

# Mineral Industry Surveys

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## LEAD IN JULY 2012

Domestic mine production (recoverable) of lead in July was 27,500 metric tons (t). Average daily mine production in July was 888 t, down by 5% from that in June. Year-to-date mine production through July 2012 was slightly less than that of the same period of 2011. Secondary refinery production of lead decreased slightly from that of the previous month and year-to-date was slightly lower than that in the corresponding period of 2011. The supply of lead scrap in the form of spent lead-acid batteries was tight during the first half of 2012, and scrap battery prices increased as a result. Factors that contributed to the tightness in the scrap market were a mild winter that reduced battery failures and the cumulative effect of increased exports of spent lead-acid batteries to foreign smelters from 2010 to 2012.

Total imports of lead for consumption through July 2012 were slightly more than those in the same period of 2011. Canada (78%) and Mexico (16%) were the principal sources of imported refined lead through July 2012. Total exports of lead, exclusive of scrap through July 2012 were 10% greater than those through the same period of 2011.

According to Platts Metals Week, the average North American producer price for lead in July 2012 was \$1.13 per pound, essentially unchanged from that of the previous month and 12% less than that in July 2011. The London Metal Exchange (LME) cash price in July 2012 averaged \$1,876 per metric ton, down slightly from that of the previous month and 30% lower than that in July 2011. Global LME lead stocks at the end of July 2011 were 326,775 t, down 7% from those at the end of June 2012 and 5% higher than those at monthend July 2011.

## Update

The Federal Aviation Administration (FAA) was developing a plan to meet the agency's goal of making unleaded fuel available for most of the general aviation fleet to replace 100-octane low-lead fuel by 2018. General aviation is the only transportation sector in the United States that still uses fuel containing the additive tetraethyllead. Piston engine-powered aircraft, about 67% of the 167,000 aircraft in the general

aviation fleet, would be affected by the issue. In October, the FAA published a final report from the unleaded aviation gas transition aviation rulemaking committee that addressed numerous challenges for transitioning the piston engine-powered general aviation fleet to unleaded fuel and made recommendations for this process. Recommendations included the implementation of a development roadmap for fuel producers that identifies milestones in the aviation fuel development process, centralized testing and certification of candidate fuels, and a collaborative industry-government initiative to facilitate the development of an unleaded general aviation fuel. An unleaded fuel that could be used for the existing general aviation fleet does not exist, and a replacement fuel would need to be developed and certified (Federal Aviation Administration, 2012).

In October, Ivernia Inc. (Toronto, Ontario, Canada) announced that it would restart its Magellan lead mine (85,000 metric tons per year production capacity) in Western Australia in the second quarter of 2013. This announcement followed a July 2012 ruling by the Minister of Environment of Western Australia that approved conditions for the restart. The mine had been shut down since April 2011 owing to concerns about possible lead contamination after lead-bearing mud was detected on shipping containers that had been transported from the mine to the Port of Freemantle. Ivernia expected to sell lead carbonate concentrate stockpiles, currently at the mine during ramp-up operations in 2013. Full production level at the mine was targeted for yearend 2013, and the restart was expected to cost about \$20 to \$25 million (Frizell, 2012).

## References Cited

- Federal Aviation Administration, 2012, Unleaded avgas transition aviation rulemaking committee final report now available: Federal Aviation Administration news release, October 5. (Accessed October 5, 2012 at <http://www.faa.gov/about/initiatives/avgas/archive/2012-10-05/>.)
- Frizell, Samuel, 2012, Ivernia's flagship mine to restart in 2013: American Metal Market, October 12. (Accessed October 12, 2012, via <http://www.amm.com/>.)

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

(Metric tons, lead content, unless otherwise specified)

	2011		2012		
	January– December <sup>p</sup>	January– July	June	July	January– July
<b>Production:</b>					
Mine (recoverable)	336,000	196,000	28,100 <sup>r</sup>	27,500	194,000
<b>Secondary refinery:</b>					
Reported by smelters/refineries	1,170,000	686,000	99,800	98,100	682,000
Estimated	11,700	6,860	998	981	6,880
Recovered from copper-base scrap <sup>c</sup>	15,000	8,750	1,250	1,250	8,750
Total secondary	1,190,000	701,000	102,000	100,000	698,000
<b>Consumption:</b>					
Reported	1,530,000	860,000	122,000	120,000	866,000
Undistributed <sup>e</sup>	45,800	25,800	3,670	3,600	25,900
Total	1,570,000	886,000	126,000	124,000	892,000
Stocks, end of period, consumers and secondary smelters	54,800	62,800	56,600 <sup>r</sup>	62,600	62,600
<b>Imports for consumption:</b>					
Base bullion	434	234	195	153	617
Refined metal	313,000	179,000	23,000	21,800	180,000
<b>Exports:</b>					
Ore and concentrate	223,000	81,700	25,300	14,900	87,800
Bullion	70	8	--	--	72
Wrought and unwrought lead	47,200	25,800	4,440	4,860	30,300
TEL/TML preparations, based on lead compounds	6,270	1,110	109	123	863
Scrap (gross weight)	31,100	21,000	1,680	1,670	15,000
Platts Metals Week North American producer price (cents per pound)	121.70	123.61	113.26	113.34	113.85

<sup>c</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 American producer price ¢/lb	London Metal Exchange cash		Sterling exchange rate \$/£
		\$/metric ton	£/metric ton	
<b>2011:</b>				
July	128.94	2,682.04	1,879.73	1.426819
August	127.90	2,404.09	1,468.11	1.637541
September	125.74	2,297.90	1,668.27	1.377414
October	113.86	1,948.25	1,237.07	1.574886
November	113.73	1,981.59	1,252.77	1.581773
December	113.87	2,018.59	1,292.71	1.561520
January–December	121.70	2,401.20	1,548.94	1.550217
<b>2012:</b>				
January	114.17	2,093.74	1,349.68	1.551290
February	114.29	2,125.79	1,345.68	1.579710
March	114.03	2,061.01	1,302.73	1.582068
April	114.03	2,062.67	1,287.68	1.601844
May	113.81	1,998.51	1,283.48	1.557100
June	113.26	1,854.42	1,190.94	1.557100
July	113.34	1,875.97	1,203.77	1.558400
January–July	113.85	2,010.30	1,280.57	1.569645

Source: Platts Metals Week.

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

(Metric tons, gross weight)

Item	Stocks	Net	Consumption	Stocks
	June 30, 2012	receipts		July 31, 2012
Battery-lead	35,300 <sup>r</sup>	91,900	91,500	35,600
Soft lead	W	W	W	W
Drosses and residues	W	W	W	W
Other <sup>2</sup>	4,230 <sup>r</sup>	2,410	2,230	4,410
Total	39,500 <sup>r</sup>	94,300	93,800	40,000
Percent change from preceding month <sup>3</sup>	XX	-0.1	-1.9	+1.3

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Other." 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 solder, 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 JULY 2012<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	82,400	--	--
Remelt lead	W	--	--
Antimonial lead	10,000	W	W
Other <sup>2</sup>	5,700	147	251
Total lead-base	98,100	147	251

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	2011		2012		
	January– December	January– July	June	July	January– July <sup>2</sup>
<b>Metal products:</b>					
Ammunition, shot and bullets	69,300	42,800	6,630	5,510	41,300
Brass and bronze, billet and ingots	1,660	1,810	283	283	1,980
Cable covering, power and communication and caulking lead, building construction	8,410	4,960	231	231	2,650
Casting metals	14,600	8,490	872	874	7,120
Sheet lead, pipes, traps and other extruded products	26,800	16,000	2,450	2,210	15,100
Solder	6,400	4,400	531	531	3,720
Storage batteries, including oxides	1,360,000	759,000	107,000	107,000	768,000
Terne metal, type metal, and other metal products <sup>3</sup>	16,400	8,880	995	1,220	8,690
Total metal products	1,500,000	846,000	119,000	117,000	849,000
Other oxides and miscellaneous	26,500	13,900	2,770	2,500	17,400
Total reported	1,530,000	860,000	122,000	120,000	866,000
Undistributed <sup>6</sup>	45,800	25,800	3,670	3,600	25,900
Grand total	1,570,000	886,000	126,000	124,000	892,000

<sup>6</sup>Estimated.

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

<sup>2</sup>May include revisions to previous months' data.

<sup>3</sup>Includes lead consumed in bearing metals, foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

U.S. Consumption of Lead

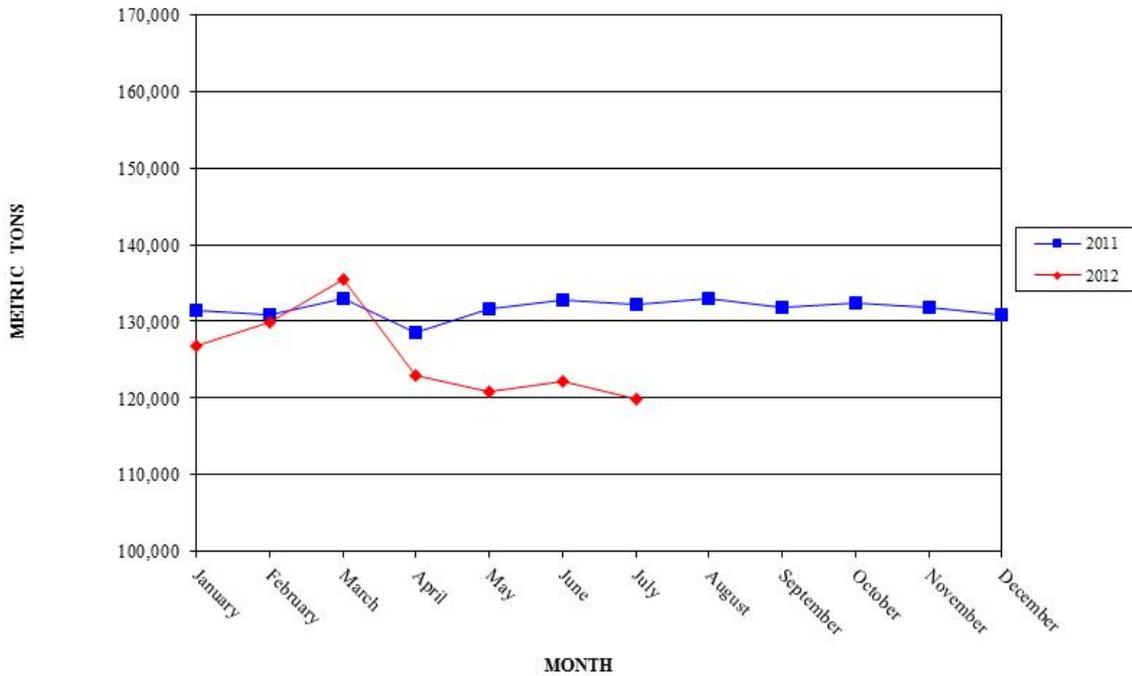


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons, lead content)

Type of material	Stocks June 30, 2012	Net receipts	Consumption	Stocks July 31, 2012
Soft lead	36,200 <sup>r</sup>	81,600	76,600	41,200
Antimonial lead	18,900 <sup>r</sup>	34,700	33,700	19,900
Lead alloys	W	W	W	W
Copper-base scrap	W	W	W	W
Total	56,600 <sup>r</sup>	126,000	120,000	62,600

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>1</sup>Data are rounded to no more than three significant digits.

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

(Metric tons unless otherwise specified)

	2011		2012		January– July
	January– December	January– July	June	July	
Lead content:					
Ore and concentrates	223,000	81,700	25,300	14,900	87,800
Bullion	70	8	--	--	72
Wrought and unwrought lead	47,200	25,800	4,440	4,860	30,300
TEL/TML preparations, based on lead compounds	6,270	1,110	109	123	863
Total	277,000	109,000	29,900	19,800	119,000
Gross weight, scrap	31,100	21,000	1,680	1,670	15,000
Spent lead-acid batteries, used for starting engines (units)	25,400,000	13,100,000	1,840,000	1,820,000	13,300,000

-- 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 country of origin	2011		2012		
	January– December	January– July	June	July	January– July
Ore, matte, etc.	--	--	--	--	--
Base bullion:					
Canada	35	35	--	--	--
Mexico	199	199	195	153	617
Venezuela	200	--	--	--	--
Total	434	234	195	153	617
Pigs and bars:					
Canada	250,000	143,000	20,000	17,900	141,000
China	32	--	--	--	5,000
Mexico	56,000	33,100	2,200	3,390	28,300
Other	7,560	3,120	760	566	5,820
Total	313,000	179,000	23,000	21,800	180,000
Grand total	314,000	179,000	23,200	22,000	180,000

-- 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.