

# Mineral Industry Surveys

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## LEAD IN AUGUST 2013

Domestic mine production (recoverable) of lead in August was 29,400 metric tons (t). Average daily mine production in August was 947 t, slightly greater than that in July. Year-to-date lead mine production was essentially unchanged from that during the same period in 2012. Secondary refinery production of lead in August was 3% greater than that of the previous month, and year-to-date production was also essentially unchanged from that of the same period in 2012.

Total imports of lead for consumption in August 2013 decreased by 4% from those in the previous month, but year-to-date imports were 70% greater than during the same period in 2012. The increase was partially attributed to lead consumers and traders accumulating lead stocks earlier in the year in anticipation of the planned closure at yearend of Doe Run Resources Corp.'s (St. Louis, MO) primary lead smelter in Herculaneum, MO. Total exports of lead, exclusive of scrap, in August increased slightly from those in the previous month, and year-to-date exports were 16% more than those in the corresponding period of 2012. Exports of spent lead-acid batteries increased by 25% in August compared with those in July. A significant portion of spent lead-acid batteries exports were sent to secondary smelters in Mexico.

The Platts Metals Week average North American producer price for lead in August 2013 was \$1.15 per pound, essentially unchanged from that in the previous month and a slight increase from that in August 2012. The London Metal Exchange Ltd. (LME) cash price of lead in August 2013 averaged \$2,173 per metric ton, 6% greater than that of the previous month and 15%

greater than that in August 2012. The Platts average U.S. used lead-acid batteries price in August 2013 was \$0.378 per pound, unchanged from that in July. Global LME lead stocks at the end of August 2013 were 185,150 t (19,925 t in domestic warehouses), 8% less than those at the end of July.

### Update

Exide Technologies, Inc. (Milton, GA), planned to invest more than \$7 million during the next 2 years to upgrade its 90,000-metric-ton-per-year secondary lead smelter in Vernon, CA, per an agreement with the California Department of Toxic Substances Control (DTSC). The DTSC had required Exide to suspend operations at the plant in April 2013 for about 7 weeks, owing to environmental concerns. (See Lead in February 2013.) The upgrades included replacement of the existing underground storm water piping at the plant with a double-walled system and the installation of high-efficiency air filters to reduce arsenic emissions. The company had started making furnace modifications to reduce arsenic emissions. The smelter was one of two secondary lead smelters operating in California (Exide Technologies, Inc., 2013).

### Reference Cited

Exide Technologies, Inc., 2013, Exide and California Department of Toxic Substances Control (DTSC) reach agreement regarding Vernon facility: Vernon, CA, Exide Technologies, Inc. news release, October 7. (Accessed December 2, 2013, at <http://www.exide.com/en/about/news/Exide-and-CA-DTSC-reach-agreement.aspx>.)

TABLE 1  
SALIENT LEAD STATISTICS IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content, unless otherwise specified)

|  | 2012 <sup>p</sup>    |                    | 2013                |         |                    |
|--|----------------------|--------------------|---------------------|---------|--------------------|
|  | January–<br>December | January–<br>August | July                | August  | January–<br>August |
| <b>Production:</b>   |                      |                    |                     |         |                    |
| Mine (recoverable)   | 336,000              | 224,000            | 28,500 <sup>r</sup> | 29,400  | 222,000            |
| <b>Secondary refinery:</b>   |                      |                    |                     |         |                    |
| Reported by smelters/refineries                                    | 1,170,000            | 778,000            | 95,000              | 97,900  | 776,000            |
| Estimated  | 11,700               | 7,840              | 950                 | 979     | 7,760              |
| Recovered from copper-base scrap <sup>e</sup>                      | 15,000               | 10,000             | 1,250               | 1,250   | 10,000             |
| Total secondary  | 1,190,000            | 796,000            | 97,200              | 100,000 | 794,000            |
| <b>Consumption:</b>  |                      |                    |                     |         |                    |
| Reported   | 1,470,000            | 988,000            | 113,000             | 114,000 | 926,000            |
| Undistributed <sup>e</sup>   | 38,600               | 29,600             | 3,760               | 3,430   | 28,200             |
| Total  | 1,510,000            | 1,020,000          | 116,000             | 118,000 | 954,000            |
| Stocks, end of period, consumers and secondary smelters            | 57,500               | 65,700             | 83,600              | 81,400  | 81,400             |
| <b>Imports for consumption:</b>                                    |                      |                    |                     |         |                    |
| Base bullion   | 1,020                | 636                | 222                 | 43      | 1,620              |
| Refined metal  | 349,000              | 202,000            | 34,300              | 32,900  | 345,000            |
| <b>Exports:</b>  |                      |                    |                     |         |                    |
| Ore and concentrate  | 214,000              | 90,600             | 28,600              | 29,500  | 111,000            |
| Bullion  | 72                   | 72                 | --                  | --      | 349                |
| Wrought and unwrought lead   | 53,300               | 34,900             | 4,620               | 4,180   | 34,200             |
| TEL/TML preparations, based on lead compounds                      | 1,730                | 1,140              | 123                 | 129     | 1,190              |
| Scrap (gross weight)   | 25,900               | 16,800             | 1,740               | 3,670   | 23,700             |
| Platts Metals Week North American producer price (cents per pound) | 114.16 <sup>r</sup>  | 113.79             | 114.42              | 114.88  | 114.83             |

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

|                  | North<br>American <sup>1</sup> | London Metal Exchange<br>cash |                       | Used lead-acid<br>batteries <sup>2</sup> |
|------------------|--------------------------------|-------------------------------|-----------------------|--|
|                  | ¢/lb                           | ¢/lb                          | \$/t                  | ¢/lb                                     |
| <b>2012:</b>     |                                |                               |                       |  |
| August           | 113.42                         | 85.97                         | 1,895.42              | NA                                       |
| September        | 114.63                         | 98.38                         | 2,168.91              | NA                                       |
| October          | 114.81                         | 97.66                         | 2,152.96              | NA                                       |
| November         | 114.91                         | 98.84                         | 2,179.08              | 38.75                                    |
| December         | 115.26                         | 103.18                        | 2,274.83              | 37.25                                    |
| January–December | 114.16 <sup>r</sup>            | 108.92                        | 2,061.94 <sup>r</sup> | NA                                       |
| <b>2013:</b>     |                                |                               |                       |  |
| January          | 115.51                         | 106.13                        | 2,339.84              | 38.40                                    |
| February         | 115.63                         | 107.76                        | 2,375.80              | 39.75                                    |
| March            | 114.92                         | 99.02                         | 2,183.06              | 39.25                                    |
| April            | 114.35                         | 92.07                         | 2,029.80              | 38.40                                    |
| May              | 114.35                         | 91.98                         | 2,027.86              | 38.25                                    |
| June             | 114.62                         | 95.41                         | 2,103.44              | 38.75                                    |
| July             | 114.42                         | 92.89                         | 2,047.90              | 37.80                                    |
| August           | 114.88                         | 98.56                         | 2,172.86              | 37.75                                    |
| January–August   | 114.83                         | 97.98                         | 2,160.07              | 38.54                                    |

<sup>r</sup>Revised. NA Not available.

<sup>1</sup>Platts Metals Week North American Producer price.

<sup>2</sup>Platts Metals Week assessment for used lead-acid automotive batteries (50% lead) picked up in U.S. Midwest, suitable for delivery to secondary smelters within 30 days.

Source: Platts Metals Week.

TABLE 3  
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN AUGUST 2013<sup>1</sup>

(Metric tons, gross weight)

| Item   | Stocks        | Net receipts | Consumption | Stocks          |
|--|---------------|--------------|-------------|-----------------|
|  | July 31, 2013 |              |             | August 31, 2013 |
| Battery-lead                                     | 41,000        | 93,000       | 92,600      | 41,400          |
| Other <sup>2</sup>                               | 4,120         | 2,310        | 2,360       | 4,070           |
| Total  | 45,100        | 95,300       | 94,900      | 45,500          |
| Percent change from preceding month <sup>3</sup> | XX            | +52.2        | +53.5       | +0.9            |

XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes soft lead, solder, drosses and residues, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

<sup>3</sup>Based on unrounded data; preceding monthly data may have been revised.

TABLE 4  
LEAD, TIN, AND ANTIMONY RECOVERED FROM  
LEAD-BASE SCRAP IN AUGUST 2013<sup>1</sup>

(Metric tons)

| Product recovered     | Secondary metal content |     |          |
|-----------------------|-------------------------|-----|----------|
|                       | Lead                    | Tin | Antimony |
| Soft and calcium lead | 66,900                  | --  | --       |
| Remelt lead           | W                       | --  | --       |
| Antimonial lead       | 27,600                  | W   | W        |
| Other <sup>2</sup>    | 3,400                   | 161 | 352      |
| Total lead-base       | 97,900                  | 161 | 352      |

W Withheld to avoid disclosing company proprietary data; included in "Other." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5  
CONSUMPTION OF LEAD IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content)

| Use   | 2012 <sup>P</sup>    |                    | 2013               |                |                    |
|---|----------------------|--------------------|--------------------|----------------|--------------------|
|   | January–<br>December | January–<br>August | July               | August         | January–<br>August |
| <b>Metal products:</b>  |                      |                    |                    |                |                    |
| Ammunition, shot and bullets  | 69,100               | 47,100             | 6,180              | 7,070          | 53,900             |
| Brass and bronze, billet and ingots   | 3,400                | 2,260              | 311                | 311            | 2,390              |
| Cable covering, power and communication<br>and caulking lead, building construction | 3,800                | 2,880              | 160                | 160            | 1,420              |
| Casting metals  | 11,600               | 8,000              | 1,340              | 1,340          | 9,140              |
| Sheet lead, pipes, traps and other extruded products                                | 27,600               | 17,300             | 973                | 1,060          | 9,810              |
| Solder  | 6,370                | 4,250              | 533 <sup>r</sup>   | 534            | 4,320              |
| Storage batteries, including oxides   | 1,300,000            | 876,000            | 99,500             | 99,600         | 816,000            |
| Terne metal, type metal, and other metal products <sup>2</sup>                      | 14,800               | 9,910              | 1,230              | 1,230          | 9,610              |
| <b>Total metal products</b>   | <b>1,440,000</b>     | <b>968,000</b>     | <b>110,000</b>     | <b>111,000</b> | <b>906,000</b>     |
| Other oxides and miscellaneous  | 31,700               | 20,300             | 2,530              | 2,950          | 19,700             |
| <b>Total reported</b>   | <b>1,470,000</b>     | <b>988,000</b>     | <b>113,000</b>     | <b>114,000</b> | <b>926,000</b>     |
| Undistributed <sup>c</sup>  | 38,600               | 29,600             | 3,760 <sup>r</sup> | 3,430          | 28,200             |
| <b>Grand total</b>  | <b>1,510,000</b>     | <b>1,020,000</b>   | <b>116,000</b>     | <b>118,000</b> | <b>954,000</b>     |

<sup>c</sup>Estimated. <sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes lead consumed in bearing metals, foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

U.S. Consumption of Lead

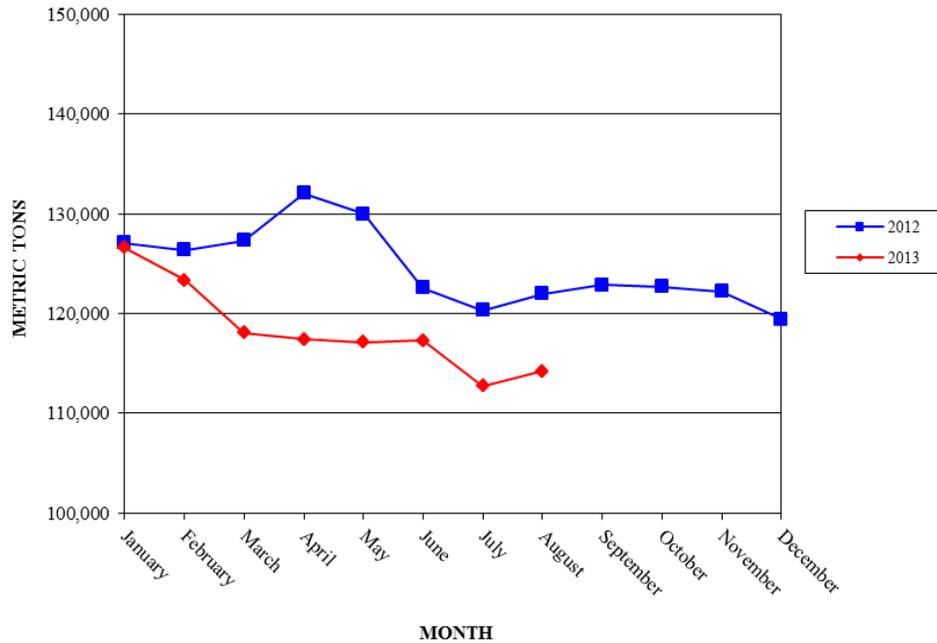


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD  
IN AUGUST 2013<sup>1</sup>

(Metric tons, lead content)

| Type of material   | Stocks              |                 | Consumption | Stocks<br>August 31,<br>2013 |
|--------------------|---------------------|-----------------|-------------|------------------------------|
|                    | July 31,<br>2013    | Net<br>receipts |             |                              |
| Soft lead          | 62,800              | 69,200          | 72,900      | 59,100                       |
| Antimonial lead    | 19,100 <sup>†</sup> | 27,200          | 25,700      | 20,600                       |
| Other <sup>2</sup> | 1,730 <sup>†</sup>  | 15,700          | 15,700      | 1,740                        |
| Total              | 83,600              | 112,000         | 114,000     | 81,400                       |

<sup>†</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes copper-based scrap, and lead alloys.

TABLE 7  
U.S. EXPORTS OF LEAD, BY CLASS<sup>1</sup>

(Metric tons unless otherwise specified)

|   | 2012                 |                    | 2013      |           |                    |
|---|----------------------|--------------------|-----------|-----------|--------------------|
|   | January–<br>December | January–<br>August | July      | August    | January–<br>August |
| Lead content:   |                      |                    |           |           |                    |
| Ore and concentrates  | 214,000              | 90,600             | 28,600    | 29,500    | 111,000            |
| Bullion   | 72                   | 72                 | --        | --        | 349                |
| Wrought and unwrought lead                                      | 53,300               | 34,900             | 4,620     | 4,180     | 34,200             |
| TEL/TML preparations, based<br>on lead compounds                | 1,730                | 1,140              | 123       | 129       | 1,190              |
| Total   | 269,000              | 127,000            | 33,300    | 33,800    | 147,000            |
| Gross weight, scrap   | 25,900               | 16,800             | 1,740     | 3,670     | 23,700             |
| Spent lead-acid batteries, used<br>for starting engines (units) | 22,700,000           | 15,300,000         | 1,840,000 | 2,290,000 | 17,000,000         |

-- Zero.

<sup>1</sup>Data are rounded to more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 8  
U.S. IMPORTS FOR CONSUMPTION BY TYPE OF MATERIALS AND BY  
COUNTRY OF ORIGIN<sup>1</sup>

(Metric tons, lead content)

| Material and<br>country of origin | 2012                 |                    | 2013   |        |                    |
|-----------------------------------|----------------------|--------------------|--------|--------|--------------------|
|                                   | January–<br>December | January–<br>August | July   | August | January–<br>August |
| Ore, matte, etc; Canada           | 1,530                | 1,530              | --     | --     | 1,530              |
| Base bullion:                     |                      |                    |        |        |                    |
| Mexico                            | 695                  | 617                | --     | --     | 148                |
| Venezuela                         | 327                  | 19                 | 222    | 43     | 1,470              |
| Total                             | 1,020                | 636                | 222    | 43     | 1,620              |
| Pigs and bars:                    |                      |                    |        |        |                    |
| Australia                         | 24,300               | --                 | --     | --     | 46,600             |
| Canada                            | 240,000              | 159,000            | 20,500 | 19,900 | 176,000            |
| China                             | 5,000                | 5,000              | --     | --     | --                 |
| Mexico                            | 56,100               | 31,400             | 7,050  | 6,530  | 69,100             |
| Other                             | 23,200               | 6,460              | 6,680  | 6,480  | 53,200             |
| Total                             | 349,000              | 202,000            | 34,300 | 32,900 | 345,000            |
| Grand total                       | 352,000              | 204,000            | 34,500 | 32,900 | 346,000            |

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.