

## EXHIBIT A-1

## AVAILABLE MARKET—NON-CAPTIVE, U.S. CONSUMPTION OF MANGANESE PRODUCTS VERSUS IMPORTS FOR CONSUMPTION, 1960-67

[Value of imports shown at domestic price. Pounds and dollars in thousands. Percent whole figures]

|                                           | 1960                          |         | 1961                          |         | 1962                          |         | 1963                          |         |
|-------------------------------------------|-------------------------------|---------|-------------------------------|---------|-------------------------------|---------|-------------------------------|---------|
|                                           | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars |
| High-carbon ferromanganese: <sup>1</sup>  |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption                    |                               |         |                               |         |                               |         |                               |         |
| (non-captive).....                        | 589,600                       | 86,400  | 598,100                       | 87,700  | 636,000                       | 88,000  | 700,000                       | 78,000  |
| Imports for consumption.....              | 82,000                        | 12,000  | 144,000                       | 21,100  | 160,300                       | 22,200  | 204,400                       | 23,000  |
| Percent imports.....                      | 13.9                          |         | 24.1                          |         | 25.1                          |         | 29.1                          |         |
| Siliconmanganese:                         |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 131,200                       | 22,300  | 148,700                       | 25,300  | 162,000                       | 17,500  | 190,000                       | 22,000  |
| Imports for consumption.....              | 20,100                        | 3,400   | 26,900                        | 4,600   | 23,100                        | 3,700   | 29,700                        | 3,600   |
| Percent imports.....                      | 15.3                          |         | 18.1                          |         | 21.0                          |         | 21.2                          |         |
| Medium- and low-carbon<br>ferromanganese: |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 11,000                        | 26,400  | 104,200                       | 25,000  | 111,000                       | 29,000  | 125,000                       | 29,700  |
| Imports for consumption.....              | 16,300                        | 3,900   | 13,900                        | 2,300   | 22,900                        | 6,000   | 26,000                        | 6,200   |
| Percent imports.....                      | 14.8                          |         | 13.3                          |         | 20.6                          |         | 21.3                          |         |
| Electrolytic manganese:                   |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 30,800                        | 10,800  | 31,900                        | 11,150  | 29,700                        | 10,700  | 36,000                        | 10,500  |
| Imports for consumption.....              | 485                           | 169     | 1,129                         | 395     | 3,000                         | 1,100   | 5,700                         | 1,600   |
| Percent imports.....                      | 1.6                           |         | 3.5                           |         | 10.1                          |         | 13.1                          |         |
| Total (above products):                   |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 891,600                       | 145,900 | 882,900                       | 149,150 | 938,700                       | 140,200 | 1,051,000                     | 140,200 |
| Imports for consumption.....              | 118,885                       | 20,200  | 185,929                       | 31,400  | 220,300                       | 33,000  | 265,800                       | 34,400  |
| Percent imports.....                      | 13.8                          |         | 21.1                          |         | 23.5                          |         | 25.5                          |         |
|                                           |                               |         |                               |         |                               |         |                               |         |
|                                           | 1964                          |         | 1965                          |         | 1966                          |         | Estimate 1967                 |         |
|                                           | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars | Cont.<br>manganese,<br>pounds | Dollars |
| High-carbon ferromanganese: <sup>1</sup>  |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption                    |                               |         |                               |         |                               |         |                               |         |
| (non-captive).....                        | 790,000                       | 65,000  | 812,000                       | 80,500  | 788,000                       | 78,000  | 700,000                       | 66,500  |
| Imports for consumption.....              | 184,000                       | 15,400  | 288,000                       | 28,700  | 328,000                       | 32,500  | 295,000                       | 28,000  |
| Percent imports.....                      | 23.3                          |         | 35.4                          |         | 41.6                          |         | 42.2                          |         |
| Siliconmanganese:                         |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 230,000                       | 24,400  | 254,000                       | 29,000  | 225,000                       | 18,600  | 193,000                       | 16,000  |
| Imports for consumption.....              | 13,800                        | 1,460   | 22,000                        | 2,500   | 46,400                        | 3,680   | 48,000                        | 4,000   |
| Percent imports.....                      | 6.0                           |         | 8.7                           |         | 20.4                          |         | 24.9                          |         |
| Medium- and low-carbon<br>ferromanganese: |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 135,000                       | 27,500  | 143,000                       | 26,800  | 172,000                       | 31,000  | 188,000                       | 34,000  |
| Imports for consumption.....              | 19,400                        | 3,900   | 43,000                        | 8,000   | 37,600                        | 6,700   | 48,200                        | 8,800   |
| Percent imports.....                      | 14.4                          |         | 30.0                          |         | 21.9                          |         | 25.6                          |         |
| Electrolytic manganese:                   |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 50,700                        | 15,300  | 51,200                        | 14,800  | 48,400                        | 14,000  | 45,000                        | 13,000  |
| Imports for consumption.....              | 1,760                         | 500     | 2,760                         | 800     | 4,030                         | 1,200   | 4,600                         | 1,330   |
| Percent imports.....                      | 3.5                           |         | 5.4                           |         | 8.3                           |         | 10.2                          |         |
| Total (above products):                   |                               |         |                               |         |                               |         |                               |         |
| Total U.S. consumption.....               | 205,700                       | 131,300 | 1,360,200                     | 150,100 | 1,233,400                     | 141,600 | 1,126,000                     | 129,500 |
| Imports for consumption.....              | 219,000                       | 21,260  | 355,800                       | 30,000  | 416,000                       | 44,080  | 395,800                       | 42,130  |
| Percent imports.....                      | 18.2                          |         | 26.1                          |         | 32.7                          |         | 35.4                          |         |

<sup>1</sup> Includes low Fe Fe Mn.

Source: U.S. Department of the Interior and U.S. Department of Commerce.