

CONTACT

PHONE    (415) 434-1955     EST.: 1950

TYPE OF SERVICE OFFERED
    consultant engineering

SPECIAL CAPABILITIES

PERSONNEL WITH SPECIAL QUALIFICATIONS

FIRM MINORITY CODE 6

0 - BLACK  3 - SPANISH AMERICAN  6 - UNDETERMINED
1 - PUERTO RICAN  4 - ASIAN  7 - OTHER INCLUDING
2 - AMERICAN INDIAN  5 - ESKIMO AND ALEUT  WHITE

FEMALE OWNED/OPERATED

OTHER COMMENTS OR QUALIFICATIONS
    geotechnical engineering, risk & safety, reactor siting studies,
    environmental studies

10-27