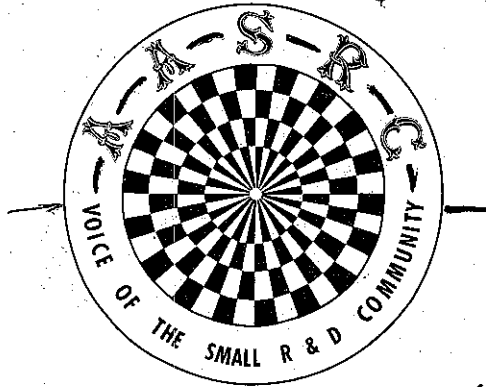


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# AMERICAN ASSOCIATION OF SMALL RESEARCH COMPANIES

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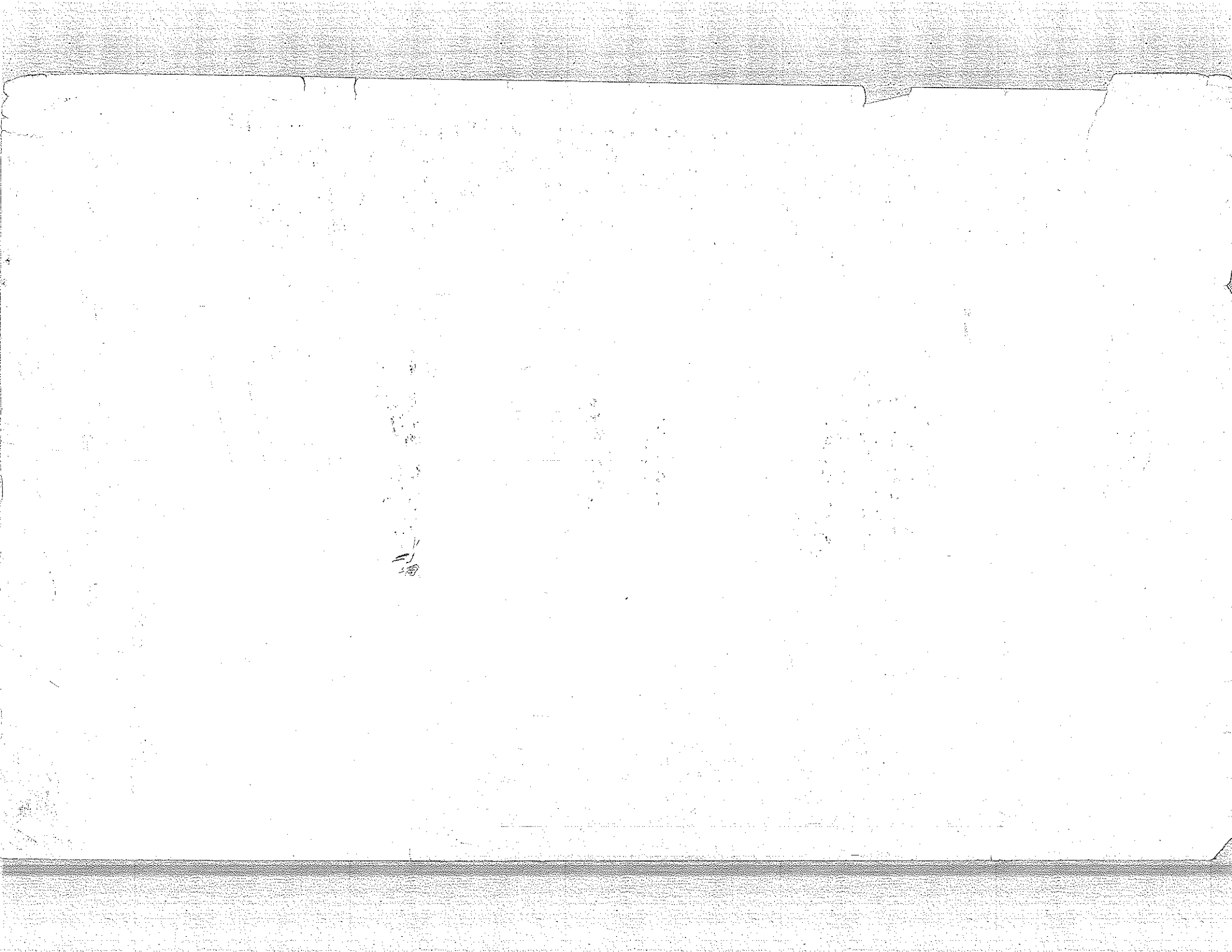
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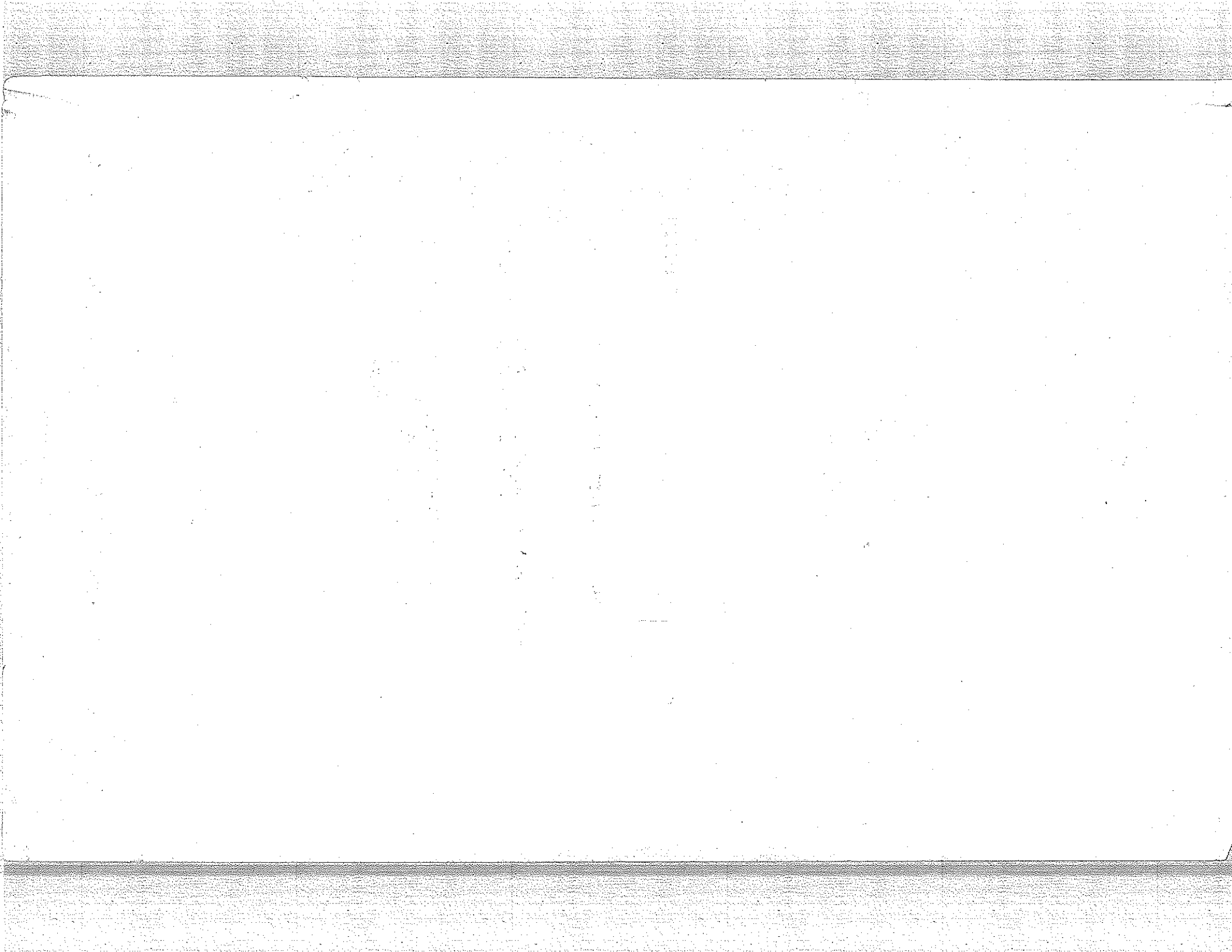
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September, 1978

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## CONTENTS

	Page
INTRODUCTION	i
SECTION I GEOGRAPHICAL DISTRIBUTION	1
SECTION II TECHNICAL FIELDS & MEMBER IDENTIFICATION NUMBERS	8
SECTION III ALPHABETICAL LIST OF MEMBERS	17
ADDENDA	63

The AMERICAN ASSOCIATION OF SMALL RESEARCH COMPANIES was organized in 1972 to obtain a more equitable share of R&D funding for small R&D and high technology companies. It has grown from 28 members to 300 and has been successful in its efforts to bring to the attention of government and private industry the many problems facing small R&D companies and simultaneously establishing the vital necessity of maintaining this group as a viable entity. Their talents are well described by the following page from the AASRC brochure.

#### IMPORTANCE OF SMALL R&D COMPANIES IN OUR SOCIETY

"From a number of different points of view we are convinced that a unique cost-benefit opportunity exists in the provision of incentives aimed at encouraging independent inventors, inventor-entrepreneurs and small technologically based businesses. The cost of special incentives to them is likely to be low. The benefits are likely to be high." (Taken from a Department of Commerce report called "Technological Innovation: Its Environment and Management", 1967.)

The report makes special note of the fact that some very important innovative contributions have been made by independent innovators and small companies. The range and diversity of these individuals are very impressive. The following is a partial list since 1900:

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SECTION I - GEOGRAPHICAL DISTRIBUTION OF AASRC MEMBERS

ALABAMA

Page

CHAM of North America, Inc., 3400 Blue Spring Rd., #A7, Huntsville (35810) ..	25
Martin J. Darity Co., P.O. Box 4356, Montgomery (36102) .....	28
Design-Develop-Supply, P.O. Drawer 1080, Livingston (36070) .....	29
Link Enterprises, Inc., P.O. Box 11072 .....	40
Man-Systems, Inc., 3107 McDow .....	42
Remtech, Inc., 2603 Artie St., St .....	48

*1 copy*

Flow Technology, Inc., P.O. Box .....	33
Talley Industries, Inc., P.O. Box .....	57
Wind-De-Go, Inc., 1940 W. Cheryl .....	61

*2/3 page*

A&P Coop Co., Inc., P.O. Box 846 .....	17
--	----

C.

Aerocomp, Inc., 3303 Harbor Blvd., .....	17
Albion Publishing Co., 1736 Stockton .....	17
Approved Engineering Test Laborator 15720 Ventura Blvd., Suite 608, .....	19
Artec Associates, Inc., 26046 Eden Landing Rd., Hayward (94545) .....	20
William M. Brobeck & Associates, 1235 Tenth St., Berkeley (94710) .....	24
Del West Associates, Inc., 6324 Variel Ave., Woodland Hills (91367) .....	28
Energy Development Research, 727B North Gordon St., Pomona (91768) .....	31
L'Garde, Inc., 1555 Placentia Avenue, Newport Beach (92660) .....	39
Linkabit Corporation, 10453 Roselle St., San Diego (92121) .....	40
Lombard Systems, Inc., 1196 Andre Avenue, Mountain View (94040) .....	40
MBAssociates, P.O. Box 196, San Ramon (94583) .....	41
Man Factors, Inc., 4433 Convoy St., San Diego (92111) .....	41
Mercury Communications, 730 Mission St., Santa Cruz (95060) .....	43
Pacific-Sierra Research Corp., 1456 Cloverfield Blvd., Santa Monica (90404) .....	46
Production Components, P.O. Box 7, Ranchita (92066) .....	47
Pyromet Industries, 595 Industrial Rd., San Carlos (94070) .....	47
George Knox Roth, P.O. Box 811, Claremont (91711) .....	49
STD Research Corporation, P.O. Box "C", Arcadia (91006) .....	52
Scientific Associates, Inc., 1639 - 12th St., Santa Monica (90404) .....	52
Ralph Sherman, 1019 Coronado, #25, Imperial Beach (92032) .....	53
Sierracin Corp., 12780 San Fernando Rd., Sylmar (91342) .....	54
Space Vector Corp., 19631 Prairie St., Northridge (91324) .....	55
Spectra Research Systems, 2212 Dupont Drive, Irvine (92664) .....	55
Technological Innovators, 21, 441 Highvale Trail, Topanga (90290) .....	58
WVS Engineers, 12248 Spring Trail, Lakeview Terrace (91342) .....	60
Stanley W. Zehr, 1760 Lomitas Avenue, Livermore (94550) .....	62

COLORADO

Colorado School of Mines Research Institute, Box 112, Golden (80401) .....	26
Energy Dynamics Corp., 6062 E. 49th Avenue, Commerce City (80022) .....	31
Western Scientific Services, P.O. Box 1965, Fort Collins (80522) .....	60
Wind Energy Research and Development Co., Box 324, Bennett (80102) .....	61

CONNECTICUT

Barnes Engineering Co., 30 Commerce Road, Stamford (06904)	21
Bellmore-Johnson Tool Co., 445 Putnam Avenue, Hamden (06517)	22
Robert A. Bolke, 115 Mamasasco Road, Ridgefield (06877)	23
E-B Industries, Inc., 660 Hopmeadow Street, Simsbury (06070)	30
Imprint Services, 482 Summer Street, Stamford (06901)	36
Springborn Laboratories, Water Street, Enfield (06082)	55

DELAWARE

Technology Clearing House, Inc., 1105 Market St., #801, Wilmington (19801)	58
--	----

DISTRICT OF COLUMBIA

American Petroleum Institute, 2101 L Street, N.W.	18
W. C. Beckwith Associates, 1026 National Press	22
Bernard & Brown, 1700 K Street, N.W. (20007)	22
Robert B. Bowytz, Esq., 2000 L Street	24
Design Alternatives, Inc., 1312 - 18th	29
Ebon Research Systems, 1542 - 9th Str	30
Fulmer Research Institute, 1522 K Street	33
Glen A. Gilbert & Associates, 2500 Virg	34
Frederic R. Harris, Inc., 1850 K Street	34
Morris & Ward, 5817 Plainview Road (200	45
Rockville Consulting Group, Inc., 505 Secc	49
C. Branson Smith, Planning & Analysis, DC (45)	54
Sughrue, Rothwell, Mion, Zinn & MacPeak,	56
Wheeler Industries, Inc., 1129 - 20th St., N	61

*copy this page*

FLORIDA

General Energy Devices, P.O. Box 5679, Clear	33
Ross Hofmann Associates, 2908 Salzedo, Coral C	35
Hydragon Corporation, 1326 S. Killian Drive, La	35
Charles Klabosh Co., P.O. Drawer 5690, Jackson	39
Veterinary Resources Americas, Inc., 12930 N. A	60

GEORGIA

Service Engineering Associates, 3960 Peachtree Rd., N.E., Atlanta (30319)	52
T. E. Stivers Associates, P.O. Box 608, Decatur (30031)	56

ILLINOIS

A. MacDonald Engineering, 1235 Ashland Avenue, Wilmette (60091)	41
Sol Energy Corporation, 761 Rohde, Hillside (60162)	54

IOWA

J-Tec Associates, Inc., 317 Seventh Avenue, S.E., Cedar Rapids (52406)	37
--	----

KANSAS

Development Planning & Research Associates, Box 727, Manhattan (66502)	29
--	----

MARYLAND

Arctec, Inc., 9104 Red Branch Road, Columbia (21045)	20
Arinc Research Corporation, 2551 Riva Road, Annapolis (21401)	20
Associated Management Information Consultants, 11813 Gregerscoft Road, Potomac (20854)	20
Automated Sciences Group, 8555 - 16th St., #713, Silver Spring (20910)	21
Bicycles & Exotic Energy, 5761 Elkridge Hgts. Rd., Baltimore (21227)	22

(continued)



MARYLAND (continued)

Biochemical Intermediates, P.O. Box 1469, Rockville (20850) .....	23
Cadcom, Inc., 107 Ridgely Avenue, Annapolis (21401) .....	25
Contax, P.O. Box 740, Silver Spring (20910) .....	27
Doty Associates, Inc., 416 Hungerford Drive, Rockville (20850) .....	29
EMR-Telemetry, 1320 Fenwick Lane, Suite 420, Silver Spring (20910) .....	30
Exotech, Inc., 1200 Quince Orchard Blvd., Gaithersburg (20760) .....	32
Fisher Scientific Co., 7722 Fenton Street, Silver Spring (20910) .....	32
W. R. Grace & Co., 7379 Route 32, Columbia (21044) .....	34
Informatics, 6000 Executive Blvd., Rockville (20852) .....	36
Jones Associates, 11 W. Pennsylvania Avenue, Baltimore (21204) .....	38
McLaughlin Research Corp., 1110 Spring St., Silver Spring (20910) .....	41
Mega Analytical Research Services, 11499 Columbia Pike, Silver Spring (20904) .	43
Met Electrical Testing Co., 916 W. Patapsco Ave., Baltimore (21230) .....	43
Optelecom, Inc., 15940 Shady Grove Rd., Gaithersburg (20760) .....	46
Payne, Inc., 1938 Lincoln Drive, Annapolis (21401) .....	46
RAD Services, Inc., 9381 "C" Davis Avenue, Laurel (20810) .....	48
Sachs/Freeman Associates, 5809 Annapolis Rd., #512, Bladensburg (20710) ...	52
Teledyne Energy Systems, 110 W. Timonium Rd., Timonium (21093) .....	58
Trans-Tech, Inc., 12 Meem Avenue, Gaithersburg (20760) .....	58

MASSACHUSETTS

Analysis & Computer Systems, Inc., 113 Terrace Hall Avenue, Burlington (01803) .....	18
Analytical Systems Engineering Corp., 5 Old Concord Road, Burlington (01803) .....	18
✓ Baird-Atomic, Inc., 125 Middlesex Turnpike, Bedford (01730) .....	21
David E. Brook, Esq., 2 Militia Dr., Lexington (02173) .....	24
Computer Corp. of America, 575 Technology Square, Cambridge (02139) .....	27
✓ Computer Genetics Corp., 18 Lakeside Office Park, Wakefield (01880) .....	27
Crosby Valve & Gage Co., 43 Kendrick St., Wrentham (02093) .....	28
Doble Engineering Co., P.O. Box 414, Watertown (02172) .....	29
Energy Resources Co., 185 Alewife Brook Pkway., Cambridge (02138) .....	31
Hitec Corporation, 65 Power Road, Westford (01886) .....	35
Industrial Materials Technology Co., 19 Wheeling Ave., Woburn (01801) .....	36
Input Output Computer Services, 689 Concord Ave., Cambridge (02138) .....	36
Interprise Corporation, P.O. Box 947, Framingham (01701) .....	37
✓ Ionics, Inc., 65 Grove Street, Watertown (02172) .....	37
Jenike & Johanson, Inc., 2 Executive Park Drive., N. Billerica (01862) .....	38
Littleton Research & Engineering, 95 Russell St., Littleton (01460) .....	40
Mason Research Institute, 57 Union Street, Worcester (01608) .....	42
Massachusetts Science and Technology Foundation, 10 Lakeside Office Park, Wakefield (01880) .....	43
Massdesign Architects & Planners, 138 Mt. Auburn St., Cambridge (02138) ....	43
✓ Metal Bellows Co., 1075 Providence Highway, Sharon (02067) .....	44
Moleculon Research Corporation, 139 Main St., Cambridge (02142) .....	44
Multisystems, Inc., 1050 Massachusetts Avenue, Cambridge (02138) .....	45
Signatron, Inc., 12 Hartwell Avenue, Lexington (02173) .....	54
Tachisto, Inc., 13 Highland Circle, Needham Heights (02194) .....	57
Trantech Corporation, P.O. Box 310, Newton (02160) .....	59
Westwood Research Laboratory, 543 High Street, Westwood (02090) .....	61
Donald Worth, 336 Beacon St., Apt. #5, Boston (02176) .....	62

MICHIGAN

Analydata, P.O. Box 55, Ann Arbor (48107) .....	18
Ann Arbor Science Publishers, P.O. Box 1425, Ann Arbor (48106) .....	19
Ash Stevens, Inc., 5861 John Lodge Freeway, Detroit (48202) .....	20
John P. Humphrey, 5409 Mason Street, Midland (48640) .....	35
KAR Laboratory, 1711 Merrill St., Kalamazoo (49008) .....	38
Shrader Analytical Laboratories, 3450 Lovett Ave., Detroit (48210) .....	53
Thermotron Corporation, Kollen Park Drive, Holland (49423) .....	58

## MINNESOTA

Donaldson Co., Inc., P.O. Box 1299, Minneapolis (55440) .....	29
International Venture Research, 11 Peavey Road, Chaska (55318) .....	36

## MISSOURI

Baganoff Engineering, Inc., 380 Brookes Drive, Hazelwood (63042) .....	21
Labconco Corporation, 8811 Prospect, Kansas City (64132) .....	39

## NEVADA

Barth Electronics, Inc., 1300 Wyoming Street, Boulder City (89005) .....	22
--	----

## NEW HAMPSHIRE

Contemporary Systems, 68 Charlionne Street, Jaffrey (03452) .....	27
Hoyle-Tanner Associates, 1 Technology Park, Londonderry (03053) .....	35

## NEW JERSEY

Aerochem Research Laboratories, P.O. Box 12, Princeton (08540) .....	17
Alva-Tech, Inc., P.O. Box 308, Bradley Beach (07720) .....	17
Applied Skills, Inc., 12 Thurmont Road, West Caldwell (07006) .....	19
Business Psychology Int'l, 342 Westminister Ave., #228, Elizabeth (07208) .....	24
Computer Horizons, Inc., 1050 Kings Highway North, Cherry Hill (08034) .....	27
Descriptive Design & Development Corp., 59 Farnham Ave., Garfield (07026) .....	28
Electro-Science Laboratories, Inc., P.O. Box 596, Pennsauken (08110) .....	31
Electronic Associates, Inc., 185 Monmouth Pkwy., W. Long Branch (07764) .....	31
Flodyne Controls, Inc., 48 Commerce Drive, Murray Hill (07974) .....	32
William G. Florence, 400 Haddon Ave., Apt. 503, Haddonfield (08033) .....	33
Gumbs Associates, Inc., 26 Avenue B, Newark (07114) .....	34
Innovative Systems Research, 103 E. Cooper River Plaza, Pennsauken (08109) .....	36
Jacob-Winston Laboratories, 25 Mt. Vernon Street, Ridgefield Park (07660) .....	38
C. H. Luhrs & Co., P.O. Box 1786, South Hackensack (07606) .....	41
Marotta Scientific Controls, Inc., Boonton Avenue, Boonton (07005) .....	42
Matachem Research Corp., 432 Cherry Hill Blvd., Cherry Hill (08034) .....	43
Metex Corporation, 970 New Durham Road, Edison (08817) .....	44
Mona Industries, Inc., P.O. Box 397, Paterson (07524) .....	44
SGL Industries, Inc., 76 Euclid Avenue, Haddonfield (08033) .....	50
Shepard Laboratories, 19 Morris Court, Summit (07901) .....	53
Utility Research Co., P.O. Box 107, Montclair (07042) .....	59

## NEW YORK

American Identification Products, 145 - 58th, Brooklyn (11220) .....	18
Angenieux Corp. of America, 1500 Ocean Ave., Bohemia (11716) .....	18
Bioresearch, Inc., 315 Smith Street, Farmingdale (11735) .....	23
R. R. Bowker Co., 1180 Avenue of the Americas, NYC (10036) .....	23
Dayton T. Brown, Inc., Church Street, Bohemia (11716) .....	24
✓ Cary Arboretum, P.O. Box AB, Millbrook (12545) .....	25
Claremont Polychemical Corp., 501 Winding Road, Old Bethpage (11804) .....	26
Combustion Processes, Inc., 50 E. 41st Street, NYC (10017) .....	26
Data Transformation Corp., 10 Columbus Circle, #1675, NYC (10019) .....	28
Electrides Corporation, 1010 Forest Avenue, Staten Island (10310) .....	30
IEC Electronics Corp., 105 Norton Street, Newark (14513) .....	35
Ithaco, Inc., 735 W. Clinton Street, Ithaca (14850) .....	37
Litron Laboratories, Ltd., 1351 Mt. Hope Ave., #207, Rochester (14620) .....	40
Otisca Industries, Ltd., P.O. Box 186, Lafayette (13084) .....	46
Penetradar Corp., 6865 Walmore Road, Niagara Falls (14304) .....	46
Product Resources International, 90 Park Avenue, NYC (10016) .....	47
Quality Bakers of America, Inc., 1515 Broadway, NYC (10036) .....	48
E. Rau Enterprises, P.O. Box 443, Floral Park (11001) .....	48

(continued)

## NEW YORK (continued)

Research Dynamics, Inc., P.O. Box 65, Village Station, NYC (10014)	49
Root Development Corp., 909 Fifth Avenue, NYC (10021)	49
Shaker Research Corp., Northway 10 Executive Park, Ballston Lake (12019)	53
Anatoie J. Sipin Co., Inc., 425 Park Avenue South, NYC (10016)	54
Solar Investors Associates, 325 Prospect Avenue, Mamaroneck (10543)	54
Treadwell Corporation, 1700 Broadway, NYC (10019)	59
Van Allyn, Inc., 310 E. 44th Street, NYC (10017)	59
Vencon Management, Inc., 730 Fifth Avenue, NYC (10019)	59
Wolchuk and Mayrbaurl, 432 Park Avenue South, NYC (10016)	61

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Applied Science Associates, 105 E. Chatham Street, Apex (27502)	19
Armageddon Chemical Co., 431 Salem Street, Durham (27703)	20
National Testing Services, 1905 Chapel Hill Road, Durham (27707)	45

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CTL Engineering, Inc., 2860 Fisher Road, Columbus (43204)	24
D'Agostino-Yerow & Associates, 8561 Arborcrest Dr., Cincinnati (45236)	28
Energy Technology, Inc., 4914 E. 154th St., Garfield Heights (44128)	32
Life Systems, Inc., 24755 Highpoint Road, Cleveland (44122)	39
Albert Shapero, Ohio State University, Columbus (43210)	53
Tech Development, Inc., P.O. Box 1400-0, Dayton (45414)	57

## OKLAHOMA

J. Charles Halpine, P.O. Box 2903, Tulsa (74101)	34
--	----

## PENNSYLVANIA

Applied Science Associates, P.O. Box 158, Valencia (16059)	19
Auerbach Associates, Inc., 121 N. Broad Street, Philadelphia (19103)	21
Autoclave Engineers, Inc., P.O. Box 4007, Erie (16512)	21
David H. Blasetti, 7019 Guilford Road, Upper Darby (19082)	23
C&D Batteries Division, Eltra Co., 3043 Walton Rd., Plymouth Mtg (19462)	24
Han Chang, 3629 Cal-Ken Drive, Murrysville (15668)	25
Cresheim Co., Inc., 1408 E. Mermaid Lane, Philadelphia (19118)	28
Emergency Care Research Institute, 5200 Butler Pike, Plymouth Mtg (19462)	31
Albert G. Fonda, 545 Hughes Road, King of Prussia (19083)	33
General Technical Services, Inc., 8794 West Chester Pike, Upper Darby (19082)	33
Johnson Engineering Co., 17 N. Drexel Avenue, Havertown (19083)	38
Alan B. Kammerman, 11623 Kelvin Avenue, Philadelphia (19116)	38
Dr. E. M. Kipp, Suite A, Station Square 2, Paoli (19301)	39
Lancaster Laboratories, 2425 New Holland Pike, Lancaster (17601)	39
MacArthur Research Co., RD #2, Box 264, Malvern (19355)	41
Martis Associates, 618 E. 10th Street, Berwick (18603)	42
Milmark Research, Inc., P.O. Box 87, Bernville (19506)	44
Naval Air Development Center, Street & Jacksonville Rds., Warminster (18974)	45
O'Donnell & Associates, 5100 Centre Avenue, Pittsburgh (15232)	45
Pandalai Coatings Co., 618 Dahlia Drive, Monroeville (15146)	46
Penn State Engineering, P.O. Box 177, State College (16801)	46
Polysciences, Inc., Paul Valley Industrial Park, Warrington (18976)	47
Radiation Management, 3508 Market St., #30, Philadelphia (19104)	48
Stewart-Todd Associates, 530 E. Swedesford Rd., #10, Wayne (19087)	56
Structure Probe, Inc., P.O. Box 342, West Chester (19380)	56
Technimedia Corporation, 121 N. Orianna St., Philadelphia (19106)	57
Techni Research Associates, 37 Easton Road, Willow Grove (19090)	57
Wilford Aircraft Corporation 300 Linden Road, Merion Station (19066)	61

## RHODE ISLAND

Edwin H. Benz Co., 283 Whitford Avenue, Providence (02908)	22
--	----

TENNESSEE

Environmental & Regional Research Associates, Inc., (ERRA)  
 P.O. Box 1274, Johnson City (37601) ..... 32  
 FWG Associates, Inc., R.R. 3, Box 331, Tullahoma (37388)..... 32

TEXAS

Ana-Lab Corporation, 2600 Dudley Road, Kilgore (75662) ..... 18  
 Celestial Synergetics Corp., Two Houston Center, #814, Houston (77002)..... 25  
 Geochem Laboratories, 1143-C Brittmore Road, Houston (77043) ..... 33  
 Quest Research International, P.O. Box 478, Tyler (75710) ..... 48  
 Southwestern Laboratories, 222 Cavalcade Blvd., Houston (77071) ..... 54  
 Spectrix Corporation, 7408 Fannin, Houston (77054) ..... 55

UTAH

Billings Energy Corporation, P.O. Box 555, Provo (84601) ..... 22

VERMONT

Dufresne-Henry Engineering, Precinct Road, North Ferrisburgh (05150)..... 30

*1 copy  
 this page*

Aerospace Industrial Associates, F ..... 17  
 Applied Radiant Energy Co., 2432 ..... (24501) ..... 19  
 Bionetics Corporation, 18 Research ..... 23  
 Cannon Associates, P.O. Box 2007 ..... 25  
 Chi & Associates, 1011 Arlington E ..... 19) ..... 26  
 Columbia Research Corp., 2531 Jef ..... n(22202) ..... 26  
 Commonwealth Research, 11800 Su ..... eston (22091).... 27  
 Farnsworth Cannon, Inc., 7926 Jor ..... 22101)..... 32  
 R. J. Gillis Associates, P.O. Box ..... 34  
 Arthur L. Hawk, 535 W. Great Fal ..... 046) ..... 34  
 Human Sciences Research, 7710 Ol ..... n (22101) ..... 35  
 Intertechnology Corporation, P.O. ..... ) ..... 37  
 Theodore Jonas/Associates, 2009 I ..... ington (22201) .... 38  
 MERADCOM, U.S. Army, Ft. Bel ..... 41  
 William M. Moscrip, Route 2, Box ..... 1)..... 45  
 James L. Plummer, 8913 Footstep ..... 47  
 Presearch, Inc., 2361 S. Jefferso ..... (22202) ..... 47  
 Samanie, Inc., P.O. Box 694, Alexan ..... 52  
 Seaward International, 6269 Leesburg Pike, Falls Church (22090)..... 52  
 Spectro-Systems, Inc., 8000 Forbes Place, Springfield (22151)..... 55  
 Stanford Research Institute, 1611 N. Kent Street, Arlington (22209) ..... 56  
 Tensor Industries, Inc., 8415 Arlington Blvd., Fairfax (22030)..... 58  
 Unified Industries, Inc., 205 S. Whiting St., #201, Alexandria (22304) ..... 59  
 Versar, Inc., P.O. Box 1549, Springfield (22151)..... 60  
 Virginia Energy Office, 823 E. Main St., Room 300, Richmond (23219)..... 60  
 Glen W. Wiltrout, 2028 N. Vermont Street, Arlington (22207) ..... 61

WASHINGTON

Electrochemical Technology Corp., 3935 Leary Way NW, Seattle (98107) ..... 31  
 Mathematical Sciences Northwest, P.O. Box 1887, Bellevue (98009) ..... 43  
 Northwest Research and Counseling Service, Box 461, Richland (99352) ..... 45  
 Rothenbuhler Engineering, Rhodes Road, Sedro Woolley (98284) ..... 49  
 Vertrex Corporation, 808 - 106th Avenue NE, Bellevue (98004) ..... 60

WEST VIRGINIA

Ecometrics, Inc., 236 Grand Street, Morgantown (26505) ..... 30  
Standard Laboratories, 3322 Pennsylvania Avenue, Charleston (25302) ..... 56

WISCONSIN

Educational Assessment Service, Inc., Route 1, Watertown (53094) ..... 30

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Israeli Industry Center for R&D, P.O. Box 29084, Tel-Aviv, Israel ..... 37

SECTION II - TECHNICAL FIELDS & MEMBER IDENTIFICATION NUMBERS

<u>Technical Field</u>	<u>Member Identification Number</u>
1. Accident Investigation	19, 51, 52, 105, 160, 183, 239
2. Acoustics	19, 42, 58, 61, 80, 81, 127, 152, 153, 155, 163, 183, 194, 203, 216, 222, 246, 264
3. Adhesives	6, 15, 19, 50, 59, 89, 112, 113, 163, 175, 182, 195, 197, 231, 236, 254
4. Advertising	19, 72, 149, 236, 246, 269
5. Aerodynamics	23, 29, 56, 61, 110, 135, 145, 155, 163, 169, 188, 203, 210, 220, 227, 240, 265, 269
6. Aerospace Science & Techniques	19, 23, 31, 40, 49, 56, 61, 63, 65, 84, 91, 102, 104, 127, 144, 145, 155, 163, 172, 188, 190, 197, 203, 210, 216, 227, 228, 230, 239, 240, 246, 265
7. Airbreathing Propulsion Systems	61, 96, 122, 144, 155, 163, 188, 197, 203, 210, 240
8. Airconditioning	76, 82, 122, 131, 135, 259
9. Analytical Laboratory	9, 14, 19, 40, 50, 51, 60, 82, 109, 127, 129, 136, 137, 141, 146, 147, 151, 163, 174, 175, 176, 197, 199, 206, 219, 226, 229, 231, 232, 236, 239, 248, 249, 257, 263
10. Batteries	19, 23, 41, 50, 90, 112, 139, 144, 195, 209, 248, 249
11. Bicycles	37
12. Biomedical Sciences	14, 40, 41, 61, 86, 91, 108, 112, 127, 133, 139, 141, 151, 161, 164, 165, 171, 172, 193, 204, 206, 218, 229, 231, 234, 236, 239, 259, 263, 264
13. Biology	14, 15, 40, 86, 112, 127, 147, 151, 164, 174, 193, 231, 257, 259, 264
14. Business Administration	10, 21, 45, 59, 63, 69, 72, 78, 82, 104, 127, 130, 143, 163, 165, 192, 202, 205, 216A, 231, 247, 256, 267
15. By-Product Utilization	1, 15, 51, 59, 138, 141, 147, 155, 197, 202, 226, 231, 243, 257

16. Ceramics 19, 59, 60, 89, 112, 178, 197, 236, 248, 249, 269
17. Chemistry 2, 6, 9, 14, 15, 19, 22, 24, 39, 40, 41, 51, 59, 61, 85, 89, 90, 93, 112, 113, 132, 143, 147, 148, 151, 155, 164, 167, 174, 175, 176, 187, 193, 195, 199, 202, 206, 210, 218, 219, 220, 226, 229, 230, 231, 232, 236, 239, 242, 248, 249, 254, 257
18. Cleaning Compounds 59, 112, 113, 141, 176, 195, 202, 219, 231
19. Coal Processing 8, 27, 38, 56, 59, 60, 62, 112, 121, 135, 137, 139, 143, 155, 165, 183, 197, 199, 210, 226, 232, 257, 260, 261
20. Communications Sciences 12, 16, 26, 49, 50, 72, 91, 93, 120, 127, 135, 149, 150, 153, 163, 184, 208, 211, 217, 221, 228, 248, 249
21. Computer Sciences 3, 11, 12, 16, 25, 26, 28, 29, 52, 61, 63, 65, 66, 73, 78, 85, 86, 121, 126, 127, 128, 129, 148, 150, 151, 153, 163, 164, 183, 194, 210, 211, 216, 217, 229
22. Configuration Management 12, 19, 61, 63, 126, 144, 163, 194, 211, 241, 246, 264
23. Consultants: Physical and Social Science 3, 9, 43, 49, 56, 61, 65, 66, 72, 76, 78, 93, 120, 137, 140, 147, 161, 175, 194, 210, 213, 221, 231, 232, 242, 246, 256, 257, 263, 264
24. Consultants: Materials Research 6, 15, 19, 22, 35, 49, 51, 59, 61, 79, 89, 90, 113, 125, 138, 139, 143, 145, 147, 163, 175, 182, 183, 188, 193, 197, 210, 226, 231, 236, 239, 248, 249, 254, 257, 263
25. Consultants: Transportation and Communication 10, 12, 20, 28, 43, 49, 58, 63, 69, 72, 82, 105, 108, 110, 114, 115, 120, 127, 128, 144, 160, 163, 184, 194, 211, 239, 246, 253, 257, 264
26. Consultants: Instrumentation 19, 35, 43, 49, 59, 75, 93, 104, 110, 114, 144, 152, 160, 163, 171, 200, 216, 217, 222, 239, 257
27. Consultants: Energy Conservation 15, 19, 38, 43, 46, 49, 56, 59, 60, 61, 62, 72, 76, 78, 82, 90, 96, 114, 118, 120, 127, 131, 136, 138, 138, 143, 163, 166, 182, 188, 210, 215, 216, 239, 241, 243, 258, 259, 264, 267
28. Control Systems 16, 19, 27, 65, 76, 93, 102, 105, 114, 128, 135, 148, 153, 160, 162, 163, 172, 208, 217, 227, 258, 261, 268

29.	Corrosion Prevention	6, 19, 51, 59, 90, 112, 163, 176, 242, 269
30.	Cryogenics	19, 27, 38, 75, 102, 114, 138, 152, 163, 164, 257, 269
31.	Cybernetics	63, 108, 127, 163
32.	Data Processing	3, 4, 11, 12, 28, 52, 61, 63, 66, 73, 84, 85, 86, 126, 127, 128, 151, 152, 153, 163, 164, 194, 203, 211, 217, 227, 228, 239, 246, 259
33.	Dental Research	193, 236, 263
34.	Desalination of Water	19, 56, 82, 90, 104, 112, 132, 139, 163, 188, 210, 231, 243, 261
35.	Drugs	39, 85, 147, 151, 174, 175, 195, 231
36.	Ecology	1, 14, 40, 54, 59, 61, 72, 76, 82, 85, 86, 108, 140, 231, 257, 259
37.	Economics	8, 10, 28, 63, 66, 78, 81, 108, 115, 127, 129, 163, 168, 192, 205, 216A, 256, 257
38.	Editing	61, 76, 124, 127, 140, 149, 160, 241
39.	Educational Evaluation	17, 76, 87, 97, 127, 149, 160, 216A, 267
40.	Electrical Engineering	12, 14, 19, 46, 63, 81, 82, 124, 127, 136, 148, 159, 163, 169, 171, 177, 190, 194, 203, 208, 210, 211, 216, 217, 221, 222, 239, 246, 247, 248, 249, 261
41.	Electrochemistry	14, 19, 41, 50, 59, 90, 93, 112, 132, 148, 175, 204, 230, 245, 251, 252
42.	Electromagnetic Analysis	16, 19, 190, 210, 211, 228, 248, 249, 257, 269
43.	Electron Microscopy	14, 51, 193, 226, 236, 248, 249
44.	Electronics	11, 16, 19, 32, 81, 88, 89, 93, 116, 121, 123, 124, 135, 145, 148, 163, 190, 204, 209, 210, 211, 216, 217, 220, 227, 228, 238, 246, 248, 249, 258, 268, 269



45. Energy: Sources, Systems, Conservation 1, 8, 9, 14, 15, 19, 23, 28, 37, 38, 41, 46, 50, 52, 56, 57, 59, 60, 61, 62, 63, 67, 68, 76, 78, 82, 88, 90, 93, 94, 96, 104, 107, 112, 114, 116, 118, 120, 122, 125, 131, 135, 137, 138, 139, 143, 148, 151, 159, 163, 165, 166, 168, 183, 184, 185, 188, 192, 194, 196, 197, 199, 202, 203, 209, 210, 213, 215, 216, 220, 224, 225, 228, 230, 239, 240, 241, 242, 243, 245, 251, 252, 255, 258, 259, 260, 261, 268
46. Engines 19, 38, 56, 61, 96, 122, 125, 144, 188, 196, 197, 210, 217, 240
47. Engineering 12, 14, 16, 19, 20, 38, 42, 51, 52, 56, 58, 61, 62, 65, 70, 76, 81, 82, 85, 90, 93, 96, 102, 105, 115, 121, 122, 123, 124, 131, 133, 137, 140, 145, 152, 160, 162, 163, 169, 175, 177, 178, 183, 188, 191, 194, 196, 197, 203, 208, 210, 211, 213, 216, 222, 228, 230, 231, 235, 239, 240, 246, 251, 252, 257, 259, 261, 270
48. Environmental Protection Systems 1, 9, 14, 19, 20, 30, 40, 52, 54, 59, 60, 61, 62, 72, 78, 82, 97, 112, 118, 135, 140, 146, 163, 165, 168, 194, 199, 200, 210, 214, 220, 222, 226, 243, 251, 252, 253, 257, 259
49. Equipment: Laboratory and Industrial 19, 27, 30, 31, 35, 38, 56, 79, 98, 132, 137, 146, 148, 163, 171, 172, 197, 210, 222, 232, 235, 259
50. Film Production—Technical 59, 149, 175, 230, 231
51. Filtration 1, 19, 59, 80, 82, 114, 139, 148, 175, 176, 188, 216, 226, 259
52. Fluidized-bed Combustion 8, 56, 59, 62, 137, 139, 210
53. Fuels: Synthetic 2, 8, 19, 59, 60, 62, 112, 121, 139, 143, 178, 199, 245, 256
54. Food Products Processing 15, 19, 40, 59, 61, 78, 104, 112, 137, 147, 198, 226, 243
55. Gas Chromatography 76, 136, 147, 176, 199, 219, 226, 229, 230, 231, 257
56. Gas Liquefaction 27, 38, 56, 114, 138, 139, 163, 260, 261
57. Gasdynamics 2, 23, 38, 56, 61, 114, 163, 188, 203, 210

58.	General Systems Science	19, 61, 63, 66, 108, 114, 163, 194, 210, 239, 246, 261
59.	Geology	4, 32, 51, 59, 60, 109, 115, 226, 246, 257
60.	Government	8, 63, 116, 139, 140, 156, 163, 165, 223, 246, 256, 267, 271
60A.	Grain Processing	235
61.	Graphic Arts	17, 59, 61, 73, 112, 126, 140, 161, 166, 202, 211, 239, 246
62.	Health Education	17, 120
63.	Hydrodynamics	19, 20, 52, 56, 58, 61, 108, 115, 152, 163, 175, 183, 188, 207, 210, 214, 227, 264
64.	Human Factors Engineering	17, 59, 61, 73, 120, 144, 160, 161, 194, 239, 241, 243, 246, 256
65.	Industrial Engineers	14, 56, 59, 118, 136, 140, 175, 177, 194, 215, 234, 239, 246
66.	Industrial Safety	14, 19, 40, 105, 147, 160, 174, 176, 199, 200, 222, 234, 239, 257
67.	Industrial Security	103, 163, 176
68.	Information Systems	25, 28, 29, 52, 63, 66, 69, 73, 85, 103, 120, 126, 128, 163, 176, 194, 210, 211, 217, 228, 239, 244, 246
69.	Innovator's Representatives	49, 53, 143, 195, 205, 217, 267, 269
70.	Instrumentation	2, 4, 19, 23, 27, 29, 30, 31, 32, 35, 41, 59, 65, 75, 79, 84, 93, 104, 114, 123, 133, 135, 144, 145, 148, 152, 160, 163, 172, 176, 190, 200, 210, 216, 222, 227, 228, 229, 239, 257, 261, 262
71.	Integrated Logistics	17, 61, 144, 194, 211, 241
72.	Interdisciplinary Bridges	19, 63, 108, 149, 151, 160, 205
72A.	Inventors	42, 105, 114, 178, 255, 268
73.	Isotopes	15, 39, 51, 59, 175, 245
74.	Laser Technology	56, 65, 102, 124, 127, 163, 168, 175, 178, 184, 197, 207, 210, 211, 238, 246, 257

75.	Law: Patents and Procurement	8, 36, 45, 47, 105, 127, 139, 165, 176, 177, 237
76.	Machinery & Tools	19, 34, 56, 125, 143, 163, 196, 197, 209, 240
77.	Marine Engineering & Products	20, 52, 61, 70, 115, 138, 152, 162, 169, 188, 194, 208, 214, 246, 264, 265
78.	Marketing	18, 33, 53, 59, 69, 72, 77, 78, 111, 124, 127, 219, 130, 162, 163, 165, 205, 210, 216A, 231, 239, 246, 256, 263, 268, 269
79.	Materials Engineers	15, 19, 35, 51, 52, 59, 61, 89, 125, 138, 143, 145, 163, 175, 176, 178, 183, 197, 210, 226, 231, 239, 248, 249, 257, 272
80.	Mathematical Sciences	11, 16, 19, 21, 28, 56, 58, 63, 73, 81, 90, 91, 163, 168, 190, 194, 203, 210, 211, 218, 221, 228, 239, 257
81.	Medical Research & Health Care	30, 31, 41, 66, 67, 85, 86, 118, 120, 127, 141, 151, 164, 193, 194, 206, 215, 218, 231, 234, 246, 259, 263, 268
82.	Metallurgy	14, 19, 50, 51, 59, 60, 89, 125, 138, 143, 159, 163, 183, 197, 226, 236, 248, 249, 257
83.	Meteorology	2, 3, 19, 51, 56, 65, 135, 262
84.	Microbiology	14, 19, 40, 41, 58, 86, 126, 129, 136, 146, 147, 148, 151, 164, 231, 257, 259
85.	Microfiche	149
86.	Modulation-Demodulation Techniques	19, 63, 84, 150, 153, 184, 190, 211, 228
87.	Naval Architectural Design	20, 52, 56, 58, 61, 81, 115, 178, 188, 194, 214, 264
88.	Nuclear Power	8, 14, 19, 38, 56, 59, 70, 84, 102, 104, 137, 144, 162, 163, 172, 183, 194, 197, 246, 261
89.	Oceanography	16, 58, 59, 61, 65, 76, 84, 109, 115, 135, 152, 194, 214, 246, 257, 259, 264
90.	Optics	13, 30, 31, 59, 65, 75, 98, 163, 169, 184, 203, 211, 228, 230, 257, 269

91. Personnel Safety & Evaluation 17, 19, 21, 61, 67, 144, 147, 160, 161, 176, 264
92. Petrochemicals Engineers 8, 14, 27, 42, 56, 59, 61, 121, 139, 143, 199, 219, 256, 261
93. Physics 2, 12, 15, 46, 51, 55, 56, 59, 61, 65, 66, 75, 108, 142, 150, 163, 175, 183, 184, 194, 203, 204, 210, 211, 218, 220, 228, 230, 248, 249, 257
94. Plastics 6, 50, 51, 59, 61, 113, 138, 175, 176, 178, 193, 220, 231, 236, 239, 248, 249, 254, 256, 259, 263, 269
95. Pollution Controls 1, 9, 14, 19, 30, 40, 41, 52, 56, 59, 60, 61, 76, 80, 82, 109, 118, 131, 135, 139, 140, 147, 148, 163, 176, 199, 200, 203, 210, 214, 219, 222, 226, 239, 257, 261, 264
96. Product Liability 17, 45, 51, 104, 105, 160, 176, 182, 183, 234, 236, 239
97. Publishers 5, 14, 44, 76, 105, 166, 170, 231, 250
98. Pyrotechnics 19, 59, 239
99. Quality Control 9, 19, 30, 35, 40, 51, 59, 61, 93, 110, 129, 136, 141, 147, 163, 175, 176, 182, 194, 197, 199, 226, 229, 232, 246, 248, 249, 253
100. Radar Technology 4, 16, 19, 32, 100, 153, 163, 190, 211, 228, 246, 248, 249
101. Remote Sensing 16, 19, 31, 32, 84, 93, 97, 104, 153, 163, 190, 203, 208, 217, 228, 230, 246, 269
102. Social Sciences 14, 17, 63, 76, 78, 85, 120, 127, 160, 161, 205, 216A, 228
103. Solar Energy 2, 3, 8, 9, 14, 15, 19, 37, 46, 50, 52, 54, 55, 56, 58, 59, 60, 61, 68, 76, 77, 85, 89, 90, 93, 94, 96, 104, 107, 113, 116, 121, 122, 127, 131, 135, 138, 139, 149, 155, 163, 165, 166, 175, 183, 184, 188, 194, 196, 197, 202, 203, 208, 210, 225, 226, 227, 231, 239, 243, 259, 260, 261, 264, 268, 269, 272
104. Spark Plugs 19, 138, 209
105. Spectroradiometry 19, 31, 59, 175, 184, 230

106.	Spectroscopy	2, 14, 19, 30, 59, 65, 75, 147, 175, 176, 184, 199, 204, 223, 229, 230, 236, 257
107.	Structural R&D	19, 51, 52, 58, 77, 82, 139, 152, 163, 169, 183, 239, 243, 253, 270
108.	Systems Engineering	12, 16, 19, 20, 21, 38, 40, 51, 52, 56, 61, 63, 65, 69, 82, 93, 98, 100, 104, 110, 114, 115, 118, 126, 128, 138, 144, 148, 155, 160, 162, 163, 172, 182, 194, 203, 210, 211, 217, 239, 241, 246, 253, 261, 262, 264, 269, 272
109.	Technology Transfer	8, 40, 51, 52, 53, 59, 61, 69, 76, 82, 118, 126, 127, 139, 140, 143, 153, 163, 165, 166, 175, 195, 205, 242, 250, 264
110.	Testing: Chemicals	19, 39, 40, 51, 59, 60, 79, 93, 113, 137, 147, 151, 164, 175, 176, 199, 219, 226, 229, 231, 257, 263, 264
111.	Testing: Electrical	19, 50, 79, 93, 163, 171, 210, 231, 239, 246, 248, 249
112.	Testing: Engineering	19, 38, 51, 61, 70, 84, 93, 96, 105, 137, 152, 163, 183, 208, 210, 216, 226, 239, 246, 253, 257, 263
112A.	Testing: Flow	19, 93, 162, 163
113.	Testing: Materials	15, 19, 35, 51, 59, 77, 79, 93, 114, 125, 145, 163, 175, 182, 183, 197, 210, 226, 231, 232, 239, 248, 249, 257, 263
113A.	Testing: Pressure	19, 93, 162, 163
114.	Thermodynamics	2, 19, 38, 51, 52, 56, 61, 76, 108, 122, 138, 163, 182, 188, 203, 210, 213, 230, 239, 246, 261
115.	Tribology	136, 143, 152, 216, 236
116.	Valves	19, 27, 59, 70, 102, 104, 114, 138, 163, 172, 176, 227
117.	Venture Capital	49, 59, 130, 163, 165, 205, 225, 231, 256, 269
118.	Vehicles	19, 41, 63, 105, 163, 196, 227, 246, 253

119. Waste Conversion 1, 9, 14, 22, 59, 60, 61, 62, 77, 82, 85, 113, 118, 138, 139, 141, 144, 147, 165, 188, 197, 210, 231, 251, 252, 257, 259, 264
120. Wave Track Theory
121. Weaponry 16, 19, 23, 34, 56, 100, 155, 163, 178, 184, 194, 197, 211, 246
122. Weight Power Electricity Generation 23, 210, 255
123. Wind Energy 3, 8, 56, 59, 60, 61, 78, 82, 84, 93, 135, 139, 165, 178, 188, 196, 203, 208, 210, 213, 240, 243, 259, 262, 268, 269
124. Wire Products 19, 61, 173, 175

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104, 105, 106, 107, 108, 110,  
111, 112, 112A, 113, 113A,  
114, 116, 118, 121, 124

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Consulting Engineering services as applied to polar and other cold regions in the areas of Naval Architecture, Marine Engineering, Civil Engineering, Hydraulics, Environmental Engineering, Offshore Engineering and Systems Analysis. Services range from preliminary design through feasibility studies, mathematical and physical model testing, detail design, construction management and field testing. Unique laboratory facilities for studying ice problems are available including an Ice Model Basin, an Ice Flume, and an Ice Hydraulics Laboratory.

21. ARINC RESEARCH CORPORATION 14, 80, 91, 108  
2551 Riva Road  
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P. R. Oyerly, Dir./Mktg. (301) 268-4000

Systems architecture. Requirements analysis; system design; cost analysis; specification writing; system integration. Mathematical modeling; simulation; product improvement; design and production of training courses.

22. ARMAGEDDON CHEMICAL CO. 17, 24, 119  
431 Salem Street  
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Edward A. Tyczkowski, Pres. (919) 596-5426

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23. ARTEC ASSOCIATES, INC. 5, 6, 10, 45, 57, 70, 121,  
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 Fred Baganoff, Pres. (314) 831-0956
- Flight testing. Instrumentation development. Scientific data processing. Special purpose computers.
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 Bedford, MA 01730  
 David F. Walsh (617) 276-6000, Ext. 6196
- Electro-optical systems; spectrochemical, fluorometric, atomic absorption, and other analytical instrumentation; nuclear medicine and health systems and instruments; advanced electronic recording equipment; passive night vision devices.
31. BARNES ENGINEERING CO. 6, 49, 70, 90, 101, 105  
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 Harry Benoit, Jr., VP/Eng'g and Programs  
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 Provo, UT 84601  
 David R. Lyon, V.P. of Administration  
 (801) 375-0000  
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 (continued)


tanks, alloys, hydrides, and hydrogen purifiers. Production of electrolyzers is envisioned in the near future. Can design a hydrogen system for almost any function or need.

39. BIOCHEMICAL INTERMEDIATES CORP. 17, 35, 73, 110  
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40. (The) BIONETICS CORPORATION 6, 9, 12, 13, 17, 36, 48,  
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(804) 838-8880

Provides support services to government and industry in fields of aerospace science & technologies, biomedical sciences, microbiology, systems engineering, quality control, environmental protection systems, industrial safety, pollution controls, instrument calibration, technical documentation services, computer/image processing, acoustics, sterilization techniques and flight crew equipment maintenance. Also provides chemical and microbiological analytical laboratory services specializing in analysis of water, waste water, food products and fuel for government and industry.

41. BIORESEARCH, INC. 10, 12, 17, 41, 45, 70, 81,  
315 Smith Street 84, 95, 118  
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Eugene Findl, Division Mgr. (516) 293-7219 

Medical research and healthcare. Electrochemistry. Environmental monitoring. Microbiology. Biochemistry. Batteries. Fuel Cells. Electric vehicles.

42. DAVID H. BLASETTI 2, 47, 72A, 92  
7019 Guilford Road  
Upper Darby, PA 19082  
(215) 622-5274

Independent inventor doing R&D on the transient response of sound reproduction systems. Has patent on technique for reverse bending vibration testing of items large or small. Originally conceptualized for testing at earthquake frequencies and accelerations, this technique allows frequency to be adjusted separately from acceleration. Has worked as a senior pipe stress analyst for Catalytic, Inc. in the petro-chemical field. Is interested in inertial propulsion system suitable for transportation and space travel; a system independent of air and gravity.

43. ROBERT A. BOLKE 23, 25, 26, 27  
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Ridgefield, CT 06877  
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45. ROBERT B. BOWYTZ, Esq. 14, 75, 96  
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 (202) 659-3408 or 659-3232  
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46. WILLIAM M. BROBECK & ASSOCIATES 27, 40, 45, 93, 103  
 1235 Tenth Street  
 Berkeley, CA 94710  
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 Radiation safety, engineering analysis; applied mathematics, product design and development, computerized instruction terminals, automotive power systems, design of compact urban automobile powered by external combustion engine; cash register and calculator simulator, flywheels for peak-shaving in the electric power utility industry, and fusion reactors.
47. DAVID E. BROOK, Esq. 75  
 2 Militia Drive  
 Lexington, MA 02173  
 (617) 861-6240  
 Patent Attorney.
48. DAYTON T. BROWN, INC.  
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 Bohemia, NY 11716  
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 (No expertise submitted at time of printing)
49. BUSINESS PSYCHOLOGY INTERNATIONAL 6, 20, 23, 24, 25, 26, 27, 69, 117  
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Dr. Charles O. Heller, President  
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55. CELESTIAL SYNERGETICS CORP. 93, 103  
2 Houston Center—Suite 814  
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Houston, TX 77002  
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56. CHAM OF NORTH AMERICA, INC. 5, 6, 19, 21, 23, 27, 34,  
3400 Blue Spring Rd. —Suite A7 45, 46, 47, 49, 52, 56, 57,  
Huntsville, AL 35810 63, 65, 74, 76, 80, 83, 87,  
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(205) 859-4440 114, 121, 123

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57. DR. HAN CHANG 45  
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Murrysville, PA 15668  
(412) 325-2585

Energy conversion and conservation.

58. CHI ASSOCIATES, INC. 2, 25, 47, 63, 80, 84, 87,  
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59. CLAREMONT POLYCHEMICAL CORP. 3, 14, 15, 16, 17, 18, 19,  
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64. COMPUTER CORPORATION OF AMERICA  
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(No expertise submitted at time of printing)

65. COMPUTER GENETICS CORP. 6, 21, 23, 28, 47, 70, 74,  
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67. CONTAX 45, 81, 91  
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- (No expertise submitted at time of printing)
84. EMR-TELEMETRY 6, 32, 70, 86, 88, 89, 101,  
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Eastern Area Sales Manager
- Test instrumentation. Data acquisition systems, computer controlled, for R&D testing.
85. EBON RESEARCH SYSTEMS 17, 21, 32, 35, 36, 47, 68,  
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87. EDUCATIONAL ASSESSMENT SERVICE 39  
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(414) 261-1118
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91. ELECTRONIC ASSOCIATES, INC. 6, 12, 20, 80  
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92. EMERGENCY CARE RESEARCH INSTITUTE  
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Darrell Foreman

(No expertise submitted at time of printing)

93. ENERGY DEVELOPMENT RESEARCH 17, 20, 23, 26, 28, 41, 44,  
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Energy Development Research consultant specializing in energy related technologies. Electrochemistry. Electric/Electronic Systems Engineering. Instrumentation Techniques. Systems Integration.

94. ENERGY DYNAMICS CORP. 45, 103  
6062 E. 49th Avenue  
Commerce City, CO 80022  
Michael McLaughlin, Pres. (303) 287-0149

Manufacturer of solar components. Solar grants.

95. ENERGY RESOURCES CO.  
185 Alewife Brook Parkway  
Cambridge, MA 02138  
Henrietta Gates

(No expertise submitted at time of printing)

96. ENERGY TECHNOLOGY, INC. 7, 27, 45, 46, 47, 103, 112  
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108. GENERAL TECHNICAL SERVICES, INC. 12, 25, 31, 36, 37, 58, 63,  
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111. R. J. GILLIS ASSOCIATES 78  
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 Arlington, VA 22202  
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112. W. R. GRACE & CO. 3, 10, 12, 13, 16, 17, 18,  
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 Columbia, MD 21044  
 C. W. Orgell, Mgr/Commercial Planning  
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113. GUMBS ASSOCIATES, INC. 3, 17, 18, 24, 94, 103, 110,  
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 (201) 824-5110  
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114. J. CHARLES HALPINE 25, 26, 27, 28, 30, 45, 51,  
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the Government of Israel.
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135. J-TEC ASSOCIATES, INC. 5, 8, 19, 20, 28, 44, 45, 48,  
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 Washington, DC 20034  
 Dr. Alan D. Morris (301) 320-4900  
 Technology assessment. Power Plant Siting. Mechanical, electrical and hydraulic systems. Science and law.
178. WILLIAM M. MOSCRIP 16, 47, 53, 72A, 74, 79, 87, 94, 121, 123  
 Route 2, Box 474  
 Fredericksburg, VA 22401  
 (703) 775-7207  
 Inventor. R&D in mechanical/electrical/materials science area. Naval science; Naval weapons; interior ballistics; guided projectiles. Hardware prototype development. Prestressing refractory brittle materials to be used in gun barrels; projective/missile control fin actuator. Wind energy conversion. Stirling engine design; gas turbine design; synthetic fuel processes; thermal energy storage; heat pipe technology; solar pond design. High temperature ceramics; amorphous metals. Machine design; automotive design; fluid power generation; ship design, high speed hydrofoils. Gun design technology; precision guided ordnance; high energy lasers.
179. MULTISYSTEMS, INC.  
 1050 Massachusetts Avenue  
 Cambridge, MA 02138  
 Carole J. Berkson (617) 864-5810  
 (No expertise submitted at time of printing)
180. NATIONAL TESTING SERVICES  
 1905 Chapel Hill Road  
 Durham, NC 27707  
 Carol Hill  
 (No expertise submitted at time of printing)
181. NAVAL AIR DEVELOPMENT CENTER  
 Street & Jacksonville Roads  
 Warminster, PA 18974  
 Rose G. Mandrack  
 (No expertise submitted at time of printing)
182. NORTHWEST RESEARCH AND COUNSELING SERVICE 3, 24, 27, 96, 99, 108, 113, 114  
 P. O. Box 461  
 Richland, WA 99352  
 Amos F. Warren, General Manager  
 (509) 967-3684  
 Research and consultants specializing in roofing problems, epoxy floor problems and waterproofing problems. In-plant seminars. Seminars by invitation.
183. O'DONNELL & ASSOCIATES, INC. 1, 2, 19, 21, 24, 45, 47, 63, 79, 82, 88, 93, 96, 103, 107, 112, 113  
 5100 Centre Avenue  
 Pittsburgh, PA 15232  
 William J. O'Donnell, President  
 Ray G. Fasiczka, Vice President  
 (412) 687-7715  
 Engineering design and analysis services. Activities include stress analysis and certification of components, dynamic and seismic analysis, elastic and plastic analysis, nuclear fuel studies, reliability analysis, systems (continued)

172. METAL BELLOWS CORP. 6, 12, 28, 49, 70, 88, 108, 116  
 1075 Providence Highway  
 Sharon, MA 02067  
 Elton M. Tucker, Assistant Division Mgr.  
 (617) 668-3050, Ext. 118

Design, development and production of metal bellows components and systems for sealing, pumping, sensing and controlling in nuclear, medical, aerospace and industrial process applications. Application of advanced technology to precision forming, brazing and welding of foil thickness metals.

173. METEX CORPORATION 124  
 970 New Durham Road  
 Edison, NJ 08817  
 Bertram R. Rashkow (201) 287-0800

Designs, engineers, manufactures and sells knitted wire mesh products for a great many widely diverse industrial applications. Primary end use applications include EMI/RFI shielding, shock-mounts, flame arrestors, mist eliminators, filters, noise attenuators and many others.

174. MILMARK RESEARCH, INC. 9, 13, 17, 35, 66  
 P. O. Box 87  
 Bernville, PA 19506  
 Dr. Sheldon L. Clark (215) 488-6002

Industrial hygiene (laboratory services), toxicology, including drug screening and quantitation. Biological and biochemical research, including enzymes, lipids, steroids, proteins, immuno-chemical analysis, tissue cultures. Product formulation, testing and manufacturing for private labels.

175. MOLECULON RESEARCH CORP. 3, 9, 17, 23, 24, 35, 41, 47, 50, 51, 63, 65, 73, 74, 79, 93, 94, 99, 103, 105, 106, 109, 110, 113, 124  
 139 Main Street  
 Cambridge, MA 02142  
 Arthur S. Obermayer, President  
 (617) 547-2353

Specializes in research, development and consulting in chemistry polymers and allied fields. These services, performed for private industrial clients and for government agencies, range from feasibility studies and product development, to problem solving, chemical engineering investigations, and process development. Facilities include well-equipped laboratories for conducting chemical and physical experiments as well as facilities for pilot scale unit operations including film casting, fabric coating, extraction processes, emulsification, spray drying, mixing, filtration, sifting, extrusion, purification, grinding, etc. Manufactures POROPLASTIC<sup>®</sup> film and SUSTRELLE<sup>™</sup> powder. These polymeric materials are best described as a solid composed mostly of liquid or alternatively, as a molecular sponge. Amounts ranging from 70% to 98% of almost any liquid can be held within the cellulose triacetate matrix of which Poroplastic or Sustrelle is composed. A variety of procedures can be used to control the rate of mechanism by which a liquid or precipitated solid can be released from this polymeric matrix. Product applications are in a variety of consumer, industrial and technical product applications such as controlled release of fragrances, flavors, medicinals and pesticides; and the separation of biological fluids and industrial liquids.

176. MONA INDUSTRIES, INC. 9, 17, 18, 29, 51, 55, 66, 67, 68, 70, 75, 79, 91, 94, 95, 96, 99, 106, 110, 116  
 65 E. 23rd Street  
 Paterson, NJ 07524  
 Dr. Karl Heyman, VP/R&D  
 (201) 274-8221, Ext. 12

Manufacture of organic synthetic chemical specialties.

192. JAMES L. PLUMMER 14, 37, 45  
8913 Footstep Court  
Annandale, VA 22003  
(703) 978-2911
- Economic modeling; benefit cost analysis; risk-benefit analysis; energy economics; environmental economics.
193. POLYSCIENCES, INC. 12, 13, 17, 24, 33, 43, 81, 94  
Paul Valley Industrial Park  
Warrington, PA 18976  
Dr. B. David Halpern, Pres.  
(215) 343-6484
- Consultant and sponsored research in polymers, monomers, production, market development, formulations, applications and evaluation for all areas of plastics use. Specialties in medical and dental polymers, contact lenses, enzyme substrates, implant polymers, FDA materials, acrylics, PVC, polyvinyl alcohol, water-soluble polymers, thermosets, adhesives, latices, forest products, coatings, textiles and new monomers. 20,000 sq. ft. laboratories with full synthetic and pilot capability. Current confidential client relationships with major and small companies.
194. PRESEARCH, INC. 2, 21, 22, 23, 25, 32, 40, 45, 47, 48, 58, 64, 65, 68, 71, 77, 80, 81, 87, 88, 89, 93, 99, 103, 108, 121  
2361 S. Jefferson Davis Hwy.  
Arlington, VA 22202  
Leonard P. Gollobin, President  
(703) 920-5740
- Performs studies and analyses and provides inputs for management decision-making; largely for the Department of Defense. Specific areas include naval warfare; strategic studies and projections; resource management (manpower, personnel and training, costing); and data processing support including systems analysis and programming.
195. PRODUCT RESOURCES INTERNATIONAL 3, 10, 17, 18, 35, 69, 109  
90 Park Avenue  
New York, NY 10016  
Eugene F. Whelan (212) 682-2966
- Represent selected inventors on a no-fee, share-of-the-action basis. Also conducts invention-searches on behalf of companies in return for a fee paid by the company(s). (The inventor or technology owner pays nothing.)
196. PRODUCTION COMPONENTS, INC. 45, 46, 47, 76, 103, 118, 123  
Building I, El Tesoro Road  
P.O. Box 7  
Ranchita, CA 92066  
E. S. Christensen, Pres. (714) 782-3339
- Precision Machining—Tool and Die work. Thirty-two years in business of designing and building specialized machines-dies-equipment and processes. Holder of patent on thermal engine. Others pending.
197. PYROMET INDUSTRIES 3, 6, 7, 9, 15, 16, 19, 24, 45, 46, 47, 49, 74, 76, 79, 82, 88, 99, 103, 113, 119, 121  
595 Industrial Road  
San Carlos, CA 94070  
Tom Hikido, Vice President  
(415) 591-7161, Ext. 35
- Brazing and heat treating. Metallurgical research & development. Production of aerospace hardware. Refurbishment of jet aircraft engine parts.

analysis, fatigue and failure analysis. High pressure and high temperature component analysis and criteria development.

184. OPTELECOM, INC. 20, 25, 45, 74, 86, 90, 93,  
15940 Shady Grove Road 103, 105, 106, 121  
Gaithersburg, MD 20760  
William H. Culver, Pres. (301) 948-4232

Manufactures and designs modulators, semiconductor lasers, laser arrays, high brightness illuminators, optical fibers, fiber optic cables, solar concentrators, and communications systems.

185. OTISCA INDUSTRIES, LTD. 45  
P. O. Box 186  
LaFayette, NY 13084  
Clay D. Smith, Pres. (315) 475-5543

Fossil fuel mining, extraction, and upgrading research and development and process construction.

186. PACIFIC SIERRA RESEARCH CORP.  
1456 Cloverfield Blvd.  
Santa Monica, CA 90404  
Richard J. Boberg (213) 828-7461

(No expertise submitted at time of printing)

187. PANDALAI COATINGS CO. 17  
618 Dahlia Drive  
Monroeville, PA 15146  
Krish Pandalai (412) 373-7493

Research, development and manufacture of organic coatings for the coil coating, transportation and maintenance industries.

188. PAYNE, INC. 5, 6, 7, 24, 27, 34, 45, 46,  
1933 Lincoln Drive 47, 51, 57, 63, 77, 87, 103,  
Annapolis, MD 21401 114, 119, 123  
Peter R. Payne, Chmn. (301) 268-6150

In business since 1964, Payne, Inc. is a high technology R&D company with rather complete design and manufacturing capabilities. Worked for all three armed services, and ERDA, as well as many private companies. Especially strong in developing innovative hardware to solve a customer's problem. Recent developments include the Sea Knife, a low cost planning hull with the ride of a hydrofoil, the water pulsejet pump and propulsor (a heat engine with no moving parts), lightweight concrete solar collectors, and the Soslese shore erosion protection system.

190. PENETRADAR CORP. 6, 40, 42, 44, 70, 80, 86,  
6865 Walmore Road 100, 101  
Niagara Falls, NY 14304  
Anthony V. Alongi, Pres. (716) 731-5937

Ground-Penetrating-Radar Technology. High-Resolution Radar. Radar Propagation and Scattering. Target Identification. Radar Systems Analysis and Design. Electronic Warfare Analysis.

191. PENN STATE ENGINEERING 47  
P.O. Box 177  
State College, PA 16801  
Norman A. Katz, Pres. (814) 238-5013

Civil engineering.

204. RESEARCH DYNAMICS, INC. 12, 41, 44, 93, 106  
P.O. Box 65, Village Station  
New York, NY 10014  
Dr. Raymond DiMartini, Director

Electrochemistry, spectroscopy and biomedical instrumentation. Multi-disciplined research services are offered within these fields by utilizing contemporary microelectronics technology with novel interpretations of fundamental physical principles. Physical and chemical parameters of problems are investigated and interpreted in terms of up to date technological literature available and in terms of the development required to attain a specific goal or produce a specific device. Traditional approaches are critically reviewed and evaluated in relation to the interpretation developed.

205. ROCKVILLE CONSULTING GROUP, Inc. 14, 37, 69, 72, 78, 102,  
505 Second Street, N.E. 109, 117  
Washington, DC 20002  
Stuart A. Lichtman, President  
(202) 543-1040

Support to venture capitalists and other investors dealing with high technology firms.

206. ROOT DEVELOPMENT CORP. 9, 12, 17, 81  
Orentreich Medical Group  
909 Fifth Avenue  
New York, NY 10021  
Dr. Joseph H. Vogelman (212) 794-0835

Biomedical instruments and processes in endocrinology, heart measurements, thyroid responses, chemical responses. Measure blood levels, hormone levels, analysis of dermatological effects of household remedies on skin. Analysis of products for allergy potential. Computerized electrocardiograms.

207. GEORGE KNOX ROTH  
P.O. Box 811  
Claremont, CA 91711  
(714) 624-4801

(No expertise submitted at time of printing)

208. ROTHENBUHLER ENGINEERING CO. 20, 28, 40, 47, 77, 101,  
Rhodes Road 103, 112, 123  
P.O. Box 192  
Sedro Woolley, WA 98284  
Howard Rothenbuhler, Pres. (206) 856-0836

Originally founded to build radio control systems for the Forest Products Industry, company has grown to manufacture bank alarm systems, intrusion detection, scanning and monitoring equipment and single side band radios as well as the Talkie Tooter remote 2-way radio. Engineering testing, consulting, and custom engineering and manufacturing in the electronics field are also offered with recent emphasis on wind generators and energy conservation.

198. QUALIFY BAKERS OF AMERICA CORP. 54  
 1515 Broadway  
 New York, NY 10036  
 Dr. Simon S. Jackel, Vice President  
 (212) 790-9225
- Full service laboratory and consulting facilities for bakery foods and for application of ingredients, processes and products in the baking industry.
199. QUEST RESEARCH INTERNATIONAL, Inc. 9, 17, 19, 45, 48, 53, 55,  
 (formerly Howe-Baker Engineers) 66, 92, 95, 99, 106, 110  
 P. O. Box 478  
 Tyler, TX 75710  
 Tom H. Cheavens, Research Director  
 (214) 597-4174
- Process research, refining and petrochemicals; combustion analytical services; industrial hygiene; waste water; petroleum products.
200. RAD SERVICES, INC. 26, 48, 66, 70, 95  
 9381 "C" Davis Avenue  
 Laurel, MD 20810  
 Edward Wellner, Operational Manager  
 (301) 953-9583
- Transportation, packaging, storage and disposal of radioactive and chemical waste. Maintenance, calibration, repair, leasing, purchasing and sales of radiation instrumentation. Radioactive laundry service and environmental monitoring services including consultation, instrumentation and TLD, film badge dosimetry.
201. RADIATION MANAGEMENT  
 Science Center Building Two  
 3508 Market Street—Suite 30  
 Philadelphia, PA 19104  
 Bernard T. Geehan
- (No expertise submitted at time of printing)
202. E. RAU ENTERPRISES 14, 15, 17, 18, 45, 61, 103  
 40 Salisbury Avenue, Stewart Manor  
 Garden City, NY 11530  
 (Mailing address: P. O. Box 443  
 Floral Park, NY 11001  
 Dr. Emil D. Rau, President  
 (201) 440-3277 or (516) 488-2796
- Saline chemicals. Fermentation. Wood chemistry. Coal chemistry. Agricultural systems. Solar energy.
203. REMTECH, INC. 2, 5, 6, 7, 27, 32, 40, 45,  
 2603 Artie Street, Suite 21 47, 57, 63, 74, 80, 90, 93,  
 Huntsville, AL 35805 95, 101, 103, 108, 114, 123  
 Charles E. Fuller, VP (205) 536-8581
- Firm is qualified to conduct programs in Energy Transfer, Fluid Mechanics, Environmental Control, and System Analysis. Experience includes Combustion, Gaseous Radiation, and Aerodynamic Heating Analyses; Laser Doppler Velocimetry, Ground Test Support and Instrumentation Design; Building Noise Surveys conducted for the government, universities and industry. The company has amplified its technical capabilities for Solar Energy System Design, Building Heat Load Analysis, and Energy Resource/Conservation Studies.

B & S Screw Machine Products  
a division of SGL Industries, Inc.  
204 North Chester Pike  
Glenolden, PA 19036  
(215) 724-4366

Manufactures metal and plastic screw machined parts.

SGL Plastics  
Route 248  
Nazareth, PA 18064  
(215) 759-0280

Produces custom components parts, through the injection molding, profile, and sheet extrusion processes.

SGL Graphics  
John Fitch Industrial Park  
Warminster, PA 18974  
(215) 672-3600

Produces fiberglass signs and displays through the proprietary Modulite<sup>R</sup> and Moducal<sup>R</sup> processes which offer superior resistance to vandalism, sunlight, chemical fumes and weather.

SGL Homalite  
11 Brookside Drive  
Wilmington, DE 19804  
(302) 652-3686

Produces crystal-clear and colored plastic sheets, tubes, and rods. Homalite<sup>TM</sup> plastics exhibit superior resistance to abrasion, impact and radiation. Produces Homalite-LR (low-glare) instrument panels and faceplates.

SGL Modern Creative  
35 Market Street  
Elmwood Park, NJ 07407  
(201) 791-7700

Provides services to coat, frost and print glass and plastic containers.

SGL Modern Hard Chrome Service  
Cover & River Roads  
Pennsauken, NJ 08110  
(609) 665-8600

Provides hard chromium, electroless nickel and copper plating.

SGL LUBE/systems  
280 Midland Avenue  
Saddle Brook, NJ 07662  
(201) 791-6200

Manufacturer of automatic grease feeders used in industrial applications.

209. SGL INDUSTRIES, INC.  
76 Euclid Avenue  
Haddonfield, NJ 08033  
Jonathan R. Lax, Vice President  
(609) 429-7400

10, 44, 45, 76, 104

Manufacturers of electrical and electronic, metal and plastic products.  
Providers of industrial services. Divisions include:

SGL Batteries Manufacturing  
14650 Dequindre  
Detroit, MI 48212  
(313) 868-6410

Specializes in producing lead-acid batteries for "high-drain" applications such as in-plant equipment, electric-powered golf carts, electric automobiles, and trucks and buses—SGL Deep Cycle <sup>TM</sup> batteries.

SGL Auburn Spark Plug Co.  
89 York Street  
Auburn, NY 13021  
(315) 252-9501

Manufactures Auburn <sup>TM</sup> line of engineered, specialty igniters, liquid level control electrodes, electric feed-throughs, motor terminals, and observation ports.

SGL WABER Electric  
300 Harvard Avenue  
Westville, NJ 08093  
(609) 456-5400

Manufactures SGL Waber <sup>R</sup> electric power outlet boxes, SGL Power Master <sup>TM</sup> multiple outlet strips, and instrument transports.

SGL Electronics  
300 Harvard Avenue  
Westville, NJ 08093  
(609) 456-7300

Manufactures high-performance magnetic components, magnetic laminations and cores.

SGL Printed Circuits  
827 Black Oak Ridge Road  
Wayne, NJ 07479  
(201) 835-2765

Produces custom electronic circuitry.

SGL Abrasives  
North Pitt Street Extended  
Carlisle, PA 17013  
(717) 243-3471

Manufactures grinding wheels and abrasive shapes, "super-speed" grinding wheels, and abrasive segments.

SGL Piping Systems  
302 Falco Drive  
Newport, DE 19804  
(302) 995-6136

Manufactures Galaxie <sup>TM</sup> line of piping components (stub ends, coils and pipe elbows) used in petrochemical plants; integrated piping systems.



216. SHAKER RESEARCH CORP. 2, 6, 21, 26, 27, 40, 44,  
Northway 10 Executive Park 45, 47, 51, 70 112, 115  
Ballston Lake, NY 12019  
John M. McGrew, Pres. (518) 877-8581

Structure and airborne vibration data processing; machinery and structural dynamics; high performance bearing design and analysis; lubrication; seal design and analysis; acoustic and mechanical vibration analysis; machinery design reviews; machinery failure protection.

- 216A. ALBERT SHAPERO 14, 37, 39, 78, 102  
Ohio State University  
Columbus, OH 43210

As of May 1978, William H. Davis Professor of American Free Enterprise System, Ohio State University, Columbus, Ohio. Formerly, Professor of Management at the University of Texas at Austin, Austin, Texas since December 1966 and a member of the Graduate Faculty of the School of Library and Information Science. He has been Chairman of the University of Texas' Department of Management, visiting faculty member of the International Institute for the Management of Technology in Milano, Italy (IIMT), and Director of the Technology Management Division at Stanford Research Institute. At Stanford, he was principal investigator and project leader or participant in a large number of research projects. As Director of Technology Management Programs, he developed and headed a multidisciplinary research organization that was concerned with the application of systems approaches to the solution of complex problems.

217. SHEPARD LABORATORIES 20, 21, 26, 28, 32, 40, 44,  
19 Morris Court 46, 68, 69, 101, 108  
Summit, NJ 07901  
F. H. Shepard, Jr., Consulting Engineer  
(201) 273-5255

Electronic-Electro-Mechanical Systems developed; computer peripherals; instrumentation & control; prototype construction.

218. RALPH L. SHERMAN 12, 17, 80, 81, 93  
1019 Coronado, #25  
Imperial Beach, CA 92032  
(714) 429-7966  
d/b/a J. M. Richards Laboratory  
15133 Kercheval Avenue  
Grosse Point Park, MI 48230

Biophysics. Biochemistry. Bioengineering. In abstracto modeling of hormonal, biochemical and bioelectrical factors associated with nonperiodic oscillations of CNS excitability; they serve as a foundation for continuing research in quantifying brain function in health/disease. Mathematical analysis of longitudinal EEG studies in clinical patients.

219. SHRADER ANALYTICAL LABORATORIES 9, 17, 18, 55, 92, 95, 110  
3450 Lovett Avenue  
Detroit, MI 48210  
Dr. Stephen Shrader, Pres. (313) 894-4440

Analytical chemistry consultants. Specializing in identification of unknown materials—pollutants, drugs, contaminants in industrial products; experts in mass spectrometry and gas chromatography.

210. STD RESEARCH CORPORATION 5, 6, 7, 17, 19, 21, 23, 24,  
150 E. Foothill Blvd. 27, 34, 40, 42, 44, 45, 46,  
P. O. Box "C" 47, 48, 49, 52, 57, 58, 63,  
Arcadia, CA 91005 68, 70, 74, 78, 79, 80, 93,  
Dr. John C. Cutting, VP 95, 103, 108, 111, 112, 113,  
(213) 445-7000 114, 119, 122, 123

Analytical modeling and systems analysis of open cycle MHD. Detailed thermodynamics analysis of combustion liquefaction and gasification of coal. Interests: Conservation, oil, coal, gas utilization, solar energy.

211. SACHS/FREEMAN ASSOCIATES, INC. 20, 21, 22, 25, 32, 40, 42,  
5809 Annapolis Rd. — Suite 512 44, 47, 61, 68, 71, 74, 80,  
Bladensburg, MD 20710 86, 90, 93, 100, 108, 121  
Ernest Freeman, President  
(301) 927-4980

COMMUNICATION SYSTEMS: Public Safety; Emergency Medical; 911; Radio Common Carrier. ENGINEERING SERVICES: EMC; Specifications and Standards Development; ECM; Communication and Radar Systems Analysis; Electro-Mechanical Design; Laser/Optics; Design/Drafting. MANAGEMENT SCIENCES: ILS/CM/Training. COMPUTER SCIENCES: Systems Design and Specifications; ADP; Simulation/Modeling/Displays/Analysis.

212. SAMANIE, INC.  
P. O. Box 694  
Alexandria, VA 22303  
Anne B. Bryan

(No expertise submitted at time of printing)

213. SCIENTIFIC ASSOCIATES, INC. 23, 45, 47, 114, 123  
1639 - 12th Street  
Santa Monica, CA 90404  
Dr. Eugene B. Nebeker, President  
(213) 451-1344

Performs R&D and consulting services within the general field of chemical and mechanical engineering. Typical activities involve both theoretical and experimental work in fluid mechanics, heat and mass transport, and thermodynamics. Primary ongoing activities are in development of original concepts for oil spill skimming in high seas, rock excavation with water jets; and wind-energy conversion. The company has also been engaged in industrial consulting on environmental impact studies.

214. SEAWARD INTERNATIONAL, INC. 48, 63, 77, 87, 89, 95  
6269 Leesburg Pike  
Falls Church, VA 22090  
E. F. Daly, VP (703) 534-3500

Development of equipment for control of marine pollution, particularly that due to oil and hazardous materials. Search and recovery of lost underwater objects. General ocean engineering.

215. SERVICE ENGINEERING ASSOCIATES 27, 45, 65, 81  
3960 Peachtree Road, N.E.  
Atlanta, GA 30319  
Clyde H. Gordon, Sr. Consultant  
(404) 261-2050

Consultants, energy conservation and management; industrial operation and maintenance; evaluation and field testing of products, methods and equipment relating to institutional sanitation.

250. TRANTECH CORPORATION 97, 109  
P. O. Box 310  
Newton, MA 02160  
Martin Himmelfarb (617) 964-0699  
Publishers. Technology Transfer.
251. TREADWELL CORPORATION 41, 45, 47, 48, 119  
1700 Broadway  
New York, NY 10019  
J. A. Johnson, Sr. Vice President  
(212) 262-3120  
Integrated engineering-construction firm with expertise in the ferrous and non-ferrous metals industries. Also has unique qualifications in electro-chemistry and is the only producer of electrolytic oxygen equipment for nuclear submarines.
252. TREADWELL CORPORATION 41, 45, 47, 48, 119  
1700 Broadway  
New York, NY 10019  
John M. Schreiner (212) 262-3120  
Integrated engineering-construction firm with expertise in the ferrous and non-ferrous metals industries. Also has unique qualifications in electro-chemistry and is the only producer of electrolytic oxygen equipment for nuclear submarines.
253. UNIFIED INDUSTRIES, INC. 25, 48, 99, 107, 108, 112, 118  
205 S. Whiting St. — Suite 201  
Alexandria, VA 22304  
Walter L. Ambrose, Procurement Mgr.  
(703) 751-2200, Ext. 69 or 79  
A minority-owned, small business corporation furnishing competent and reliable systems engineering and technical support services to government and industry. Structured with no proprietary interest in hardware, providing an environment for objectivity through an unbiased approach. Application of specialized disciplines in the electrical, electronic and mechanical fields provides for support services in a wide range of technologies.
254. UTILITY RESEARCH CO. 3, 17, 24, 94  
98 Greenwood Avenue  
P.O. Box 107  
Montclair, NJ 07042  
Harry S. Katz (201) 744-8259  
Consulting and R&D on plastic materials, advanced composites, adhesives, elastomers; formulation, prototype and shortrun molding and production liaison.
255. VAN ALLYN, INC. 45, 72A, 122  
310 East 44th Street  
New York, NY 10017  
Wayne P. LeVan, Pres. (212) 986-0550  
Franchisor of inventions, U.S. and foreign, involving the use of vehicular traffic to generate electricity without the use of energy fuel using only the weight of vehicles.
256. VENCON MANAGEMENT, INC. 14, 23, 37, 53, 60, 64, 78, 92, 94, 117  
730 Fifth Avenue — Room 918  
New York, NY 10019  
Irvin Barash, Pres. (212) 581-8787  
Evaluates entrepreneurs, technology, markets, businesses, and arranges for equity and debt capital. Analyzes plant site locations and identifies and studies acquisition candidates.

220. SIERRACIN CORPORATION 5, 17, 44, 45, 48, 93, 94  
 12780 San Fernando Road  
 Sylmar, CA 91342  
 B. P. Levin (213) 367-6184
- Applied research directed toward heatable, anti-reflective coatings applied directly on plastic or glass substrates usable in heatable transparencies. Additional efforts fall into the areas of solar energy research, life cycle testing, environmental testing and flight environment simulation.
221. SIGNATRON, INC. 20, 23, 40, 80  
 12 Hartwell Avenue  
 Lexington, MA 02173  
 Dr. Julian J. Bussgang, Pres.  
 (617) 861-1500
- Consulting, research, development and system studies in electronic communications, radar, signal transmission and reception, mathematical modeling, performance test and evaluation, special purpose electronic instrumentation, digital interfaces, expert review and testimony.
222. ANATOLE J. SIPIN CO., INC. 2, 26, 40, 47, 48, 49, 66, 70, 95  
 425 Park Avenue South  
 New York, NY 10016  
 Anatole J. Sipin, President  
 (212) 689-2550
- Instruments to monitor organic solvents, vinyl chloride, and other toxic gases and vapors, personal pumps, charcoal and other sorbent tubes, gas collection bags, and direct reading colorimetric dosimeter tubes. R&D on medical devices, energy conversion devices, non-destructive testing, ultrasonics.
223. C. BRANSON SMITH 60  
 Planning & Analysis  
 U.S. DEPARTMENT OF ENERGY  
 20 Massachusetts Ave., N.W.  
 Washington, DC 20545
224. SOL ENERGY CORPORATION 45  
 761 Rohde  
 Hillside, IL 60162  
 Joseph Kelly, Pres. (312) LI 7-5912
- Solar energy research & development. Facility at Rutland, Illinois to use solar energy to manufacture photovoltaic cells and a general education facility open to the public.
225. SOLAR INVESTORS ASSOCIATES 45, 103, 117  
 325 Prospect Avenue  
 Mamaroneck, NY 10523  
 A. W. Adler, President (212) 952-9400
- Management and financial consulting. Venture capital with emphasis on alternative energy firms.
226. SOUTHWESTERN LABORATORIES 9, 15, 17, 19, 24, 43, 48, 51, 54, 55, 59, 79, 82, 95, 99, 103, 106, 110, 112, 113  
 222 Cavalcade Blvd.  
 P.O. Box 8768  
 Houston, TX 77009  
 Joe W. Jeanes, P.E., President  
 (713) 692-9151
- Materials, Environmental, and Geotechnical Consultation and Contract Research; Fundamental Testing and Analytical Services.

263. WESTWOOD RESEARCH LABORATORY 9, 12, 23, 24, 33, 78, 81,  
543 High Street 94, 110, 113  
Westwood, MA 02090  
John Cornell (617) 326-3965
- Independent dental research lab servicing clients in oral hygiene, chemical, drug and food industry. Specializes in developing models for dental disease, devise testing conditions which parallel those occurring in the mouth. Sets up screening programs which increase the chances for successful clinical investigation. Dental materials research, development and testing including specification testing. Specializing in polymeric materials.
264. WHEELER INDUSTRIES, INC. 2, 12, 13, 22, 23, 25, 27,  
1129 - 20th St., N.W.—Suite 403 63, 77, 87, 89, 91, 95, 103,  
Washington, DC 20036 108, 109, 110, 112, 119  
E. Joseph Wheeler, Jr., Pres.  
(202) 659-1867.
- Involved in advance research and development planning in support of naval ship systems, underwater systems, and energy and environmental protection systems. Specializes in oceanographic and environmental research, as well as systems engineering for ship, air, electronic, mariculture and deep ocean systems.
265. WILFORD AIRCRAFT CORP. 5, 6, 77  
300 Linden Lane  
Merion Station, PA 19066  
E. Burke Wilford (215) 664-1220
- Aero architecture. Marine engineering.
267. GLEN W. WILTROUT (Consultant) 14, 27, 39, 60, 69  
2028 N. Vermont Street  
Arlington, VA 22207  
(703) 528-9166
- Government contract administration. Administrative management. Energy conservation education. Represents technical innovators (mechanical).
268. WIND-DE-GO, INC. 28, 44, 45, 72A, 78, 81,  
1940 W. Cheryl 103, 123  
Phoenix, AZ 85021  
E. K. Hillman, Pres. (602) 943-0439
- Performs first stage R&D on inventions for cost analysis. Develop control systems for hybrid solar/wind configurations. Co-develop product research on pain relief. Formulate marketing policy. Inventor.
269. WIND ENERGY RESOURCE DEVELOPMENT 4, 5, 16, 29, 30, 42, 44,  
P. O. Box 324 69, 78, 90, 94, 101, 103,  
Bennett, CO 80102 108, 117, 123  
Leslie J. Mathis, Pres. (303) 644-3710
- Engages in the design of wind energy systems and subsystems.
270. WOLCHUK AND MAYRBAURL 47, 107  
432 Park Avenue South  
New York, NY 10016  
Roman Wolchuk (212) 689-0220
- CONSULTANTS. Civil Engineering. Steel plate structures. Service platforms. Hoists. Stationary offshore oil drilling platforms. Transmission towers. Transformer foundations. Underground transformer vaults.

232. STANDARD LABORATORIES, INC. 9, 17, 19, 23, 49, 99, 113  
3322 Pennsylvania Avenue  
Charleston, WV 25302  
Dick Kelly, Technical Director  
(304) 343-5173

Provides expert water and coal testing capabilities as well as innovative coal testing capabilities. Complete coal testing services include: sampling, proximate analysis, ultimate analysis of coal and coal ash, fluidity studies, and washability and/or preparation plant performance studies.

233. STANFORD RESEARCH INSTITUTE  
1611 N. Kent Street  
Arlington, VA 22209  
Dr. William D. Theriault  
(703) 524-2053, Ext. 366

(No expertise submitted at time of printing)

234. STEWART-TODD ASSOCIATES, INC. 12, 65, 66, 81, 96  
No. 10 Valley Forge Executive Mall  
530 E. Swedesford Rd., Suite #344  
Wayne, PA 19087  
Dr. W. Wayne Stewart, Pres. (215) 687-2030

Plan, develop and implement environmental health programs, nationally and internationally, including occupational medical programs; industrial hygiene surveys by certified Industrial Hygienists; toxicological test design, monitoring and interpretation. Biological and environmental health research, product safety and product liability. Expertise in training of occupational physicians, industrial hygienists and monitoring staff; augment client professional capabilities as needed.

235. T. E. STIVERS ASSOCIATES 47, 49, 60A  
P. O. Box 608  
Decatur, GA 30031  
T. E. Stivers, Pres. (404) 378-1392

Basically R&D for mechanical processing of agricultural and food products and by-products.

236. STRUCTURE PROBE, INC. 3, 4, 9, 12, 16, 17, 24, 33,  
535 E. Gay Street 43, 82, 94, 96, 106, 115  
P.O. Box 342  
West Chester, PA 19380  
Dr Charles A. Garber, President  
(215) 436-5400

Analytical and consulting laboratory equipped with some of the most advanced electron optical equipment available for materials analysis—including a combination Auger/ESCA/Scanning Auger Microprobe system for Surface Analysis plus electron microscopy (scanning and transmission), x-ray diffraction, and many other peripheral capabilities for complete materials research. Applications in failure and contamination analyses, on-line production problems, quality control, patent support, product liability in areas such as ceramics, metals, microelectronics, foods, fibers, cosmetics, air and water pollution.

237. SUGHRUE, ROTHWELL, MION, 75  
ZINN & MACPEAK  
1776 K Street, N.W.  
Washington, DC 20006  
G. Franklin Rothwell (202) 293-7060

Law: Patents and Procurement.

AMERICAN ASSOCIATION OF SMALL RESEARCH COMPANIES  
MEMBERS DIRECTORY

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- 14A. APPLIED BIOLOGICAL SCIENCES LABS. 9, 12, 13, 17, 35, 66, 81, 84,  
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Dr. J. B. Michaelson, Director  
(213) 245-1318

Toxicity Testing Laboratory; Bio-assay; Pharmacology; Toxicology; Microbiology; Marine Biology; Chemistry; Forensic Medicine; Nutrition; Pathology; Water Analyses. R&D in biology and medicine; fish and wild life toxicology. Preparation of IND's and NDA's. Consultation on GMP's and GLP's.

- 30A. JOHN H. BANKS LABORATORIES 9, 16, 17, 19, 36, 59, 82, 99,  
49 Cannonball Road 106, 110, 113  
Pompton Lakes, NJ 07442  
Bruce P. McCloskey, Pres. (201) 839-3450

Analytical chemistry in the inorganic field including x-ray fluorescence, emission spectrography, spectrophotometry, atomic absorption spectrophotometry, and general wet chemistry.

- 82A. DYNA EAST CORPORATION 6, 24, 47, 80, 113, 121  
227 Hemlock Road  
Wynnewood, PA 19096  
Joseph Carleone, Chief Engineer  
(215) 386-4885

Specializes in various aspects of ballistics, explosive-systems technology, composite materials, and computer-software development. Present areas of expertise include Engineering R&D of shaped charges, explosive-metal systems, composite materials, underwater explosions, ship-hull protection, impact and penetration. Warhead design is also a major interest. Recently developed a modern warhead synthesis procedure applicable to many types of conventional warheads.

- 90A. ELECTROFRAC CORPORATION 19, 45, 70, 75, 78, 110, 111,  
308 W - 99 Terrace 112, 123  
P.O. Box 8558  
Kansas City, MO 64114  
Erich Sarapuu, Pres. (816) 942-5965

Electro-energetic enhanced oil recovery systems, in situ electro-energetic processing of fossil fuels (tar sand, coal, oil shale, Devonian shale). Electrical rock fragmentation systems - developments, manufacturing equipment.

243. TECHNOLOGICAL INNOVATORS CO. 15, 27, 34, 45, 48, 54, 64,  
21, 441 Highvale Trail 103, 107, 123  
Topanga, CA 90290  
Robert L. Woodbury, Chief Scientist  
(213) 455-1721

Performs research, development and consulting in the field of Appropriate Technology (technologies that are ecologically and sociologically compatible), and require no petrochemical fuels, pesticides or non-renewable resources to make economic development possible.

244. TECHNOLOGY CLEARING HOUSE, INC. 68  
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Ernest Breton, Pres. (302) 658-7831

Publishers of New Technology Index. Will index clients technology by function to permit retrieval of information on new technology on the basis of the needs that it satisfies.

245. TELEDYNE ENERGY SYSTEMS 41, 45, 53, 73  
110 West Timonium Road  
Timonium, MD 21093  
William C. Kincaide (301) 252-8220, Ext. 278

Engaged in the research and development and manufacture of electrochemical and thermoelectrical energy conversion devices, including water electrolysis systems, fuel cell systems, space power systems, and related equipment.

246. TENSOR INDUSTRIES, INC. 2, 4, 6, 22, 23, 25, 32, 40,  
8415 Arlington Blvd. 44, 47, 58, 59, 60, 61, 64,  
Fairfax, VA 22030 65, 68, 74, 77, 78, 81, 88,  
Gaylord Leonard, Contract Mgr. 89, 99, 100, 101, 108, 111,  
(703) 573-1204 112, 114, 118, 121

R&D activities center around systems engineering, reliability and maintainability, and systems acquisition management. A wide variety of engineering, technical and management skills are represented on its staff. Company has no hardware products.

247. THERMOTRON CORPORATION 14, 40  
Kollen Park Drive  
Holland, MI 49423  
John J. Sexton, Pres. (616) 392-1491

Business Administration. Electrical Engineering.

248. TRANS-TECH, INC. 9, 10, 16, 17, 20, 24, 40,  
12 Meem Avenue 42, 43, 44, 79, 82, 93, 94,  
P.O. Box 457 99, 100, 111, 113  
Gaithersburg, MD 20760  
A. C. Blankenship, VP/Engineering  
(301) 948-3800, Ext. 73

Producers of Microwave Materials; Ferrites, Garnets, Ceramic Dielectrics; Custom Research and Development Facilities; Diamond Wheel Machine Shop.

249. TRANS-TECH, INC. 9, 10, 16, 17, 20, 24, 40  
12 Meem Avenue 42, 43, 44, 79, 82, 93, 94,  
P.O. Box 457 99, 100, 111, 113  
Gaithersburg, MD 20760  
R. G. West, Sr. Staff Engineer  
(301) 948-3800

Producers of Microwave Materials; Ferrites, Garnets, Ceramic Dielectrics; Custom Research and Development Facilities; Diamond Wheel Machine Shop.



173B. MIDLAND ENERGY INSTITUTE 27, 39, 45, 97, 103, 123  
906 Grand Avenue—Suite 100  
Kansas City, MO 64106  
Glen Hand, Executive Director  
(816) 842-2459

(No further expertise submitted)

197A. QUAD CORPORATION 18, 27, 45, 47, 48, 54, 84,  
1852 Dale Avenue 95, 99, 108, 109, 119  
Highland Park, IL 60035  
Harold J. Rafson, Pres. (312) 432-3210

Air Pollution Control Systems: odor control, particulate removal, energy recovery from emissions. Food Sanitation Systems: continuous process sanitizing, direct application on foods, equipment and facilities. Food Process Engineering. Energy Recovery: from emissions; through process modifications. Refrigerated Facilities Design. Food Manufacturing and Procurement Quality Assurance Systems.

201A. RAPIDEX, INC. 19, 47, 76, 103, 118, 123  
8 Ray Avenue  
Burlington, MA 01803  
Robert E. Wallhagen, Project Manager  
(617) 273-2102

Specializes in Research and Equipment Design and Development in the Coal and Hard-rock mining industry. Active areas of interest include drilling, mining, tunneling, crushing, concrete forming, and heavy equipment development.

204A. JOHN S. ROBERTS, Ph. D. 9, 10, 14, 20, 21, 22, 23, 60,  
Technology Development Consultant 68, 69, 79, 82, 94  
17 Shattuck Street  
Natick, MA 01760  
(617) 653-8505

Practice directed at improving the effectiveness of the R&D function of smaller manufacturing firms. Services include assembly, co-ordination and control of R&D programs for companies with limited or non-existent "in-house" R&D facilities; technological forecasting; technology transfer; quality assurance analysis; formation of funds for R&D programs; analysis of the overall innovative process of the firm. Dr. Roberts, a Senior Scientist at the Worcester Foundation, has been a research director and consultant in the biomedical field for over ten years. He has published numerous technical articles and has lectured extensively at universities here and abroad. In addition to his extensive training and experience as a scientist and administrator, Dr. Roberts had an early background in economics and business. He has served as a consultant to small enterprises in fields as diverse as chemicals, pharmaceuticals, food services, educational materials and automobile accessories.

222A. SISA, Incorporated 12, 17, 23, 35, 49, 55, 70,  
767B Concord Avenue 81, 110  
Cambridge, MA 02138  
Dr. Harry G. Pars, Pres. (617) 354-2800

Principal purpose of the corporation is to engage in laboratory research and development, and in commercially developing drugs from conception through Phase II clinical trials. Current areas of interest include non-addicting analgesics and sedative hypnotics, anti-hypertensive agents, anti-convulsants, anti-diarrheals, anti-glaucoma agents, anti-anxiety drugs, tranquilizers, broad spectrum anti-biotics and drugs useful in the treatment of narcotic addiction.

257. **VERSAR, INC.** 9, 13, 15, 17, 19, 23, 24,  
6621 Electronic Drive 25, 26, 30, 36, 37, 42, 47,  
P.O. Box 1549 48, 55, 59, 66, 70, 74, 79,  
Springfield, VA 22151 80, 82, 84, 89, 90, 93, 95,  
Dr. Michael Markels, Jr., Pres. 106, 110, 112, 113, 119  
(703) 354-3350
- High technology firm dealing in studies relating to environmental quality, resource recovery, energy research, materials research, applied physics, and life sciences.
258. **VERTREX CORPORATION** 27, 28, 44, 45  
808 - 106th Ave., N.E.  
Bellevue, WA 98004  
Albert H. Rooks, Pres. (206) 455-4718
- Manufactures an electronic control device whose purpose is to reduce energy and cost consumption in building HVAC systems.
259. **VETERINARY RESOURCES AMERICAS** 8, 12, 13, 27, 32, 36, 45,  
12930 North A1A 47, 48, 49, 51, 81, 84, 89,  
Vero Beach, FL 32960 94, 103, 119, 123  
Dr. M. L. Simmons, Pres.
- Consulting firm specializing in biomedical aspects of energy conservation and experimental animal facility design and program management. Veterinarians, designers, and engineers working together.
260. **VIRGINIA ENERGY OFFICE** 19, 45, 56, 103  
823 E. Main St. —Room 300  
Richmond, VA 23219  
Louis R. Lawson, Jr., Director  
(804) 786-8451
- Created by Governor Mills E. Godwin, Jr. in 1974 to serve as a focal point for energy related information, programs and planning for the State. RESPONSIBLE FOR: Keeping the Secretary of Commerce and Resources informed on energy developments and measures to minimize energy shortages in Virginia; Coordinating the flow of information between the various agencies of State government and working with the Federal and local governments and the private sector in implementing energy associated projects; Coordinating the development of energy plans and their strategies for implementation; Conducting action-oriented studies of alternative energy projects and programs; Developing and coordinating energy conservation programs for industry, commerce and private citizens; Cooperating with specific requests for the development of energy information, studies, projects, programs, or surveys; Maintaining continuous liaison with energy suppliers and distributors, agencies of other States and Federal agencies concerned with energy matters; Working closely with volunteer groups; and, Providing energy information to the public through the Virginia Energy Information and Conservation Center.
261. **WVS ENGINEERS** 19, 28, 34, 40, 45, 47, 56,  
12248 Spring Trail 58, 70, 88, 92, 95, 103, 108,  
Lakeview Terrace, CA 91342 114  
William V. Susel, Pres. (213) 344-9936
- Engineering management.
262. **WESTERN SCIENTIFIC SERVICES** 70, 83, 108, 123  
328 Airpark Drive  
P.O. Box 1965  
Ft. Collins, CO 80522  
James F. Hedrick, VP (303) 482-3364
- Weather science, remote sensing, meteorological and environmental data monitoring system interfaced to satellite.

237A. SURFACE TECHNOLOGY, INC.

17, 24, 29, 41, 44

3684 U. S. Highway #1

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Dr. Nathan Feldstein, Pres. (609) 452-2929

R&D of plating applications, in particular in chemical plating for the electronics industry. Process development for improved reliability and decreased pollution. Miscellaneous specialty solutions as well as manufacturing capabilities of specialty items.

255A. VECTOR RESEARCH, INC.

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(313) 973-9210

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270A. WOODS R&D

15, 17, 21, 32, 36, 59, 69,  
117

1 E. King Street

P. O. Box 1016

Yakima, WA 98907

Jay Woods, Manager (509) 452-9133

Pesticide formulation; particle size reduction; agricultural by-products; natural plant products; computer applications; basalt mineral utilization.

271. DONALD WORTH  
336 Beacon St., Apt. 5  
Boston, MA 02176

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Presently working for a State Task Force on economic development in  
Massachusetts of high technology companies.

272. DR. STANLEY W. ZEHR  
1760 Lomas Avenue  
Livermore, CA 94550  
(415) 443-2541

79, 103, 108

Materials Science——interested particularly in high efficiency solar cell  
development and device fabrication as well as overall systems design and  
analysis.

- 97A. ESSEX RECON CORPORATION 65, 76, 116, 123  
 310 Erie Street  
 Lancaster, NY 14086  
 David W. Birch, Pres. (716) 684-4470

Work in electronics has been in R&D accoustically sensitive alarm devices and radio signals that will conform to new FCC regulations. Product engineering has consisted of improvements in a prototype archery release and a series of medical implements to make them more effective in applications and more attractive for sales, and several special adaptations of valves to suit specific customer requirements. Manufacturing processes include designing and building a large scale material handling interface system for Westinghouse LRA plant in Pittsburgh and a method of forming small tubes from the inside - out.

- 103A. Center for Educational Technology 20, 39, 62, 64, 81, 108, 109  
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 Tallahassee, FL 32306  
 Dr. Robert K. Branson, Director, CET  
 (904) 644-4720

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- 136A. T. JAYNE CO. 1, 5, 6, 7, 12, 13, 17, 23, 24,  
 10234 Johnnycake 26, 27, 28, 29, 41, 42, 43, 45,  
 Painesville, OH 44077 46, 48, 53, 57, 58, 63, 70, 72,  
 Ted D. Jayne, Consultant 74, 77, 82, 87, 89, 90, 93, 94,  
 (216) 357-5060 101, 103, 106, 107, 108, 115,  
 116, 118, 119, 123, 124

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- 144A. KOOGL & POULS ENGINEERING 23, 47, 50  
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 Albuquerque, NM 87110  
 H. G. Koogle, Pres. (505) 294-5051

Company is not involved in direct research or equipment development. Provide a consulting service in photogrammetric and related civil engineering and surveys. Firm uses and is highly interested in all new research and developments related to its field of activity.

- 173A. MICRO CRAFT, INC. 6, 28, 70  
 207 Big Springs Avenue  
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 Tullahoma, TN 37388  
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 (615) 455-2664

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