

Mineral Industry Surveys

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LEAD IN FEBRUARY 2010

Domestic mine production (recoverable) of lead in February was 28,600 metric tons (t), according to the U.S. Geological Survey. Average daily mine production in February was 1,020 t, slightly higher than that in January 2010. Secondary refinery production of lead in February decreased slightly from that of the previous month. 2010 year to date secondary lead production and was 3% lower than that in the corresponding period of 2009.

Total imports of lead for consumption in January 2010 were 12% lower than those in the previous month. Canada (84%) and Mexico (15%) were the principal sources of imported refined lead in January 2010. Total exports of lead, exclusive of scrap, in January 2010 were 3% higher than those in the previous month. China (78%) and Canada (20%) were the leading destinations for exported ore and concentrate in January 2010. Exports of lead scrap in January 2010 decreased by 21% from those in the previous month. Canada and the Republic of Korea were leading destinations for lead scrap exports in January 2010.

The average Platts Metals Week North American producer price for lead in February 2010 was \$1.10 per pound, down slightly from that of the previous month and 67% higher than that in February 2009. The London Metal Exchange (LME) cash price of lead in February 2010 averaged \$2,122 per metric ton, down 10% from that of the previous month and 93% higher than that in February 2009. Global LME lead stocks at the end of February 2010 were 167,200 t, 6% higher than those at the end of January 2010 and 177% greater than those at month-end February 2009.

According to the Battery Council International (2010), North American shipments of original equipment lead-acid automotive batteries were 2.17 million units in February 2010, 9% higher than shipments in the previous month, and 47% greater than those in February 2009. North American shipments of replacement lead-acid automotive batteries were 6.70 million units in February 2010, down 24% from those in January 2010. Year-to-date shipments of replacement batteries through February 2010 were slightly higher than those in the corresponding period of 2009. Cumulatively, North American shipments of lead-acid automotive batteries during the peak

winter months from December 2009 through February 2010 were 27.7 million units, a 3% increase from shipments during the same period of the previous year. Battery shipments during winter months are closely monitored by industry analysts, lead-acid battery manufacturers, and lead producers because a cold winter can increase lead-acid battery failure rates and result in increased demand for replacements.

In early February, Johnson Controls Inc. (JCI) (Milwaukee, WI), a leading domestic manufacturer of lead-acid batteries, was selected by Wal-Mart Stores, Inc. as the sole provider of automotive, lawn and garden tractor, marine, and power sports batteries for the more than 4,000 retail stores that Walmart operates in the United States. JCI planned to expand production at several of its battery manufacturing plants in future months to accommodate the increase in volume of batteries that was expected to be ordered by Walmart. Previously, Walmart had multisourced batteries from JCI and another leading lead-acid battery manufacturer, Exide Technologies (Alpharetta, GA). According to a recent Exide financial report, Walmart's purchases represented a significant portion of the company's transportation segment sales in the Americas. The company said that it was actively pursuing other sales opportunities in an effort to minimize the impact of the decision on future revenue (Content, 2010; Exide Technologies, 2010; Johnson Controls Inc., 2010).

A challenge to a permit that was issued to Teck Resources Ltd. by the U.S. Environmental Protection Agency (EPA) could jeopardize the future of mining operations at Teck's Red Dog zinc-lead mine in northwest Alaska. Teck had been working towards gaining final approval for the commencement of mining operations at the Aqqaluk Deposit, the next ore body to be developed at Red Dog. Currently, ore produced at Red Dog has originated from the Main Deposit, which contains enough reserves to sustain current production rates until the first quarter of 2011. The Aqqaluk deposit contains reserves that would sustain mining operations at Red Dog until 2031. Teck announced that, on February 17, several environmental and tribal groups appealed the EPA's issuance of a renewed National Pollution Discharge Elimination System permit which was due to become effective as of March 1. Teck was awaiting a

note issued from the EPA clarifying which provisions of the permit were subject to the appeal. Until that clarification is issued by the EPA, Teck did not know whether and to what extent access to Aqqaluk will be affected by the appeal. In order to maintain efficient production rates, Teck eventually planned to supplement ore from the Main Deposit with higher-grade ore from Aqqaluk. According to the company, if permit delays extend beyond May 2010, the transition plan from the Main Deposit ore to the new deposit could be affected, and production at Red Dog would be curtailed in October 2010 (Teck Resources Ltd., 2010).

References Cited

- Battery Council International, 2010, BCI 2010 monthly shipment report: Chicago, IL, Battery Council International, April 5.
- Content, Thomas, 2010, Johnson Controls selected as sole battery supplier to Wal-Mart: Milwaukee, WI, The Journal Sentinel, February 3. (Accessed April 22, 2010 at <http://www.jsonline.com/business/83454852.html>.)
- Exide Technologies, 2010, Exide Technologies reports fiscal 2010 third quarter results: Alpharetta, GA, Exide Technologies news release, February 2, 5 p.
- Johnson Controls Inc., 2010, Walmart selects Johnson Controls as sole provider for automotive batteries: Milwaukee, WI, Johnson Controls Inc. news release, February 3, 1 p.
- Teck Resources Ltd., 2010, Teck comments on additional permit appeal at Red Dog: Vancouver, British Columbia, Canada, Teck Resources Ltd. news release, February 17, 2 p.

TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2009		2010		
	Year	January-February	January	February	January-February
Production:					
Mine (recoverable)	395,000	65,000	31,600 ^r	28,600	60,200
Secondary refinery:					
Reported by smelters/refineries	1,120,000	192,000	94,000 ^r	93,000	187,000
Estimated	11,200	1,920	940 ^r	930	1,870
Recovered from copper-base scrap ^c	15,000	2,500	1,250	1,250	2,500
Total secondary	1,150,000	196,000	96,200 ^r	95,200	191,000
Consumption:					
Reported	1,380,000	238,000	115,000 ^r	115,000	230,000
Undistributed ^c	41,500	7,150	3,460 ^r	3,440	6,900
Total	1,430,000	245,000	119,000 ^r	118,000	237,000
Stocks, end of period, consumers and secondary smelters	61,700	73,000	60,200 ^r	61,100	61,100
Imports for consumption:					
Base bullion	844	265	71	NA	71 ²
Refined metal	251,000	37,100	20,400	NA	20,400 ²
Exports:					
Ore and concentrate	287,000	33,500	10,500	NA	10,500 ²
Bullion	34	16	--	NA	-- ²
Wrought and unwrought lead	82,000	14,000	5,780	NA	5,780 ²
TEL/TML preparations, based on lead compounds	2,070	231	45	NA	45 ²
Scrap (gross weight)	140,000	21,300	6,920	NA	6,920 ²
Platts Metals Week North American producer price (cents per pound)	86.87	66.40	111.24	110.35	110.80

^cEstimated. ^rRevised. NA Not available. -- Zero.

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

²Includes data for January only; February 2010 data were not available at time of publication.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North American producer price ¢/lb	London Metal Exchange cash		Sterling exchange rate \$/£
		\$/metric ton	£/metric ton	
2009:				
December	111.11	2,327.76	1,431.91	1.625638
Year	86.87	1,718.49	1,086.44	1.564528
2010:				
January	111.24	2,367.70	1,464.68	1.616535
February	110.35	2,122.45	1,358.72	1.562100

Source: Platts Metals Week.

TABLE 3
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP¹

(Metric tons, gross weight)

Item	Stocks	Net receipts	Consumption	Stocks
	January 31, 2009			February 28, 2010
Battery-lead	15,100 ^f	81,400	84,500	12,000
Soft lead	W	W	W	W
Drosses and residues	W	W	W	W
Other ²	1,590 ^f	5,360	5,550	1,400
Total	16,700 ^f	86,700	90,000	13,400
Percent change from preceding month	XX	-9.8	-3.4	-19.7

^fRevised. W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.

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

²Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

TABLE 4
LEAD, TIN, AND ANTIMONY RECOVERED FROM
LEAD-BASE SCRAP IN FEBRUARY¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	50,800	--	--
Remelt lead	W	--	--
Antimonial lead	13,200	(2)	(2)
Other ³	28,900	(2)	(2)
Total lead-base	93,000	132	267

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

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

²Withheld to avoid disclosing company proprietary data; included in "Total."

³Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5
CONSUMPTION OF LEAD IN THE UNITED STATES¹

(Metric tons, lead content)

Use	2009		2010		
	January-December	January-February	January	February	January-February
Metal products:					
Ammunition, shot and bullets	70,500	10,300	5,680 ^r	5,920	11,600
Brass and bronze, billet and ingots	3,920	725	275 ^r	233	508
Cable covering, power and communication and calking lead, building construction	5,830	1,420	648 ^r	496	1,140
Casting metals	20,100	3,330	986 ^r	932	1,920
Sheet lead, pipes, traps and other extruded products	27,100	4,540	2,290 ^r	2,450	4,740
Solder	7,270	1,150	1,060 ^r	551	1,610
Storage batteries, including oxides	1,210,000	210,000	101,000 ^r	101,000	202,000
Terne metal, type metal, and other metal products ²	16,700	2,780	1,380 ^r	1,380	2,760
Total metal products	1,360,000	234,000	114,000 ^r	113,000	226,000
Other oxides and miscellaneous	21,300	3,870	1,800 ^r	1,800	3,600
Total reported	1,380,000	238,000	115,000 ^r	115,000	230,000
Undistributed ³	41,500	7,150	3,460 ^r	3,440	6,900
Grand total	1,430,000	245,000	119,000 ^r	118,000	237,000

^rEstimated. ^rRevised.

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

²Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

³Included in "Metal products:Terne metal, type metal, and other metal products."

U.S. Consumption of Lead

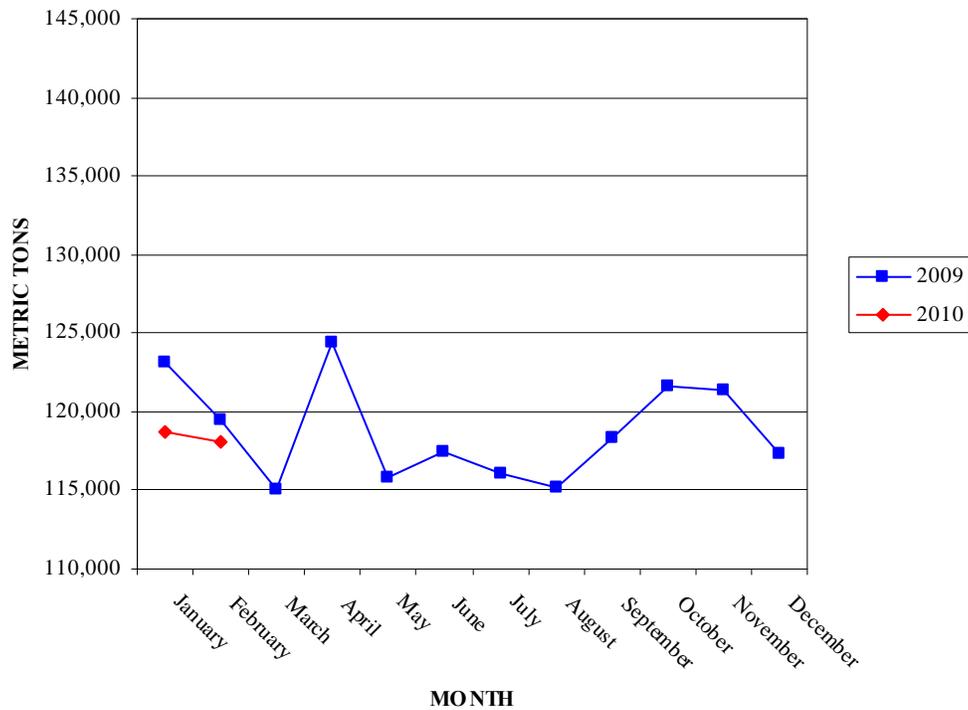


TABLE 6
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD¹

(Metric tons, lead content)

Type of material	Stocks		Consumption	Stocks
	January 31, 2010	Net receipts		February 28, 2010
Soft lead	31,600 ^r	75,500	74,000	33,100
Antimonial lead	20,100 ^r	20,500	21,100	19,500
Lead alloys	W	W	W	W
Copper-base scrap	W	W	W	W
Total	60,200 ^r	116,000	115,000	61,100

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Data are rounded to no more than three significant digits.

TABLE 7
U.S. EXPORTS OF LEAD, BY CLASS¹

(Metric tons)

	2009		2010
	December	Year	January
Lead content:			
Ore and concentrates	9,490	287,000	10,500
Bullion	--	34	--
Materials excluding scrap	6,280	82,000	5,780
TEL/TML preparations, based on lead compounds	4	2,070	45
Total	15,800	371,000	16,300
Gross weight, scrap	8,770	140,000	6,920

-- Zero.

¹Data 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 ORIGIN¹

(Metric tons, lead content)

Country of origin	2009			2010
	Year	January	December	January
Ore, matte, etc., Canada	1,490	--	--	--
Base bullion:				
Mexico	810	57	105	33
Other	34	--	--	38
Total	844	57	105	71
Pigs and bars:				
Canada	205,000	14,400	19,600	17,200
Mexico	41,100	5,320	3,430	3,100
Peru	991	496	--	--
Other	4,020	93	75	56
Total	251,000	20,300	23,100	20,400
Grand total	253,000	20,400	23,200	20,400

-- Zero.

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

Source: U.S. Census Bureau.