

CEMEX LYONS PLANT TRAFFIC STUDY

NOVEMBER 5, 2024

Prepared for:

CEMEX

Prepared by:



3810 Northdale Blvd., Ste. 100
Tampa, FL 33624 (888) 462-3514




Bruce W. Landis, P.E., AICP
Colorado P.E. License # 41980
Date: 10-31-24

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INTRODUCTION

This report summarizes Landis Evans + Partners' findings and conclusions in the analysis of Boulder County's April 10, 2024, *Notification of Determination Regarding Termination of Non-Conforming Use* (the "Determination") of the Cemex Lyons Cement Plant property located at 5134 Ute Highway (a.k.a. SH 66) (the "Plant"). Specifically, this report demonstrates that the County has erred in its Determination in several respects, including its unsupported assumption that traffic to and from the Plant has increased since the non-conforming use was established. First, this report establishes the appropriate timeframes for truck volume comparisons. Second, utilizing these timeframes, it provides calculations and comparisons of the truck traffic volumes from the Plant pre-1994 and present day. Third, it identifies the County's error in using the truck volumes of the Stantec Access Traffic Study (the "Stantec Study") cited in the Determination. Fourth, this report provides evidence refuting the County's allegation that truck traffic from the Plant property constitutes "...a hazard or nuisance off the property..." which the County offered as its justification for termination of the non-conforming use. Finally, this report

establishes that any change in volume of truck traffic from/to the Plant is not an indicator of either an enlargement or an alteration of the use.

BACKGROUND AND SETTING

In 1965, work began for the construction of a cement manufacturing plant on the property. Once completed, the Plant has been operating continuously, through today, allowed by right under the land use regulation in effect in 1965. In 1994, Boulder County enacted a unilateral County-wide Land Use Code update, rendering the long-established Plant a non-conforming use. The core operation at the property has always been and remains cement manufacturing. While the economy has fluctuated over the years, and the modes of transporting raw materials into and finished product out of the Plant have changed and/or fluctuated over the months and years (as has truck traffic serving the facility), the property use has remained unchanged.

In April 2024, Cemex, the current owner and operator of the property, received the Determination from Boulder County.

The County communicated the basis for the termination of the Plant's non-conforming use as follows:

"...[an] increase in truck traffic...constitutes an enlargement or alteration of the nonconforming use..."
(Determination, Page 3).

Additionally, Dale Case, the Director of Community Planning and Permitting, stated in the Determination that the truck traffic created

"...a hazard or nuisance off the property...adversely affect[ing] the character of the neighborhood..."
(Determination, Page 3).

Cemex has engaged our firm to investigate truck traffic generated by the Plant over time and determine if the truck traffic has significantly increased, and if so, whether it constitutes a "hazard" or "nuisance".

The following sections of this report conclusively answer these questions "no", and provide significant evidence

refuting the County's allegations that: 1) truck traffic from the Plant has increased and, 2) truck traffic is a valid basis for termination of the non-conforming use.

TIME FRAMES FOR TRUCK VOLUME COMPARISON

As the basis for its Determination, the County claims an increase in truck traffic from the Plant's 866-acre property at 5134 Ute Highway due to closure of the adjacent Dowe Flats Quarry. Specifically, Director Case states:

"The Director has determined that the right to continue the nonconforming cement plant use has terminated as a result of an increase in truck traffic since the closing of the Dowe Flats Quarry. Specifically... the Director has determined that this increase in truck traffic constitutes an enlargement or alteration of the nonconforming use which has the effect of creating a hazard or nuisance off the property, adversely affects the character of the neighborhood, or intensifying the use of the land and its need for services under Article 4-1003.C.1.d of the Land Use Code."
(Determination, Page 3).

However, the Dowe Flats Quarry's closing in 2022, and any subsequent truck traffic volume changes entering/exiting from the Plant are irrelevant to the test of Article 4-1003.C in the Land Use Code, specifically the right to continue operations vis à vis Subsection 1.d. If external truck traffic were to be used as a metric of "enlargement" or "alteration" - a methodology that Cemex disputes (because truck traffic is an *effect* of land use not the land use itself) - then the appropriate test would be whether the truck traffic due to operations of the Plant today is significantly higher than that prior to the County's imposition of the 1994 amendment to the Land Use Code.

TRUCK VOLUMES GENERATED BY THE PLANT SITE

Unfortunately, historic volume counts for trucks entering and exiting the Plant property are not available dating back prior to 1994. However, actual, counted, annual truck volumes are available for the years 2019 to 2022 which match the Plant's raw materials supply and product distribution modes of

transportation of the pre-1994 timeframe.¹ Historical Plant production and operational data records were used to correlate truck traffic and thus determine a reliable method to provide a time-consistent predictor of the Plant truck traffic for those timeframes of interest. Cemex reports of the annual production of a product called clinker² are available for almost every single year dating back to 1983. We postulated that annual truck traffic entering/exiting the Plant could be correlated to annual clinker production. A retrospective projection was made to estimate Plant-generated (external) truck traffic for the years of interest. Simply put, we hypothesized that clinker production could be used to estimate truck volumes entering and exiting the site.

To test this hypothesis, we used the years of reported truck volumes and compared those truck volumes to the clinker production. A summary of these values is provided in **Table 1**.

¹ From 1983 to 1993 a portion of the raw materials were sourced from offsite and brought into the Plant. The conveyor belt transporting raw materials from the Dowe Flats Quarry was brought online in 1994 and remained in use until 2022.

² Clinker is an intermediate product formed during the production of Portland cement. It is manufactured on-site, and the volume produced is carefully measured and recorded.

Table 1 Clinker Production and Truck Volume by Year

Year	Clinker Production (tons)	Truck Volume
2019	279,546	19,478
2020	388,572	28,481
2021	341,316	23,277
2022	336,085	24,660

We evaluated this data to determine the strength of the correlation between the clinker production and the truck volumes. We both graphed the annual truck volume (the dependent variable) versus the clinker production (the independent variable) and calculated a linear regression equation-based trend line for the two values. The correlation is very strong ($R^2=0.96$, see **Figure 1**), thus the hypothesis is valid.

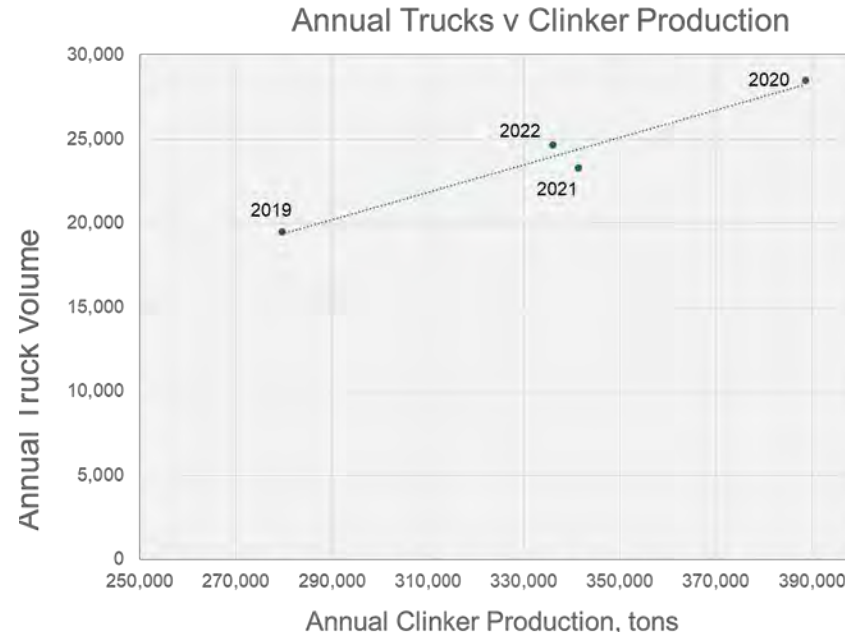


Figure 1 Annual Truck Volume vs Clinker Production

Accordingly, using the historic clinker production data and the regression equation trendline, we then calculated the truck volumes for the years from 1983 to 1993. The calculated truck volumes for 1983 to 1993 (and the Year 2023 - as annual truck counts were not available for that year) as well as the Cemex-reported truck volumes for 2014 to 2022 are shown in graphic form in **Figure 2** and in tabular form in **Table 2**. (Truck volumes for 2006 – 2022 were reported in the May 10, 2023 Cemex Response to Request

for Information Regarding Ongoing Use of Cement Plant, Appendix A.) Notably, the *annual* truck volumes entering and exiting the Plant site are lower in the most recent years when compared to the 1990s.

The average *daily* truck traffic entering and exiting the Plant has also been calculated. We did this by dividing the *annual* truck traffic (**Table 2**) by the number of the Plant's operational/production/working days in a year, which is approximately 250. A table showing the annual truck volumes, working days per year, and daily truck volumes is provided in **Appendix B**.

Figure 3 represents the resulting average *daily* truck traffic for the years from 1983 to 1993 and 2014 to 2023. As stated previously, from 1983 through 1993 similar transport modes for raw materials were used by the Plant as for the period 2019 through 2023; in both periods, raw materials were sourced from off site. Data for 1994 through 2013 is not included on the graph because, during this timeframe, the mode of materials and product transport was dissimilar to

that of the pre-1994, i.e., there was reduced inbound and outbound traffic due to the Dowe Flats raw material conveyor and the use of rail to transport finished product. Post 2018, reduced production from Dowe Flats and a cessation of rail transport resulted in increased truck traffic until the mode of transport, beginning in 2019, became substantially similar to the pre-1994 operating conditions. As can be seen in **Figure 3**, the average *daily* truck traffic for the last ten years is markedly lower than the years prior to 1994 when the Plant's non-conforming use was established.

Accordingly, the County's determination that the truck traffic entering/exiting the Plant has increased since the establishment of Cemex's non-conforming use is incorrect. Thus, even assuming truck traffic alone could constitute an expansion of use, the County's termination of Cemex's non-conforming use based on that erroneous premise is unjustified. Also, notably, the calculated traffic for 2023 is lower than for 2022.

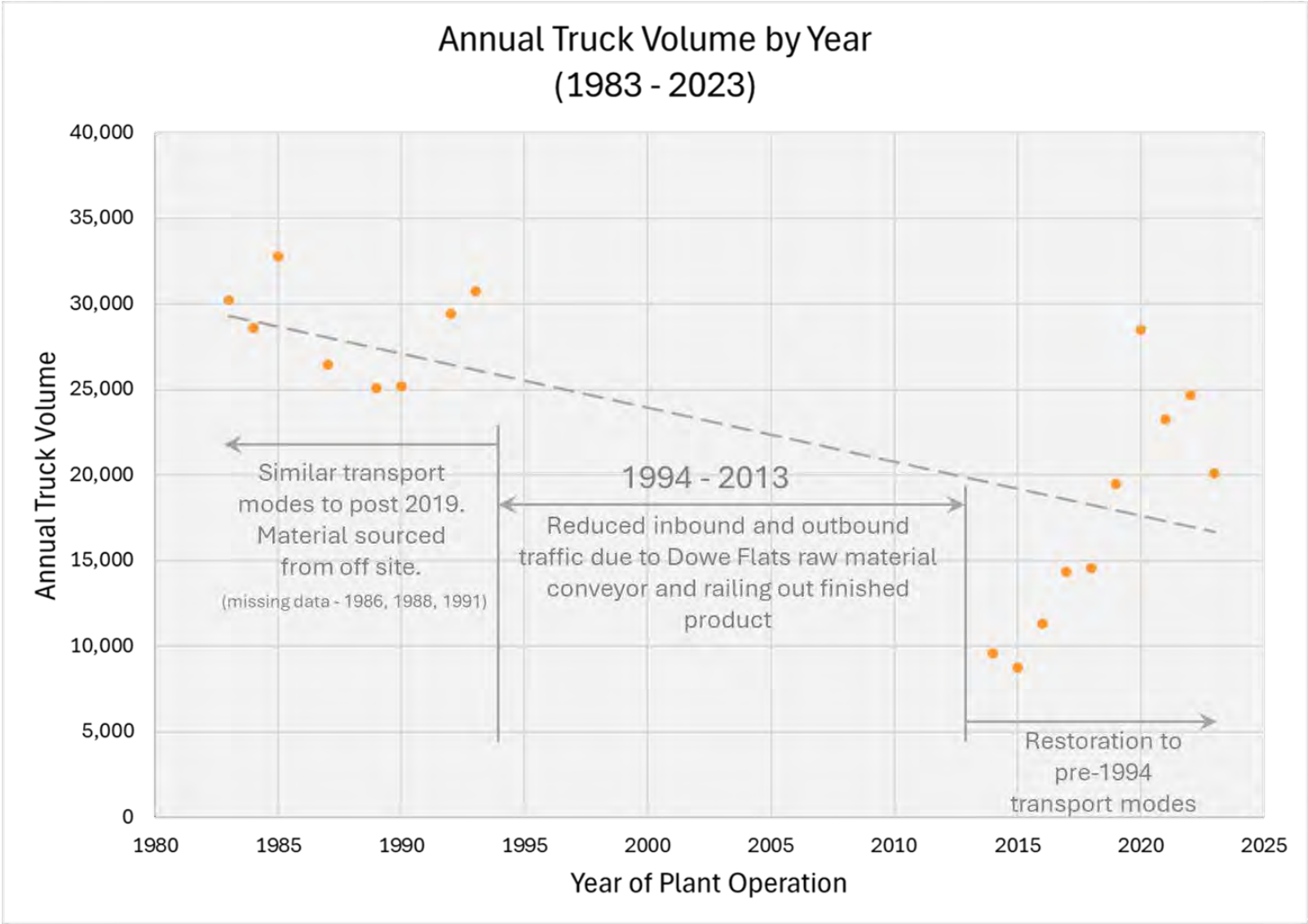


Figure 2 Annual Truck Volumes by Year

Table 2 Clinker Production and Annual Truck Volumes

Year	Clinker Production (tons)	Annual Truck Volume	
1983	413,300	30,233	Calculated Truck Volumes ¹
1984	393,478	28,618	
1985	444,808	32,800	
1987	366,901	26,452	
1989	350,316	25,101	
1990	351,419	25,191	
1992	403,670	29,448	
1993	419,230	30,716	
2014	381,810	9,602	Reported Truck Volumes ²
2015	244,074	8,729	
2016	275,799	11,305	
2017	370,385	14,330	
2018	313,276	14,557	
2019	279,546	19,478	
2020	388,572	28,481	
2021	341,316	23,277	
2022	336,085	24,660	
2023	289,021	20,106	Calculated ¹

1. Calculated using the regression equation developed and shown in **Figure 1**.
2. Truck volumes reported in Response at **Appendix A**.

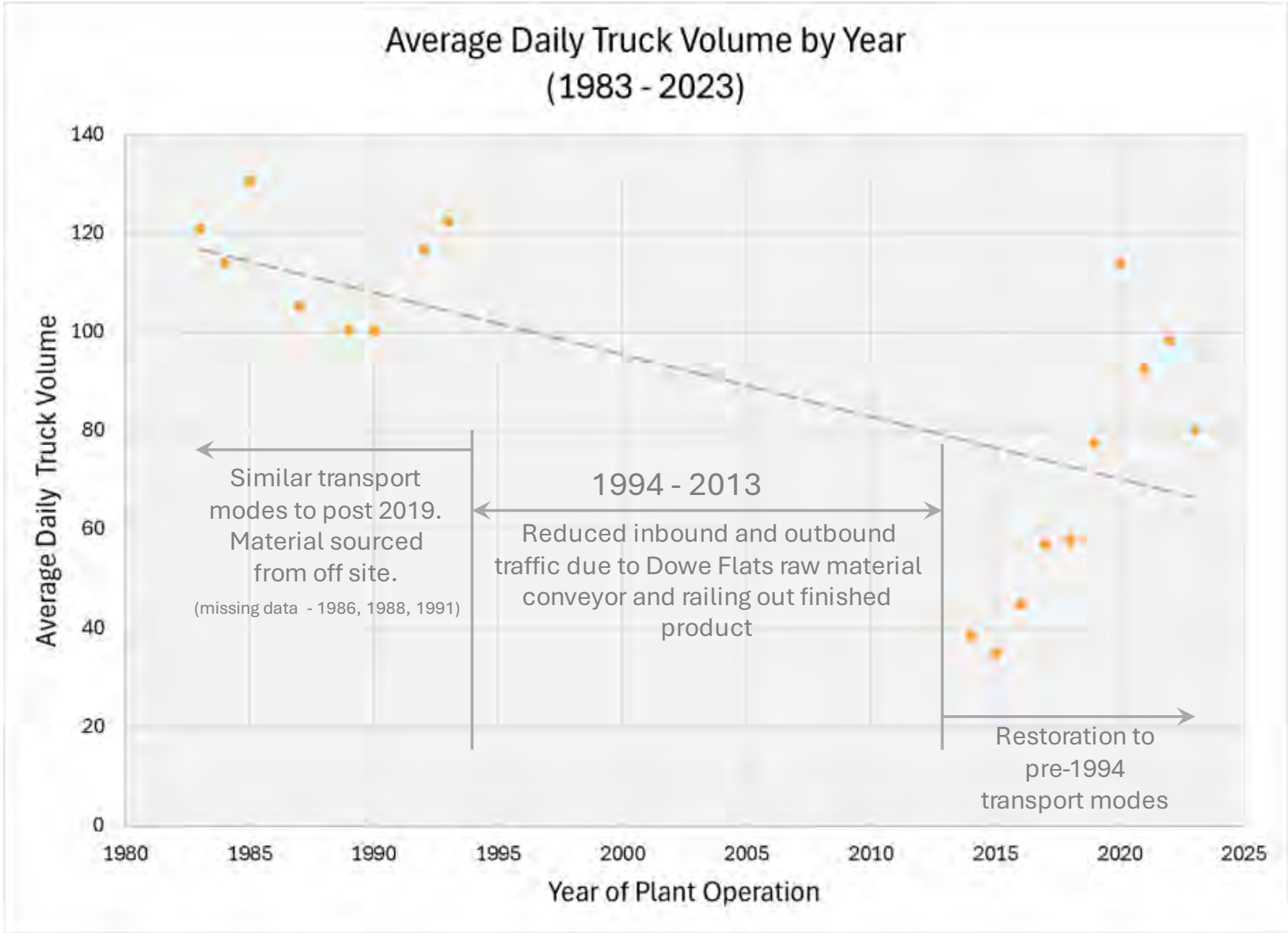


Figure 3 Ten Year Comparative Daily Truck Volumes, Pre 1994 and Pre 2024

MIS-USE OF ACCESS STUDY TRAFFIC DATA

Not only did Boulder County err in its Determination in the analysis of the appropriate truck traffic timeframes and volume comparison, the County also inappropriately used the extremely limited truck volume information from the September 2023 Stantec Study as the basis of its conclusions. The Stantec Study was conducted for Cemex in response to a request from the Colorado Department of Transportation (CDOT) for the purpose of evaluating Plant access and potential operational improvements to Highway 66. It was not intended to and did not ascertain or compare truck counts for purposes of determining whether truck volumes had increased since the establishment of Cemex's non-conforming use. It made conservative volume assumptions and utilized short time-period traffic counts with no adjustment for seasonal or yearly traffic variability. As such, it is wholly inappropriate for the County to make their conclusions in the Determination using such limited data.

The Stantec Study evaluated the existing capacity of four intersections along the Highway 66 corridor, including the

entrance to the Plant. These capacity analyses were conducted to determine the existing and anticipated future operating levels of service for these intersections. The study concluded that after the Dowe Flats Quarry operations ceased, there was an increase in truck traffic exiting the Plant site. However, this study used surrogates for the pre-quarry closure condition (based upon monthly rates) and traffic counts (using only one day from three days of collected data in the month of June for the post-quarry closure traffic volume). Information to confirm their correlation between Tuesday, Wednesday, and Thursday actual traffic count data to average annual daily data for the Plant was not provided in the Stantec Study. Consequently, it is impossible to conclude that the June 2023 counts represented true increases in average overall truck traffic from the Plant site as compared to pre-2023 traffic.

Another significant error in the County's use of the Stantec Study traffic volumes is their mischaracterization of the yearly variation of traffic into and out of the Plant property. To assume that data from any single year, much less any three days from a single month, represents a true baseline,

from which an increase in average annual daily truck traffic can be identified, is certain to be incorrect. Any such purported increase is not supported by actual data. In fact, our review of the truck volume data from Cemex (**Figure 4**) shows substantial year-to-year variation and day-to-day variation in the month of June. When comparing minimum and maximum daily truck volumes, the range of variation is well over 200%, and as high as 326%. Considering this substantial variation, the County's use of just three days of data to support the conclusion in their Determination that there was a significant increase in the average annual daily traffic exiting the site based on the Stantec June 2023 data was inappropriate.

It is also important to note that the purpose of the Stantec Study was to make recommendations for operational

improvements to the Plant access point and the adjacent roadway network. For this reason, making conservative volume assumptions (estimating high) identifies the most operationally robust mitigation measures to reduce delay along roadways and at intersections. The methods used for those traffic projections, combined with the limited data in the access traffic study, however, are not adequate nor appropriate to establish statistically reliable annual truck traffic trends. The Stantec Study was done using a short period of time (3 days in each of two consecutive years) for data and for the very limited purpose of identifying operational enhancements. It is not acceptable to use it for any other purpose. The County thus erred in their use of the Stantec Study's traffic data in its April 10th Determination.

Daily Variation in June Traffic

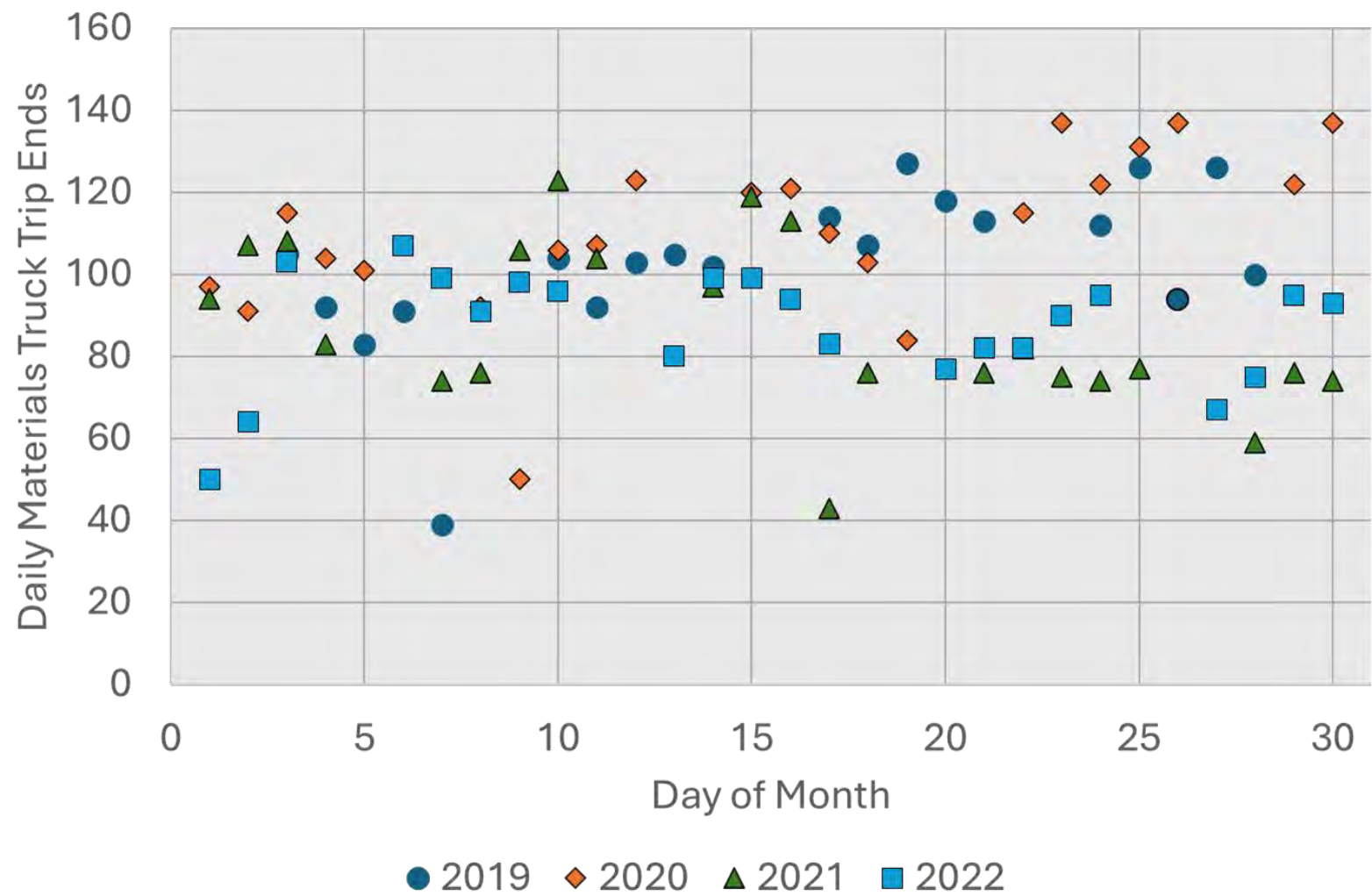


Figure 4 Average Daily Month of June Truck Traffic

DECLINE IN OVERALL TRUCK VOLUMES ON UTE HIGHWAY / SH 66

As noted previously, the County stated in the Determination:

*“...an increase in truck traffic... has the effect of
creating a hazard or nuisance off the property...”*

(Determination, Page 3)

To provide an informed response to this allegation, we examined the volume of trucks entering and leaving the Plant and the overall number of trucks on the section of Ute Highway / SH 66 fronting the Plant property. We used CDOT’s Online Traffic Information System (OTIS) to access this data (see **Figure 5**). The segment for which we downloaded data is shown as the **blue** line in **Figure 5**. Data was available for the years of 1997 through 2022. The OTIS data is provided in **Appendix C**.

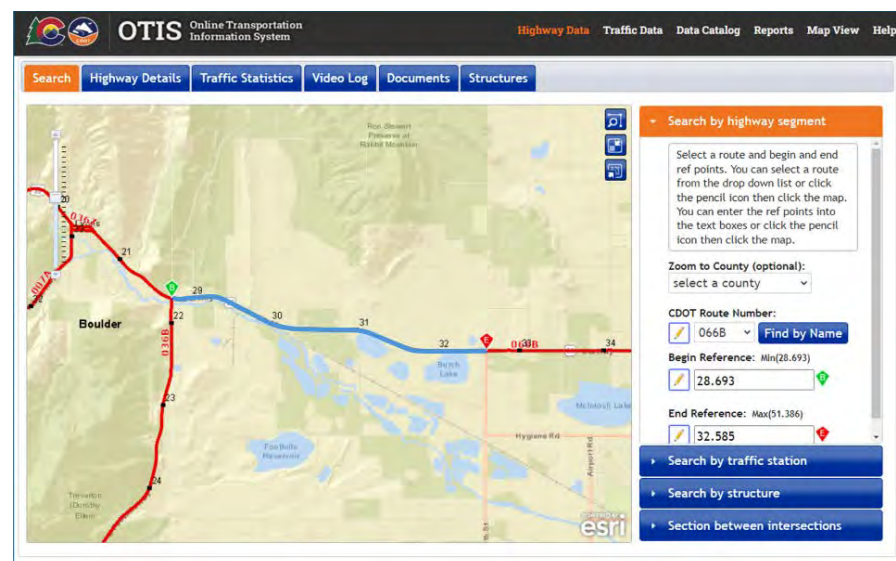


Figure 5 Segment Identified for Volume Data

The data in OTIS includes Average Annual Daily Traffic (all types of vehicle traffic) and the percentage of the traffic volume comprised of trucks. As can be seen plotted in **Figure 6**, the overall traffic volumes from the OTIS data on Highway 66 have generally been increasing since 1997.³

Figure 7 shows the *percentage* of that traffic stream that is comprised of trucks according to CDOT data. **Figure 8** shows the *daily* truck volumes on Highway 66. Truck volumes are only available back to 2002. The **blue** dots in

³ The 2006 data point appears to be an outlier (or an error in the CDOT data).

Figure 8 represent the overall truck volumes from the OTIS data (with the erroneous 2006 data not included in this chart); the **orange** dots represent the trucks attributable to the Plant (the truck volumes prior to 1994 are the regression-predicted volumes; the volumes for those years after 2005 are those volumes reported by Cemex).

As is evident from these volume graphs, while the overall *general traffic* volume on the roadway has risen since 1994, the truck volumes on the highway are generally trending **downward** (**Figure 8**). Additionally, the volume of trucks

attributable to the Plant have been relatively stable, or trending downward over the 40-year period spanning 1983 to 2023 (**Figure 8**).

Consequently, contrary to the County's Determination, there has not been an "...*increase in truck traffic...*" to create or escalate any "...*nuisance...*" off the Plant property onto the surrounding roadway network. Accordingly, the County's allegation that the Plant's truck traffic has increased and thus constitutes or creates "a nuisance" is refuted by the data.

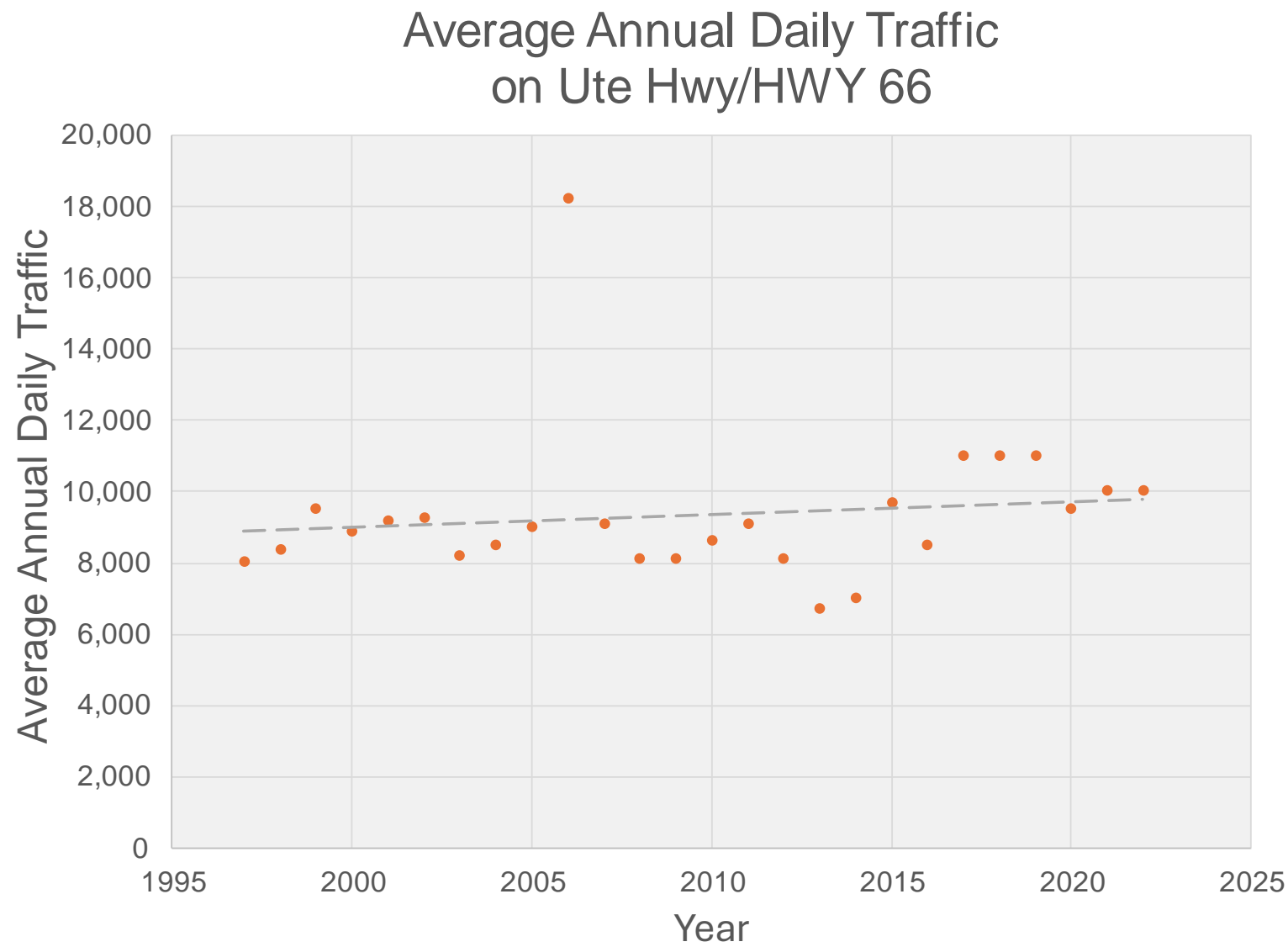


Figure 6 Average Annual Daily Traffic on Ute Hwy/SH 66, 1997-2022

Percentage of Trucks on Ute Hwy/SH 66

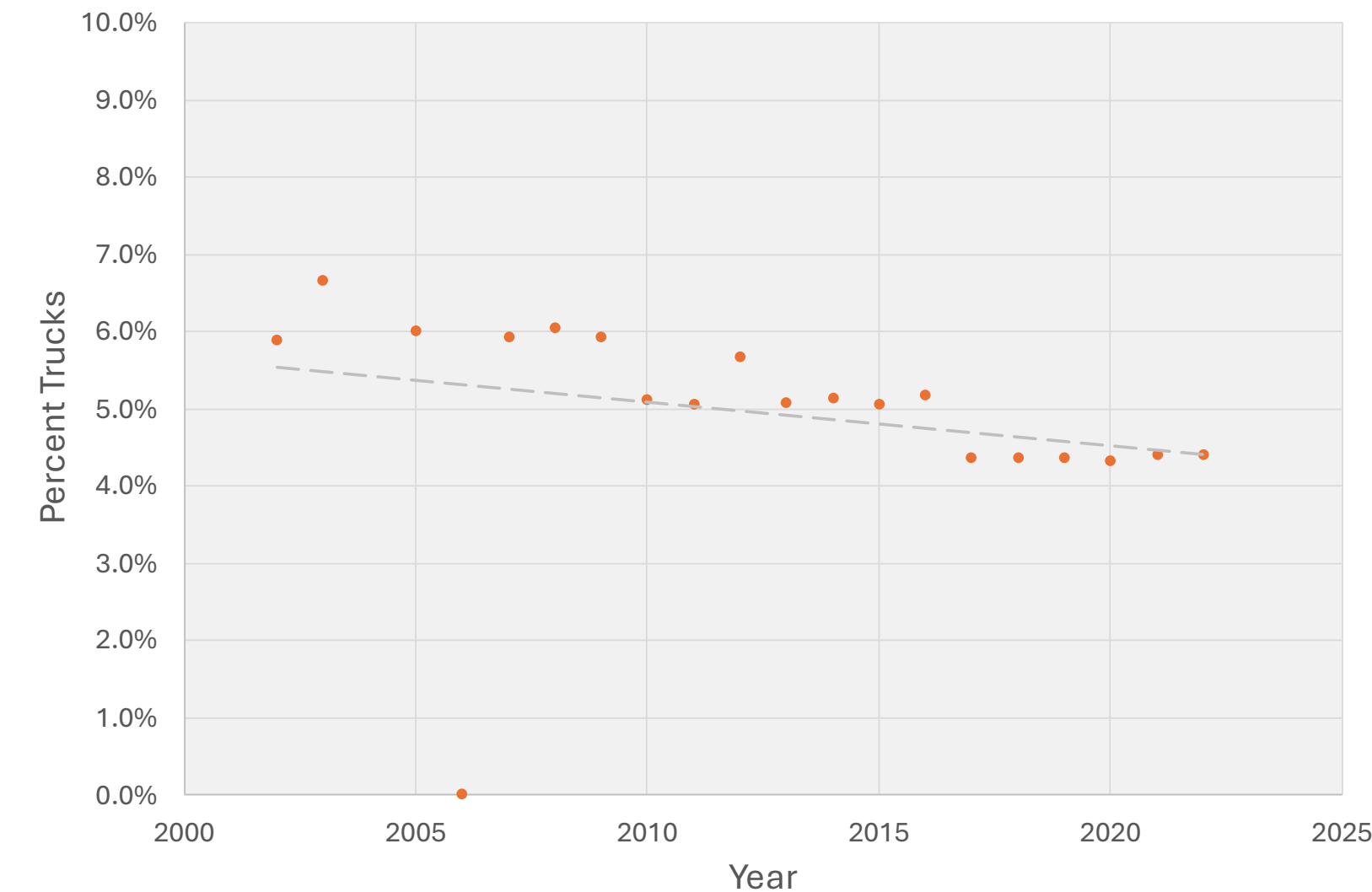


Figure 7 Percentage of Trucks v. Total Traffic Volume by Year on Ute Hwy/SH 66

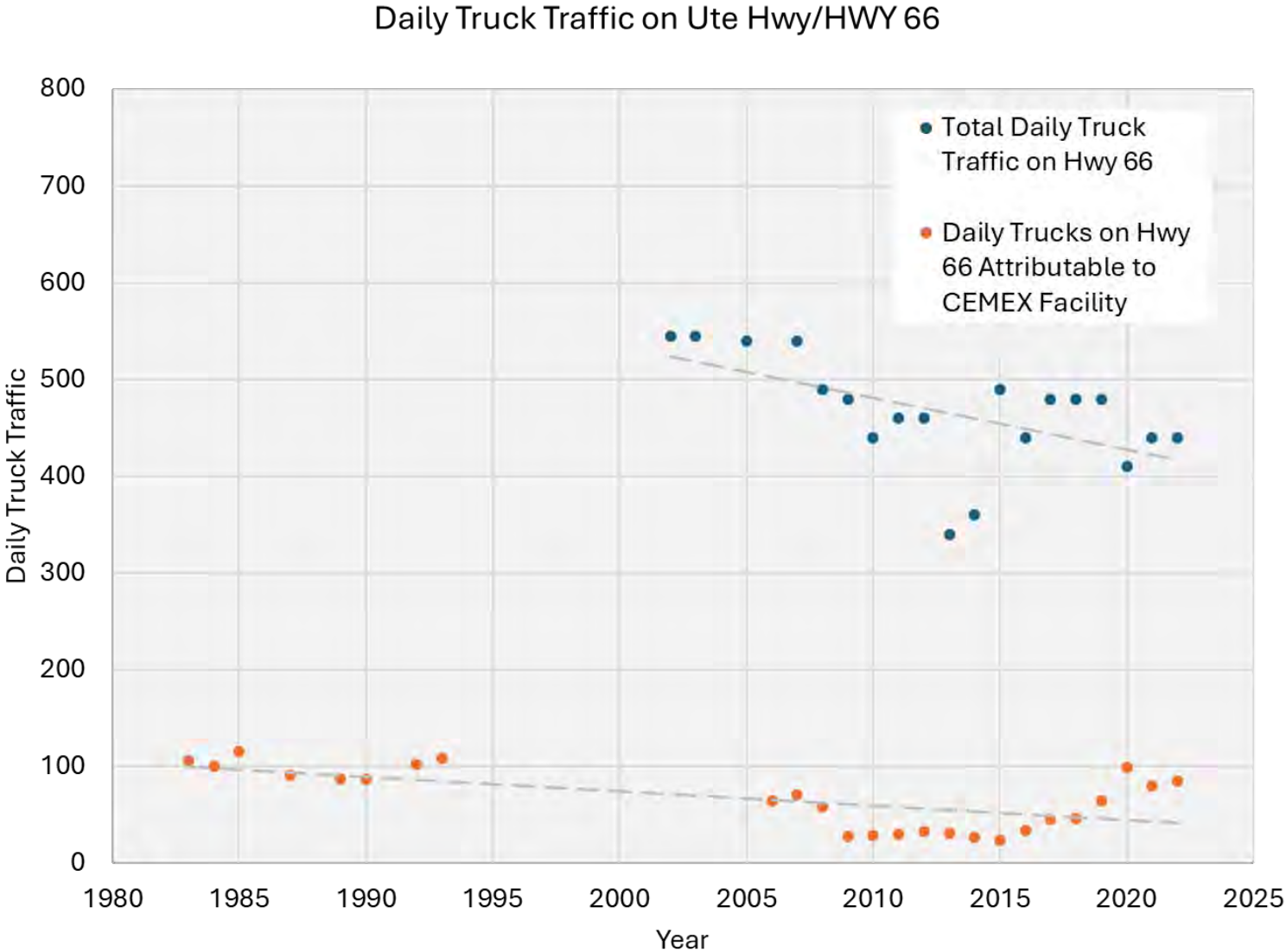


Figure 8 Daily Truck Volumes on Ute Hwy/SH 66

SAFETY AND CRASH ANALYSIS

The County's Determination states that

"...an increase in truck traffic... has the effect of creating a hazard ... off the property..."

(Determination, Page 3)

Given that truck traffic has not increased, either with regard to historical operations of the plant as compared to current operations, or generally on Highway 66, this statement is also not supported by the data. However, as part of our investigation, we reviewed the crashes occurring near and at the Plant site entrance. Based upon the crash data reviewed, neither the trucks entering the Plant site, nor other vehicles entering the site, have a notable number of crash incidences. Additionally, there is no evidence that crashes involving trucks have been increasing.

To determine if truck crashes are increasing, we conducted a crash analysis. CDOT maintains a website that provides crash data from 2007 through 2023. We downloaded this data, entered it into GIS, and extracted the area surrounding

the Plant (within 1 mile of the Plant site entrance drive). These crashes were reviewed to determine if there have been an unusually high number of truck crashes at or near the Plant access point.

Crashes Within One Mile of the Site Entrance

Our review of the data revealed only a small number of truck crashes. All crashes between 2007 and 2023 were reviewed (those occurring within 1 mile of the Plant site entrance). Only three crashes were reported as having involved heavy trucks in the entire 16-year period:

- 5/2/2007, a fatal crash occurred approximately 0.8 miles east of the Plant driveway. The crash was an opposite-direction sideswipe involving a heavy truck and a passenger car or van.
- 7/21/2017, a property-damage-only crash occurred approximately 0.6 miles west of the Plant driveway. The crash was a same-direction sideswipe involving an SUV and a heavy truck.
- 12/9/2019, a property-damage-only crash occurred approximately 0.1 miles east of the Plant driveway.

The crash was a same-direction sideswipe involving an SUV and a heavy truck.

All three of these crashes occurred prior to the Dowe Flats Quarry closure. Of these, the most recent occurred nearly 5 years ago.

Crashes Proximate to Property Entrance

We also reviewed crashes occurring within the intersection area at the Plant site entrance. The “intersection area” was defined by including the lengths of the turn lanes into and out of the Plant on the eastbound and westbound approaches. The crash reports were examined to identify which may have involved drivers entering or exiting the Plant driveway. Only a *single* crash within the sixteen-year period met this criterion. On 6/3/2023 there was a crash which the OTIS “First Harmful Event” described as “Front to Side” and the OTIS “Crash Type” reported as “Broadside.” The types of vehicles involved were not reported. OTIS shows that this crash resulted in two incapacitating injuries. The CDOT crash summary does not provide the information to determine if this was a left entering or exiting crash, or a right exiting crash.

Access Management Modifications

The Determination maintains that,

“In December of 2022, in response to complaints by members of the public, the Colorado Department of Transportation (CDOT) approached CEMEX ...CDOT required CEMEX to provide an updated traffic study to determine if a new access permit was required.” (Determination, Page 3)

Notably, in March 2020, an *Access Control Plan* approved and published by CDOT found no significant accident history in the vicinity of the Plant property. This March 2020 report also noted that Highway 66 will continue to operate at an adequate level of service.

In September 2023, in response to CDOT’s request, Cemex commissioned Stantec to conduct their study. The Stantec Study concluded that a left or west turning restriction would be beneficial at the Plant property entrance on Highway 66, consistent with CDOT’s March 2020 Access Control Plan. That was a preventative recommendation, not a determination that there was a hazard caused by truck traffic

volumes in that area. As such, it does not support the County's determination.

TRUCK TRAFFIC IS NOT AN INDICATOR OF LAND USE ENLARGEMENT OR ALTERATION

It is clearly evident from the tables and graphs in the preceding sections that Plant truck traffic volumes have fluctuated over the more than fifty (50) years or so of its operation. The core operation and use of the Plant property has always been cement manufacturing. While the economy has fluctuated over the years, the Plant property use remains unchanged. While the modes of transporting raw materials into and finished product out of the Plant have also changed and/or fluctuated over the months and years, the Plant property use remains unchanged. The County has acknowledged the 1994 established use of the property; they affirmed it again in the October 8, 2002 letter from then Current Planning Division Manager, Mr. David Callahan, to Cemex Plant Manager, Mr. John Lohr (See **Appendix D**).

The County's Determination that changes in truck traffic serving this land use constitutes an enlargement or alteration of that use is seriously flawed. That would be

tantamount to saying that the change in the volume of traffic to and from a football stadium would constitute an enlargement or alteration of the stadium property's use. The year-to-year rise and fall of a football program's success, or the range in quality of the opposing team, or the level of fans' support and attendance on game day does not constitute a change in the actual land use of the stadium property. Neither does the stadium's employment of off-site satellite parking lots with shuttle busses for game day fans change or alter the use of the football stadium property. The logic of the argument is flawed, as is Boulder County's Determination in this case involving the Lyons cement Plant property. Indeed, the language of the zoning code itself, quoted in the Determination (Page 2), highlights the fact that the **use** must change to violate the Code provision and terminate the grandfathered nonconforming status: "*Any other enlargement or alteration of the nonconforming use . . .*" Here, the Plant property's use has always been and continues to be the production of cement. That the volume of trucks supplying the Plant or transporting its products

fluctuate in number, whether up or down, does not enlarge or alter such use of the property.

CONCLUSIONS

The data, analyses, and conclusions communicated in this report demonstrate that Boulder County failed to consider all relevant facts and information in arriving at its Determination, and made erroneous and unsupported findings with regard to Land Use Code Article 4-1003.C.1.d. The County erred in particular: 1) in its selection of comparative timeframes for Plant truck volumes; 2) in its misuse of truck traffic data and assumptions from the Stantec Study, which was extremely limited and conducted for an entirely different purpose; 3) in its allegation that truck traffic from the Plant property has increased, and therefore constitutes “...a *hazard or nuisance off the property...*”, and finally 4) in its very selection of Plant-servicing truck traffic volumes as an indicator of land use enlargement or alteration. The Plant’s grandfathered nonconforming use should not be terminated on the basis of the arguments in the County’s Determination.

APPENDIX A – MONTHLY TRUCK VOLUMES PROVIDED BY CEMEX (MAY 10, 2023) IN RESPONSE TO BOULDER COUNTY CODE COMPLIANCE AND PUBLIC INFORMATION TEAM’S REQUEST FOR FURTHER INFORMATION REGARDING ONGOING USE OF CEMENT PLANT, APRIL 12, 2023

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Inbound and Outbound Truck Trip Count Estimates (Round Trips)

Lyons Cement Plant - 2006 - April 2023**

**Data excludes automobiles and delivery vehicles for mail, packages and equipment.

Year	Month	Inbd	Outbd	Mo'ly Total	Annual Total
2006	Jan	144	1,436	1,580	19,431
2006	Feb	96	1,265	1,361	
2006	Mar	80	1,544	1,624	
2006	Apr	7	1,597	1,604	
2006	May	121	2,245	2,366	
2006	Jun	113	1,856	1,969	
2006	Jul	79	1,637	1,716	
2006	Aug	83	1,780	1,863	
2006	Sep	72	1,520	1,592	
2006	Oct	69	1,381	1,450	
2006	Nov	72	1,337	1,409	
2006	Dec	19	880	899	
2007	Jan	134	927	1,061	21,008
2007	Feb	10	935	945	
2007	Mar	11	1,324	1,335	
2007	Apr	71	1,486	1,557	
2007	May	65	2,140	2,205	
2007	Jun	97	2,288	2,385	
2007	Jul	55	2,044	2,099	
2007	Aug	106	2,078	2,184	
2007	Sep	101	1,639	1,740	
2007	Oct	104	2,050	2,154	
2007	Nov	45	1,987	2,032	
2007	Dec	151	1,158	1,309	
2008	Jan	93	1,372	1,465	17,805
2008	Feb	8	1,503	1,511	
2008	Mar	115	1,688	1,803	
2008	Apr	81	1,760	1,841	
2008	May	103	1,533	1,636	
2008	Jun	71	1,770	1,841	
2008	Jul	97	1,422	1,519	
2008	Aug	106	1,270	1,376	
2008	Sep	61	1,293	1,354	
2008	Oct	65	1,364	1,429	
2008	Nov	115	959	1,074	
2008	Dec	120	837	957	
2009	Jan	7	688	695	
2009	Feb	0	648	648	
2009	Mar	1	510	511	
2009	Apr	7	514	521	
2009	May	16	602	618	

Year	Month	Inbd	Outbd	Mo'ly Total	Annual Total
2009	Jun	6	785	791	9,799
2009	Jul	98	1,186	1,284	
2009	Aug	96	1,152	1,248	
2009	Sep	40	1,138	1,178	
2009	Oct	55	895	950	
2009	Nov	46	749	795	
2009	Dec	20	540	560	10,024
2010	Jan	131	483	614	
2010	Feb	95	415	510	
2010	Mar	15	675	690	
2010	Apr	19	745	764	
2010	May	27	796	823	
2010	Jun	60	975	1,035	
2010	Jul	47	953	1,000	
2010	Aug	74	957	1,031	
2010	Sep	52	958	1,010	
2010	Oct	108	897	1,005	
2010	Nov	85	796	881	
2010	Dec	21	640	661	10,316
2011	Jan	26	407	433	
2011	Feb	54	453	507	
2011	Mar	66	687	753	
2011	Apr	79	770	849	
2011	May	144	741	885	
2011	Jun	90	1,032	1,122	
2011	Jul	73	896	969	
2011	Aug	65	1,021	1,086	
2011	Sep	72	927	999	
2011	Oct	79	859	938	
2011	Nov	112	845	957	
2011	Dec	118	700	818	11,262
2012	Jan	224	758	982	
2012	Feb	132	533	665	
2012	Mar	96	780	876	
2012	Apr	107	731	838	
2012	May	124	893	1,017	
2012	Jun	187	916	1,103	
2012	Jul	159	786	945	
2012	Aug	158	655	813	
2012	Sep	159	834	993	
2012	Oct	246	896	1,142	
2012	Nov	363	745	1,108	
2012	Dec	279	501	780	
2013	Jan	229	522	751	
2013	Feb	111	546	657	
2013	Mar	187	685	872	

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Year	Month	Inbd	Outbd	Mo'ly Total	Annual Total
2013	Apr	89	665	754	10,692
2013	May	82	846	928	
2013	Jun	94	891	985	
2013	Jul	92	948	1,040	
2013	Aug	143	1,062	1,205	
2013	Sep	53	350	403	
2013	Oct	170	687	857	
2013	Nov	540	891	1,431	
2013	Dec	94	715	809	
2014	Jan	119	788	907	
2014	Feb	147	686	833	9,602
2014	Mar	168	820	988	
2014	Apr	155	871	1,026	
2014	May	110	748	858	
2014	Jun	134	618	752	
2014	Jul	48	619	667	
2014	Aug	67	646	713	
2014	Sep	65	718	783	
2014	Oct	59	801	860	
2014	Nov	65	485	550	
2014	Dec	27	638	665	
2015	Jan	58	589	647	8,729
2015	Feb	60	481	541	
2015	Mar	70	636	706	
2015	Apr	28	783	811	
2015	May	19	614	633	
2015	Jun	73	800	873	
2015	Jul	93	871	964	
2015	Aug	25	923	948	
2015	Sep	88	822	910	
2015	Oct	21	731	752	
2015	Nov	53	483	536	11,305
2015	Dec	51	357	408	
2016	Jan	29	355	384	
2016	Feb	22	464	486	
2016	Mar	95	595	690	
2016	Apr	17	700	717	
2016	May	63	786	849	
2016	Jun	78	1,124	1,202	
2016	Jul	76	1,007	1,083	
2016	Aug	107	1,235	1,342	
2016	Sep	101	1,169	1,270	
2016	Oct	88	1,245	1,333	
2016	Nov	67	1,084	1,151	
2016	Dec	55	743	798	
2017	Jan	57	619	676	

Year	Month	Inbd	Outbd	Mo'ly Total	Annual Total
2017	Feb	114	776	890	14,330
2017	Mar	111	1,200	1,311	
2017	Apr	62	1,186	1,248	
2017	May	12	1,028	1,040	
2017	Jun	73	1,380	1,453	
2017	Jul	12	1,255	1,267	
2017	Aug	37	1,616	1,653	
2017	Sep	23	1,487	1,510	
2017	Oct	25	1,272	1,297	
2017	Nov	44	1,072	1,116	
2017	Dec	35	834	869	14,557
2018	Jan	78	839	917	
2018	Feb	97	693	790	
2018	Mar	59	764	823	
2018	Apr	76	1,185	1,261	
2018	May	101	1,463	1,564	
2018	Jun	127	1,292	1,419	
2018	Jul	108	1,372	1,480	
2018	Aug	103	1,390	1,493	
2018	Sep	103	1,193	1,296	
2018	Oct	88	1,259	1,347	19,478
2018	Nov	82	1,113	1,195	
2018	Dec	122	850	972	
2019	Jan	89	805	894	
2019	Feb	22	841	863	
2019	Mar	276	808	1,084	
2019	Apr	916	1,149	2,065	
2019	May	1,140	939	2,079	
2019	Jun	1,029	1,098	2,127	
2019	Jul	416	1,039	1,455	
2019	Aug	655	1,339	1,994	28,481
2019	Sep	716	1,246	1,962	
2019	Oct	699	1,329	2,028	
2019	Nov	579	1,114	1,693	
2019	Dec	270	964	1,234	
2020	Jan	546	1,006	1,552	
2020	Feb	447	576	1,023	
2020	Mar	1,206	1,114	2,320	
2020	Apr	1,043	1,362	2,405	
2020	May	521	1,426	1,947	
2020	Jun	982	1,511	2,493	
2020	Jul	1,404	1,584	2,988	
2020	Aug	1,521	1,545	3,066	
2020	Sep	1,394	1,499	2,893	
2020	Oct	1,753	1,519	3,272	
2020	Nov	1,695	1,336	3,031	

Cemex Lyons Plant Traffic Study
November 6, 2024

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Year	Month	Inbd	Outbd	Mo'ly Total	Annual Total
2020	Dec	454	1,037	1,491	23,277
2021	Jan	757	1,009	1,766	
2021	Feb	449	846	1,295	
2021	Mar	524	1,057	1,581	
2021	Apr	398	1,031	1,429	
2021	May	493	1,114	1,607	
2021	Jun	841	1,099	1,940	
2021	Jul	852	933	1,785	
2021	Aug	750	1,350	2,100	
2021	Sep	873	1,720	2,593	
2021	Oct	956	1,146	2,102	
2021	Nov	1,435	1,208	2,643	
2021	Dec	1,510	926	2,436	24,660
2022	Jan	1,155	666	1,821	
2022	Feb	895	699	1,594	
2022	Mar	573	1,091	1,664	
2022	Apr	144	1,507	1,651	
2022	May	310	1,156	1,466	
2022	Jun	421	1,539	1,960	
2022	Jul	510	1,593	2,103	
2022	Aug	719	1,884	2,603	
2022	Sep	826	1,652	2,478	
2022	Oct	1,345	1,626	2,971	
2022	Nov	1,346	1,009	2,355	
2022	Dec	1,080	914	1,994	
2023	Jan	946	702	1,648	
2023	Feb	1,105	900	2,005	
2023	Mar	1,036	1,053	2,089	
2023	Apr	1,003	1,283	2,286	

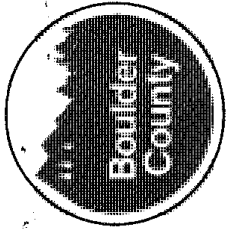
APPENDIX B - ANNUAL AND DAILY CEMEX TRUCK VOLUMES

	Year	Truck Volumes	Workdays per year	Average daily traffic
Calculated with Regression Equation	1983	30,233	250	106
	1984	28,618	251	100
	1985	32,800	251	116
	1987	26,452	251	91
	1989	25,101	250	87
	1990	25,191	251	87
	1992	29,448	252	102
	1993	30,716	251	108
Truck Volume Numbers from CEMEX	2014	9,602	250	96
	2015	8,729	250	53
	2016	11,305	252	63
	2017	14,330	251	93
	2018	14,557	251	75
	2019	19,478	251	64
	2020	28,481	250	98
	2021	23,277	251	79
Calculated with the Regression Equation	2022	24,660	251	82
	2023	20,106	251	67

APPENDIX C - CDOT OTIS DATA

Year	OBJECTID	ROUTE	REFPT	ENDREFPT	LENGTH_	UPDATEYR	COUNTSTATIONID	AADT	AADTTRUCKS	Truck% Calculated
2022	1129	066B	28.693	32.585	3.879	2022	102868	10000	440	4.40%
2021		066B	28.693	32.585	3.879	2021	102868	10000	440	4.40%
2020	1438	066B	28.693	32.585	3.879	2020	102868	9500	410	4.32%
2019	1425	066B	28.693	32.585	3.879	2019	102868	11000	480	4.36%
2018		066B	28.693	32.585	3.879	2019	102868	11000	480	4.36%
2017		066B	28.693	32.585	3.879	2018	102868	11000	480	4.36%
2016	1658	066B	28.693	32.585	3.879	2017	102868	8500	440	5.18%
2015	1658	066B	28.693	32.585	3.879	2016	102868	9700	490	5.05%
2014	2384	066B	28.693	32.585	3.879	2015	102868	7000	360	5.14%
2013	1462	066B	28.693	32.585	3.881	2014	102868	6700	340	5.07%
2012	1462	066B	28.693	32.585	3.88	2013	102868	8100	460	5.68%
2011	1462	066B	28.693	32.585	3.881	2012	102868	9100	460	5.05%
2010		066B	28.693	32.585	3.881	2011	102868	8600	440	5.12%
2009	8904	066B	28.693	32.585	3.879	2010	102868	8100	480	5.93%
2008	1218	066B	28.693	32.585	3.879	2009	102868	8100	490	6.05%
2007	1821	066B	28.693	32.585	3.896	2008	102868	9100	540	5.93%
2006	1472	066B	28.693	32.585	3.896	2007	102868	18200		
2005	43	066B	28.693	32.585	3.896	2006	102868	9000	540	6.00%
2004	1614	066B	28.693	32.585	3.896	2005	102868	8500		
2003		066B	28.693	32.585	3.896	2004	102868	8183	545	6.66%
2002		066B	28.693	32.585	3.892	2003	102868	9258	545	5.89%
2001		066B	28.693	32.585	3.896		102868	9152		
2000		066B	28.693	32.585	3.896	2001	102868	8870		
1999		066B	28.693	32.585	3.896	2000		9499		
1998		066B	28.693	32.585	3.896	1999		8379		
1997		066B	28.693	32.585	3.896	98		8028		

**APPENDIX D - OCTOBER 8, 2002 LETTER FROM THEN CURRENT PLANNING DIVISION MANAGER, MR. DAVID
CALLAHAN, TO CEMEX PLANT MANAGER, MR. JOHN LOHR**



Post Office Box 471 • Boulder, Colorado 80306

Land Use Department

Courthouse Annex
2045 13th Street • 13th & Spruce Streets • Boulder, Colorado 80302 • (303) 441-3930

October 8, 2002

Mr. John Lohr
Plant Manager
CEMEX
P.O. Box 529
Lyons, Colorado 80540

Dear Mr. Lohr:

This responds to your facsimile of September 27, 2002, in which you request a letter indicating the status of the Cemex factory building and equipment as governed by the Boulder County Land Use Code. You attached a partial "observation" from the Division of Minerals and Geology. That information notes that "DMG stated that it would like either written confirmation that the cement kiln is allowed to remain in place after reclamation is completed, or a Certificate of Designation regarding the disposal of Cement Kiln Dust."

The Boulder County Land Use Code recognizes the cement kiln and attendant equipment as a nonconforming use. Ordinarily, this use requires special use review, however, in this case, the use predates the regulations. Consequently, it is subject to Article 4-1003 Nonconforming Uses, which I have attached for your convenience. As a matter of clarification, I note that there have been various reviews involving this property. These include Special Use Review SU-88-21, which allowed tire burning, Special Use Review SU-01-08, which allowed cellular antennas for Quest, and Site Plan Review SPR-97-160, which allowed cellular antennas for US West and New Vector. Even so, these reviews did not address the nonconformity of the kiln and its attendant equipment.

Please note that from a County land-use standpoint, the kiln is a nonconforming use allowed regardless of any relationship to any mining activity reviewed and approved by the county, as there is no connection between the use of the facility and any adjacent mining areas (such as Dowe Flats, which received county special uses approval in Docket SU-94-13), or other mining sites. Therefore, it follows that the use can potentially remain in place indefinitely, if it continues to meet all of the requirements of Article 4-1003. However, please note that Article 4-1003 requires the termination of the nonconforming use if it is impermissibly enlarged or if it is abandoned (see paragraphs C., and G. in the attached regulations). Further, the right to continue a nonconforming use terminates immediately when the structure containing the use is damaged by an intentional act of the property or structure owner or their agent (see paragraph F.).

Jana L. Mendez
County Commissioner

Ronald K. Stewart
County Commissioner

Paul Danish
County Commissioner

Page 2 of 2

10/8/02

Cemex

I hope this answers your questions at this time. If I can be of further service, please feel free to contact me at your convenience.

Sincerely,



David Callahan

Manager, Current Planning Division

Attachment: Article 4-1003, Boulder County Land Use Code

Boulder County Land Use Code**4-1000 Nonconforming Structures and Uses**

the reasonable regulation of nonconforming uses and structures to minimize their adverse impacts on current comprehensive zoning schemes and the community, this Article shall be strictly construed against the continuation or expansion of nonconformity in Boulder County. (8/20/96)

4-1002 Nonconforming Structures (9/5/96)

- A. A nonconforming structure is any existing structure which does not conform to the structure regulations of this Code for the zoning district in which such nonconforming structure is located, as a result of either (1) the adoption or amendment of this Code, or (2) a final county administrative or judicial decision precluding Boulder County from enforcing this Code specific to a structure on the basis of estoppel, laches, or waiver.
- B. A nonconforming structure may continue to be occupied, except as otherwise provided for in this Section.
- C. A nonconforming structure may not be altered, repaired, or enlarged in any way which would increase the degree of nonconformity with respect to the setback or height regulations of this Code,
 1. For purposes of this Section, an increase in the degree of nonconformity shall be any alteration which adds to the floor area or height of the portion of the structure which violates this Code.
 2. This restriction may be waived if the Building Official determines that any such alteration, repair, or enlargement is necessary to rectify a hazardous health or safety situation, or to comply with the public health or safety requirements of another governmental entity having lawful jurisdiction over the structure.
 3. Agricultural structures, either singly or cumulatively, legally constructed which were over 25,000 square feet (or 35,000 square feet in a community service area) as of October 18, 1994, may be altered, repaired, or enlarged provided the total square footage of the structures on a parcel is not increased.
- D. A nonconforming structure which has been damaged or destroyed by causes outside the control of the property owner or their agent, may be restored to its original location, floor area, and height, provided that such restoration complies with the current provisions of the Boulder County Building Code.
 1. Such restoration must be commenced within six months after the date on which the nonconforming structure was damaged or destroyed and completed within one year after the date on which the restoration was commenced.
 2. The provisions of this Section 4-1002 (D) shall not apply to substantial improvements to structures in the Floodplain Overlay District as provided for in Section 4-400 of this Code.
 3. Restoration meeting the requirements of this provision are not required to undergo a Site Plan Review. (See Article 4-803 B)(7/2/98)

4-1003 Nonconforming Uses (9/5/96)

- A. A nonconforming use is any existing use which does not conform to the use regulations of this Code for the zoning district in which such nonconforming use is located, as a result of either
 1. the adoption or amendment of this Code, or

ARTICLE 4
ZONING
4-1000 Nonconforming Structures and Uses

2. a final administrative or judicial decision precluding the County from enforcing this Code specific to a use on the basis of estoppel, laches, or waiver.
- a. Uses are not considered nonconforming due to inadequate parking.
- b. Uses which fall within Section 4-1003 (A) (2), above shall not be eligible to apply for a special use permit for a use of community significance (Section 4-506 (J)).
- B.** Except as otherwise provided in this Section, a nonconforming use may be continued and normal or routine maintenance of a structure containing a nonconforming use shall be permitted. Normal or routine maintenance shall include any maintenance or repair which does not impermissibly enlarge or alter the structure containing a nonconforming use under Section 4-1003(C), below.
- C.** Enlargement or Alteration of a Nonconforming Use
1. The right to continue a nonconforming use terminates immediately when the nonconforming use is enlarged, expanded, extended, or altered in any of the following ways, and the property owner does not successfully pursue any of the options specified in Section 4-1003 (H) within 30 calendar days after the Director provides written notification of an alleged illegal enlargement or alteration to the owner.
- a. Addition of a new structure containing or accessory to the nonconforming use;
- b. Enlargement or alteration of a structure containing or accessory to the nonconforming use, including but not necessarily limited to an increase in floor area, an increase in height, or any other alteration or improvement in excess of normal or routine maintenance of the structure;
- c. Enlargement or alteration in the land area occupied by the nonconforming use, unless the basic nature of the use, at the time it became nonconforming, clearly indicated or contemplated such an increase or alteration; or
- d. Any other enlargement or alteration of the nonconforming use which has the effect or threatened effect of creating a hazard or nuisance on or off the property, of adversely affecting the character of the neighborhood, or of intensifying the use of the land or its need for services.
- e. Removal or replacement of any structural member in a use for which the County is precluded from enforcing this Code specific to use on the basis of estoppel, laches, or waiver.
2. An impermissible enlargement or alteration shall not include the following:
- a. a change of ownership of the property;
- b. an alteration or expansion which the Building Official determines is necessary to rectify a hazardous health or safety situation or to comply with the public health or safety requirements of another governmental entity having lawful jurisdiction over the structure; an extension of the nonconforming use within the structure containing the use, provided that such extension is not accompanied by an alteration of the structure falling within category (b), above; the addition of a solar energy device to a structure containing a nonconforming use; or

Boulder County Land Use Code**4-1000 Nonconforming Structures and Uses**

- e.** any replacement or upgrading of outmoded or worn equipment or supplies, provided that such activity does not fall within category Section 4-1003(C)(1)(d), above.
- 3.** Owners of legal building lots containing agricultural uses which have become nonconforming as a result of adoption or amendment of this Code, may restore, modify, and maintain existing conforming structures, and may construct new conforming structures, provided such structures are directly related to the agricultural use, and provided the use is not enlarged or altered in any other way.
- D. Change of a Nonconforming Use**
- 1.** A nonconforming use may be changed only to a use which is conforming in the zoning district in which the use is located.
- 2.** Any change of a nonconforming use to any other use shall operate immediately to terminate the right to continue the nonconforming use. Thereafter, the property shall be used only in conformity with the use provisions of its zoning district.
- E. Destruction of a Structure Containing a Nonconforming Use**
- 1.** A structure containing a nonconforming use shall be deemed destroyed when either greater than 50 percent of its floor area, or greater than 50 percent of its actual value (as determined by the Boulder County Assessor) is destroyed.
- 2.** The right to continue a nonconforming use terminates immediately when the structure containing that use is destroyed by an intentional act of the property or structure owner or their agent.
- 3.** In all other cases, when a structure containing a nonconforming use is destroyed, the structure may be restored, and the nonconforming use may be reestablished.
- a.** Restoration of the structure must be commenced within six months after the date on which the nonconforming structure was destroyed and completed within one year after the date on which the restoration was commenced.
- b.** These times may be extended for a reasonable period, if approved by the County Commissioners at a public hearing upon a showing of extraordinary circumstances by the property owner or their agent.
- 4.** The provisions of this Section 4-1003(E) shall not apply to substantial improvements to structures in the Floodplain Overlay District as provided for in Section 4-400.
- F. Damage to a Structure Containing a Nonconforming Use**
- 1.** The right to continue a nonconforming use terminates immediately when the structure containing that use is damaged by an intentional act of the property or structure owner or their agent.
- 2.** In all other cases, when a structure containing a nonconforming use is damaged, the structure may be restored, and the nonconforming use may be reestablished.
- a.** Restoration of the structure must be commenced within six months after the date on which the nonconforming structure was damaged and completed within one year after the date on which the restoration was commenced.

Boulder County Land Use Code**4-1000 Nonconforming Structures and Uses**

with a 30 day opportunity to abate, any failure by the Director to provide a notification of a determination of termination as provided for in this Section shall in no way entitle the property owner to continue or resume a nonconforming use terminated by operation of this Section 4-1003(H).

4-1004 Recognition of Nonconforming Uses (9/4/97)

A. A nonconforming use may be recognized as a conforming use if:

- 1.** The use was made nonconforming pursuant to Section 4-1003(A)(1), and receives special use review approval as a use of community significance under Sections 4-506(I) and 4-602(E) of this Code, or
- 2.** The use is nonconforming pursuant to 4-1003(A)(2), and receives special use approval as a temporary use under Section 4-600(A). In addition to satisfying the special use criteria of Section 4-601, such a use may receive special use approval only if it meets the following requirements, to assure that these nonconforming uses are brought into conformity as quickly as justice may permit:

- a.** The use is required to totally cease, or to be changed to a conforming use, within a reasonable time certain as determined by the Board of County Commissioners through the special use review process, not to exceed 30 years.
- b.** During the time certain when the use is allowed to exist as a temporary special use, the property owner grants a conservation easement to the County to assure that no future expansion of the use or its associated structures occurs on the property beyond that approved in the special use. The conservation easement will also require that at the expiration of the temporary use period established in subsection 4-1004(A)(2)(a), the temporary special use shall cease, and the property's use and structures shall be made to conform to the zoning districts requirements and in accordance with any specific requirement of the special use review and conservation easement.
- c.** Approval of the use as a temporary special use will result in some measurable decrease in one or more of the adverse land use impacts associated in the nonconforming use (such as in traffic, noise, or adverse visual impact).
- 3.** The use was a legal residential use when it became nonconforming pursuant to subsection 4-1003(A)(1) and receives limited impact special review use approval under Section 4-600(A), and, in addition, the owner/applicant agrees to permanently deed restrict the approved special use as affordable housing under the adopted standards of the BOCC based upon the recommendation and policies of the Boulder County Housing Authority. (1/13/98)
 - a.** No increase in density is permitted through this approval.
 - b.** Minor expansions to the use may be allowed through the limited impact special use process, so long as the proposed use results in some measurable decrease in one or more of the adverse land use impacts associated with nonconforming use (such as in traffic, noise, or adverse visual impact) and so long as current County Building Code requirements are met.
- 4.** The nonconforming use is changed to any other conforming use recognized under this Code.