

APPENDIX A

**TRIP GENERATION INFORMATION
FROM ROBERTSON'S AND CEMEX**

**CEMEX AGGREGATE TRUCK GENERATION
FOR AM AND PM PEAK HOURS
UPPER SANTA ANA RIVER WASH PLAN**

SCENARIO		AM	AM	TOTAL	PM	PM	TOTAL
		IN	OUT		IN	OUT	
Existing Base- 2.53 MTY	PCE	114	117	231	30	21	51
	No. of trucks	38	39	77	10	7	17
Proposed – 3 MTY	PCE	132	138	270	36	24	60
	No. of trucks	44	46	90	12	8	20
Net New Trucks At 3 MTY	PCE	18	21	39	6	3	9
	No. of Trucks	6	7	13	2	1	3

Source: Lilburn Corporation and Cemex memo updated February 23, 2006.

Assumptions: Based on 3 years of truck data from 2003 – 2005.

Peak hours and percent of trucks per peak hour based on July 2003 truck scale tickets and verified by LSA traffic counts.

Passenger Car Equivalent (PCEs) of 3 used for all aggregate trucks.

MTY – million tons per year

MEMORANDUM

DATE: UPDATED June 16, 2006 **Project No.:** 554-01

TO: Lisa Donnell, LSA
Burnie Cavender, SBVWCD

COPY: Christine Jones - Cemex
Craig Philips - RRM

FROM: Marty Derus, Lilburn Corp.

SUBJECT: Cemex Construction Materials Existing And Proposed Trucking Data

Orange Street Plant

The tables enclosed present the average monthly, daily, and hourly aggregate truck data and percents based on scale house tickets from the Cemex Orange Street Plant for the months of January and July 2003 and on production data for years 2003 through 2005. These actual numbers relate to aggregate trucks leaving the site and therefore are **one-way**. The data does not include employee and miscellaneous delivery trips to each site.

The numbers of aggregate trucks per day were totaled and averaged, then calculated as a percentage for that day of the week. Aggregate trucks are assumed to average 26 tons per truck. There are a minor number of smaller trucks (single dump trucks of 10 tons) and larger off-road haul trucks that transfer material to Matich and the Alabama Street concrete batch plant but these tend to offset each other. These two truck types average less than 5 percent.

LSA requested the last three years of annual production to determine an existing or baseline for the traffic analysis. Production at the Orange Street Plant for the last three years based on truck tickets and the three-year average are listed below.

2003 – 2,205,249 tons
2004 – 2,452,977 tons
2005 – 2,942,312 tons
Ave. - 2,533,512 tons

The number of aggregate trucks to haul 2,533,512 tons is equal to 2.53 MTY/26 tons per truck or 97,442 trucks/year. This number divided by 52 weeks equals 1,873 trucks/week (see Table 1, Column 5). The same math is used to determine the number of trucks for 3 MTY in Table 1, Column 6. Note that the number of aggregate trucks is the average number based on the annual volume divided by the working days. Truck trips on some days would exceed the listed numbers and some days will be less depending on daily demand. Also in emergency situations, truck numbers may exceed average numbers.

The same daily percentages are then used to estimate the average number of trucks per day for the 3-year average (baseline) and the proposed 3 MTY production rate. **Table 1** summarizes the aggregate truck data as described. As can be seen in Table 1, truck traffic is primarily Monday through Friday with not a great deal of fluctuation from day to day though Wednesday is the busiest day. It is expected with increased production that Saturday sales would increase.

Table 1
Cemex Orange Street Plant
Average Daily Aggregate Truck Traffic
Trucks Leaving Site (One Way)
Existing 3-Year Average (Baseline) and Proposed 3 MTY
(Based on January & July 2003 Scale House Data
and 2003 to 2005 Annual Production)

Day of Week	Average Number of Trucks/Day (Jan. 2003)	Average Number of Trucks/Day (July 2003)	Daily Percent of Trucks (Average of January & July 2003)	<i>Baseline</i> Number of Trucks/Day (Based on 3-yr ave. 2003-05)	<i>Proposed</i> Number of Trucks/Day (Based on 3 MTY)
Sunday	11	19	1.1	21	24
Monday	235	278	18.7	350	415
Tuesday	281	247	19.3	362	428
Wednesday	289	273	20.4	382	453
Thursday	267	265	19.3	362	428
Friday	223	244	17.0	319	377
Saturday	51	62	4.2	77	91
Average Trucks/Week	1,357¹	1,388²	100	1,873³	2,216⁴

Notes: Proposed aggregate trucks/day are average number of trucks based on 3 MTY. Some days could exceed this number based on demand.

MTY - million tons/year Assume 26 tons per truck.

1) 1,357 trucks/week equates to approx. 1.835 MTY

2) 1,388 trucks/week equates to approx. 1.877 MTY.

3) 1,874 trucks/week based on 3-year average of 2.533 MTY between 2003 and 2005.

4) 2,220 trucks/week equates to approx. 3 MTY.

Note that totals may not equal numbers in columns due to averaging and applying a percentage.

Source: Cemex January and July 2003 Truck Scale Tickets, 2003 – 2005 Production Data

Table 2 lists the number and percent of aggregate trucks per hour from the July 2003 scale house data. The average number of aggregate trucks per hour for the July weekdays were totaled and a percent per hour calculated. This percent per hour was then applied to the 1,873 trucks/week for the 3-year average or baseline and the 2,216 trucks/week for the 3 MTY or proposed rate using the busiest day, Wednesday. Table 2 shows that hourly

Table 2
Cemex Orange Street Plant
Average Hourly Aggregate Truck Data
Trucks Leaving Site (One Way)
(Percent Based on July 2003 Traffic Data)

Hour of Day	Number of Trucks Per Hour (July 2003)	Percent of Trucks Per Hour	<u>Baseline</u> Trucks/Hour (Based on 3-Year Ave. or 2.53 MTY) 382 trucks/day	<u>Proposed</u> Trucks/Hour (Based on 3 MTY) 453 trucks/day
00-01	0	0	0	0
01-02	0	0	0	0
02-03	0	0	0	0
03-04	8	3.1	12	15
04-05	16	6.3	24	29
05-06	18	6.9	26	31
06-07	23	8.8	34	40
07-08	25	9.6	37	43
08-09	27	10.2	39	46
09-10	24	9.3	36	42
10-11	24	9.3	36	42
11-12	22	8.5	32	39
12-13	20	7.7	29	35
13-14	17	6.6	23	30
14-15	12	4.5	17	20
15-16	7	2.6	10	12
16-17	4	1.7	7	8
17-18	3	1.0	4	5
18-19	4	1.4	5	6
19-20	2	0.9	4	4
20-21	2	0.8	3	4
21-22	2	0.8	3	4
22-23	0	0	0	0
23-24	0	0	0	0
Daily Truck Trips (Wed)	260	100	381	455

Source: Cemex July 2003 Truck Scale Tickets
Used Wednesday Traffic Data of 20.4% as worst case.
Note that totals may not equal numbers in columns due to averaging and applying a percentage.
Lilburn Corp. Feb. 2006

traffic is concentrated in the morning hours to coincide with construction projects starting about 4 AM and gradually lowering after 1 PM. Note that the truck numbers are quite low for the PM peak hours. The differences in the Cemex and Robertson's hourly truck traffic are apparent by comparing the two companies traffic information.

Table 3 simply shows the monthly fluctuations in production/shipping for the Orange Street Plant. This data would not necessarily be used for any traffic analysis but is provided for informational or descriptive purposes. Obviously winter weather causes reduced production as does the short month of February.

Table 3
Cemex Orange Street Plant
Average Monthly Production Fluctuations
(Based on 2001 – 2003 Production
and Shipping Data)

Month	Percent of Shipping
January	7.6
February	6.6
March	8.0
April	10.1
May	8.8
June	8.4
July	9.4
August	8.8
September	7.8
October	9.5
November	7.6
December	7.4

Cemex has City of Redlands approval to produce up to 7 MTY and air quality permits that limit the plant to 5.4 MTY. Cemex has agreed to place a limit on its Orange Street Plant production to 3 million tons per year. (Note that it was agreed that any production from the Alabama Street Quarry that is not processed at the Orange St. Plant would count towards this 3 MTY limit.) This is a reduction in the approved production limits by 45% of the 5.4 MTY rate and 57% of the 7 MTY rate. The proposed limitation would reduce approved trucks by 45% and should be viewed as a beneficial element of the proposed project for the cities and public concerned about uncontrolled increasing numbers of trucks.

Date: February 24, 2006
To: Lisa Donnell, LSA
Walter Christensen, SBVWCD
From: Craig Phillips, Robertson's
Subject: Robertson's Existing and Proposed Traffic

All data presented below have been taken from scale house records and invoices.

East Basin Processing Plant

The following tables present the average monthly, daily and hourly aggregate ruck data based on delivery tickets from the East Basin Processing Plant for the months of February and August 2004 and on production data for years 2003 through 2005. The latter relate to aggregate trucks leaving the site and represent one-way traffic. Approximately 94% of deliveries off-site are made with Robertson's trucks, the remainder by outside haulers. The data does not include employee and miscellaneous delivery trips.

Baseline annual production for the last three years is as follows:

2003 - 1,651,901 tons
2004 - 1,917,142 tons
2005 - 1,856,746 tons
Avg. - 1,808,596 tons

It is assumed that a typical aggregate delivery truck can transport **29.0** tons of material. Currently, 94% of Robertson's deliveries are made using Robertson's trucks and can be scheduled throughout the day, unlike operations where a large percentage of the deliveries are made by outside haulers who deliver material as the market demands. The annualized number of trucks is 62,365 (1,808,596 tons / 29.0 tons per truck) or 1200 trucks / week (62,365 trucks per year / 52 weeks per year). There is a normal distribution of truck trips in any one period, so these numbers represent an average and not as a maximum or minimum.

Daily ship percentages are developed from the high and low ship months for the years 2003- 2005, February and July respectively (see Table 3). These percentages are used to develop baseline distributions shown in Tables 1 and 2.

The worst case for Baseline data is Wednesday (193 truck trips) and for the Proposed project Monday (320 truck trips). Again, Robertson's has the ability to direct their traffic away from peak hours by scheduling. It is anticipated that the percentage of non-Robertson's trucks would increase to 10% (6% currently) as the annual production approaches the proposed volume. The non-Robertson's trucks would be distributed in a similar manner as trucks exiting CEMEX's site. This is reflected in the Table 2.

Table 1 - East Basin Processing Plant Average DAILY Aggregate Trucks Leaving Site (One Way) for Baseline and Proposed Conditions					
Day of Week	Average Trucks / Day February, 2005	Average Trucks / Day December, 2005	Weekly Distribution (Average of Two months)	<u>Baseline</u> ¹ Trucks / Day (Based on 3-yr avg 2003-2005)	<u>Proposed</u> ² Trucks / Day (Based on 3 MTY tons / year)
Sunday	94	249	12.7%	152	253
Monday	149	279	15.8%	190	315
Tuesday	117	293	15.2%	182	302
Wednesday	130	304	16.1%	193	320
Thursday	145	224	13.7%	164	272
Friday	140	207	12.8%	154	256
Saturday	124	246	13.7%	164	273
Average Trucks / Week	899	1,802	100.0%	1,199 ¹	1,991 ²

Note: Proposed aggregate trucks / day are average numbers based on 3 MTY. Normal fluctuations in weekly and monthly shipments would be above and below this value.

MTY = millions tons per year

Assume aggregate trucks a capacity of 29.0 tons.

¹Based on a 3-year average of 1.808 MTY (2003 through 2005).

²Based on 3.000 MTY proposed shipments.

Source: Robertson's Daily Ship Reports for 2003 through 2005.

Table 2 lists the hourly distribution of aggregate truck traffic related to base line and proposed traffic. This distribution is based on hourly shipments during August, 2004. Aggregate is shipped to Robertson's regional concrete batch plants. It is typical to completely fill the concrete batch plants serviced early in the week and at night. Robertson's also has the ability to schedule aggregate trucks to any day of the week and any hour of the day because over 95% of the trucks deliver material to Robertson's operations. This ability allows Robertson's to limit traffic during local peak-hour traffic.

Table 2 - East Basin Processing Plant Average HOURLY Aggregate Trucks Leaving Site (One Way) for Baseline and Proposed Conditions					
Hour of Day	Trucks / Hour (August, 2004)	Daily Distribution (%)	<u>Baseline</u> Trucks/Hour (Wednesday) (1.808 MTY)	<u>Proposed</u> Daily Distribution (%)	<u>Proposed</u> Trucks/Hour (Wednesday) (3.00 MTY)
00-01	13	5.4%	10	5.9%	19
01-02	12	5.0%	10	5.9%	19
02-03	11	4.5%	9	5.9%	19
03-04	11	4.5%	9	5.9%	19
04-05	13	5.4%	10	5.6%	18
05-06	13	5.4%	10	5.3%	17
06-07	14	5.8%	11	5.0%	16
07-08	14	5.8%	11	3.4%	11
08-09	13	5.4%	10	3.1%	10
09-10	10	4.1%	8	3.1%	10
10-11	7	2.9%	6	2.8%	9
11-12	5	2.1%	4	2.8%	9
12-13	3	1.2%	2	2.8%	9
13-14	3	1.2%	2	2.8%	9
14-15	3	1.2%	2	2.8%	9
15-16	7	2.9%	6	1.9%	6
16-17	7	2.9%	6	1.9%	6

17-18	7	2.9%	6	1.9%	6
18-19	8	3.3%	6	3.4%	11
19-20	10	4.1%	8	4.4%	14
20-21	13	5.4%	10	5.3%	17
21-22	15	6.2%	12	5.9%	19
22-23	15	6.2%	12	5.9%	19
23-24	15	6.2%	12	5.9%	19
Daily Truck Trips	242	100.0%	192	100.0%	320

Table 3 shows the distribution in shipments from the East Basin Processing Plant. This data would not necessarily be used for any traffic analysis but is provided for informational or descriptive purposes.

Other Aggregate Related Truck Trips

It is anticipated that the annual usage of aggregate for on-site purposes (ready mixed concrete, concrete products, etc) will not change from the baseline for the proposed project. This is due to the fact that the concrete batching facilities are limited both by physical and air quality permit limitations, i.e. any expansion of these facilities would require new air quality permits and subject to review by the Cities. In addition, it is assumed that all aggregate leaving the site, whether as aggregate or aggregate-containing product, leaves under the worst-case PCE (Passenger Car Equivalent), i.e. bottom-dump trucks (= 3.00).

**Table 3 - East Basin Processing Plant
Average Monthly Aggregate Shipping Distribution
(Based 2003-2005 Shipping Data)**

Month	Off-Site Shipments (tons)	Distribution (%)
January	159,188	8.8%
February	104,919	5.8%
March	141,099	7.8%
April	150,143	8.3%
May	157,379	8.7%
June	168,233	9.3%
July	180,896	10.0%
August	171,851	9.5%
September	119,391	6.6%
October	151,952	8.4%
November	141,099	7.8%
December	162,806	9.0%
Total	1,808,956	100.0%

**ROBERTSON'S AGGREGATE TRUCK GENERATION
FOR AM AND PM PEAK HOURS
UPPER SANTA ANA RIVER WASH PLAN**

SCENARIO		AM PEAK			PM PEAK		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Baseline - 1.808 MTY	PCE	33	30	63	18	18	36
	No of Trucks	11	10	21	6	6	12
Proposed - 3.00 MTY	PCE	33	30	63	18	18	36
	No of Trucks	11	10	21	6	6	12
Net New Trucks	PCE	0	0	0	0	0	0
	No of Trucks	0	0	0	0	0	0

Source: Robertson's memo updated February 24, 2006.

- Assumptions
1. Baseline based on shipment distributions from 2003 through 2005.
 2. Robertson's has the ability to limit shipments during local peak traffic hours, so that NO net change from baseline conditions would occur during these hours.
 3. Passenger Car Equivalent (PCE) = 3.00 for all truck counts.
 4. MTY = million tons per year.